



# **2022 Annual Compliance Monitoring Report**

**Shell Harbor Island Terminal  
2555, 1835, 1711 13th Avenue Southwest  
Seattle, Washington**

**PlaNNet Site ID           MIGUS357032**

**PlaNNet Project ID       86013**

**Consent Decree No. 99 2 07176 0SEA**

**Equilon Enterprises LLC dba Shell Oil Products US**

**February 15, 2023**

**→ The Power of Commitment**

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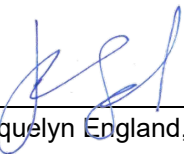
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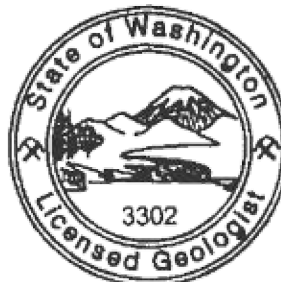
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# 1. Introduction

GHD Services, Inc. (GHD) is submitting this *2022 Annual Compliance Monitoring Report* on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) for the Shell Distribution Terminal on Harbor Island in Seattle, Washington (Site, Figure 1). The Site is comprised of three parcels located at 2555, 1835, and 1711 13th Avenue Southwest, designated as the Main Tank Farm, North Tank Farm, and Shoreline Manifold Area, respectively (Figure 2). Three groundwater monitoring and cleanup areas are associated with the parcels:

- The TX-03 Area, encompassing the North Tank Farm and the northern portion of the Main Tank Farm.
- The SH-04 Area overlapping the southeastern portion of the Main Tank Farm.
- The Shoreline Manifold Area.

Compliance monitoring activities described in this report are performed under the October 1998 Equilon Seattle Terminal MTCA Consent Decree No. 99 2-07 176 SEA (Consent Decree) with the Washington State Department of Ecology (Ecology, 1998). The information presented herein is based on data collected during the monitoring period of January through December 2021.

## 1.1 Summary of Cleanup Actions

Cleanup actions were performed in compliance with the Consent Decree, which provides Site-specific cleanup levels for total petroleum hydrocarbons (TPH), lead, and arsenic in soils, and for TPH, select metals, benzene, toluene, ethylbenzene, and total xylenes (BTEX), and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) in groundwater. The Site-specific cleanup levels applicable to this report are summarized in Table 1. The Site-specific soil cleanup levels are included in the summary of cleanup actions discussed below.

The primary cleanup action at the Site included excavation of near surface lead and arsenic impacted soil in areas throughout the Main Tank Farm which was conducted from December 2003 through February 2004. Lead- and arsenic-impacted surface soils with concentrations above the soil cleanup levels of 1,000 milligrams per kilogram (mg/kg) and 32 mg/kg, respectively, were removed. In addition, a small area of lead-impacted soil near the oil-water separator (OWS) in the Main Tank Farm was excavated in October 2001; however, some lead impacted soils were left in place due to structural constraints. A 3-inch cap was placed over the lead impacted subsurface soil in the area around the OWS.

Between November 2001 and October 2009, TPH-impacted surface and subsurface hotspots with concentrations greater than 10,000 mg/kg, the shoreline soil cleanup level, were removed from the Shoreline Manifold Area. Additional impacted soils with TPH concentrations greater than 20,000 mg/kg, the inland soil cleanup level, were removed near a former underground storage tank (UST) in October 2001, and in the Main Tank Farm in February 2004 and 2007.

A free product and vapor extraction system was installed in the Shoreline Manifold Area in 1996. The vapor extraction system operated until August 2005 when it was shut down because the hydrocarbon recovery through vapor extraction had declined. Passive free product recovery occurred in the Shoreline Manifold Area at monitoring well MW-211 through 2010 and in monitoring wells MW-210 and MW-212 through 2011. Vacuum purging was conducted on a quarterly basis in monitoring wells MW-210 and MW-212 in 2012.

On September 10, 2013, less than three barrels of diesel product were released in the Shoreline Manifold Area during an "in line" inspection of the dock lines. Approximately 2.4 barrels of free-standing product were recovered immediately by vacuum truck and the use of sorbent pads. Additionally, approximately 8 to 10 cubic yards of soil were removed. Confirmation soil samples collected from the excavated area were below the shoreline soil cleanup level of 10,000 mg/kg. Field observations indicated that surface water and the stormwater system were not impacted by the release (URS, 2014). Pooled diesel product was observed surrounding monitoring well MW-212 following the release. The product was removed using a vacuum truck and subsequent monitoring did not detect product. At the request of

Ecology, sorbent socks were installed in monitoring wells MW-209, MW-210, and MW-212 in January 2014. In addition, monitoring wells MW-208, MW-210, MW-211, and MW-212 are monitored monthly for product.

In September 2016, RECON Environmental, Inc. (RECON) excavated and disposed of approximately 5.28 tons of visibly stained soils at the former Lubes Facility, located near the southwest corner of the Main Tank Farm and directly west of the Pump House. Confirmation soil samples were collected and the open piping at two small petroleum impacted areas were capped. The TPH concentrations in the confirmation soil samples were less than the inland soil cleanup level of 20,000 mg/kg (Ecology, 1998; RECON, 2017). Upon receipt of these results, AECOM authorized RECON to backfill the excavations.

In November 2016, construction of the bio-sparging system commenced within the TX-03A Area (Figure 2). The City of Seattle (the City) halted the completion of the system in December 2016 due to a delay in the issuance of the Utility Major Permit and the Annual Permit. Prior to the work halt, AECOM oversaw the installation of the 37 bio sparging wells in the City Parking Lot and Main Tank Farm, and the installation of the system piping within the Main Tank Farm. System construction was completed in May 2017 and the system was started on May 25, 2017. The bio sparging system construction details were documented in a *Bio Sparging Completion Technical Memorandum*, submitted in the first quarter of 2018. The bio sparging system was shut down in December 2019 to evaluate for rebound and has remained off.

Between March and September of 2018, AECOM completed rehabilitation of the 24-inch mainline of the City's stormwater system located directly north of the Seattle Terminal's Main Tank Farm, per the terms of a Voluntary Compliance Agreement (VCA) between Shell and the City dated April 2016. Per the VCA, annual dry weather stormwater system sampling events were required for a period of 3 years. Sampling events were conducted in January and August of 2019, in August 2020, and in July 2021. All three dry weather sample event results indicated that the rehabilitation was successful. An Acknowledgement of Completion for the requirements in the VCA was issued by the City on October 27, 2021.

On October 1, 2020 a gasoline release occurred from a failed pump inside the Pump House during tanker truck fueling operations. The Pump House is located south of the Main Tank Farm. Areas affected by the release included the Pump House interior, Manifold Pit East, and limited areas outside the Pump House on the ground surface at its northern and southern entryways. Following initial recovery of the release, additional excavation was completed including soil excavation at the north and south ends of the Pump House where a total of 136.05 tons of impacted soil and 9,190 gallons of fuel and water were hauled off Site (Interim Action Report (GHD, 2021a). In June of 2022 GHD installed three groundwater monitoring wells per the approved Well Installation Work Plan (GHD, 2021b); the results of the investigation are summarized in our *Revised Site Investigation Report* (GHD, 2022).

## 1.2 Summary of Compliance Monitoring Program

Compliance monitoring consists of product monitoring, groundwater level monitoring, and groundwater sampling as detailed in the Compliance Monitoring Plan (EMCON and LCI, 1999). The monitoring objectives have been categorized as confirmational, performance, and sentry:

- Performance monitoring is conducted to monitor the effectiveness of the cleanup actions. Performance monitoring consists of three components: product thickness and sheen monitoring, groundwater natural attenuation monitoring, and groundwater quality monitoring.
- Confirmational monitoring is conducted to confirm the long-term effectiveness of the cleanup action once performance and cleanup levels have been met. Confirmation product monitoring consists of monitoring product thickness and sheen.
- Sentry monitoring is conducted to provide early warnings of off-Site contaminant migrations. Semi-annual sentry groundwater quality monitoring is conducted simultaneously with groundwater performance monitoring.

Site-wide quarterly monitoring was conducted until 2006 in accordance with the Compliance Monitoring Plan. In 2006, the monitoring program was modified in accordance to proposed changes by RETEC (RETEC, 2006a; RETEC, 2006b), and additional modifications in the monitoring program occurred in 2008 in accordance with email

correspondence with Ecology (URS, 2008). The groundwater monitoring program established in 2008 is presented in black text in Table 2. Additional modifications to the compliance monitoring program between 2011 and 2022 are presented in red text. The groundwater cleanup levels specified in the 1998 Consent Decree are presented in Table 1.

## 1.2.1 SH-04 Area

Compliance monitoring wells MW-05, MW-111, MW-112A, MW-104, and SH-04 are located along 13th Avenue and in the southeast corner of the Main Tank Farm, within the SH-04 Area of the Site (Figure 2). The compliance monitoring program for the SH-04 Area was modified between 2011 and 2015 as described below and presented in red text on Table 2.

- In 2001, additional semiannual samples were obtained from the above listed five monitoring wells to assess the dissolved groundwater plume (URS, 2012). Monitoring wells MW-305 and MW-306 were installed in the SH-04 Area in November 2011.
- Beginning in 2012 through 2014, quarterly groundwater samples were collected to assess the dissolved hydrocarbon plume in the SH-04 Area. Additionally, three joint groundwater sampling events were conducted in 2012 with the neighboring Kinder Morgan Terminal in the SH-04 Area.
- In 2014, benzene and gasoline concentrations within sentry well SH-04 were below the cleanup levels. Therefore, due to reductions of concentrations within the sentry well, URS removed groundwater monitoring at monitoring wells MW-305 and MW-306 from the monitoring program (URS, 2014)

The fifth EPA 5-Year review of the Harbor Island Superfund Site (EPA, 2020) noted that elevated contaminant concentrations have been observed in wells A-28R and MW-23, associated with the Kinder Morgan facility. These wells are located along the southwestern edge of the Kinder Morgan facility near 13th Avenue Southwest. Surrounding wells, including Shell well MW-111, do not indicate an expanding plume, but the EPA noted that additional data are needed to determine a trend.

A coordinated gauging event of wells in the SH-04 area with wells at the Kinder Morgan facility was conducted on April 12, 2021. However, GHD was not able to generate a groundwater flow diagram because the shared well SH-04 is shown in a different location on the map generated for the Kinder Morgan facility from the location on our map. Since then, Arcadis U.S., Inc. (Arcadis) has confirmed well locations and a special joint gauging and sampling event was conducted April 18, 2022. Arcadis is obtaining approval from Kinder Morgan to release the joint gauging and groundwater data to GHD. The data summary will be included in the subsequent quarterly report once data is received from Arcadis.

## 1.2.2 TX-03A Area

As indicated on Table 2, multiple compliance monitoring wells are in the TX-03A Area of the Site. This area includes the northern boundary of the Main Tank Farm and extends north to the northern boundary of the North Tank Farm (Figure 2). The compliance monitoring program within the TX-03A Area includes historical monitoring wells and additional monitoring wells that were installed within the TX-03A Area between 2011 and 2016 as part of the TX-03A Area investigation. Modifications since 2008 are presented in red text on Table 2.

To assess the dissolved hydrocarbon plume at the TX-03A Area, the following additional monitoring wells were installed within the TX-03A Area between 2011 and 2016:

- MW-301 through MW-304 in November 2011
- MW-307 through MW-310 in November 2012
- MW-311 and MW-312 in October 2014
- MW-313, MW-314, and MW-315 in July 2016

The monitoring wells installed in November 2011 through July 2016 were sampled at least semiannually since 2012.

## 1.3 Geology and Hydrogeology

The 405-acre Harbor Island was constructed during the early 1900s in an area consisting of intertidal wetlands at the mouth of the Duwamish River. The island was created using sediments dredged to facilitate navigation in the Lower Duwamish River and West Waterway (KJC, 1990).

Soil underlying the site consists of emplaced grade and dredge fill overlying native estuarine deposits (EMCON and LCI, 1999). The uppermost grade fill unit consists of coarse-grained fill varying in thickness from less than one foot to approximately two feet thick. The underlying dredge fill unit was created when estuarine deposits near the site were dredged and used as fill. The contact between the dredge fill and native estuarine units is poorly defined due to similar properties of the two units. The dredge fill varies from approximately 8 to 20 feet in thickness at the site. It consists of fine- to medium-grained sand with some gravel. Native estuarine deposits underlie the dredge fill at depths of approximately 9 to 21 feet below ground surface (bgs). These deposits are composed of primarily fine- to medium-grained sand with thin silt interbeds.

The shallow, unconfined groundwater aquifer consists of a thin lens of freshwater overlying brackish water. The groundwater table is 4 to 8 feet bgs, within the dredge fill. The water table within the North Tank Farm and Main Tank Farm areas are generally unaffected by tides; groundwater quality and elevations within the Shoreline Manifold Area are affected by tides.

The native estuarine deposits are fully saturated, and groundwater within this unit is unconfined. Groundwater quality and groundwater elevations within this unit are influenced by surrounding surface water bodies and associated tidal fluctuations. This shallow groundwater flows in a radial fashion to the north and to the south from a potentiometric high located within the Main Tank Farm area.

## 2. Groundwater Elevations and Flow

Monitoring wells at the site are screened in either the shallow or deep depth intervals. The monitoring well screen intervals are presented on Table 2 and discussed below.

- All but two of the monitoring wells in the groundwater monitoring program are screened in the shallow depth interval (approximately 5 to 15 feet bgs)
- Monitoring wells MW-213 and MW-214 are screened in the deeper depth interval (approximately 30 to 40 feet bgs)

Groundwater elevation data for the monitoring period (January 2022 through December 2022) and historical groundwater elevation data are presented in Table 3. The groundwater elevation data are discussed in the following subsections for each area, as identified on Figure 2. Monitoring well gauging field logs, which include depth to groundwater and depth to product provided in Appendix A.

### 2.1 TX-03A Area (including the North Tank Farm)

The TX-03A Area is shown on Figure 2. The North Tank Farm has been incorporated into the TX-03A Area because it provides downgradient and cross gradient data for the TX-03A Area (Figures 3 through 6).

In accordance with the groundwater monitoring program, depth to groundwater was measured in North Tank Farm monitoring wells (MW-201 through MW-204 and MW-206A) and in additional TX-03A Area monitoring wells (MW-101, MW-102, MW-301 through MW-304, MW-307 through MW-315, TES-MW-1, and TX-03A) during the quarterly sampling events.

The range in groundwater elevations for each quarterly 2022 event is listed below:

- First Quarter 2022 | 6.79 (MW-204) to 8.54 (MW-101) feet above mean sea level (AMSL)

- Second Quarter 2022 | 6.09 (MW-204) to 8.67 (MW-206A) feet AMSL
- Third Quarter 2022 | 5.08 (MW-314) to 7.20 (MW-312) feet AMSL
- Fourth Quarter 2022 | 5.80 (TES-MW-1) to 8.35 (MW-102) feet AMSL

Localized groundwater elevation contour maps depicting the March, June, September, and December 2022 groundwater elevations for the shallow depth interval beneath the TX-03A Area are presented as Figures 3 through 6, respectively. Groundwater in the TX-03A Area generally flows to the north-northwest in quarters one and two, and variable directions in quarters three and four.

## 2.2 SH-04 Area

In accordance with the groundwater monitoring program, depth to groundwater was measured semiannually in MW-05, MW-104, MW-111, MW-112A, and SH-04 in June and December 2022. A special gauging event was conducted in April 2022 in coordination with gauging of the wells at the Kinder Morgan site by Arcadis.

The range in groundwater elevations for each semiannual 2022 event is listed below:

- April 2022 | 6.48 (MW-112A) to 8.25 (MW-104) feet AMSL
- June 2022 | 6.35 (MW-112A) to 7.84 (MW-05 and MW-104) feet AMSL
- December 2022 | 6.64 (MW-112A) to 7.65 (MW-104) feet AMSL

## 2.3 Shoreline Manifold Area

In accordance with the groundwater monitoring program, depth to groundwater was measured semiannually in MW-213 and MW-214 (June and December) and monthly from monitoring wells MW-208, MW-210, MW-211, and MW-212.

The range in groundwater elevations for each quarter in 2022 is listed below:

- First Quarter 2022 | 5.97 (MW-212) to 9.09 (MW-212) feet AMSL
- Second Quarter 2022 | 4.65 (MW-214) to 8.01 (MW-214) feet AMSL
- Third Quarter 2022 | 5.76 (MW-212) to 6.58 (MW-208) feet AMSL
- Fourth Quarter 2022 | 7.25 (MW-212) to 8.01 (MW-214) feet AMSL

## 2.4 Pump House Investigation Area

Following the 2020 Pump House area gasoline release and excavation, GHD installed three wells, MW-113, MW-114, and MW-115, to assess impact to groundwater in the area (*Revised Site Investigation Report*, GHD 2022). These three wells are monitored in second and fourth quarters (Figure 7 and Figure 8).

The range in groundwater elevations for each quarter in 2022 is listed below:

- Second Quarter 2022 | 7.71 (MW-113) to 8.15 (MW-114) feet AMSL
- Fourth Quarter 2022 | 7.65 (MW-113) to 8.08 (MW-114) feet AMSL

Groundwater flow direction is generally to the southeast.

# 3. General Compliance Results

This section presents the analytical results of the groundwater monitoring and performance product monitoring (in support of operation and maintenance). Field sampling data sheets, which include field parameter measurements and product measurement field forms, are provided in Appendix A. Laboratory data packages are provided in Appendix B.

Laboratory analytical data were assessed to ensure data quality and were deemed acceptable for their intended use with noted qualifiers. Data validation reports are provided in Appendix C. Data provided by Arcadis was not validated nor collected by GHD.

### **3.1 Performance Product Monitoring**

In accordance with the groundwater monitoring program (Table 2), depth to groundwater and thickness of free product was measured in the monitoring wells listed below:

- Shoreline Manifold Area | MW-208, MW-210, MW-211, and MW-212, monthly
- North Tank Farm | MW-204, quarterly

Performance product monitoring data are presented in Table 4. Absorbent socks are present for product recovery in monitoring wells MW-210 and MW-212 and are replaced monthly or as needed.

No measurable thickness of floating product was detected in monitoring wells MW-204, MW-208, MW-211, or MW-212 during the 2022 events. No product was detected at MW-210 in the months of February, March, July, September, and December. A sheen was present in October and in the remaining months, measurable thicknesses of product ranged from 0.02 ft (August and November) to 0.89 ft in January at MW-210.

### **3.2 Natural Attenuation Performance Criteria**

In accordance with the groundwater monitoring program (Table 2), natural attenuation performance monitoring is conducted annually at ten monitoring wells within the TX-03A Area. The results are presented in Table 5 along with the standard groundwater stabilization parameters, which are collected from monitoring wells quarterly after completion of purging and prior to collection of groundwater samples.

### **3.3 Analytical Results for the Groundwater Performance and Confirmational Monitoring**

This section presents analytical results for the performance and compliance monitoring events conducted in 2022. Groundwater samples were collected during the fourth quarter of 2022 from the following monitoring wells in accordance with Table 2.

- Background well MW-206A
- Point of compliance (POC) wells MW-213 and MW-214
- Sentry wells MW-102, MW-104, MW-201, MW-204, MW-311 through MW-315, MW-05, MW-111, MW-112A, SH-04, MW-105, TX-04, and TX-06A
- General compliance wells MW-101, MW-301, MW-303, MW-309, and TES-MW-1
- Natural attenuation performance wells MW-202, MW-203, MW-302, MW-304, MW-307, MW-208, MW-310, MW-311, MW-312, and TX-03A

Monitoring wells at the Site were monitored in 2022 monthly, quarterly, semiannually, or annually according to Table 2. Monitoring wells MW-311 and MW-312 are identified as both natural attenuation performance wells and sentry wells.

The 2022 and historic groundwater sample results are included on Tables 6 and 7 and are summarized in the following subsections. The gasoline and diesel results for 2022 are included on Figure 9, and the benzene results are included on Figure 10. Cleanup level exceedances are highlighted in red on Figures 9 and 10.

### 3.3.1 Background Monitoring Well Results

A groundwater sample was collected from background monitoring well MW-206A in December 2022. The background sample was analyzed for BTEX, gasoline range hydrocarbons (gasoline), diesel range hydrocarbons (diesel), and motor oil range hydrocarbons (oil). The results are presented on Table 6.

TPHd and TPHo were detected at concentrations of 0.264 milligrams per liter (mg/L) and 0.575 mg/L, respectively. Other analytes were not detected. Detections and reporting limits are below the applicable clean up levels.

### 3.3.2 POC Well Results

Groundwater samples were collected from POC wells MW-213 and MW-214 in June and December 2022. The groundwater samples from the POC wells were analyzed for BTEX, gasoline, diesel, oil, and cPAHs. The results for the two monitoring wells are presented within Tables 6 and 7.

During the June 2022 event TPHd and TPHo were detected at estimated concentrations (J-flagged) of 0.181 mg/L (J) and 0.135 mg/L (J) at MW-214, respectively and 0.163 mg/L (J) of TPHd at MW-213. TPHo was not detected in MW-213 during the June 2022 event. During the December 2022 event, TPHd was detected at a concentration of 0.270 mg/L in MW-213 and 0.367 mg/L in MW-214 and TPHo was detected at estimated concentrations (J-flagged) of 0.268 mg/L (J) at MW-213 and 0.275 mg/L (J) at MW-214.

Benzo(a)-pyrene and chrysene were reported as estimated concentrations of 0.0000123 mg/L (J) and 0.0000148 mg/L (J) in well MW-214 during the June 2022 event. No other cPAHs were detected during the June or December 2022 events. All reporting limits and estimated concentrations detected were below the applicable cleanup levels.

### 3.3.3 Sentry Monitoring Results

Sentry wells include MW-05, MW-102, MW-104, MW-105, MW-111, MW-112A, MW-201, MW-204, MW-311 through MW-315, SH-04, TX-04, and TX-06A. The following subsections summarize the results in the sentry wells characterizing groundwater flowing from beneath the North and Main Tank Farms.

#### 3.3.3.1 North Tank Farm (included in the TX-03A Area)

Monitoring wells MW-201 and MW-204 are representative sampling points for assessing the quality of groundwater flowing across the northern boundary of the North Tank Farm. The groundwater samples were analyzed for BTEX, gasoline, diesel, and oil. The results for both wells presented in Table 6.

No analytes were detected in sentry wells MW-201 and MW-204 at concentrations above the cleanup levels.

#### 3.3.3.2 Main Tank Farm – Northern Boundary (included in the TX-03A Area)

Historically, monitoring well TX-03A was the representative sampling point for assessing the quality of groundwater flowing across the northern boundary of the Main Tank Farm. However, the investigation within the TX-03A has expanded with the installation of additional monitoring wells as discussed in Section 1.2.2.

Monitoring wells MW-102 and MW-311 through MW-315 are additional sentry wells used for the characterization of the northern boundary of the Main Tank Farm. Groundwater samples were collected from MW-102 in December 2022, MW-314 in March, June, and September, and from MW-311, MW-312, and MW-313 in March, June, September, and December 2022. MW-314 was not accessible during the fourth quarter event due to a car parked on top of the well.

The groundwater samples from the six sentry wells were all analyzed for BTEX and gasoline, and the groundwater samples from MW-102 and MW-313 through MW-315 were also analyzed for diesel and oil. Results are summarized in Table 6.

No analytes were detected above the cleanup levels at MW-102, MW-313, and MW-314.



Concentrations of gasoline exceeded the cleanup level of 1 milligram per liter (mg/L) in wells MW-311 and MW-312 during all four quarters. The maximum detected concentration in monitoring well MW-311 was during the June event at 2.05 mg/ and the maximum concentration in MW-312 was 2.77 mg/L during the first quarter event. TPHg concentrations at MW-312 continued to decline in the second, third and fourth quarter events. Gasoline concentrations exceeded the cleanup level of 1 mg/L in monitoring well MW-315 during first, second and third quarters events of 2022. The maximum detected concentration of gasoline in monitoring well MW-315 during March 2022 at 2.41 mg/L. While some of the wells had exceedances of gasoline as described above, benzene was below clean up levels in all wells in all four quarters of 2022. TPHg exceedances are highlighted in red on Figures 9 and 10.

### **3.3.3.3 Main Tank Farm – Eastern and Western Boundaries**

Monitoring wells TX-04 and TX-06A were designated as the sentry wells for the eastern and western boundaries of the Main Tank Farm. Groundwater samples were collected from these two monitoring wells in December 2022 and analyzed for BTEX, gasoline, diesel, and oil.

No analytes were detected above the cleanup levels at TX-04 and TX-06A (Table 6).

### **3.3.3.4 Main Tank Farm – Southern Boundary (includes the SH-04 Area)**

SH-04 Area monitoring wells MW-05, MW-104, MW-111, MW-112A, and SH-04 as well as monitoring well MW-105, located to the west of the SH-04 Area, were designated as the sentry wells for the southern boundary of the Main Tank Farm.

- MW-05, MW-111, MW-112A, and SH-04 were sampled in a special coordinated event in April, and during the standard monitoring events in June and December 2022 for BTEX, gasoline, diesel, and oil.
- MW-104 was sampled in a special coordinated event in April, and during the standard monitoring events in June and December 2022 for total lead, gasoline, diesel, and oil.
- MW-105 was sampled in December 2022 for total lead, BTEX, gasoline, diesel, and oil.

The results are presented in Table 6, and the cleanup level exceedances for these five sentry wells are as follows:

- Gasoline concentrations exceeded the cleanup level of 1 mg/L in April, June, and December at MW-112A with a maximum concentration of 1.87 mg/L and in SH-04 in April at a concentration of 1.17 mg/L (Figure 9).
- Lead was reported at an estimated concentration of 0.0143 mg/L (J) in MW-105 during the December 2022 event.

## **4. TX-03A Area Investigation**

The TX-03A Area is shown on Figure 2. The TX-03A Area, which includes the North Tank Farm, was identified for additional evaluation in the third EPA 5-Year review of the Harbor Island Superfund Site (EPA, 2010), and active remediation was recommended in the fourth EPA 5-year review (EPA, 2015). This section summarizes the other activities conducted in the TX-03A Area during 2022 in addition to the compliance monitoring.

### **4.1 TX-03A Area Groundwater Flow**

Localized groundwater elevation contour maps for the shallow depth interval beneath the TX-03A Area using the March, June, September, and December 2022 groundwater elevations are presented as Figures 3 through 6, respectively. Groundwater in the TX-03A Area flows to the north-northwest across the north end of the Main Tank Farm across SW Florida Street.

## 4.2 Bio Sparging System

Construction of the bio sparging system was completed in May 2017, and the system was started on May 25, 2017. Details of the system installation and the operation and maintenance plan are provided in AECOM's *Bio Sparging Completion Technical Memorandum*, dated March 28, 2018. The location of the bio sparging system, including the air-lines and a total of six main trunk lines, is shown on Figure 2.

The bio sparge system operated until December 6, 2019, when it was shutdown to support the fourth quarter sampling event, and the system has remained off for rebound testing.

## 4.3 TX-03A Area Groundwater Analytical Results

The TX-03A Area is evaluated by North Tank Farm monitoring wells (MW-201 through MW-204 and MW-206A) and TX-03A Area monitoring wells (MW-101, MW-102, MW-301 through MW-304, MW-307 through MW-315, TES-MW-1, and TX-03A). Groundwater samples from these monitoring wells were analyzed for one or more of the following: gasoline, diesel, oil, BTEX, natural attenuation parameters, and lead (Table 2). The results are included in Tables 5 and 6. The BTEX and petroleum hydrocarbon concentrations detected in groundwater in the TX-03A Area in 2022 are summarized below. The gasoline, diesel, and benzene concentration are shown on Figures 9 and 10. The BTEX and gasoline concentration trends for monitoring well TX-03A are shown on Figure 11.

Note: To support effectiveness monitoring of the bio sparging program, the monitoring program within the TX-03A Area was modified in 2017 to include the quarterly sampling of monitoring wells MW-302, MW-303, and MW-304. Quarterly groundwater sampling began in June 2017 for MW-302 and MW-304 and began in December 2017 for MW-303.

### 4.3.1 Petroleum Hydrocarbon Results

Gasoline was analyzed in 21 monitoring wells located in the TX-03A Area during the monitoring period (Table 2). Diesel and oil were analyzed in 16 monitoring wells located in the TX-03A Area during the monitoring period (Table 2). Well MW-314 was parked over during the December event thus inaccessible for sampling. Gasoline was not analyzed in well MW-301 during the December event, due to insufficient sample volume.

Gasoline exceeded the cleanup level of 1 mg/L during one or more sampling events in monitoring wells MW-202, MW-302, MW-303, MW-307, MW-310, MW-311, MW-312, MW-315, and TX-03A at concentrations ranging from 1.05 mg/L (TX-03A in December 2022) to 3.69 mg/L (MW-307 in March 2022). Gasoline concentrations have decreased to below cleanup levels in 2022 at wells MW-301 and MW-308.

Mann-Kendall trend analysis was completed by the EPA and summarized in their fifth 5-year review (EPA, 2020). Their review noted that wells MW-312 and MW-315 showed increasing trends for TPHg and benzene above cleanup levels, but that concentrations will likely decline as the remediated groundwater migrates downgradient.

Reported diesel and oil concentrations exceeded the clean-up standards of 10 mg/L only in monitoring well MW-202 during the December 2022 event with a concentration of 22.1 mg/L TPHd.

### 4.3.2 BTEX Results

BTEX constituents were analyzed in 20 monitoring wells located in the TX-03A Area. Benzene concentrations exceeded the cleanup level of 0.071 mg/L in monitoring wells MW-303, MW-304, MW-307, and TX-03A at concentrations ranging from 0.0820 mg/L (MW-307 in December 2022) to 0.216 mg/L (MW-303 in September 2022). Benzene concentrations are shown on Figure 10 with the cleanup level exceedances highlighted in red.

Toluene and ethylbenzene detections were all below the cleanup levels of 200 mg/L and 29 mg/L, respectively. A cleanup level for xylenes has not been established for the site.

## 4.4 Bio Sparging System Rebound Evaluation

The bio sparging system operated from May 2017 through December 2019. Thirteen monitoring events (one event in 2019, four in 2020, four in 2021, and four in 2022) have been completed since the system was shutdown. Wells MW-301, MW-302, MW-303, MW-304, MW-307, MW-308, MW-310, and TX-03A are closest to the bio sparge lines (Figure 2).

Since the system was shutdown, gasoline, diesel, and BTEX concentrations have remained generally below respective cleanup levels in wells MW-301, MW-302, MW-304, MW-308, MW-310, and TX-03A with periodic exceedances. Well MW-301 and MW-304 have had only one exceedance of the gasoline or benzene cleanup levels, respectively, in the thirteen events, and wells MW-308 has only had exceedances of the gasoline and or benzene cleanup levels in two of the thirteen events. MW-310 and TX-03A only had exceedances of the gasoline and or benzene cleanup levels in three of the thirteen events.

In well MW-302, BTEX concentrations have remained below respective cleanup levels, and gasoline concentrations have exceeded cleanup levels in six of the thirteen events since the system was shutdown. In wells MW-303 and MW-307, gasoline concentrations have exceeded cleanup objectives in twelve of the thirteen events each, and benzene in four of the thirteen events for MW-303 and eleven of the thirteen for MW-307. Gasoline concentrations in the three wells remain significantly lower than concentrations reported between 2012 and 2016, prior to system operation. Maximum gasoline concentrations in wells MW-302, MW-303, and MW-307 in the thirteen events since shutdown were 1.85 mg/L (MW-302, April 2021), 4.07 mg/L (MW-303, April 2021), and 4.06J mg/L (MW-307, April 2021), compared to maximum historical concentrations of 5.86 mg/L (MW-302, April 2014), 12.8 mg/L (MW-303, February 2013), and 10.9 mg/L (MW-307, November 2012).

Based on these results, GHD recommends continued rebound monitoring and if trends continue to increase in the first and second quarter of 2023 an evaluation of the biosparge system condition will be conducted in preparation for the system to be restarted, if warranted.

## 5. Pump House Area Investigation

This area is located around the Pump House, south of SH-04 area. MW-113, MW-114, and MW-115 were installed in June 2022 to assess potential groundwater impacts from the 2020 gasoline release.

### 5.1 Groundwater Flow

Groundwater elevations were monitored in second and fourth quarters of 2022. Groundwater flow direction is to the generally to the southeast (Figure 7 and Figure 8).

### 5.2 Pump House Area Groundwater Analytical Results

In June and December 2022 groundwater samples were collected from MW-113, MW-114, MW-115 and analyzed for the following petroleum hydrocarbons and BTEX (Table 2).

#### 5.2.1 Petroleum Hydrocarbon Results

Concentrations of TPHg, TPHd, and TPHo in MW-113, MW-114, and MW-115 were all below the cleanup goals of 1 mg/L (TPHg) and 10 mg/L (TPHd and TPHo) during the June and December 2022 events. While TPHg was reported as not detected in MW-113 during the June event, due to dilution, the reporting limit for TPHg was elevated to <15 mg/L which exceeds the cleanup goal.

## 5.2.2 BTEX Results

BTEX constituents were not detected in groundwater samples in wells MW-114 and MW-115 in either June or December 2022 events. These wells are located to the south and west of the pump house.

Groundwater samples from MW-113, nearest and to the east of the pump house, in June 2022, had detections of toluene, ethylbenzene and total xylenes at concentrations that are below cleanup levels (where established). By December 2022, ethylbenzene and total xylenes were not detected and the toluene concentration decreased and remains below the cleanup level. Benzene was detected in MW-113 in June 2022 at a concentration of 0.156 mg/L which exceeds the cleanup level (0.071 mg/L). By December 2022, the benzene concentration had reduced to 0.0650 mg/L, which is below the cleanup level.

GHD recommends removing wells MW-113, MW-114, and MW-115 from the monitoring program if the concentrations of petroleum hydrocarbons and BTEX remain below the cleanup levels throughout 2023.

## 6. Summary

Based on the analytical results of the January through December 2022 monitoring period, GHD concludes the following:

- Groundwater elevations at the Site generally appear to be consistent with historical levels. Elevation data will be collected in association with all monitoring events in 2022. GHD proposes no changes to the monitoring schedule, which is summarized in Table 2.
- Measurable product from an older release is still present in the Shoreline Manifold Area. During the past year, measurable product was observed in monitoring well MW-210. Absorbent socks are present for product recovery in monitoring wells MW-210 and MW-212. Given the presence of product, absorbent socks will remain in monitoring wells MW-210 and MW-212, and performance product monitoring will continue until discussed further with Ecology. The performance product monitoring schedule is included in Table 2.
- Natural attenuation parameters were collected annually from eight monitoring wells (MW-302, MW-304, MW-307, MW-308, MW-310, MW-311, MW-312, and TX-03A) on the northern boundary of the Main Tank Farm and two monitoring wells (MW-202 and MW-203) in the North Tank Farm. In support of evaluating natural attenuation and the bio sparging system, no changes to the natural attenuation monitoring program are proposed in this report. The groundwater monitoring program is summarized in Table 2.
- Of the sentry wells, cleanup level exceedances included gasoline detections in MW 112A, MW 311, MW-312, MW-315, and SH 04. Benzene no longer exceeds cleanup levels in these wells.
- SH 04 Area: Concentrations of benzene and gasoline in monitoring well MW-104 remain below the cleanup levels in 2022. Concentrations are generally consistent with historical results.
- TX 03A Area: Concentrations of benzene and gasoline have decreased from pre bio sparge system operation levels in source area wells but continue to increase and still exceed cleanup levels in wells MW-302, MW-303, and MW-307. GHD recommends continued rebound monitoring and an assessment of the condition of the biosparge system if concentrations continue to increase by second quarter 2023.
- Wells MW-113, MW-114, and MW-115 were sampled in June and December as part of the pump house release investigation. TPH and BTEX were either not detected and or below the cleanup levels apart from groundwater from MW-113. In June, the benzene concentration exceeded the cleanup level however the concentration had declined to below clean up levels in December 2022. Currently, all analyzed constituents in MW-113, MW-114, and MW-115 are below cleanup levels. GHD recommends removing them from the monitoring program if the concentrations remain below cleanup levels during the second and fourth quarter monitoring events in 2023.

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# Tables

**Table 1**  
**Groundwater Cleanup Levels**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

<b>Constituent</b>	<b>Cleanup Level<sup>a</sup> (mg/L)</b>
Arsenic	0.036 <sup>b</sup>
Benzene	0.071
Benzo(a)anthracene	0.000031
Benzo(a)pyrene	0.000031
Benzo(b)fluoranthene	0.000031
Benzo(k)fluoranthene	0.000031
Chrysene	0.000031
Dibenzo(a,h)anthracene	0.000031
Ethylbenzene	29.0
Indeno(1,2,3-cd)pyrene	0.000031
Lead	0.0058
TPH-G	1.0
TPH-D	10
TPH-O	10
Toluene	200.0

**Notes:**

<sup>a</sup> Cleanup levels per the Consent Decree (Ecology, 1998), except where noted.

<sup>b</sup> Cleanup level based on ambient water quality criteria (chronic criteria for the protection of aquatic organisms) per WAC 173-201A-040.

mg/L = milligrams per liter

TPH-D = total petroleum hydrocarbons as diesel

TPH-G = total petroleum hydrocarbons as gasoline

TPH-O = total petroleum hydrocarbons as oil

**Table 2  
Groundwater Monitoring Program  
Shell Harbor Island Terminal  
Seattle, Washington**

Well	Schedule								Analysis						Compliance Monitoring Well				Well Construction		Comments and Deviations from Monitoring Program
	1Q		2Q		3Q		4Q (2nd Semi-Annual & Annual)		Total Lead	BTEX	TPH-Gx	TPH-Dx	PAHs	NA Parameters	Performance Product	NA Performance	Groundwater Quality Confirmation	Sentry	Total Depth (ft bgs)	Screened Interval (ft bgs)	
	Gauge	Sample	Gauge	Sample	Gauge	Sample	Gauge	Sample													
<b>TX-03A Area - North Tank Farm</b>																					
MW-201	G		G		G		G	S		X	X	X					X	15	5.0 - 14.5		
MW-202	G		G	S	G		G	S		X <sup>A</sup>	X	X		X <sup>A</sup>		X		15	5.0 - 14.5		
MW-203	G		G	S	G		G	S			X	X		X <sup>A</sup>		X		15	5.0 - 14.5		
MW-204	G		G		G		G	S		X	X	X			X		X	15	5.0 - 14.5		
MW-206A	G		G		G		G	S		X	X	X					X-BGD	15	5.0 - 14.5		
<b>TX-03A Area - Excluding the North Tank Farm</b>																					
MW-101	G		G		G		G	S		X	X	X						15	5.0 - 14.5		
MW-102	G		G		G		G	S		X	X	X					X	15	5.0 - 14.5		
MW-301	G	S	G	S	G	S	G	S		X	X	X						15	5.0 - 15.0		
MW-302	G	S	G	S	G	S	G	S		X	X	X <sup>A</sup>		X <sup>A</sup>		X		15	5.0 - 15.0		
MW-303	G	S	G	S	G	S	G	S		X	X	X <sup>A</sup>		X <sup>A</sup>		X		15	5.0 - 15.0		
MW-304	G	S	G	S	G	S	G	S		X	X	X <sup>A</sup>		X <sup>A</sup>		X		15	5.0 - 15.0		
MW-307	G	S	G	S	G	S	G	S		X	X	X <sup>S</sup>		X <sup>A</sup>		X		15	5.0 - 15.0		
MW-308	G	S	G	S	G	S	G	S		X	X	X		X <sup>A</sup>		X		15	5.0 - 15.0		
MW-309	G		G	S	G		G	S		X	X	X <sup>A</sup>						15	5.0 - 15.0		
MW-310	G	S	G	S	G	S	G	S		X	X	X <sup>A</sup>		X <sup>A</sup>		X		15	5.0 - 15.0		
MW-311	G	S	G	S	G	S	G	S		X	X	X		X <sup>A</sup>		X		15	5.0 - 15.0		
MW-312	G	S	G	S	G	S	G	S		X	X	X		X <sup>A</sup>		X		15	5.0 - 15.0		
MW-313	G	S	G	S	G	S	G	S		X	X	X					X	15	5.0 - 15.0		
MW-314	G	S	G	S	G	S	G	S		X	X	X					X	15	5.0 - 15.0		
MW-315	G	S	G	S	G	S	G	S		X	X	X					X	15	5.0 - 15.0		
TES-MW-1	G		G		G		G	S		X	X	X						18	3.0 - 18.0		
TX-03A	G	S	G	S	G	S	G	S		X	X	X <sup>A</sup>		X <sup>A</sup>		X		16	6.0 - 16.0		
<b>SH-04 Area</b>																					
MW-05			G	S			G	S		X	X	X					X	15	5.0 - 15.0		
MW-111			G	S			G	S		X	X	X					X	15	5.0 - 14.5		
MW-112A			G	S			G	S		X	X	X					X	15	5.5 - 15.0		
SH-04			G	S			G	S		X	X	X					X	16	6.0 - 16.0		
MW-104			G	S			G	S	X		X	X					X	15	5.0 - 14.5		
<b>Pump House Area Wells</b>																					
MW-113			G	S			G	S		X	X	X						15	5.0-15.0		
MW-114			G	S			G	S		X	X	X						15	5.0-15.0		
MW-115			G	S			G	S		X	X	X						15	5.0-15.0		
<b>Additional Compliance Monitoring Wells</b>																					
MW-105							G	S	X	X	X	X					X	15	5.0 - 14.5		
TX-04							G	S		X	X	X					X	16	6.0 - 16.0		
TX-06A							G	S		X	X	X					X	15.8	5.5 - 15.5		
<b>Shoreline Manifold Area</b>																					
MW-208	MG		MG		MG		MG							X				16.5	5.0 - 14.5		
MW-210	MG		MG		MG		MG							X				15	unknown		
MW-211	MG		MG		MG		MG							X				13	5.0 -13.0		
MW-212	MG		MG		MG		MG							X				12	unknown		
MW-213			G	S			G	S		X	X	X	X				X-POC	30	30 - 40		
MW-214			G	S			G	S		X	X	X	X				X-POC	30	30 - 40		



**Table 2  
Groundwater Monitoring Program  
Shell Harbor Island Terminal  
Seattle, Washington**

Well	Schedule								Analysis										Compliance Monitoring Well				Well Construction		Comments and Deviations from Monitoring Program
	1Q		2Q		3Q		4Q (2nd Semi-Annual & Annual)		Total Lead	BTEX	TPH-Gx	TPH-Dx	PAHs	NA Parameters	Performance Product	NA Performance	Groundwater Quality Confirmation	Sentry	Total Depth (ft bgs)	Screened Interval (ft bgs)					
	Gauge	Sample	Gauge	Sample	Gauge	Sample	Gauge	Sample																	
<b>Additional Wells (Included in Annual Inspection only)</b>																									
ASW-1																			14	13 - 14	Air sparge well				
PSV-1																			4	3 - 4	Soil gas well				
PSV-2																			4	3 - 4	Soil gas well				
SVE-1																			4	3 - 4	Soil vapor extraction well				
TW-01																			14	4 - 14	Pumping test well				
DP-06																									
MW-06																									
MW-103																									
MW-106																									
MW-107																									
MW-108																									
MW-109																									
MW-110																									
MW-205																									
MW-209																									
MW-305																									
MW-306																									
AMW-8																									
AMW-X																									

**Notes:**

**Red** = Modifications to the program since the November 2008 proposed changes which were established in correspondence between URS and Ecology. Additional modifications to incorporate Pump House Area Wells per GHD's October 14, 2022 Site Investigation Report.

1Q = March

2Q = June

3Q = August

4Q = December

Addtl = Additional

BGD = Background well with respect to confirmational sampling

BTEX = benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8260B

Dec = December

DTP = Depth to product

ft bgs = below ground surface

G = indicates a well to be gauged during that event

MG = monthly gauge

NA = natural attenuation

Natural Attenuation Parameters: Nitrate and Nitrite by EPA Method 353.2, Sulfate by EPA Method 300.0, Dissolved Iron and Manganese by EPA Method 6010B/6020A (Lab Filtered), and Ferrous Iron collected in the field.

PAHs = polycyclic aromatic hydrocarbons by EPA Method 8270C-SIM

POC = Conditional Point of Compliance Well

Q = quarter

S = indicates a well to be sampled during that event

Sept = September

Total Lead by EPA Method 6020

TPH-Dx = total petroleum hydrocarbons as diesel by NWTPH-Dx

TPH-Gx = total petroleum hydrocarbons as gasoline by NWTPH-Gx WLM = Water level measurement

X = indicates a well to be analyzed for that analyte

X<sup>A</sup> = indicates a well to be analyzed for that analyte during the annual sampling event only

X<sup>S</sup> = indicates a well to be analyzed for that analyte during both semi-annual sampling events only

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-05	04/06/93	10.39	6.12	4.27
MW-05	05/13/93	10.39	5.92	4.47
MW-05	06/10/93	10.39	5.98	4.41
MW-05	07/08/93	10.39	6.23	4.16
MW-05	08/03/93	10.39	6.50	3.89
MW-05	10/08/93	10.39	7.22	3.17
MW-05	11/05/93	10.39	7.42	2.97
MW-05	12/03/93	10.39	7.38	3.01
MW-05	01/05/94	10.39	6.64	3.75
MW-05	02/04/94	10.39	6.54	3.85
MW-05	08/28/95	10.39	Not Measured	Not Measured
MW-05	09/27/95	10.39	8.35	2.04
MW-05	04/27/99	10.39	8.07	2.32
MW-05	07/14/99	10.39	5.88	4.51
MW-05	10/18/99	10.39	7.00	3.39
MW-05	04/05/00	10.39	5.05	5.34
MW-05	07/18/00	10.39	6.30	4.09
MW-05	10/02/00	10.39	7.15	3.24
MW-05	01/22/01	10.39	6.50	3.89
MW-05	07/23/01	10.39	7.43	2.96
MW-05	07/18/02	10.39	7.10	3.29
MW-05	01/30/03	10.39	5.84	4.55
MW-05	04/15/03	10.39	5.80	4.59
MW-05	07/17/03	10.39	7.12	3.27
MW-05	10/15/03	10.39	7.78	2.61
MW-05	10/23/03	10.39	7.80	2.59
MW-05	01/13/04	10.39	5.65	4.74
MW-05	04/19/04	13.57	6.35	7.22
MW-05	07/27/04	13.57	7.32	6.25
MW-05	10/18/04	13.57	7.36	6.21
MW-05	01/24/05	13.57	6.26	7.31
MW-05	04/18/05	13.57	6.27	7.30
MW-05	07/12/05	13.57	6.85	6.72
MW-05	10/18/05	13.57	7.60	5.97
MW-05	01/25/06	13.57	4.78	8.79
MW-05	04/25/06	13.57	5.90	7.67
MW-05	10/11/06	13.57	7.62	5.95
MW-05	11/19/08	13.57	8.23	5.34
MW-05	11/16/09	13.57	6.44	7.13
MW-05	10/29/10	13.57	6.57	7.00
MW-05	10/25/11	13.57	7.25	6.32
MW-05	05/30/12	13.57	5.86	7.71
MW-05	08/23/12	13.57	6.63	6.94
MW-05	11/27/12	13.57	5.30	8.27

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-05	05/16/13	13.57	5.72	7.85
MW-05	11/07/13	13.57	6.49	7.08
MW-05	04/22/14	13.57	5.25	8.32
MW-05	12/08/15	13.57	5.42	8.15
MW-05	05/04/16	13.57	5.22	8.35
MW-05	12/14/16	13.57	4.78	8.79
MW-05	06/13/17	13.57	5.45	8.12
MW-05	12/04/17	13.57	5.64	7.93
MW-05	06/12/18	13.57	6.43	7.14
MW-05	12/17/18	13.57	6.27	7.30
MW-05	05/15/19	13.57	6.69	6.88
MW-05	12/09/19	13.57	7.09	6.48
MW-05	06/29/20	13.57	6.30	7.27
MW-05	12/14/20	13.57	6.31	7.26
MW-05	04/12/21	13.57	5.40	8.17
MW-05	06/14/21	13.57	6.27	7.30
MW-05	12/15/21	13.57	5.00	8.57
MW-05	04/18/22	13.57	5.35	8.22
MW-05	06/27/22	13.57	5.73	7.84
MW-05	12/12/22	13.57	5.95	7.62
MW-101	04/06/93	15.14	10.48	4.66
MW-101	05/13/93	15.14	10.32	4.82
MW-101	06/10/93	15.14	10.45	4.69
MW-101	07/08/93	15.14	10.75	4.39
MW-101	08/03/93	15.14	11.09	4.05
MW-101	09/08/93	15.14	11.52	3.62
MW-101	10/08/93	15.14	11.89	3.25
MW-101	11/05/93	15.14	12.13	3.01
MW-101	12/03/93	15.14	12.14	3.00
MW-101	01/05/94	15.14	11.16	3.98
MW-101	02/04/94	15.14	11.02	4.12
MW-101	08/28/95	15.14	11.25	3.89
MW-101	09/27/95	15.14	11.49	3.65
MW-101	04/27/99	15.14	9.22	5.92
MW-101	07/14/99	15.14	10.73	4.41
MW-101	10/18/99	15.14	11.78	3.36
MW-101	01/11/00	15.14	9.73	5.41
MW-101	04/05/00	15.14	9.85	5.29
MW-101	07/18/00	15.14	11.01	4.13
MW-101	10/02/00	15.14	11.85	3.29
MW-101	01/22/01	15.14	11.67	3.47
MW-101	07/23/01	15.14	12.33	2.81
MW-101	10/16/01	15.14	13.15	1.99

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-101	04/23/02	15.14	10.81	4.33
MW-101	07/18/02	15.14	11.88	3.26
MW-101	10/23/02	15.14	12.73	2.41
MW-101	01/30/03	15.14	10.09	5.05
MW-101	04/15/03	15.14	10.36	4.78
MW-101	07/17/03	15.14	11.94	3.20
MW-101	10/15/03	15.14	12.68	2.46
MW-101	01/13/04	15.14	10.06	5.08
MW-101	04/19/04	18.21	11.13	7.08
MW-101	07/27/04	18.21	12.07	6.14
MW-101	10/18/04	18.21	12.19	6.02
MW-101	01/24/05	18.21	10.61	7.60
MW-101	04/18/05	18.21	10.86	7.35
MW-101	07/12/05	18.21	11.61	6.60
MW-101	10/18/05	18.21	12.45	5.76
MW-101	01/25/06	18.21	9.21	9.00
MW-101	04/25/06	18.21	10.75	7.46
MW-101	10/11/06	18.21	12.39	5.82
MW-101	11/18/08	18.21	11.45	6.76
MW-101	11/16/09	18.21	10.95	7.26
MW-101	10/26/10	18.21	11.36	6.85
MW-101	10/25/11	18.21	12.15	6.06
MW-101	05/30/12	18.21	10.79	7.42
MW-101	06/13/12	18.21	10.90	7.31
MW-101	09/26/12	18.21	12.04	6.17
MW-101	11/27/12	18.21	9.90	8.31
MW-101	02/22/13	18.21	10.24	7.97
MW-101	05/16/13	18.21	10.89	7.32
MW-101	09/06/13	18.21	11.99	6.22
MW-101	11/07/13	18.21	11.78	6.43
MW-101	04/22/14	18.21	10.16	8.05
MW-101	11/04/14	18.21	10.70	7.51
MW-101	03/10/15	18.21	10.31	7.90
MW-101	05/15/15	18.21	10.03	8.18
MW-101	07/29/15	18.21	11.86	6.35
MW-101	12/10/15	18.21	9.12	9.09
MW-101	02/23/16	18.21	8.81	9.40
MW-101	05/03/16	18.21	10.29	7.92
MW-101	08/30/16	18.21	11.29	6.92
MW-101	12/14/16	18.21	9.62	8.59
MW-101	03/13/17	18.21	8.87	9.34
MW-101	06/13/17	18.21	10.53	7.68
MW-101	08/22/17	18.21	11.63	6.58
MW-101	12/04/17	18.21	10.18	8.03

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-101	03/06/18	18.21	10.05	8.16
MW-101	06/12/18	18.21	11.03	7.18
MW-101	09/05/18	18.21	11.97	6.24
MW-101	12/17/18	18.21	10.98	7.23
MW-101	03/18/19	18.21	10.17	8.04
MW-101	05/15/19	18.21	10.58	7.63
MW-101	09/17/19	18.21	12.03	6.18
MW-101	12/09/19	18.21	11.82	6.39
MW-101	04/27/20	18.21	10.53	7.68
MW-101	06/29/20	18.21	11.15	7.06
MW-101	09/21/20	18.21	12.00	6.21
MW-101	12/14/20	18.21	11.10	7.11
MW-101	04/12/21	18.21	10.20	8.01
MW-101	06/14/21	18.21	11.05	7.16
MW-101	09/22/21	18.21	12.00	6.21
MW-101	12/14/21	18.21	9.41	8.80
MW-101	03/28/22	18.21	9.67	8.54
MW-101	06/27/22	18.21	11.22	6.99
MW-101	09/19/22	18.21	11.79	6.42
MW-101	12/12/22	18.21	10.70	7.51
MW-102	04/06/93	12.51	7.99	4.52
MW-102	05/13/93	12.51	7.82	4.69
MW-102	06/10/93	12.51	7.80	4.71
MW-102	07/08/93	12.51	8.32	4.19
MW-102	08/03/93	12.51	8.68	3.83
MW-102	09/08/93	12.51	9.03	3.48
MW-102	10/08/93	12.51	9.44	3.07
MW-102	11/05/93	12.51	9.62	2.89
MW-102	12/03/93	12.51	9.42	3.09
MW-102	01/05/94	12.51	8.50	4.01
MW-102	02/04/94	12.51	8.52	3.99
MW-102	08/28/95	12.51	8.86	3.65
MW-102	09/27/95	12.51	9.17	3.34
MW-102	04/27/99	12.51	6.68	5.83
MW-102	07/14/99	12.51	8.40	4.11
MW-102	10/18/99	12.51	9.38	3.13
MW-102	01/11/00	12.51	7.43	5.08
MW-102	04/05/00	12.51	7.55	4.96
MW-102	07/18/00	12.51	8.37	4.14
MW-102	10/02/00	12.51	9.45	3.06
MW-102	01/22/01	12.51	9.12	3.39
MW-102	07/23/01	12.51	9.91	2.60
MW-102	04/23/02	12.51	8.17	4.34

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-102	07/18/02	12.51	9.44	3.07
MW-102	07/18/02	12.51	9.44	3.07
MW-102	10/23/02	12.51	10.05	2.46
MW-102	01/28/03	12.51	7.20	5.31
MW-102	04/15/03	12.51	7.75	4.76
MW-102	07/17/03	12.51	9.51	3.00
MW-102	10/15/03	12.51	10.11	2.40
MW-102	01/13/04	12.51	7.49	5.02
MW-102	04/19/04	15.60	8.72	6.88
MW-102	07/27/04	15.60	9.62	5.98
MW-102	10/18/04	15.60	9.54	6.06
MW-102	01/24/05	15.60	7.92	7.68
MW-102	04/18/05	15.60	8.20	7.40
MW-102	07/12/05	15.60	9.10	6.50
MW-102	10/18/05	15.60	9.87	5.73
MW-102	01/25/06	15.60	3.94	11.66
MW-102	04/25/06	15.60	8.24	7.36
MW-102	10/11/06	15.60	9.84	5.76
MW-102	11/19/08	15.60	8.79	6.81
MW-102	11/16/09	15.60	8.10	7.50
MW-102	10/28/10	15.60	8.64	6.96
MW-102	10/25/11	15.60	9.59	6.01
MW-102	05/30/12	15.60	8.27	7.33
MW-102	06/13/12	15.60	8.32	7.28
MW-102	09/26/12	15.60	9.53	6.07
MW-102	11/27/12	15.60	7.03	8.57
MW-102	02/22/13	15.60	7.88	7.72
MW-102	05/16/13	15.60	8.40	7.20
MW-102	09/06/13	15.60	9.36	6.24
MW-102	11/07/13	15.60	9.18	6.42
MW-102	04/22/14	15.60	7.69	7.91
MW-102	11/04/14	15.60	7.91	7.69
MW-102	03/10/15	15.60	7.90	7.70
MW-102	05/15/15	15.60	8.47	7.13
MW-102	07/29/15	15.60	9.39	6.21
MW-102	12/10/15	15.60	6.53	9.07
MW-102	02/23/16	15.60	6.78	8.82
MW-102	05/03/16	15.60	7.92	7.68
MW-102	08/30/16	15.60	8.98	6.62
MW-102	12/14/16	15.60	7.27	8.33
MW-102	03/13/17	15.60	6.75	8.85
MW-102	06/13/17	15.60	8.10	7.50
MW-102	08/22/17	15.60	9.20	6.40
MW-102	12/04/17	15.60	7.32	8.28

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-102	03/06/18	15.60	8.61	6.99
MW-102	06/12/18	15.60	9.02	6.58
MW-102	09/05/18	15.60	9.47	6.13
MW-102	12/17/18	15.60	8.20	7.40
MW-102	03/18/19	15.60	7.69	7.91
MW-102	05/15/19	15.60	7.83	7.77
MW-102	09/17/19	15.60	9.36	6.24
MW-102	12/09/19	15.60	9.23	6.37
MW-102	04/27/20	15.60	7.97	7.63
MW-102	06/29/20	15.60	8.53	7.07
MW-102	09/21/20	15.60	9.48	6.12
MW-102	12/14/20	15.60	8.31	7.29
MW-102	04/12/21	15.60	7.77	7.83
MW-102	06/14/21	15.60	8.47	7.13
MW-102	09/22/21	15.60	9.39	6.21
MW-102	12/16/21	15.60	6.81	8.79
MW-102	03/28/22	15.60	7.28	8.32
MW-102	06/27/22	15.60	8.46	7.14
MW-102	09/19/22	15.60	9.44	6.16
MW-102	12/12/22	15.60	7.25	8.35
MW-104	04/06/93	10.22	5.98	4.24
MW-104	05/13/93	10.22	6.79	3.43
MW-104	06/10/93	10.22	5.85	4.37
MW-104	07/08/93	10.22	6.13	4.09
MW-104	08/03/93	10.22	6.38	3.84
MW-104	09/08/93	10.22	6.72	3.50
MW-104	10/08/93	10.22	7.05	3.17
MW-104	11/05/93	10.22	7.26	2.96
MW-104	12/03/93	10.22	7.26	2.96
MW-104	01/05/94	10.22	6.64	3.58
MW-104	02/04/94	10.22	6.46	3.76
MW-104	08/28/95	10.22	6.43	3.79
MW-104	09/27/95	10.22	6.70	3.52
MW-104	04/27/99	10.22	2.41	7.81
MW-104	07/14/99	10.22	5.62	4.60
MW-104	10/18/99	10.22	6.80	3.42
MW-104	01/11/00	10.22	5.04	5.18
MW-104	04/05/00	10.22	4.80	5.42
MW-104	07/18/00	10.22	6.15	4.07
MW-104	10/02/00	10.22	7.02	3.20
MW-104	01/22/01	10.22	6.45	3.77
MW-104	07/23/01	10.22	7.39	2.83
MW-104	10/16/01	10.22	8.59	1.63

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-104	04/23/02	10.22	5.91	4.31
MW-104	07/18/02	10.22	7.07	3.15
MW-104	10/23/02	10.22	7.74	2.48
MW-104	01/28/03	10.22	6.03	4.19
MW-104	04/15/03	10.22	5.75	4.47
MW-104	07/17/03	10.22	7.08	3.14
MW-104	10/15/03	10.22	7.76	2.46
MW-104	01/13/04	10.22	5.58	4.64
MW-104	04/19/04	13.46	6.30	7.16
MW-104	07/27/04	13.46	7.25	6.21
MW-104	10/18/04	13.46	7.34	6.12
MW-104	01/24/05	13.46	6.27	7.19
MW-104	04/18/05	13.46	6.22	7.24
MW-104	07/12/05	13.46	6.81	6.65
MW-104	10/18/05	13.46	7.55	5.91
MW-104	01/25/06	13.46	4.78	8.68
MW-104	04/25/06	13.46	5.82	7.64
MW-104	10/11/06	13.46	7.54	5.92
MW-104	11/18/08	13.46	6.74	6.72
MW-104	04/08/09	13.46	6.27	7.19
MW-104	11/16/09	13.46	6.39	7.07
MW-104	04/27/10	13.46	5.45	8.01
MW-104	10/26/10	13.46	6.53	6.93
MW-104	10/25/11	13.46	7.15	6.31
MW-104	03/01/12	13.46	5.82	7.64
MW-104	05/30/12	13.46	5.74	7.72
MW-104	06/13/12	13.46	5.86	7.60
MW-104	08/23/12	13.46	6.50	6.96
MW-104	09/26/12	13.46	6.90	6.56
MW-104	11/27/12	13.46	5.24	8.22
MW-104	05/16/13	13.46	5.65	7.81
MW-104	11/07/13	13.46	6.44	7.02
MW-104	04/22/14	13.46	5.20	8.26
MW-104	11/05/14	13.46	6.02	7.44
MW-104	05/20/15	13.46	5.86	7.60
MW-104	12/09/15	13.46	5.32	8.14
MW-104	12/14/16	13.46	4.78	8.68
MW-104	06/13/17	13.46	5.41	8.05
MW-104	12/04/17	13.46	5.75	7.71
MW-104	06/12/18	13.46	5.96	7.50
MW-104	12/17/18	13.46	6.23	7.23
MW-104	05/15/19	13.46	5.97	7.49
MW-104	12/09/19	13.46	6.99	6.47
MW-104	06/29/20	13.46	6.22	7.24



**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-104	12/14/20	13.46	6.18	7.28
MW-104	04/12/21	13.46	5.30	8.16
MW-104	06/14/21	13.46	6.17	7.29
MW-104	12/15/21	13.46	4.99	8.47
MW-104	04/18/22	13.46	5.21	8.25
MW-104	06/27/22	13.46	5.62	7.84
MW-104	12/12/22	13.46	5.81	7.65
MW-105	04/06/93	9.05	4.97	4.08
MW-105	05/13/93	9.05	4.88	4.17
MW-105	06/10/93	9.05	4.83	4.22
MW-105	07/08/93	9.05	5.20	3.85
MW-105	08/03/93	9.05	5.43	3.62
MW-105	09/08/93	9.05	6.76	2.29
MW-105	10/08/93	9.05	6.06	2.99
MW-105	11/05/93	9.05	6.28	2.77
MW-105	12/03/93	9.05	6.18	2.87
MW-105	01/05/94	9.05	5.65	3.40
MW-105	02/04/94	9.05	5.63	3.42
MW-105	08/28/95	9.05	5.39	3.66
MW-105	09/27/95	9.05	5.70	3.35
MW-105	04/27/99	9.05	3.39	5.66
MW-105	07/14/99	9.05	4.58	4.47
MW-105	10/18/99	9.05	5.79	3.26
MW-105	01/11/00	9.05	3.97	5.08
MW-105	04/05/00	9.05	3.84	5.21
MW-105	07/18/00	9.05	4.90	4.15
MW-105	10/02/00	9.05	6.22	2.83
MW-105	01/22/01	9.05	5.56	3.49
MW-105	07/23/01	9.05	6.48	2.57
MW-105	04/23/02	9.05	5.25	3.80
MW-105	07/18/02	9.05	6.17	2.88
MW-105	10/23/02	9.05	6.78	2.27
MW-105	01/28/03	9.05	5.02	4.03
MW-105	04/15/03	9.05	4.97	4.08
MW-105	07/17/03	9.05	6.2	2.85
MW-105	10/15/03	9.05	6.66	2.39
MW-105	01/13/04	9.05	5.01	4.04
MW-105	04/19/04	12.18	5.51	6.67
MW-105	07/27/04	12.18	6.28	5.90
MW-105	10/18/04	12.18	6.15	6.03
MW-105	01/24/05	12.18	5.02	7.16
MW-105	04/18/05	12.18	5.19	6.99
MW-105	07/12/05	12.18	5.82	6.36

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-105	10/18/05	12.18	6.44	5.74
MW-105	01/25/06	12.18	4.05	8.13
MW-105	04/25/06	12.18	5.00	7.18
MW-105	10/11/06	12.18	6.51	5.67
MW-105	11/19/08	12.18	5.52	6.66
MW-105	11/16/09	12.18	5.03	7.15
MW-105	10/26/10	12.18	5.33	6.85
MW-105	10/25/11	12.18	6.06	6.12
MW-105	11/26/12	12.18	3.82	8.36
MW-105	11/07/13	12.18	5.42	6.76
MW-105	11/05/14	12.18	4.62	7.56
MW-105	12/08/15	12.18	4.00	8.18
MW-105	12/14/16	12.18	4.15	8.03
MW-105	12/04/17	12.18	4.55	7.63
MW-105	12/17/18	12.18	5.04	7.14
MW-105	12/09/19	12.18	5.83	6.35
MW-105	12/14/20	12.18	5.18	7.00
MW-105	04/12/21	12.18	4.55	7.63
MW-105	12/15/21	12.18	3.99	8.19
MW-105	12/12/22	12.18	4.35	7.83
MW-111	04/06/93	8.61	4.95	3.66
MW-111	05/13/93	8.61	4.87	3.74
MW-111	06/10/93	8.61	4.84	3.77
MW-111	07/08/93	8.61	5.11	3.50
MW-111	08/03/93	8.61	5.29	3.32
MW-111	09/08/93	8.61	5.56	3.05
MW-111	10/08/93	8.61	5.81	2.80
MW-111	11/05/93	8.61	5.97	2.64
MW-111	12/03/93	8.61	5.93	2.68
MW-111	01/05/94	8.61	5.45	3.16
MW-111	02/04/94	8.61	5.28	3.33
MW-111	08/28/95	8.61	5.28	3.33
MW-111	09/27/95	8.61	5.45	3.16
MW-111	04/27/99	8.61	3.55	5.06
MW-111	07/14/99	8.61	4.65	3.96
MW-111	10/18/99	8.61	5.59	3.02
MW-111	01/11/00	8.61	4.18	4.43
MW-111	04/05/00	8.61	3.94	4.67
MW-111	07/13/00	8.61	5.30	3.31
MW-111	10/02/00	8.61	5.68	2.93
MW-111	01/22/01	8.61	5.37	3.24
MW-111	07/23/01	8.61	6.22	2.39
MW-111	10/16/01	8.61	7.37	1.24

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-111	04/23/02	8.61	5.28	3.33
MW-111	07/18/02	8.61	5.94	2.67
MW-111	10/23/02	8.61	6.50	2.11
MW-111	01/28/03	8.61	5.05	3.56
MW-111	04/15/03	8.61	5.03	3.58
MW-111	07/17/03	8.61	6.05	2.56
MW-111	10/15/03	8.61	6.45	2.16
MW-111	01/13/04	8.61	4.84	3.77
MW-111	04/19/04	11.88	5.46	6.42
MW-111	07/27/04	11.88	6.16	5.72
MW-111	10/18/04	11.88	6.11	5.77
MW-111	01/24/05	11.88	5.33	6.55
MW-111	04/18/05	11.88	5.27	6.61
MW-111	07/12/05	11.88	5.75	6.13
MW-111	10/18/05	11.88	6.26	5.62
MW-111	01/25/06	11.88	4.42	7.46
MW-111	04/25/06	11.88	4.88	7.00
MW-111	10/11/06	11.88	6.30	5.58
MW-111	11/19/08	11.88	8.62	3.26
MW-111	11/16/09	11.88	5.30	6.58
MW-111	10/26/10	11.88	5.35	6.53
MW-111	10/25/11	11.88	5.89	5.99
MW-111	05/30/12	11.88	4.81	7.07
MW-111	08/23/12	11.88	Not Measured	Not Measured
MW-111	11/29/12	11.88	4.14	7.74
MW-111	05/16/13	11.88	4.63	7.25
MW-111	11/07/13	11.88	5.10	6.78
MW-111	04/22/14	11.88	4.32	7.56
MW-111	11/05/14	11.88	4.58	7.30
MW-111	12/08/15	11.88	4.36	7.52
MW-111	12/14/16	11.88	4.04	7.84
MW-111	06/13/17	11.88	4.51	7.37
MW-111	12/04/17	11.88	4.59	7.29
MW-111	06/12/18	11.88	5.25	6.63
MW-111	12/17/18	11.88	4.98	6.90
MW-111	05/15/19	11.88	4.97	6.91
MW-111	12/09/19	11.88	5.66	6.22
MW-111	06/29/20	11.88	5.12	6.76
MW-111	12/14/20	11.88	5.10	6.78
MW-111	04/12/21	11.88	4.46	7.42
MW-111	06/14/21	11.88	5.10	6.78
MW-111	12/15/21	11.88	4.14	7.74
MW-111	04/18/22	11.88	4.38	7.50
MW-111	06/27/22	11.88	4.67	7.21

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-111	12/12/22	11.88	4.75	7.13
MW-112	04/06/93	9.98	6.69	3.29
MW-112	05/13/93	9.98	6.61	3.37
MW-112	06/10/93	9.98	6.51	3.47
MW-112	07/08/93	9.98	6.83	3.15
MW-112	08/03/93	9.98	7.00	2.98
MW-112	09/08/93	9.98	7.24	2.74
MW-112	10/08/93	9.98	7.50	2.48
MW-112	11/05/93	9.98	7.56	2.42
MW-112	12/03/93	9.98	7.41	2.57
MW-112	01/05/94	9.98	6.93	3.05
MW-112	02/04/94	9.98	6.83	3.15
MW-112	08/28/95	9.98	6.98	3.00
MW-112	09/27/95	9.98	7.13	2.85
MW-112	04/27/99	9.98	5.66	4.32
MW-112	07/14/99	9.98	6.57	3.41
MW-112	10/18/99	9.98	7.36	2.62
MW-112	01/11/00	9.98	5.89	4.09
MW-112	04/05/00	9.98	5.81	4.17
MW-112	07/18/00	9.98	7.11	2.87
MW-112	10/02/00	9.98	7.57	2.41
MW-112	04/25/06	9.98	6.44	3.54
MW-112A	04/24/02	9.98	6.85	3.13
MW-112A	07/18/02	9.98	7.22	2.76
MW-112A	10/23/02	9.98	7.52	2.46
MW-112A	01/28/03	9.98	6.25	3.73
MW-112A	04/15/03	9.98	6.47	3.51
MW-112A	07/17/03	9.98	7.3	2.68
MW-112A	10/15/03	9.98	7.49	2.49
MW-112A	01/13/04	9.98	6.2	3.78
MW-112A	04/19/04	12.52	6.93	5.59
MW-112A	07/27/04	12.52	7.41	5.11
MW-112A	10/18/04	12.52	7.15	5.37
MW-112A	01/24/05	12.52	6.52	6.00
MW-112A	04/18/05	12.52	6.6	5.92
MW-112A	07/12/05	12.52	7.1	5.42
MW-112A	10/18/05	12.52	7.34	5.18
MW-112A	01/25/06	12.52	5.95	6.57
MW-112A	10/11/06	12.52	7.43	5.09
MW-112A	11/19/08	12.52	6.73	5.79
MW-112A	11/16/09	12.52	6.35	6.17

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-112A	10/29/10	12.52	6.51	6.01
MW-112A	10/25/11	12.52	7.03	5.49
MW-112A	05/30/12	12.52	6.28	6.24
MW-112A	08/23/12	12.52	6.56	5.96
MW-112A	11/25/12	12.52	5.23	7.29
MW-112A	05/16/13	12.52	6.24	6.28
MW-112A	11/04/13	12.52	-	-
MW-112A	04/22/14	12.52	5.90	6.62
MW-112A	11/06/14	12.52	5.68	6.84
MW-112A	12/08/15	12.52	5.42	7.10
MW-112A	12/14/16	12.52	5.69	6.83
MW-112A	06/13/17	12.52	6.25	6.27
MW-112A	12/04/17	12.52	5.93	6.59
MW-112A	06/12/18	12.52	6.51	6.01
MW-112A	12/17/18	12.52	5.97	6.55
MW-112A	05/16/19	12.52	6.39	6.13
MW-112A	12/09/19	12.52	6.73	5.79
MW-112A	06/29/20	12.52	6.31	6.21
MW-112A	12/14/20	12.52	6.45	6.07
MW-112A	04/12/21	12.52	6.11	6.41
MW-112A	06/14/21	12.52	6.40	6.12
MW-112A	12/15/21	12.52	5.52	7.00
MW-112A	04/18/22	12.52	6.04	6.48
MW-112A	06/27/22	12.52	6.17	6.35
MW-112A	12/12/22	12.52	5.88	6.64
MW-113	06/27/22	12.47	4.76	7.71
MW-113	12/12/22	12.47	4.82	7.65
MW-114	06/27/22	13.18	5.03	8.15
MW-114	12/12/22	13.18	5.10	8.08
MW-115	06/27/22	12.64	4.74	7.90
MW-115	12/12/22	12.64	4.60	8.04
MW-201	04/06/93	17.07	14.03	3.04
MW-201	05/13/93	17.07	14.02	3.05
MW-201	06/10/93	17.07	13.97	3.10
MW-201	07/08/93	17.07	14.25	2.82
MW-201	08/03/93	17.07	14.48	2.59
MW-201	09/08/93	17.07	14.68	2.39
MW-201	10/08/93	17.07	14.90	2.17
MW-201	11/05/93	17.07	15.03	2.04
MW-201	12/03/93	17.07	14.96	2.11

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-201	01/05/94	17.07	14.10	2.97
MW-201	02/04/94	17.07	14.32	2.75
MW-201	08/28/95	17.07	14.49	2.58
MW-201	09/27/95	17.07	14.56	2.51
MW-201	04/27/99	17.07	13.04	4.03
MW-201	07/14/99	17.07	14.26	2.81
MW-201	10/18/99	17.07	14.93	2.14
MW-201	01/11/00	17.07	13.03	4.04
MW-201	04/05/00	17.07	13.90	3.17
MW-201	07/18/00	17.07	14.09	2.98
MW-201	10/02/00	17.07	14.82	2.25
MW-201	01/22/01	17.07	14.43	2.64
MW-201	07/23/01	17.07	14.95	2.12
MW-201	10/16/01	17.07	16.11	0.96
MW-201	04/24/02	17.07	14.23	2.84
MW-201	07/18/02	17.07	14.73	2.34
MW-201	10/23/02	17.07	15.13	1.94
MW-201	01/28/03	17.07	13.13	3.94
MW-201	04/15/03	17.07	13.58	3.49
MW-201	07/17/03	17.07	14.70	2.37
MW-201	10/15/03	17.07	14.99	2.08
MW-201	01/13/04	17.07	12.71	4.36
MW-201	04/19/04	20.18	14.07	6.11
MW-201	07/27/04	20.18	14.70	5.48
MW-201	10/18/04	20.18	14.70	5.48
MW-201	01/24/05	20.18	13.44	6.74
MW-201	04/18/05	20.18	13.73	6.45
MW-201	07/12/05	20.18	14.47	5.71
MW-201	10/18/05	20.18	14.99	5.19
MW-201	01/25/06	20.18	12.61	7.57
MW-201	04/25/06	20.18	13.94	6.24
MW-201	10/11/06	20.18	15.00	5.18
MW-201	11/20/08	20.18	13.77	6.41
MW-201	11/16/09	20.18	13.74	6.44
MW-201	10/27/10	20.18	14.42	5.76
MW-201	10/26/11	20.18	14.94	5.24
MW-201	11/27/12	20.18	13.10	7.08
MW-201	02/22/13	20.18	13.74	6.44
MW-201	05/16/13	20.18	14.45	5.73
MW-201	09/06/13	20.18	14.78	5.40
MW-201	11/07/13	20.18	14.70	5.48
MW-201	04/22/14	20.18	13.42	6.76
MW-201	11/04/14	20.18	13.65	6.53
MW-201	03/10/15	20.18	13.64	6.54

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-201	05/15/15	20.18	14.34	5.84
MW-201	07/29/15	20.18	14.65	5.53
MW-201	12/10/15	20.18	12.23	7.95
MW-201	02/23/16	20.18	12.33	7.85
MW-201	05/03/16	20.18	13.74	6.44
MW-201	08/30/16	20.18	14.04	6.14
MW-201	12/14/16	20.18	12.86	7.32
MW-201	03/13/17	20.18	12.18	8.00
MW-201	06/13/17	20.18	13.85	6.33
MW-201	08/22/17	20.18	14.43	5.75
MW-201	12/04/17	20.18	12.87	7.31
MW-201	03/06/18	20.18	13.28	6.90
MW-201	06/12/18	20.18	13.58	6.60
MW-201	09/05/18	20.18	8.22	11.96
MW-201	12/17/18	20.18	13.66	6.52
MW-201	03/18/19	20.18	13.14	7.04
MW-201	05/15/19	20.18	14.06	6.12
MW-201	09/17/19	20.18	14.64	5.54
MW-201	12/09/19	20.18	14.52	5.66
MW-201	04/27/20	20.18	14.05	6.13
MW-201	06/29/20	20.18	14.32	5.86
MW-201	09/21/20	20.18	14.59	5.59
MW-201	12/14/20	20.18	14.28	5.90
MW-201	04/12/21	20.18	13.74	6.44
MW-201	06/14/21	20.18	14.32	5.86
MW-201	09/22/21	20.18	14.68	5.50
MW-201	12/16/21	20.18	--	--
MW-201	03/28/22	20.18	13.16	7.02
MW-201	06/27/22	20.18	14.06	6.12
MW-201	09/19/22	20.18	14.31	5.87
MW-201	12/12/22	20.18	13.90	6.28
MW-202	04/06/93	16.77	13.23	3.54
MW-202	05/13/93	16.77	13.17	3.60
MW-202	06/10/93	16.77	13.26	3.51
MW-202	07/08/93	16.77	13.54	3.23
MW-202	08/03/93	16.77	13.76	3.01
MW-202	09/08/93	16.77	14.04	2.73
MW-202	10/08/93	16.77	14.30	2.47
MW-202	11/05/93	16.77	14.48	2.29
MW-202	12/03/93	16.77	14.34	2.43
MW-202	01/05/94	16.77	13.73	3.04
MW-202	02/04/94	16.77	13.63	3.14
MW-202	08/28/95	16.77	13.78	2.99

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-202	09/27/95	16.77	13.95	2.82
MW-202	04/27/99	16.77	12.38	4.39
MW-202	07/14/99	16.77	13.57	3.20
MW-202	10/18/99	16.77	14.31	2.46
MW-202	01/11/00	16.77	12.95	3.82
MW-202	04/05/00	16.77	12.96	3.81
MW-202	07/18/00	16.77	13.21	3.56
MW-202	10/02/00	16.77	14.25	2.52
MW-202	01/22/01	16.77	14.46	2.31
MW-202	07/23/01	16.77	14.64	2.13
MW-202	10/16/01	16.77	15.81	0.96
MW-202	04/24/02	16.77	13.80	2.97
MW-202	07/18/02	16.77	14.28	2.49
MW-202	10/23/02	16.77	14.73	2.04
MW-202	01/28/03	16.77	12.95	3.82
MW-202	04/15/03	16.77	13.13	3.64
MW-202	07/17/03	16.77	14.30	2.47
MW-202	10/15/03	16.77	14.62	2.15
MW-202	01/13/04	16.77	12.81	3.96
MW-202	04/19/04	19.86	13.61	6.25
MW-202	07/27/04	19.86	14.29	5.57
MW-202	10/18/04	19.86	14.30	5.56
MW-202	01/24/05	19.86	13.29	6.57
MW-202	04/18/05	19.86	13.51	6.35
MW-202	07/12/05	19.86	14.02	5.84
MW-202	10/18/05	19.86	14.59	5.27
MW-202	01/25/06	19.86	12.38	7.48
MW-202	04/25/06	19.86	13.43	6.43
MW-202	10/11/06	19.86	14.58	5.28
MW-202	11/20/08	19.86	13.92	5.94
MW-202	04/07/09	19.86	13.71	6.15
MW-202	11/16/09	19.86	13.70	6.16
MW-202	04/27/10	19.86	13.24	6.62
MW-202	10/27/10	19.86	14.04	5.82
MW-202	10/26/11	19.86	14.45	5.41
MW-202	03/02/12	19.86	13.70	6.16
MW-202	05/30/12	19.86	13.65	6.21
MW-202	06/13/12	19.86	13.76	6.10
MW-202	09/26/12	19.86	14.42	5.44
MW-202	11/27/12	19.86	13.09	6.77
MW-202	02/22/13	19.86	13.27	6.59
MW-202	05/16/13	19.86	13.80	6.06
MW-202	09/06/13	19.86	14.38	5.48
MW-202	11/07/13	19.86	14.25	5.61



**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-202	04/22/14	19.86	13.23	6.63
MW-202	11/04/14	19.86	13.44	6.42
MW-202	03/10/15	19.86	13.23	6.63
MW-202	05/15/15	19.86	13.76	6.10
MW-202	07/29/15	19.86	14.18	5.68
MW-202	12/10/15	19.86	12.76	7.10
MW-202	02/23/16	19.86	12.15	7.71
MW-202	05/03/16	19.86	13.11	6.75
MW-202	08/30/16	19.86	14.00	5.86
MW-202	12/14/16	19.86	12.81	7.05
MW-202	03/13/17	19.86	12.25	7.61
MW-202	06/13/17	19.86	13.23	6.63
MW-202	08/22/17	19.86	13.98	5.88
MW-202	12/04/17	19.86	13.15	6.71
MW-202	03/06/18	19.86	13.03	6.83
MW-202	06/12/18	19.86	13.53	6.33
MW-202	09/05/18	19.86	8.20	11.66
MW-202	12/17/18	19.86	13.45	6.41
MW-202	03/18/19	19.86	12.95	6.91
MW-202	05/15/19	19.86	13.42	6.44
MW-202	09/17/19	19.86	14.16	5.70
MW-202	12/09/19	19.86	14.10	5.76
MW-202	04/27/20	19.86	13.49	6.37
MW-202	06/29/20	19.86	13.75	6.11
MW-202	09/21/20	19.86	14.20	5.66
MW-202	12/14/20	19.86	13.65	6.21
MW-202	04/12/21	19.86	13.15	6.71
MW-202	06/14/21	19.86	13.75	6.11
MW-202	09/22/21	19.86	14.20	5.66
MW-202	12/16/21	19.86	12.70	7.16
MW-202	03/28/22	19.86	12.77	7.09
MW-202	06/27/22	19.86	13.23	6.63
MW-202	09/19/22	19.86	13.84	6.02
MW-202	12/12/22	19.86	13.56	6.30
MW-203	04/06/93	11.04	7.39	3.65
MW-203	05/13/93	11.04	7.31	3.73
MW-203	06/10/93	11.04	7.40	3.64
MW-203	07/08/93	11.04	7.66	3.38
MW-203	08/03/93	11.04	7.93	3.11
MW-203	09/08/93	11.04	8.20	2.84
MW-203	10/08/93	11.04	8.46	2.58
MW-203	11/05/93	11.04	8.65	2.39
MW-203	12/03/93	11.04	8.64	2.40

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-203	01/05/94	11.04	7.99	3.05
MW-203	02/04/94	11.04	7.88	3.16
MW-203	08/28/95	11.04	7.86	3.18
MW-203	09/27/95	11.04	8.02	3.02
MW-203	04/27/99	11.04	6.32	4.72
MW-203	07/14/99	11.04	7.58	3.46
MW-203	10/18/99	11.04	8.42	2.62
MW-203	01/11/00	11.04	6.98	4.06
MW-203	04/05/00	11.04	6.92	4.12
MW-203	07/18/00	11.04	8.00	3.04
MW-203	10/02/00	11.04	8.40	2.64
MW-203	01/22/01	11.04	8.47	2.57
MW-203	07/23/01	11.04	8.69	2.35
MW-203	10/16/01	11.04	9.73	1.31
MW-203	04/24/02	11.04	7.45	3.59
MW-203	10/23/02	11.04	8.80	2.24
MW-203	01/28/03	11.04	6.76	4.28
MW-203	04/15/03	11.04	7.05	3.99
MW-203	07/17/03	11.04	8.25	2.79
MW-203	01/13/04	11.04	6.71	4.33
MW-203	04/19/04	13.99	7.58	6.41
MW-203	07/27/04	13.99	8.25	5.74
MW-203	10/18/04	13.99	8.34	5.65
MW-203	01/24/05	13.99	7.31	6.68
MW-203	04/18/05	13.99	7.43	6.56
MW-203	07/12/05	13.99	7.96	6.03
MW-203	10/18/05	13.99	8.64	5.35
MW-203	01/25/06	13.99	6.41	7.58
MW-203	04/25/06	13.99	7.18	6.81
MW-203	10/11/06	13.99	8.58	5.41
MW-203	11/18/08	13.99	8.01	5.98
MW-203	04/08/09	13.99	7.63	6.36
MW-203	11/16/09	13.99	4.97	9.02
MW-203	04/26/10	13.99	7.17	6.82
MW-203	10/25/10	13.99	8.10	5.89
MW-203	10/26/11	13.99	5.45	8.54
MW-203	05/30/12	13.99	7.61	6.38
MW-203	06/13/12	13.99	7.65	6.34
MW-203	09/26/12	13.99	8.40	5.59
MW-203	11/27/12	13.99	7.25	6.74
MW-203	02/22/13	13.99	7.26	6.73
MW-203	05/16/13	13.99	7.80	6.19
MW-203	09/06/13	13.99	8.37	5.62
MW-203	11/07/13	13.99	8.27	5.72

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-203	04/22/14	13.99	7.33	6.66
MW-203	11/04/14	13.99	7.59	6.40
MW-203	03/10/15	13.99	6.70	7.29
MW-203	05/15/15	13.99	7.74	6.25
MW-203	07/29/15	13.99	8.18	5.81
MW-203	12/10/15	13.99	6.83	7.16
MW-203	02/23/16	13.99	5.92	8.07
MW-203	05/03/16	13.99	7.02	6.97
MW-203	08/30/16	13.99	8.17	5.82
MW-203	12/14/16	13.99	6.62	7.37
MW-203	03/13/17	13.99	5.83	8.16
MW-203	06/13/17	13.99	7.17	6.82
MW-203	08/22/17	13.99	7.98	6.01
MW-203	12/04/17	13.99	7.24	6.75
MW-203	03/06/18	13.99	6.57	7.42
MW-203	06/12/18	13.99	7.55	6.44
MW-203	09/05/18	13.99	8.14	5.85
MW-203	12/17/18	13.99	7.68	6.31
MW-203	03/18/19	13.99	6.96	7.03
MW-203	05/16/19	13.99	7.38	6.61
MW-203	09/17/19	13.99	8.19	5.80
MW-203	12/09/19	13.99	8.13	5.86
MW-203	04/27/20	13.99	7.39	6.60
MW-203	06/29/20	13.99	7.55	6.44
MW-203	09/21/20	13.99	8.14	5.85
MW-203	12/14/20	13.99	7.62	6.37
MW-203	04/12/21	13.99	7.13	6.86
MW-203	06/14/21	13.99	7.75	6.24
MW-203	09/22/21	13.99	8.26	5.73
MW-203	12/16/21	13.99	6.80	7.19
MW-203	03/28/22	13.99	6.90	7.09
MW-203	06/27/22	13.99	7.02	6.97
MW-203	09/19/22	13.99	7.39	6.60
MW-203	12/12/22	13.99	7.04	6.95
MW-204	04/06/93	14.21	10.97	3.24
MW-204	05/13/93	14.21	10.92	3.29
MW-204	06/10/93	14.21	10.98	3.23
MW-204	07/08/93	14.21	11.20	3.01
MW-204	08/03/93	14.21	11.44	2.77
MW-204	09/08/93	14.21	11.64	2.57
MW-204	10/08/93	14.21	11.85	2.36
MW-204	11/05/93	14.21	12.03	2.18
MW-204	12/03/93	14.21	12.01	2.20

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-204	01/05/94	14.21	11.42	2.79
MW-204	02/04/94	14.21	11.35	2.86
MW-204	08/28/95	14.21	11.58	2.63
MW-204	09/27/95	14.21	11.57	2.64
MW-204	04/05/00	14.21	Not Measured	Not Measured
MW-204	10/02/00	14.21	Not Measured	Not Measured
MW-204	01/22/01	14.21	11.69	2.52
MW-204	07/23/01	14.21	12.05	2.16
MW-204	10/16/01	14.21	13.17	1.04
MW-204	07/27/04	14.21	11.67	2.54
MW-204	10/18/04	17.27	11.71	5.56
MW-204	01/24/05	17.27	10.72	6.55
MW-204	04/18/05	17.27	10.98	6.29
MW-204	07/12/05	17.27	11.4	5.87
MW-204	10/18/05	17.27	11.98	5.29
MW-204	01/25/06	17.27	9.96	7.31
MW-204	10/11/06	17.27	11.96	5.31
MW-204	11/20/08	17.27	11.45	5.82
MW-204	11/16/09	17.27	11.20	6.07
MW-204	10/27/10	17.27	11.54	5.73
MW-204	10/27/11	17.27	10.71	6.56
MW-204	03/26/12	17.27	Not Measured	Not Measured
MW-204	06/12/12	17.27	11.20	6.07
MW-204	09/27/12	17.27	Not Measured	Not Measured
MW-204	11/27/12	17.27	10.81	6.46
MW-204	12/20/12	17.27	Not Measured	Not Measured
MW-204	02/22/13	17.27	10.81	6.46
MW-204	05/16/13	17.27	11.30	5.97
MW-204	09/06/13	17.27	11.77	5.50
MW-204	11/07/13	17.27	11.71	5.56
MW-204	04/22/14	17.27	10.78	6.49
MW-204	11/04/14	17.27	11.04	6.23
MW-204	03/10/15	17.27	10.75	6.52
MW-204	05/15/15	17.27	11.21	6.06
MW-204	07/29/15	17.27	11.59	5.68
MW-204	12/10/15	17.27	9.91	7.36
MW-204	02/23/16	17.27	9.67	7.60
MW-204	05/03/16	17.27	10.53	6.74
MW-204	08/30/16	17.27	11.78	5.49
MW-204	12/14/16	17.27	10.34	6.93
MW-204	03/13/17	17.27	9.83	7.44
MW-204	08/22/17	17.27	11.34	5.93
MW-204	12/04/17	17.27	10.84	6.43
MW-204	03/06/18	17.27	10.55	6.72

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-204	06/12/18	17.27	11.04	6.23
MW-204	09/05/18	17.27	8.20	9.07
MW-204	12/17/18	17.27	11.10	6.17
MW-204	03/18/19	17.27	10.51	6.76
MW-204	05/15/19	17.27	10.98	6.29
MW-204	09/17/19	17.27	11.65	5.62
MW-204	12/09/19	17.27	11.54	5.73
MW-204	04/27/20	17.27	10.94	6.33
MW-204	06/29/20	17.27	11.26	6.01
MW-204	09/21/20	17.27	11.59	5.68
MW-204	12/14/20	17.27	11.22	6.05
MW-204	04/12/21	17.27	10.71	6.56
MW-204	06/14/21	17.27	11.27	6.00
MW-204	09/22/21	17.27	11.65	5.62
MW-204	12/16/21	17.27	10.42	6.85
MW-204	03/28/22	17.27	10.48	6.79
MW-204	06/27/22	17.27	11.18	6.09
MW-204	09/19/22	17.27	11.58	5.69
MW-204	12/12/22	17.27	10.88	6.39
MW-206	04/06/93	10.75	9.83	0.92
MW-206	05/13/93	10.75	6.72	4.03
MW-206	06/10/93	10.75	6.78	3.97
MW-206	07/08/93	10.75	7.08	3.67
MW-206	08/03/93	10.75	7.35	3.40
MW-206	09/08/93	10.75	7.66	3.09
MW-206	10/08/93	10.75	7.95	2.80
MW-206	11/05/93	10.75	8.15	2.60
MW-206	12/03/93	10.75	8.17	2.58
MW-206	01/05/94	10.75	7.42	3.33
MW-206	02/04/94	10.75	7.24	3.51
MW-206	08/28/95	10.75	7.01	3.74
MW-206	09/27/95	10.75	7.19	3.56
MW-206	04/27/99	10.75	5.59	5.16
MW-206	07/14/99	10.75	6.97	3.78
MW-206	10/18/99	10.75	7.88	2.87
MW-206	01/11/00	10.75	6.34	4.41
MW-206	04/05/00	10.75	6.32	4.43
MW-206	07/18/00	10.75	7.11	3.64
MW-206	10/02/00	10.75	7.92	2.83
MW-206	01/22/01	10.75	8.93	1.82
MW-206	04/25/06	10.75	9.30	1.45
MW-206	10/11/06	10.75	10.44	0.31

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-206A	04/24/02	10.75	7.43	3.32
MW-206A	07/18/02	10.75	8.07	2.68
MW-206A	10/23/02	10.75	8.55	2.20
MW-206A	01/28/03	10.75	6.40	4.35
MW-206A	04/15/03	10.75	5.26	5.49
MW-206A	07/17/03	10.75	8.06	2.69
MW-206A	04/19/04	15.90	9.51	6.39
MW-206A	07/27/04	15.90	10.23	5.67
MW-206A	10/18/04	15.90	10.17	5.73
MW-206A	01/24/05	15.90	9.18	6.72
MW-206A	04/18/05	15.90	9.38	6.52
MW-206A	07/12/05	15.90	9.87	6.03
MW-206A	10/18/05	15.90	10.50	5.40
MW-206A	01/25/06	15.90	8.23	7.67
MW-206A	11/20/08	15.90	9.81	6.09
MW-206A	11/16/09	15.90	9.48	6.42
MW-206A	10/25/10	15.90	9.74	6.16
MW-206A	10/26/11	15.90	10.25	5.65
MW-206A	05/30/12	15.90	9.44	6.46
MW-206A	06/13/12	15.90	9.49	6.41
MW-206A	09/26/12	15.90	10.21	5.69
MW-206A	11/27/12	15.90	9.05	6.85
MW-206A	02/22/13	15.90	9.04	6.86
MW-206A	05/16/13	15.90	8.44	7.46
MW-206A	09/06/13	15.90	10.06	5.84
MW-206A	11/07/13	15.90	10.04	5.86
MW-206A	04/22/14	15.90	9.01	6.89
MW-206A	11/04/14	15.90	9.25	6.65
MW-206A	03/10/15	15.90	9.03	6.87
MW-206A	05/15/15	15.90	9.49	6.41
MW-206A	07/29/15	15.90	9.99	5.91
MW-206A	12/10/15	15.90	8.36	7.54
MW-206A	02/23/16	15.90	8.09	7.81
MW-206A	05/03/16	15.90	9.03	6.87
MW-206A	08/30/16	15.90	10.25	5.65
MW-206A	12/14/16	15.90	8.51	7.39
MW-206A	03/13/17	15.90	7.98	7.92
MW-206A	06/13/17	15.90	9.02	6.88
MW-206A	08/22/17	15.90	9.74	6.16
MW-206A	12/04/17	15.90	9.07	6.83
MW-206A	03/06/18	15.90	8.78	7.12
MW-206A	06/12/18	15.90	6.90	9.00
MW-206A	09/05/18	15.90	9.94	5.96
MW-206A	12/17/18	15.90	9.23	6.67

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-206A	03/18/19	15.90	8.86	7.04
MW-206A	05/15/19	15.90	9.30	6.60
MW-206A	09/17/19	15.90	10.13	5.77
MW-206A	12/09/19	15.90	9.98	5.92
MW-206A	04/27/20	15.90	9.22	6.68
MW-206A	06/29/20	15.90	9.40	6.50
MW-206A	09/21/20	15.90	10.08	5.82
MW-206A	12/14/20	15.90	7.15	8.75
MW-206A	04/12/21	15.90	7.20	8.70
MW-206A	06/14/21	15.90	9.45	6.45
MW-206A	09/22/21	15.90	10.05	5.85
MW-206A	12/16/21	15.90	8.57	7.33
MW-206A	03/28/22	15.90	8.79	7.11
MW-206A	06/27/22	15.90	7.23	8.67
MW-206A	09/19/22	15.90	9.23	6.67
MW-206A	12/12/22	15.90	9.31	6.59
MW-208	06/28/13	--	4.98	--
MW-208	09/11/13	--	5.67	--
MW-208	10/30/13	--	5.97	--
MW-208	11/05/13	--	5.51	--
MW-208	01/16/14	--	5.46	--
MW-208	02/27/14	--	4.72	--
MW-208	03/25/14	--	4.91	--
MW-208	04/22/14	--	4.98	--
MW-208	06/10/14	--	5.62	--
MW-208	07/24/14	--	5.50	--
MW-208	08/28/14	--	5.73	--
MW-208	09/23/14	--	5.76	--
MW-208	10/22/14	--	4.82	--
MW-208	11/05/14	--	4.50	--
MW-208	12/18/14	12.16	4.28	7.88
MW-208	01/27/15	12.16	4.52	7.64
MW-208	02/26/15	12.16	4.92	7.24
MW-208	03/11/15	12.16	5.29	6.87
MW-208	04/21/15	12.16	5.08	7.08
MW-208	05/19/15	12.16	5.31	6.85
MW-208	06/11/15	12.16	5.34	6.82
MW-208	07/29/15	12.16	5.81	6.35
MW-208	08/25/15	12.16	5.95	6.21
MW-208	09/24/15	12.16	5.72	6.44
MW-208	10/15/15	12.16	5.35	6.81
MW-208	11/20/15	12.16	4.37	7.79
MW-208	12/09/15	12.16	2.55	9.61

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-208	02/23/16	12.16	4.18	7.98
MW-208	04/22/16	12.16	4.90	7.26
MW-208	05/03/16	12.16	5.27	6.89
MW-208	06/02/16	12.16	5.34	6.82
MW-208	07/14/16	12.16	5.58	6.58
MW-208	08/18/16	12.16	5.80	6.36
MW-208	09/08/16	12.16	5.88	6.28
MW-208	10/21/16	12.16	5.40	6.76
MW-208	11/17/16	12.16	3.67	8.49
MW-208	12/01/16	12.16	3.93	8.23
MW-208	01/11/17	12.16	2.83	9.33
MW-208	02/14/17	12.16	3.81	8.35
MW-208	03/13/17	12.16	4.04	8.12
MW-208	04/13/17	12.16	3.78	8.38
MW-208	05/08/17	12.16	4.78	7.38
MW-208	06/13/17	12.16	5.00	7.16
MW-208	07/18/17	12.16	5.32	6.84
MW-208	08/22/17	12.16	5.32	6.84
MW-208	09/13/17	12.16	5.68	6.48
MW-208	10/31/17	12.16	5.58	6.58
MW-208	11/13/17	12.16	4.67	7.49
MW-208	12/04/17	12.16	4.15	8.01
MW-208	03/06/18	12.16	4.57	7.59
MW-208	06/12/18	12.16	5.25	6.91
MW-208	09/05/18	12.16	5.75	6.41
MW-208	12/17/18	12.16	4.13	8.03
MW-208	01/16/19	12.16	4.48	7.68
MW-208	02/20/19	12.16	3.98	8.18
MW-208	03/18/19	12.16	4.95	7.21
MW-208	04/10/19	12.16	4.66	7.50
MW-208	05/15/19	12.16	4.91	7.25
MW-208	06/26/19	12.16	5.47	6.69
MW-208	07/24/19	12.16	5.43	6.73
MW-208	08/13/19	12.16	5.45	6.71
MW-208	09/17/19	12.16	5.23	6.93
MW-208	10/16/19	12.16	5.61	6.55
MW-208	11/05/19	12.16	5.62	6.54
MW-208	12/09/19	12.16	5.08	7.08
MW-208	01/28/20	12.16	3.05	9.11
MW-208	02/26/20	12.16	4.81	7.35
MW-208	04/27/20	12.16	5.18	6.98
MW-208	06/16/20	12.16	5.25	6.91
MW-208	06/29/20	12.16	5.08	7.08
MW-208	07/29/20	12.16	5.20	6.96



**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-208	08/27/20	12.16	5.41	6.75
MW-208	09/21/20	12.16	5.09	7.07
MW-208	10/29/20	12.16	5.58	6.58
MW-208	11/30/20	12.16	4.82	7.34
MW-208	12/14/20	12.16	4.75	7.41
MW-208	01/21/21	12.16	4.27	7.89
MW-208	02/16/21	12.16	3.69	8.47
MW-208	03/23/21	12.16	4.53	7.63
MW-208	04/12/21	12.16	5.28	6.88
MW-208	05/12/21	12.16	5.54	6.62
MW-208	06/14/21	12.16	4.97	7.19
MW-208	07/15/21	12.16	5.31	6.85
MW-208	08/18/21	12.16	5.52	6.64
MW-208	09/22/21	12.16	5.46	6.70
MW-208	10/21/21	12.16	5.32	6.84
MW-208	11/23/21	12.16	4.28	7.88
MW-208	12/14/21	12.16	3.99	8.17
MW-208	01/25/22	12.16	4.34	7.82
MW-208	02/28/22	12.16	4.59	7.57
MW-208	03/28/22	12.16	4.63	7.53
MW-208	04/18/22	12.16	5.08	7.08
MW-208	05/23/22	12.16	4.81	7.35
MW-208	06/27/22	12.16	5.02	7.14
MW-208	07/20/22	12.16	5.03	7.13
MW-208	08/23/22	12.16	5.55	6.61
MW-208	09/19/22	12.16	5.58	6.58
MW-208	10/11/22	12.16	5.54	6.62
MW-208	11/22/22	12.16	5.59	6.57
MW-208	12/12/22	12.16	4.21	7.95
MW-209	09/11/13	--	6.61	--
MW-209	10/30/13	--	5.65	--
MW-209	01/16/14	--	5.56	--
MW-209	02/27/14	--	6.04	--
MW-209	03/25/14	--	5.90	--
MW-209	04/22/14	--	5.89	--
MW-209	06/10/14	--	8.31	--
MW-209	07/24/14	--	6.91	--
MW-209	08/28/14	--	6.79	--
MW-209	09/23/14	--	5.73	--
MW-209	10/22/14	--	4.91	--
MW-209	11/05/14	--	6.60	--
MW-209	12/18/14	12.10	5.27	6.83
MW-209	01/27/15	12.10	4.88	7.22

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-209	02/26/15	12.10	5.54	6.56
MW-209	03/11/15	12.10	5.55	6.55
MW-209	05/19/15	12.10	8.60	3.50
MW-210	03/29/13	--	6.53	--
MW-210	06/28/13	--	6.35	--
MW-210	09/11/13	--	6.63	--
MW-210	10/30/13	--	7.08	--
MW-210	11/05/13	--	6.41	--
MW-210	01/16/14	--	6.48	--
MW-210	02/27/14	--	6.79	--
MW-210	03/25/14	--	6.96	--
MW-210	04/22/14	--	6.32	--
MW-210	06/10/14	--	7.08	--
MW-210	07/24/14	--	6.64	--
MW-210	08/28/14	--	6.72	--
MW-210	09/23/14	--	6.56	--
MW-210	10/22/14	--	5.87	--
MW-210	11/05/14	--	6.45	--
MW-210	12/18/14	12.85	5.49	7.36
MW-210	01/27/15	12.85	6.15	6.70
MW-210	02/26/15	12.85	6.69	6.16
MW-210	03/11/15	12.85	6.56	6.29
MW-210	04/21/15	12.85	6.44	6.41
MW-210	05/19/15	12.85	6.50	6.35
MW-210	06/11/15	12.85	6.48	6.37
MW-210	07/29/15	12.85	6.73	6.12
MW-210	08/25/15	12.85	6.23	6.62
MW-210	09/24/15	12.85	6.60	6.25
MW-210	10/15/15	12.85	6.30	6.55
MW-210	11/20/15	12.85	6.47	6.38
MW-210	12/09/15	12.85	4.45	8.40
MW-210	02/23/16	12.85	5.82	7.03
MW-210	04/22/16	12.85	5.96	6.89
MW-210	05/03/16	12.85	6.42	6.43
MW-210	06/02/16	12.85	6.44	6.41
MW-210	07/14/16	12.85	6.67	6.18
MW-210	08/18/16	12.85	6.78	6.07
MW-210	09/08/16	12.85	6.78	6.07
MW-210	10/21/16	12.85	6.32	6.53
MW-210	11/17/16	12.85	5.43	7.42
MW-210	12/01/16	12.85	6.00	6.85
MW-210	01/11/17	12.85	5.38	7.47
MW-210	02/14/17	12.85	5.69	7.16

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-210	03/13/17	12.85	5.98	6.87
MW-210	04/13/17	12.85	6.42	6.43
MW-210	05/08/17	12.85	6.74	6.11
MW-210	06/13/17	12.85	6.18	6.67
MW-210	07/18/17	12.85	6.47	6.38
MW-210	08/22/17	12.85	6.42	6.43
MW-210	09/13/17	12.85	6.60	6.25
MW-210	10/31/17	12.85	6.64	6.21
MW-210	11/13/17	12.85	6.08	6.77
MW-210	12/04/17	12.85	6.05	6.80
MW-210	03/06/18	12.85	6.19	6.66
MW-210	06/12/18	12.85	6.50	6.35
MW-210	09/05/18	12.85	6.74	6.11
MW-210	12/17/18	12.85	5.31	7.54
MW-210	01/16/19	12.85	6.07	6.78
MW-210	02/20/19	12.85	6.45	6.40
MW-210	03/18/19	12.85	6.67	6.18
MW-210	04/10/19	12.85	5.24	7.61
MW-210	05/15/19	12.85	7.05	5.80
MW-210	06/26/19	12.85	6.58	6.27
MW-210	07/24/19	12.85	5.59	7.26
MW-210	08/13/19	12.85	6.58	6.27
MW-210	09/17/19	12.85	6.18	6.67
MW-210	10/16/19	12.85	6.47	6.38
MW-210	11/05/19	12.85	6.78	6.07
MW-210	12/09/19	12.85	6.27	6.58
MW-210	01/28/20	12.85	4.06	8.79
MW-210	02/26/20	12.85	5.78	7.07
MW-210	04/27/20	12.85	6.43	6.42
MW-210	06/16/20	12.85	5.56	7.29
MW-210	06/29/20	12.85	6.58	6.27
MW-210	07/29/20	12.85	6.43	6.42
MW-210	08/27/20	12.85	6.71	6.14
MW-210	09/21/20	12.85	6.35	6.50
MW-210	10/29/20	12.85	6.87	5.98
MW-210	11/30/20	12.85	6.23	6.62
MW-210	12/14/20	12.85	6.05	6.80
MW-210	01/21/21	12.85	6.96	5.89
MW-210	02/16/21	12.85	5.83	7.02
MW-210	03/23/21	12.85	6.57	6.28
MW-210	04/12/21	12.85	6.42	6.43
MW-210	05/12/21	12.85	6.61	6.24
MW-210	06/14/21	12.85	6.15	6.70
MW-210	07/15/21	12.85	6.36	6.49

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-210	08/18/21	12.85	6.60	6.25
MW-210	09/22/21	12.85	6.50	6.35
MW-210	10/21/21	12.85	6.36	6.49
MW-210	11/23/21	12.85	6.20	6.65
MW-210	12/14/21	12.85	5.12	7.73
MW-210	01/25/22	12.85	6.34	6.51
MW-210	02/28/22	12.85	6.31	6.54
MW-210	03/28/22	12.85	5.92	6.93
MW-210	04/18/22	12.85	6.18	6.69
MW-210	05/23/22	12.85	6.50	6.35
MW-210	06/27/22	12.85	6.21	6.64
MW-210	07/20/22	12.85	6.24	6.61
MW-210	08/23/22	12.85	6.62	6.23
MW-210	09/19/22	12.85	6.99	5.86
MW-210	10/11/22	12.85	6.59	6.26
MW-210	11/22/22	12.85	6.56	6.29
MW-210	12/12/22	12.85	5.15	7.70
MW-211	03/29/13	--	5.97	--
MW-211	06/28/13	--	5.68	--
MW-211	10/30/13	--	6.43	--
MW-211	11/05/13	--	5.68	--
MW-211	01/16/14	--	5.51	--
MW-211	02/27/14	--	5.01	--
MW-211	03/25/14	--	5.38	--
MW-211	04/22/14	--	5.33	--
MW-211	06/10/14	--	6.02	--
MW-211	07/24/14	--	6.85	--
MW-211	08/28/14	--	6.06	--
MW-211	09/23/14	--	5.96	--
MW-211	10/22/14	--	4.96	--
MW-211	11/05/14	--	4.70	--
MW-211	12/18/14	12.21	4.50	7.71
MW-211	01/27/15	12.21	4.82	7.39
MW-211	02/26/15	12.21	5.38	6.83
MW-211	03/11/15	12.21	5.52	6.69
MW-211	04/21/15	12.21	5.50	6.71
MW-211	05/19/15	12.21	5.71	6.50
MW-211	06/11/15	12.21	5.70	6.51
MW-211	07/29/15	12.21	6.10	6.11
MW-211	08/25/15	12.21	6.17	6.04
MW-211	09/24/15	12.21	5.72	6.49
MW-211	10/15/15	12.21	5.30	6.91
MW-211	11/20/15	12.21	4.78	7.43

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-211	12/09/15	12.21	2.80	9.41
MW-211	02/23/16	12.21	4.45	7.76
MW-211	04/22/16	12.21	4.67	7.54
MW-211	05/03/16	12.21	5.63	6.58
MW-211	06/02/16	12.21	5.77	6.44
MW-211	07/14/16	12.21	6.02	6.19
MW-211	08/18/16	12.21	6.16	6.05
MW-211	09/08/16	12.21	6.22	5.99
MW-211	10/21/16	12.21	6.01	6.20
MW-211	11/17/16	12.21	3.86	8.35
MW-211	12/01/16	12.21	4.14	8.07
MW-211	01/11/17	12.21	3.18	9.03
MW-211	02/14/17	12.21	4.02	8.19
MW-211	03/13/17	12.21	4.27	7.94
MW-211	04/13/17	12.21	4.02	8.19
MW-211	05/08/17	12.21	5.32	6.89
MW-211	06/13/17	12.21	5.36	6.85
MW-211	07/18/17	12.21	5.78	6.43
MW-211	08/22/17	12.21	5.76	6.45
MW-211	09/13/17	12.21	Not Measured	Not Measured
MW-211	10/31/17	12.21	Not Measured	Not Measured
MW-211	11/13/17	12.21	Not Measured	Not Measured
MW-211	12/04/17	12.21	Not Measured	Not Measured
MW-211	03/06/18	12.21	5.03	7.18
MW-211	06/12/18	12.21	5.73	6.48
MW-211	09/05/18	12.21	6.16	6.05
MW-211	12/17/18	12.21	4.14	8.07
MW-211	01/16/19	12.21	4.30	7.91
MW-211	02/20/19	12.21	4.22	7.99
MW-211	03/18/19	12.21	5.34	6.87
MW-211	04/10/19	12.21	4.66	7.55
MW-211	05/15/19	12.21	5.38	6.83
MW-211	06/26/19	12.21	6.88	5.33
MW-211	07/24/19	12.21	5.88	6.33
MW-211	08/13/19	12.21	5.72	6.49
MW-211	09/17/19	12.21	5.54	6.67
MW-211	10/16/19	12.21	5.77	6.44
MW-211	11/05/19	12.21	6.01	6.20
MW-211	12/09/19	12.21	5.54	6.67
MW-211	01/28/20	12.21	3.12	9.09
MW-211	02/26/20	12.21	5.19	7.02
MW-211	04/27/20	12.21	5.47	6.74
MW-211	06/16/20	12.21	5.72	6.49
MW-211	06/29/20	12.21	5.78	6.43

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-211	07/29/20	12.21	5.67	6.54
MW-211	08/27/20	12.21	5.85	6.36
MW-211	09/21/20	12.21	5.45	6.76
MW-211	10/29/20	12.21	5.99	6.22
MW-211	11/30/20	12.21	5.11	7.10
MW-211	12/14/20	12.21	5.28	6.93
MW-211	01/21/21	12.21	4.82	7.39
MW-211	02/16/21	12.21	4.18	8.03
MW-211	03/23/21	12.21	5.37	6.84
MW-211	04/12/21	12.21	5.65	6.56
MW-211	05/12/21	12.21	5.86	6.35
MW-211	06/14/21	12.21	5.24	6.97
MW-211	07/15/21	12.21	5.60	6.61
MW-211	08/18/21	12.21	5.90	6.31
MW-211	09/22/21	12.21	5.70	6.51
MW-211	10/21/21	12.21	5.50	6.71
MW-211	11/23/21	12.21	4.42	7.79
MW-211	12/14/21	12.21	4.39	7.82
MW-211	01/25/22	12.21	4.85	7.36
MW-211	02/28/22	12.21	4.51	7.70
MW-211	03/28/22	12.21	5.00	7.21
MW-211	04/18/22	12.21	5.28	6.93
MW-211	05/23/22	12.21	5.28	6.93
MW-211	06/27/22	12.21	5.28	6.93
MW-211	07/20/22	12.21	5.42	6.79
MW-211	08/23/22	12.21	5.94	6.27
MW-211	09/19/22	12.21	5.93	6.28
MW-211	10/11/22	12.21	6.34	5.87
MW-211	11/22/22	12.21	5.61	6.60
MW-211	12/12/22	12.21	4.39	7.82
MW-212	03/29/13	--	4.90	--
MW-212	06/28/13	--	4.42	--
MW-212	09/11/13	--	5.32	--
MW-212	09/12/13	--	5.52	--
MW-212	10/30/13	--	5.28	--
MW-212	11/05/13	--	5.51	--
MW-212	01/16/14	--	5.47	--
MW-212	02/27/14	--	6.12	--
MW-212	03/25/14	--	6.30	--
MW-212	04/22/14	--	5.85	--
MW-212	06/10/14	--	Not Measured	Not Measured
MW-212	07/24/14	--	6.06	--
MW-212	08/28/14	--	6.23	--

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-212	09/23/14	--	6.08	--
MW-212	10/22/14	--	4.13	--
MW-212	11/05/14	--	5.12	--
MW-212	12/18/14	11.95	4.89	7.06
MW-212	01/27/15	11.95	5.38	6.57
MW-212	02/26/15	11.95	5.59	6.36
MW-212	03/11/15	11.95	5.45	6.50
MW-212	04/21/15	11.95	5.85	6.10
MW-212	05/19/15	11.95	5.67	6.28
MW-212	06/11/15	11.95	5.46	6.49
MW-212	07/29/15	11.95	5.85	6.10
MW-212	08/25/15	11.95	6.82	5.13
MW-212	09/24/15	11.95	6.33	5.62
MW-212	10/15/15	11.95	5.82	6.13
MW-212	11/20/15	11.95	5.51	6.44
MW-212	12/09/15	11.95	3.61	8.34
MW-212	02/23/16	11.95	4.38	7.57
MW-212	04/22/16	11.95	5.37	6.58
MW-212	05/03/16	11.95	6.00	5.95
MW-212	06/02/16	11.95	6.18	5.77
MW-212	07/14/16	11.95	6.27	5.68
MW-212	08/18/16	11.95	6.44	5.51
MW-212	09/08/16	11.95	6.55	5.40
MW-212	10/21/16	11.95	6.10	5.85
MW-212	11/17/16	11.95	4.68	7.27
MW-212	12/01/16	11.95	4.88	7.07
MW-212	01/11/17	11.95	3.88	8.07
MW-212	02/14/17	11.95	4.79	7.16
MW-212	03/13/17	11.95	4.98	6.97
MW-212	04/13/17	11.95	5.02	6.93
MW-212	05/08/17	11.95	5.31	6.64
MW-212	06/13/17	11.95	5.60	6.35
MW-212	07/18/17	11.95	5.83	6.12
MW-212	08/22/17	11.95	5.92	6.03
MW-212	09/13/17	11.95	6.21	5.74
MW-212	10/31/17	11.95	6.17	5.78
MW-212	11/13/17	11.95	4.98	6.97
MW-212	12/04/17	11.95	5.38	6.57
MW-212	03/06/18	11.95	5.46	6.49
MW-212	06/12/18	11.95	6.06	5.89
MW-212	09/05/18	11.95	6.35	5.60
MW-212	12/17/18	11.95	4.43	7.52
MW-212	01/16/19	11.95	5.56	6.39
MW-212	02/20/19	11.95	4.32	7.63

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-212	03/18/19	11.95	6.12	5.83
MW-212	04/10/19	11.95	5.78	6.17
MW-212	05/15/19	11.95	6.13	5.82
MW-212	06/26/19	11.95	6.11	5.84
MW-212	07/24/19	11.95	5.96	5.99
MW-212	08/13/19	11.95	6.02	5.93
MW-212	09/17/19	11.95	6.28	5.67
MW-212	10/16/19	11.95	6.36	5.59
MW-212	11/05/19	11.95	6.51	5.44
MW-212	12/09/19	11.95	6.14	5.81
MW-212	01/28/20	11.95	2.03	9.92
MW-212	02/26/20	11.95	4.97	6.98
MW-212	04/27/20	11.95	5.29	6.66
MW-212	06/16/20	11.95	6.25	5.70
MW-212	06/29/20	11.95	5.85	6.10
MW-212	07/29/20	11.95	6.31	5.64
MW-212	08/27/20	11.95	6.15	5.80
MW-212	09/21/20	11.95	6.23	5.72
MW-212	10/29/20	11.95	6.23	5.72
MW-212	11/30/20	11.95	5.10	6.85
MW-212	12/14/20	11.95	5.83	6.12
MW-212	01/21/21	11.95	5.63	6.32
MW-212	02/16/21	11.95	4.25	7.70
MW-212	03/23/21	11.95	5.74	6.21
MW-212	04/12/21	11.95	6.31	5.64
MW-212	05/12/21	11.95	6.21	5.74
MW-212	06/14/21	11.95	5.62	6.33
MW-212	07/15/21	11.95	6.01	5.94
MW-212	08/18/21	11.95	6.16	5.79
MW-212	09/22/21	11.95	6.10	5.85
MW-212	10/21/21	11.95	6.05	5.90
MW-212	11/23/21	11.95	5.19	6.76
MW-212	12/14/21	11.95	4.79	7.16
MW-212	01/25/22	11.95	5.67	6.28
MW-212	02/28/22	11.95	2.86	9.09
MW-212	03/28/22	11.95	5.98	5.97
MW-212	04/18/22	11.95	5.98	5.97
MW-212	05/23/22	11.95	5.70	6.25
MW-212	06/27/22	11.95	5.90	6.05
MW-212	07/20/22	11.95	5.85	6.10
MW-212	08/23/22	11.95	6.19	5.76
MW-212	09/19/22	11.95	6.19	5.76
MW-212	10/11/22	11.95	6.34	5.61
MW-212	11/22/22	11.95	5.61	6.34



**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-212	12/12/22	11.95	4.70	7.25
MW-213	07/23/01	8.57	10.17	-1.60
MW-213	10/16/01	8.57	5.81	2.76
MW-213	04/24/02	8.57	7.34	1.23
MW-213	07/18/02	8.57	7.39	1.18
MW-213	10/23/02	8.57	5.04	3.53
MW-213	01/28/03	8.57	4.60	3.97
MW-213	04/15/03	8.57	4.43	4.14
MW-213	07/17/03	8.57	10.24	-1.67
MW-213	10/15/03	8.57	5.85	2.72
MW-213	01/13/04	8.57	5.02	3.55
MW-213	04/19/04	8.57	7.91	0.66
MW-213	07/27/04	8.57	6.94	1.63
MW-213	10/18/04	8.57	5.70	2.87
MW-213	01/24/05	8.57	4.70	3.87
MW-213	04/18/05	8.57	7.43	1.14
MW-213	07/12/05	8.57	8.72	-0.15
MW-213	10/18/05	8.57	7.24	1.33
MW-213	01/25/06	8.57	5.79	2.78
MW-213	04/25/06	8.57	7.82	0.75
MW-213	10/11/06	8.57	6.09	2.48
MW-213	11/19/08	8.57	5.98	2.59
MW-213	04/07/09	8.57	7.69	0.88
MW-213	11/16/09	8.57	4.97	3.60
MW-213	04/26/10	8.57	8.22	0.35
MW-213	10/28/10	8.57	5.33	3.24
MW-213	10/25/11	8.57	7.43	1.14
MW-213	06/12/12	8.57	7.84	0.73
MW-213	11/29/12	8.57	4.65	3.92
MW-213	05/15/13	8.57	8.86	-0.29
MW-213	10/30/13	8.57	5.45	3.12
MW-213	11/05/13	8.57	5.29	3.28
MW-213	04/22/14	8.57	6.39	2.18
MW-213	11/05/14	12.17	6.55	5.62
MW-213	05/19/15	12.17	7.85	4.32
MW-213	12/09/15	12.17	4.18	7.99
MW-213	12/14/16	12.17	5.22	6.95
MW-213	06/13/17	12.17	5.75	6.42
MW-213	12/04/17	12.17	6.33	5.84
MW-213	06/12/18	12.17	9.38	2.79
MW-213	12/17/18	12.17	3.87	8.30
MW-213	05/15/19	12.17	8.76	3.41
MW-213	12/09/19	12.17	6.26	5.91

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-213	06/29/20	12.17	7.30	4.87
MW-213	12/14/20	12.17	5.21	6.96
MW-213	04/12/21	12.17	6.01	6.16
MW-213	06/14/21	12.17	5.45	6.72
MW-213	12/16/21	12.17	5.76	6.41
MW-213	06/27/22	12.17	6.88	5.29
MW-213	12/12/22	12.17	4.35	7.82
MW-214	07/23/01	8.63	10.37	-1.74
MW-214	10/19/01	8.63	5.74	2.89
MW-214	04/24/02	8.63	7.94	0.69
MW-214	07/18/02	8.63	7.25	1.38
MW-214	10/23/02	8.63	5.85	2.78
MW-214	01/28/03	8.63	4.25	4.38
MW-214	04/15/03	8.63	4.66	3.97
MW-214	07/17/03	8.63	10.40	-1.77
MW-214	10/15/03	8.63	4.89	3.74
MW-214	01/13/04	8.63	4.86	3.77
MW-214	04/19/04	8.63	7.92	0.71
MW-214	07/27/04	8.63	6.42	2.21
MW-214	10/18/04	8.63	5.37	3.26
MW-214	01/24/05	8.63	5.00	3.63
MW-214	04/18/05	8.63	7.65	0.98
MW-214	07/12/05	8.63	8.82	-0.19
MW-214	10/18/05	8.63	7.18	1.45
MW-214	01/25/06	8.63	5.96	2.67
MW-214	04/25/06	8.63	7.80	0.83
MW-214	10/11/06	8.63	5.95	2.68
MW-214	11/19/08	8.63	5.50	3.13
MW-214	04/07/09	12.92	7.05	5.87
MW-214	11/16/09	12.92	5.28	7.64
MW-214	04/26/10	12.92	7.80	5.12
MW-214	10/28/10	12.92	5.25	7.67
MW-214	10/25/11	12.92	7.78	5.14
MW-214	06/12/12	12.92	7.80	5.12
MW-214	11/29/12	12.92	5.00	7.92
MW-214	05/15/13	12.92	9.23	3.69
MW-214	10/30/13	12.92	7.88	5.04
MW-214	11/05/13	12.92	5.38	7.54
MW-214	02/27/14	12.92	6.08	6.84
MW-214	04/22/14	12.92	6.78	6.14
MW-214	11/05/14	12.39	6.80	5.59
MW-214	05/19/15	12.39	8.10	4.29
MW-214	12/09/15	12.39	4.74	7.65

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-214	12/14/16	12.39	5.58	6.81
MW-214	06/13/17	12.39	6.04	6.35
MW-214	12/04/17	12.39	6.41	5.98
MW-214	06/12/18	12.39	9.70	2.69
MW-214	12/17/18	12.39	4.13	8.26
MW-214	05/15/19	12.39	7.81	4.58
MW-214	12/09/19	12.39	6.39	6.00
MW-214	06/29/20	12.39	7.59	4.80
MW-214	12/14/20	12.39	5.32	7.07
MW-214	04/12/21	12.39	5.87	6.52
MW-214	06/14/21	12.39	5.63	6.76
MW-214	12/16/21	12.39	5.71	6.68
MW-214	06/27/22	12.39	7.74	4.65
MW-214	12/12/22	12.39	4.38	8.01
MW-301	03/02/12	12.56	6.03	6.53
MW-301	05/30/12	12.56	6.03	6.53
MW-301	06/13/12	12.56	6.11	6.45
MW-301	09/26/12	12.56	6.82	5.74
MW-301	11/27/12	12.56	5.34	7.22
MW-301	02/21/13	12.56	5.66	6.90
MW-301	05/16/13	12.56	6.14	6.42
MW-301	09/06/13	12.56	6.71	5.85
MW-301	11/07/13	12.56	6.60	5.96
MW-301	04/22/14	12.56	5.56	7.00
MW-301	07/24/14	12.56	6.38	6.18
MW-301	09/23/14	12.56	6.71	5.85
MW-301	11/04/14	12.56	5.73	6.83
MW-301	03/10/15	12.56	5.64	6.92
MW-301	05/15/15	12.56	6.10	6.46
MW-301	07/29/15	12.56	6.63	5.93
MW-301	12/10/15	12.56	4.57	7.99
MW-301	02/23/16	12.56	4.50	8.06
MW-301	05/03/16	12.56	5.53	7.03
MW-301	08/30/16	12.56	6.68	5.88
MW-301	12/14/16	12.56	5.08	7.48
MW-301	03/13/17	12.56	7.60	4.96
MW-301	05/16/17	12.56	5.21	7.35
MW-301	06/13/17	12.56	5.70	6.86
MW-301	08/22/17	12.56	6.43	6.13
MW-301	12/04/17	12.56	5.40	7.16
MW-301	03/06/18	12.56	5.37	7.19
MW-301	06/12/18	12.56	5.90	6.66
MW-301	09/05/18	12.56	6.58	5.98

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-301	12/17/18	12.56	5.75	6.81
MW-301	03/18/19	12.56	5.23	7.33
MW-301	05/16/19	12.56	5.74	6.82
MW-301	09/17/19	12.56	6.49	6.07
MW-301	12/09/19	12.56	6.41	6.15
MW-301	04/27/20	12.56	5.50	7.06
MW-301	06/29/20	12.56	5.85	6.71
MW-301	09/21/20	12.56	6.57	5.99
MW-301	12/14/20	12.56	5.90	6.66
MW-301	04/12/21	12.56	5.26	7.30
MW-301	06/14/21	12.56	5.95	6.61
MW-301	09/22/21	12.56	6.57	5.99
MW-301	12/16/21	12.56	4.67	7.89
MW-301	03/28/22	12.56	4.91	7.65
MW-301	06/27/22	12.56	5.34	7.22
MW-301	09/21/22	12.56	6.95	5.61
MW-301	12/12/22	12.56	5.22	7.34
MW-302	03/01/12	12.85	6.47	6.38
MW-302	05/30/12	12.85	Not Measured	Not Measured
MW-302	06/13/12	12.85	Not Measured	Not Measured
MW-302	09/26/12	12.85	7.23	5.62
MW-302	11/27/12	12.85	5.83	7.02
MW-302	02/22/13	12.85	6.10	6.75
MW-302	05/16/13	12.85	6.61	6.24
MW-302	09/06/13	12.85	7.11	5.74
MW-302	11/07/13	12.85	6.99	5.86
MW-302	01/16/14	12.85	6.80	6.05
MW-302	04/22/14	12.85	6.09	6.76
MW-302	06/10/14	12.85	6.40	6.45
MW-302	07/24/14	12.85	6.85	6.00
MW-302	09/23/14	12.85	7.13	5.72
MW-302	11/04/14	12.85	6.28	6.57
MW-302	03/10/15	12.85	6.22	6.63
MW-302	05/15/15	12.85	6.60	6.25
MW-302	07/29/15	12.85	7.07	5.78
MW-302	12/10/15	12.85	5.12	7.73
MW-302	02/23/16	12.85	5.23	7.62
MW-302	05/03/16	12.85	6.15	6.70
MW-302	08/30/16	12.85	7.26	5.59
MW-302	12/14/16	12.85	5.74	7.11
MW-302	03/13/17	12.85	5.33	7.52
MW-302	05/16/17	12.85	5.79	7.06
MW-302	06/13/17	12.85	6.30	6.55

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-302	08/22/17	12.85	6.92	5.93
MW-302	12/04/17	12.85	5.80	7.05
MW-302	03/06/18	12.85	5.91	6.94
MW-302	06/12/18	12.85	6.48	6.37
MW-302	09/05/18	12.85	6.96	5.89
MW-302	12/17/18	12.85	6.10	6.75
MW-302	03/18/19	12.85	5.65	7.20
MW-302	05/16/19	12.85	6.20	6.65
MW-302	09/17/19	12.85	7.33	5.52
MW-302	12/09/19	12.85	6.75	6.10
MW-302	04/27/20	12.85	5.95	6.90
MW-302	06/29/20	12.85	6.22	6.63
MW-302	09/21/20	12.85	6.92	5.93
MW-302	12/15/20	12.85	6.15	6.70
MW-302	04/13/21	12.85	5.67	7.18
MW-302	06/15/21	12.85	6.28	6.57
MW-302	09/23/21	12.85	6.84	6.01
MW-302	12/16/21	12.85	4.98	7.87
MW-302	03/28/22	12.85	5.25	7.60
MW-302	06/27/22	12.85	5.68	7.17
MW-302	09/21/22	12.85	7.38	5.47
MW-302	12/12/22	12.85	5.88	6.97
MW-303	03/02/12	12.64	5.96	6.68
MW-303	05/30/12	12.64	5.97	6.67
MW-303	06/13/12	12.64	6.06	6.58
MW-303	09/26/12	12.64	6.86	5.78
MW-303	11/27/12	12.64	5.22	7.42
MW-303	02/21/13	12.64	5.58	7.06
MW-303	05/16/13	12.64	6.10	6.54
MW-303	09/06/13	12.64	6.80	5.84
MW-303	11/07/13	12.64	6.61	6.03
MW-303	04/22/14	12.64	5.49	7.15
MW-303	07/24/14	12.64	6.44	6.20
MW-303	09/23/14	12.64	6.80	5.84
MW-303	11/04/14	12.64	5.73	6.91
MW-303	03/10/15	12.64	5.62	7.02
MW-303	05/15/15	12.64	6.11	6.53
MW-303	07/29/15	12.64	6.71	5.93
MW-303	12/10/15	12.64	4.38	8.26
MW-303	02/23/16	12.64	4.44	8.20
MW-303	05/03/16	12.64	5.56	7.08
MW-303	08/30/16	12.64	6.82	5.82
MW-303	12/14/16	12.64	5.06	7.58

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-303	03/13/17	12.64	4.51	8.13
MW-303	05/16/17	12.64	5.18	7.46
MW-303	06/13/17	12.64	5.75	6.89
MW-303	08/22/17	12.64	6.55	6.09
MW-303	12/04/17	12.64	5.35	7.29
MW-303	03/06/18	12.64	5.35	7.29
MW-303	06/12/18	12.64	6.07	6.57
MW-303	09/05/18	12.64	6.73	5.91
MW-303	12/17/18	12.64	5.83	6.81
MW-303	03/18/19	12.64	5.33	7.31
MW-303	05/16/19	12.64	5.89	6.75
MW-303	09/17/19	12.64	6.68	5.96
MW-303	12/09/19	12.64	6.54	6.10
MW-303	04/27/20	12.64	5.63	7.01
MW-303	06/29/20	12.64	6.10	6.54
MW-303	09/21/20	12.64	6.72	5.92
MW-303	12/14/20	12.64	5.95	6.69
MW-303	04/12/21	12.64	5.33	7.31
MW-303	06/14/21	12.64	6.00	6.64
MW-303	09/22/21	12.64	6.69	5.95
MW-303	12/15/21	12.64	4.61	8.03
MW-303	03/28/22	12.64	4.84	7.80
MW-303	06/27/22	12.64	5.38	7.26
MW-303	09/21/22	12.64	7.02	5.62
MW-303	12/12/22	12.64	5.24	7.40
MW-304	03/01/12	12.70	6.07	6.63
MW-304	05/30/12	12.70	6.12	6.58
MW-304	06/13/12	12.70	6.22	6.48
MW-304	09/26/12	12.70	6.98	5.72
MW-304	11/27/12	12.70	5.43	7.27
MW-304	02/22/13	12.70	5.78	6.92
MW-304	05/16/13	12.70	Not Measured	Not Measured
MW-304	09/06/13	12.70	6.89	5.81
MW-304	11/07/13	12.70	6.75	5.95
MW-304	01/16/14	12.70	6.50	6.20
MW-304	04/22/14	12.70	5.67	7.03
MW-304	07/24/14	12.70	6.57	6.13
MW-304	09/23/14	12.70	6.89	5.81
MW-304	11/04/14	12.70	5.91	6.79
MW-304	03/10/15	12.70	5.80	6.90
MW-304	05/15/15	12.70	6.28	6.42
MW-304	07/29/15	12.70	6.84	5.86
MW-304	12/10/15	12.70	4.80	7.90

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-304	02/23/16	12.70	Not Measured	Not Measured
MW-304	05/03/16	12.70	5.79	6.91
MW-304	08/30/16	12.70	Not Measured	Not Measured
MW-304	12/14/16	12.70	5.27	7.43
MW-304	03/13/17	12.70	4.82	7.88
MW-304	06/13/17	12.70	5.95	6.75
MW-304	08/22/17	12.70	6.67	6.03
MW-304	12/04/17	12.70	5.53	7.17
MW-304	03/06/18	12.70	5.46	7.24
MW-304	06/12/18	12.70	6.18	6.52
MW-304	09/05/18	12.70	6.78	5.92
MW-304	12/17/18	12.70	5.90	6.80
MW-304	03/18/19	12.70	5.39	7.31
MW-304	05/16/19	12.70	5.98	6.72
MW-304	09/17/19	12.70	6.67	6.03
MW-304	12/09/19	12.70	6.58	6.12
MW-304	04/27/20	12.70	5.71	6.99
MW-304	06/29/20	12.70	6.10	6.60
MW-304	09/21/20	12.70	6.78	5.92
MW-304	12/14/20	12.70	6.00	6.70
MW-304	04/12/21	12.70	5.42	7.28
MW-304	06/14/21	12.70	6.05	6.65
MW-304	09/22/21	12.70	6.72	5.98
MW-304	12/16/21	12.70	4.69	8.01
MW-304	03/28/22	12.70	5.08	7.62
MW-304	06/27/22	12.70	5.45	7.25
MW-304	09/20/22	12.70	7.03	5.67
MW-304	12/12/22	12.70	5.28	7.42
MW-305	03/01/12	13.48	6.47	7.01
MW-305	05/30/12	13.48	6.43	7.05
MW-305	06/11/12	13.48	6.43	7.05
MW-305	09/26/12	13.48	7.22	6.26
MW-305	11/28/12	13.48	5.86	7.62
MW-305	05/16/13	13.48	6.01	7.47
MW-305	11/07/13	13.48	6.40	7.08
MW-305	04/22/14	13.48	5.92	7.56
MW-305	11/06/14	13.48	6.22	7.26
MW-305	05/21/15	13.48	6.32	7.16
MW-306	03/01/12	13.36	6.24	7.12
MW-306	05/30/12	13.36	6.14	7.22
MW-306	06/11/12	13.36	6.12	7.24
MW-306	09/26/12	13.36	6.99	6.37

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-306	11/28/12	13.36	5.64	7.72
MW-306	05/16/13	13.36	5.57	7.79
MW-306	11/07/13	13.36	6.04	7.32
MW-306	04/22/14	13.36	5.63	7.73
MW-306	05/21/15	13.36	5.99	7.37
MW-306	12/10/15	13.36	4.80	8.56
MW-307	11/27/12	15.62	7.94	7.68
MW-307	02/22/13	15.62	8.42	7.20
MW-307	05/16/13	15.62	8.91	6.71
MW-307	09/06/13	15.62	9.67	5.95
MW-307	11/07/13	15.62	9.49	6.13
MW-307	04/22/14	15.62	8.52	7.10
MW-307	03/10/15	15.62	8.42	7.20
MW-307	05/15/15	15.62	8.92	6.70
MW-307	07/29/15	15.62	9.58	6.04
MW-307	12/10/15	15.62	7.33	8.29
MW-307	02/23/16	15.62	7.24	8.38
MW-307	05/03/16	15.62	8.39	7.23
MW-307	08/30/16	15.62	9.51	6.11
MW-307	12/14/16	15.62	7.84	7.78
MW-307	03/13/17	15.62	7.32	8.30
MW-307	05/16/17	15.62	8.02	7.60
MW-307	06/13/17	15.62	8.51	7.11
MW-307	08/22/17	15.62	9.42	6.20
MW-307	09/25/17	15.62	9.76	5.86
MW-307	12/04/17	15.62	8.18	7.44
MW-307	03/06/18	15.62	8.16	7.46
MW-307	06/12/18	15.62	8.70	6.92
MW-307	09/05/18	15.62	9.61	6.01
MW-307	12/17/18	15.62	8.62	7.00
MW-307	03/18/19	15.62	8.07	7.55
MW-307	05/15/19	15.62	8.69	6.93
MW-307	09/17/19	15.62	9.52	6.10
MW-307	12/09/19	15.62	9.39	6.23
MW-307	04/27/20	15.62	8.42	7.20
MW-307	06/29/20	15.62	8.83	6.79
MW-307	09/21/20	15.62	9.57	6.05
MW-307	12/14/20	15.62	8.72	6.90
MW-307	04/12/21	15.62	8.10	7.52
MW-307	06/14/21	15.62	8.80	6.82
MW-307	09/22/21	15.62	9.54	6.08
MW-307	12/14/21	15.62	7.32	8.30
MW-307	03/28/22	15.62	7.73	7.89



**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-307	06/27/22	15.62	8.61	7.01
MW-307	09/20/22	15.62	9.17	6.45
MW-307	12/12/22	15.62	7.98	7.64
MW-308	11/27/12	15.59	7.90	7.69
MW-308	02/22/13	15.59	8.22	7.37
MW-308	05/16/13	15.59	8.80	6.79
MW-308	09/06/13	15.59	9.56	6.03
MW-308	11/07/13	15.59	9.45	6.14
MW-308	04/22/14	15.59	8.10	7.49
MW-308	11/04/14	15.59	8.40	7.19
MW-308	03/10/15	15.59	8.31	7.28
MW-308	05/15/15	15.59	9.01	6.58
MW-308	07/29/15	15.59	9.62	5.97
MW-308	12/10/15	15.59	6.15	9.44
MW-308	02/23/16	15.59	6.88	8.71
MW-308	05/03/16	15.59	8.20	7.39
MW-308	08/30/16	15.59	9.59	6.00
MW-308	12/14/16	15.59	7.56	8.03
MW-308	03/13/17	15.59	6.72	8.87
MW-308	05/16/17	15.59	7.69	7.90
MW-308	06/13/17	15.59	8.38	7.21
MW-308	08/22/17	15.59	9.29	6.30
MW-308	09/25/17	15.59	9.74	5.85
MW-308	12/04/17	15.59	7.90	7.69
MW-308	03/06/18	15.59	7.98	7.61
MW-308	06/12/18	15.59	8.78	6.81
MW-308	09/05/18	15.59	9.55	6.04
MW-308	12/17/18	15.59	8.38	7.21
MW-308	03/18/19	15.59	8.02	7.57
MW-308	05/15/19	15.59	8.65	6.94
MW-308	09/17/19	15.59	9.49	6.10
MW-308	12/09/19	15.59	9.34	6.25
MW-308	04/27/20	15.59	8.32	7.27
MW-308	06/29/20	15.59	8.78	6.81
MW-308	09/21/20	15.59	9.53	6.06
MW-308	12/14/20	15.59	8.70	6.89
MW-308	04/12/21	15.59	8.00	7.59
MW-308	06/14/21	15.59	8.65	6.94
MW-308	09/22/21	15.59	9.50	6.09
MW-308	12/14/21	15.59	7.07	8.52
MW-308	03/28/22	15.59	7.43	8.16
MW-308	06/27/22	15.59	8.34	7.25
MW-308	09/20/22	15.59	8.85	6.74

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-308	12/12/22	15.59	7.94	7.65
MW-309	11/27/12	12.67	5.41	7.26
MW-309	02/21/13	12.67	5.73	6.94
MW-309	05/16/13	12.67	6.21	6.46
MW-309	09/06/13	12.67	6.84	5.83
MW-309	11/07/13	12.67	6.76	5.91
MW-309	04/22/14	12.67	5.60	7.07
MW-309	07/24/14	12.67	6.47	6.20
MW-309	09/23/14	12.67	6.81	5.86
MW-309	11/04/14	12.67	5.81	6.86
MW-309	03/10/15	12.67	5.72	6.95
MW-309	05/15/15	12.67	6.18	6.49
MW-309	07/29/15	12.67	6.74	5.93
MW-309	12/10/15	12.67	4.59	8.08
MW-309	02/23/16	12.67	4.70	7.97
MW-309	05/03/16	12.67	5.60	7.07
MW-309	08/30/16	12.67	6.75	5.92
MW-309	12/12/16	12.67	5.12	7.55
MW-309	03/13/17	12.67	4.62	8.05
MW-309	06/13/17	12.67	5.76	6.91
MW-309	08/22/17	12.67	6.56	6.11
MW-309	12/04/17	12.67	5.52	7.15
MW-309	03/06/18	12.67	5.40	7.27
MW-309	06/12/18	12.67	6.18	6.49
MW-309	09/05/18	12.67	6.72	5.95
MW-309	12/17/18	12.67	5.93	6.74
MW-309	03/18/19	12.67	5.41	7.26
MW-309	05/16/19	12.67	5.95	6.72
MW-309	09/17/19	12.67	6.74	5.93
MW-309	12/09/19	12.67	6.59	6.08
MW-309	04/27/20	12.67	5.74	6.93
MW-309	06/29/20	12.67	6.00	6.67
MW-309	09/21/20	12.67	6.75	5.92
MW-309	12/14/20	12.67	6.08	6.59
MW-309	04/12/21	12.67	5.42	7.25
MW-309	06/14/21	12.67	6.10	6.57
MW-309	09/22/21	12.67	6.72	5.95
MW-309	12/15/21	12.67	4.84	7.83
MW-309	03/28/22	12.67	5.03	7.64
MW-309	06/27/22	12.67	5.51	7.16
MW-309	09/19/22	12.67	7.20	5.47
MW-309	12/12/22	12.67	5.41	7.26

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-310	11/27/12	13.51	6.42	7.09
MW-310	02/21/13	13.51	6.78	6.73
MW-310	05/16/13	13.51	7.20	6.31
MW-310	09/06/13	13.51	7.72	5.79
MW-310	11/07/13	13.51	7.61	5.90
MW-310	01/16/14	13.51	7.39	6.12
MW-310	04/23/14	13.51	6.64	6.87
MW-310	07/24/14	13.51	7.43	6.08
MW-310	09/23/14	13.51	7.73	5.78
MW-310	11/04/14	13.51	6.84	6.67
MW-310	03/10/15	13.51	6.78	6.73
MW-310	05/15/15	13.51	7.19	6.32
MW-310	07/29/15	13.51	7.67	5.84
MW-310	12/10/15	13.51	5.80	7.71
MW-310	02/23/16	13.51	5.77	7.74
MW-310	05/03/16	13.51	6.70	6.81
MW-310	08/30/16	13.51	7.76	5.75
MW-310	12/14/16	13.51	6.32	7.19
MW-310	03/13/17	13.51	5.90	7.61
MW-310	05/16/17	13.51	6.39	7.12
MW-310	06/13/17	13.51	6.88	6.63
MW-310	08/22/17	13.51	7.56	5.95
MW-310	12/04/17	13.51	6.48	7.03
MW-310	03/06/18	13.51	6.52	6.99
MW-310	06/12/18	13.51	7.08	6.43
MW-310	09/05/18	13.51	7.57	5.94
MW-310	12/17/18	13.51	6.73	6.78
MW-310	03/18/19	13.51	5.28	8.23
MW-310	05/16/19	13.51	6.92	6.59
MW-310	09/17/19	13.51	7.59	5.92
MW-310	12/09/19	13.51	7.41	6.10
MW-310	04/27/20	13.51	6.60	6.91
MW-310	06/29/20	13.51	6.78	6.73
MW-310	09/21/20	13.51	7.57	5.94
MW-310	12/14/20	13.51	8.95	4.56
MW-310	04/12/21	13.51	6.41	7.10
MW-310	06/14/21	13.51	6.98	6.53
MW-310	09/22/21	13.51	7.62	5.89
MW-310	12/16/21	13.51	5.58	7.93
MW-310	03/28/22	13.51	5.85	7.66
MW-310	06/27/22	13.51	7.08	6.43
MW-310	09/20/22	13.51	8.08	5.43
MW-310	12/12/22	13.51	6.20	7.31

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
MW-311	11/05/14	14.91	8.03	6.88
MW-311	03/10/15	14.91	8.02	6.89
MW-311	05/15/15	14.91	8.42	6.49
MW-311	07/29/15	14.91	8.83	6.08
MW-311	12/10/15	14.91	7.08	7.83
MW-311	02/23/16	14.91	6.97	7.94
MW-311	05/03/16	14.91	7.92	6.99
MW-311	08/30/16	14.91	8.92	5.99
MW-311	12/14/16	14.91	7.53	7.38
MW-311	03/13/17	14.91	7.10	7.81
MW-311	06/13/17	14.91	8.05	6.86
MW-311	08/22/17	14.91	8.70	6.21
MW-311	12/04/17	14.91	7.70	7.21
MW-311	03/06/18	14.91	7.74	7.17
MW-311	06/12/18	14.91	8.32	6.59
MW-311	09/05/18	14.91	8.78	6.13
MW-311	12/17/18	14.91	8.02	6.89
MW-311	03/18/19	14.91	7.63	7.28
MW-311	05/15/19	14.91	8.06	6.85
MW-311	09/17/19	14.91	8.78	6.13
MW-311	12/09/19	14.91	8.64	6.27
MW-311	04/27/20	14.91	7.94	6.97
MW-311	06/29/20	14.91	8.24	6.67
MW-311	09/21/20	14.91	8.80	6.11
MW-311	12/14/20	14.91	8.20	6.71
MW-311	04/12/21	14.91	7.68	7.23
MW-311	06/14/21	14.91	--	--
MW-311	09/22/21	14.91	8.79	6.12
MW-311	12/16/21	14.91	7.05	7.86
MW-311	03/28/22	14.91	7.25	7.66
MW-311	06/27/22	14.91	7.69	7.22
MW-311	09/20/22	14.91	9.23	5.68
MW-311	12/12/22	14.91	7.62	7.29
MW-312	11/05/14	14.31	7.58	6.73
MW-312	03/10/15	14.31	7.56	6.75
MW-312	05/15/15	14.31	7.95	6.36
MW-312	07/29/15	14.31	8.34	5.97
MW-312	12/10/15	14.31	6.97	7.34
MW-312	02/23/16	14.31	6.68	7.63
MW-312	05/03/16	14.31	7.49	6.82
MW-312	08/30/16	14.31	8.44	5.87
MW-312	12/14/16	14.31	7.10	7.21
MW-312	03/13/17	14.31	6.75	7.56

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-312	06/13/17	14.31	7.61	6.70
MW-312	08/22/17	14.31	8.22	6.09
MW-312	12/04/17	14.31	7.36	6.95
MW-312	03/06/18	14.31	7.32	6.99
MW-312	06/12/18	14.31	7.83	6.48
MW-312	09/05/18	14.31	8.31	6.00
MW-312	12/17/18	14.31	7.57	6.74
MW-312	03/18/19	14.31	7.23	7.08
MW-312	05/15/19	14.31	7.59	6.72
MW-312	09/17/19	14.31	8.26	6.05
MW-312	12/09/19	14.31	8.12	6.19
MW-312	04/27/20	14.31	7.52	6.79
MW-312	06/29/20	14.31	7.70	6.61
MW-312	09/21/20	14.31	8.30	6.01
MW-312	12/14/20	14.31	7.77	6.54
MW-312	04/12/21	14.31	7.31	7.00
MW-312	06/14/21	14.31	7.80	6.51
MW-312	09/22/21	14.31	8.25	6.06
MW-312	12/16/21	14.31	6.63	7.68
MW-312	03/28/22	14.31	5.90	8.41
MW-312	06/27/22	14.31	7.56	6.75
MW-312	09/20/22	14.31	7.11	7.20
MW-312	12/12/22	14.31	7.08	7.23
MW-313	08/30/16	13.25	7.05	6.20
MW-313	12/14/16	13.25	5.63	7.62
MW-313	03/13/17	13.25	5.31	7.94
MW-313	06/13/17	13.25	6.10	7.15
MW-313	08/22/17	13.25	6.80	6.45
MW-313	12/04/17	13.25	5.77	7.48
MW-313	03/06/18	13.25	5.87	7.38
MW-313	06/12/18	13.25	6.38	6.87
MW-313	09/05/18	13.25	6.98	6.27
MW-313	12/17/18	13.25	6.04	7.21
MW-313	03/18/19	13.25	5.87	7.38
MW-313	05/15/19	13.25	6.21	7.04
MW-313	09/17/19	13.25	6.82	6.43
MW-313	12/09/19	13.25	6.74	6.51
MW-313	04/27/20	13.25	6.03	7.22
MW-313	06/29/20	13.25	6.36	6.89
MW-313	09/21/20	13.25	6.95	6.30
MW-313	12/14/20	13.25	6.27	6.98
MW-313	04/12/21	13.25	5.96	7.29
MW-313	06/14/21	13.25	6.27	6.98

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-313	09/22/21	13.25	6.83	6.42
MW-313	12/16/21	13.25	5.11	8.14
MW-313	03/28/22	13.25	5.48	7.77
MW-313	06/27/22	13.25	5.87	7.38
MW-313	09/20/22	13.25	7.30	5.95
MW-313	12/12/22	13.25	5.48	7.77
MW-314	08/30/16	13.49	7.72	5.77
MW-314	12/14/16	13.49	6.77	6.72
MW-314	03/13/17	13.49	6.55	6.94
MW-314	06/13/17	13.49	7.08	6.41
MW-314	08/22/17	13.49	7.55	5.94
MW-314	12/04/17	13.49	7.00	6.49
MW-314	03/06/18	13.49	6.99	6.50
MW-314	06/12/18	13.49	7.38	6.11
MW-314	09/05/18	13.49	7.66	5.83
MW-314	12/17/18	13.49	6.98	6.51
MW-314	03/18/19	13.49	6.92	6.57
MW-314	05/16/19	13.49	7.13	6.36
MW-314	09/17/19	13.49	Not Measured	Not Measured
MW-314	12/09/19	13.49	7.46	6.03
MW-314	04/27/20	13.49	7.19	6.30
MW-314	06/29/20	13.49	7.40	6.09
MW-314	09/22/20	13.49	7.53	5.96
MW-314	12/15/20	13.49	7.31	6.18
MW-314	04/13/21	13.49	7.13	6.36
MW-314	06/14/21	13.49	--	--
MW-314	09/22/21	13.49	--	--
MW-314	12/16/21	13.49	--	--
MW-314	03/28/22	13.49	6.68	6.81
MW-314	06/27/22	13.49	6.93	6.56
MW-314	09/20/22	13.49	8.41	5.08
MW-314	12/12/22	13.49	--	--
MW-315	08/30/16	14.61	8.56	6.05
MW-315	12/14/16	14.61	7.26	7.35
MW-315	03/13/17	14.61	6.93	7.68
MW-315	06/13/17	14.61	7.72	6.89
MW-315	08/22/17	14.61	8.32	6.29
MW-315	12/04/17	14.61	7.45	7.16
MW-315	03/06/18	14.61	7.47	7.14
MW-315	06/12/18	14.61	7.98	6.63
MW-315	09/05/18	14.61	8.46	6.15
MW-315	12/17/18	14.61	7.64	6.97

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
MW-315	03/18/19	14.61	7.43	7.18
MW-315	05/15/19	14.61	7.73	6.88
MW-315	09/17/19	14.61	9.43	5.18
MW-315	12/09/19	14.61	8.21	6.40
MW-315	04/27/20	14.61	7.64	6.97
MW-315	06/29/20	14.61	7.95	6.66
MW-315	09/21/20	14.61	8.41	6.20
MW-315	12/14/20	14.61	7.77	6.84
MW-315	04/12/21	14.61	7.52	7.09
MW-315	06/14/21	14.61	7.90	6.71
MW-315	09/22/21	14.61	8.34	6.27
MW-315	12/16/21	14.61	6.76	7.85
MW-315	03/28/22	14.61	7.03	7.58
MW-315	06/27/22	14.61	7.42	7.19
MW-315	09/20/22	14.61	9.08	5.53
MW-315	12/12/22	14.61	7.08	7.53
SH-04	07/08/93	12.92	9.94	2.98
SH-04	08/03/93	12.92	10.15	2.77
SH-04	09/08/93	12.92	10.50	2.42
SH-04	10/08/93	12.92	10.72	2.20
SH-04	11/05/93	12.92	10.88	2.04
SH-04	12/03/93	12.92	10.78	2.14
SH-04	01/05/94	12.92	10.20	2.72
SH-04	02/04/94	12.92	10.12	2.80
SH-04	08/28/95	12.92	10.15	2.77
SH-04	09/27/95	12.92	10.37	2.55
SH-04	04/27/99	12.92	8.55	4.37
SH-04	07/14/99	12.92	7.63	5.29
SH-04	10/18/99	12.92	10.58	2.34
SH-04	01/11/00	12.92	9.06	3.86
SH-04	04/05/00	12.92	8.94	3.98
SH-04	07/18/00	12.92	9.96	2.96
SH-04	10/02/00	12.92	10.62	2.30
SH-04	01/22/01	12.92	10.13	2.79
SH-04	07/23/01	12.92	6.98	5.94
SH-04	10/16/01	12.92	12.20	0.72
SH-04	04/23/02	12.92	9.91	3.01
SH-04	07/18/02	12.92	10.74	2.18
SH-04	10/23/02	12.92	11.27	1.65
SH-04	01/28/03	12.92	9.73	3.19
SH-04	04/15/03	12.92	9.69	3.23
SH-04	07/17/03	12.92	10.78	2.14
SH-04	10/15/03	12.92	11.19	1.73

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
SH-04	01/13/04	12.92	9.61	3.31
SH-04	04/19/04	16.62	10.05	6.57
SH-04	07/27/04	16.62	10.90	5.72
SH-04	10/18/04	16.62	10.89	5.73
SH-04	01/24/05	16.62	10.03	6.59
SH-04	04/18/05	16.62	10.03	6.59
SH-04	07/12/05	16.62	10.51	6.11
SH-04	10/18/05	16.62	11.01	5.61
SH-04	01/25/06	16.62	8.98	7.64
SH-04	10/11/06	16.62	11.06	5.56
SH-04	11/20/08	16.62	10.40	6.22
SH-04	04/08/09	16.62	10.01	6.61
SH-04	11/16/09	16.62	10.09	6.53
SH-04	04/27/10	16.62	9.33	7.29
SH-04	10/25/10	16.62	10.23	6.39
SH-04	10/27/11	16.62	10.68	5.94
SH-04	03/01/12	16.62	9.63	6.99
SH-04	05/30/12	16.62	9.56	7.06
SH-04	06/11/12	16.62	9.55	7.07
SH-04	08/23/12	16.62	9.95	6.67
SH-04	09/25/12	16.62	10.21	6.41
SH-04	11/25/12	16.62	8.77	7.85
SH-04	05/16/13	16.62	8.64	7.98
SH-04	11/04/13	16.62	8.75	7.87
SH-04	04/22/14	16.62	9.00	7.62
SH-04	11/06/14	16.62	9.23	7.39
SH-04	05/21/15	16.62	9.15	7.47
SH-04	12/08/15	16.62	8.80	7.82
SH-04	12/14/16	16.62	8.34	8.28
SH-04	06/13/17	16.62	8.75	7.87
SH-04	12/04/17	16.62	9.33	7.29
SH-04	06/12/18	16.62	9.39	7.23
SH-04	12/17/18	16.62	9.65	6.97
SH-04	05/16/19	16.62	9.72	6.90
SH-04	12/09/19	16.62	10.50	6.12
SH-04	06/29/20	16.62	9.89	6.73
SH-04	12/14/20	16.62	9.90	6.72
SH-04	04/12/21	16.62	9.18	7.44
SH-04	06/14/21	16.62	9.60	7.02
SH-04	12/15/21	16.62	8.79	7.83
SH-04	04/18/22	16.62	9.15	7.47
SH-04	06/27/22	16.62	9.33	7.29
SH-04	12/12/22	16.62	9.20	7.42



**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
TES-MW-1	04/06/93	13.10	8.79	4.31
TES-MW-1	05/13/93	13.10	8.61	4.49
TES-MW-1	06/10/93	13.10	8.63	4.47
TES-MW-1	07/08/93	13.10	8.98	4.12
TES-MW-1	08/03/93	13.10	9.28	3.82
TES-MW-1	09/08/93	13.10	8.66	4.44
TES-MW-1	10/08/93	13.10	9.98	3.12
TES-MW-1	11/05/93	13.10	10.20	2.90
TES-MW-1	12/03/93	13.10	10.17	2.93
TES-MW-1	01/05/94	13.10	9.30	3.80
TES-MW-1	02/04/94	13.10	9.19	3.91
TES-MW-1	08/28/95	13.10	9.26	3.84
TES-MW-1	09/27/95	13.10	9.53	3.57
TES-MW-1	04/27/99	13.10	7.49	5.61
TES-MW-1	07/14/99	13.10	8.90	4.20
TES-MW-1	10/18/99	13.10	9.88	3.22
TES-MW-1	01/11/00	13.10	7.59	5.51
TES-MW-1	04/05/00	13.10	8.20	4.90
TES-MW-1	10/02/00	13.10	9.99	3.11
TES-MW-1	01/22/01	13.10	9.65	3.45
TES-MW-1	07/23/01	13.10	10.77	2.33
TES-MW-1	10/16/01	13.10	11.93	1.17
TES-MW-1	04/23/02	13.10	9.32	3.78
TES-MW-1	07/18/02	13.10	10.34	2.76
TES-MW-1	10/23/02	13.10	10.92	2.18
TES-MW-1	01/30/03	13.10	8.43	4.67
TES-MW-1	04/15/03	13.10	8.89	4.21
TES-MW-1	07/17/03	13.10	10.41	2.69
TES-MW-1	10/15/03	13.10	10.82	2.28
TES-MW-1	01/13/04	13.10	8.82	4.28
TES-MW-1	04/19/04	16.15	9.76	6.39
TES-MW-1	07/27/04	16.15	10.48	5.67
TES-MW-1	10/18/04	16.15	10.27	5.88
TES-MW-1	01/24/05	16.15	9.26	6.89
TES-MW-1	04/18/05	16.15	9.46	6.69
TES-MW-1	07/12/05	16.15	10.10	6.05
TES-MW-1	10/18/05	16.15	10.70	5.45
TES-MW-1	01/25/06	16.15	8.17	7.98
TES-MW-1	04/25/06	16.15	9.33	6.82
TES-MW-1	10/11/06	16.15	10.66	5.49
TES-MW-1	11/18/08	16.15	9.85	6.30
TES-MW-1	11/16/09	16.15	9.35	6.80
TES-MW-1	10/26/10	16.15	9.66	6.49
TES-MW-1	10/27/11	16.15	10.42	5.73

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
TES-MW-1	05/30/12	16.15	9.37	6.78
TES-MW-1	06/13/12	16.15	9.43	6.72
TES-MW-1	06/26/12	16.15	10.31	5.84
TES-MW-1	11/27/12	16.15	8.62	7.53
TES-MW-1	05/16/13	16.15	9.46	6.69
TES-MW-1	11/07/13	16.15	10.06	6.09
TES-MW-1	04/22/14	16.15	8.70	7.45
TES-MW-1	11/04/14	16.15	9.07	7.08
TES-MW-1	03/10/15	16.15	8.92	7.23
TES-MW-1	05/15/15	16.15	9.40	6.75
TES-MW-1	07/29/15	16.15	10.08	6.07
TES-MW-1	12/10/15	16.15	7.14	9.01
TES-MW-1	02/23/16	16.15	7.58	8.57
TES-MW-1	05/03/16	16.15	8.80	7.35
TES-MW-1	08/30/16	16.15	9.86	6.29
TES-MW-1	12/14/16	16.15	8.30	7.85
TES-MW-1	03/13/17	16.15	7.57	8.58
TES-MW-1	06/13/17	16.15	9.01	7.14
TES-MW-1	08/22/17	16.15	9.90	6.25
TES-MW-1	12/04/17	16.15	8.75	7.40
TES-MW-1	03/06/18	16.15	8.61	7.54
TES-MW-1	06/12/18	16.15	9.56	6.59
TES-MW-1	09/05/18	16.15	10.17	5.98
TES-MW-1	12/17/18	16.15	9.08	7.07
TES-MW-1	03/18/19	16.15	8.73	7.42
TES-MW-1	05/15/19	16.15	9.34	6.81
TES-MW-1	09/17/19	16.15	10.19	5.96
TES-MW-1	12/09/19	16.15	9.99	6.16
TES-MW-1	04/27/20	16.15	9.04	7.11
TES-MW-1	06/29/20	16.15	9.50	6.65
TES-MW-1	09/21/20	16.15	10.23	5.92
TES-MW-1	12/14/20	16.15	9.43	6.72
TES-MW-1	04/12/21	16.15	8.79	7.36
TES-MW-1	06/14/21	16.15	9.35	6.80
TES-MW-1	09/22/21	16.15	10.15	6.00
TES-MW-1	12/14/21	16.15	7.87	8.28
TES-MW-1	03/28/22	16.15	8.19	7.96
TES-MW-1	06/27/22	16.15	9.18	6.97
TES-MW-1	09/19/22	16.15	10.50	5.65
TES-MW-1	12/12/22	16.15	10.35	5.80
TX-03	04/06/93	9.58	5.57	4.01
TX-03	06/10/93	9.58	5.50	4.08
TX-03	07/08/93	9.58	5.81	3.77

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
TX-03	08/03/93	9.58	6.08	3.50
TX-03	09/08/93	9.58	6.42	3.16
TX-03	10/08/93	9.58	6.74	2.84
TX-03	11/05/93	9.58	6.91	2.67
TX-03	12/03/93	9.58	6.90	2.68
TX-03	01/05/94	9.58	6.16	3.42
TX-03	02/04/94	9.58	Not Measured	Not Measured
TX-03	08/28/95	9.58	6.16	3.42
TX-03	09/27/95	9.58	Not Measured	Not Measured
TX-03	04/27/99	9.58	4.68	4.90
TX-03	07/14/99	9.58	5.87	3.71
TX-03	10/18/99	9.58	6.71	2.87
TX-03	01/11/00	9.58	5.30	4.28
TX-03	04/05/00	9.58	5.31	4.27
TX-03	07/18/00	9.58	5.98	3.60
TX-03	10/02/00	9.58	6.65	2.93
TX-03A	04/23/02	9.58	6.25	3.33
TX-03A	07/18/02	9.58	6.75	2.83
TX-03A	10/23/02	9.58	7.15	2.43
TX-03A	01/28/03	9.58	5.40	4.18
TX-03A	04/15/03	9.58	5.76	3.82
TX-03A	07/17/03	9.58	6.76	2.82
TX-03A	10/15/03	9.58	7.05	2.53
TX-03A	01/13/04	9.58	5.46	4.12
TX-03A	04/19/04	12.26	6.22	6.04
TX-03A	07/27/04	12.26	6.78	5.48
TX-03A	10/18/04	12.26	6.69	5.57
TX-03A	01/24/05	12.26	5.76	6.50
TX-03A	04/18/05	12.26	5.91	6.35
TX-03A	07/12/05	12.26	6.41	5.85
TX-03A	10/18/05	12.26	6.92	5.34
TX-03A	01/25/06	12.26	4.82	7.44
TX-03A	04/25/06	12.26	5.82	6.44
TX-03A	10/11/06	12.26	6.91	5.35
TX-03A	11/20/08	12.26	6.14	6.12
TX-03A	04/08/09	12.26	5.90	6.36
TX-03A	11/16/09	12.26	5.80	6.46
TX-03A	04/27/10	12.26	5.53	6.73
TX-03A	10/25/10	12.26	6.20	6.06
TX-03A	10/27/11	12.26	6.74	5.52
TX-03A	03/01/12	12.26	5.86	6.40
TX-03A	06/13/12	12.26	5.97	6.29
TX-03A	09/26/12	12.26	6.67	5.59

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
TX-03A	11/27/12	12.26	5.21	7.05
TX-03A	02/21/13	12.26	5.55	6.71
TX-03A	05/16/13	12.26	6.01	6.25
TX-03A	09/06/13	12.26	6.56	5.70
TX-03A	11/07/13	12.26	6.45	5.81
TX-03A	04/22/14	12.26	5.45	6.81
TX-03A	07/24/14	12.26	6.28	5.98
TX-03A	09/23/14	12.26	6.57	5.69
TX-03A	11/04/14	12.26	5.64	6.62
TX-03A	03/10/15	12.26	5.57	6.69
TX-03A	05/15/15	12.26	5.98	6.28
TX-03A	07/29/15	12.26	6.51	5.75
TX-03A	12/10/15	12.26	4.48	7.78
TX-03A	02/23/16	12.26	4.44	7.82
TX-03A	05/03/16	12.26	5.46	6.80
TX-03A	08/30/16	12.26	6.59	5.67
TX-03A	12/14/16	12.26	5.04	7.22
TX-03A	03/13/17	12.26	4.56	7.70
TX-03A	05/16/17	12.26	5.12	7.14
TX-03A	06/13/17	12.26	5.63	6.63
TX-03A	08/22/17	12.26	6.37	5.89
TX-03A	12/04/17	12.26	5.20	7.06
TX-03A	03/27/18	12.26	5.42	6.84
TX-03A	06/12/18	12.26	6.33	5.93
TX-03A	09/05/18	12.26	6.43	5.83
TX-03A	12/17/18	12.26	5.61	6.65
TX-03A	03/18/19	12.26	5.12	7.14
TX-03A	05/16/19	12.26	5.56	6.70
TX-03A	09/17/19	12.26	6.42	5.84
TX-03A	12/09/19	12.26	6.27	5.99
TX-03A	04/27/20	12.26	5.45	6.81
TX-03A	06/29/20	12.26	5.65	6.61
TX-03A	09/21/20	12.26	6.43	5.83
TX-03A	12/15/20	12.26	5.70	6.56
TX-03A	04/12/21	12.26	5.12	7.14
TX-03A	06/14/21	12.26	5.72	6.54
TX-03A	09/23/21	12.26	6.35	5.91
TX-03A	12/16/21	12.26	--	--
TX-03A	03/28/22	12.26	4.90	7.36
TX-03A	06/27/22	12.26	5.17	7.09
TX-03A	09/21/22	12.26	6.75	5.51
TX-03A	12/12/22	12.26	5.05	7.21
TX-04	04/06/93	14.36	9.97	4.39

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
TX-04	05/13/93	14.36	9.83	4.53
TX-04	06/10/93	14.36	9.87	4.49
TX-04	07/08/93	14.36	10.24	4.12
TX-04	08/03/93	14.36	10.54	3.82
TX-04	09/08/93	14.36	10.96	3.40
TX-04	10/08/93	14.36	11.28	3.08
TX-04	11/05/93	14.36	11.51	2.85
TX-04	12/03/93	14.36	11.43	2.93
TX-04	01/05/94	14.36	10.60	3.76
TX-04	02/04/94	14.36	10.45	3.91
TX-04	08/28/95	14.36	10.64	3.72
TX-04	09/27/95	14.36	10.88	3.48
TX-04	04/27/99	14.36	8.57	5.79
TX-04	07/14/99	14.36	10.01	4.35
TX-04	10/18/99	14.36	11.12	3.24
TX-04	01/11/00	14.36	9.06	5.30
TX-04	04/05/00	14.36	9.04	5.32
TX-04	07/18/00	14.36	10.41	3.95
TX-04	10/02/00	14.36	11.23	3.13
TX-04	01/22/01	14.36	10.70	3.66
TX-04	07/23/01	14.36	11.50	2.86
TX-04	10/16/01	14.36	9.57	4.79
TX-04	04/23/02	14.36	6.81	7.55
TX-04	07/18/02	14.36	11.33	3.03
TX-04	10/23/02	14.36	11.79	2.57
TX-04	01/28/03	14.36	9.51	4.85
TX-04	04/15/03	14.36	9.55	4.81
TX-04	07/17/03	14.36	11.28	3.08
TX-04	10/15/03	14.36	11.93	2.43
TX-04	01/13/04	14.36	9.54	4.82
TX-04	04/19/04	17.65	10.50	7.15
TX-04	07/27/04	17.65	11.46	6.19
TX-04	10/18/04	17.65	11.46	6.19
TX-04	01/24/05	17.65	10.16	7.49
TX-04	04/18/05	17.65	10.35	7.30
TX-04	07/12/05	17.65	11.04	6.61
TX-04	10/18/05	17.65	11.79	5.86
TX-04	01/25/06	17.65	8.43	9.22
TX-04	04/25/06	17.65	10.22	7.43
TX-04	10/11/06	17.65	11.77	5.88
TX-04	11/18/08	17.65	10.84	6.81
TX-04	11/16/09	17.65	10.39	7.26
TX-04	10/25/10	17.65	10.77	6.88
TX-04	10/26/11	17.65	11.47	6.18

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC	Depth to Water ft below TOC	GW Elevation ft AMSL
		Elevation ft AMSL		
TX-04	11/26/12	17.65	9.26	8.39
TX-04	11/04/13	17.65	10.98	6.67
TX-04	11/06/14	17.65	10.05	7.60
TX-04	02/27/15	17.65	9.37	8.28
TX-04	12/08/15	17.65	9.27	8.38
TX-04	12/14/16	17.65	8.97	8.68
TX-04	12/04/17	17.65	9.64	8.01
TX-04	12/17/18	17.65	10.39	7.26
TX-04	12/09/19	17.65	11.22	6.43
TX-04	12/14/20	17.65	10.45	7.20
TX-04	04/12/21	17.65	9.63	8.02
TX-04	12/15/21	17.65	8.90	8.75
TX-04	12/12/22	17.65	9.81	7.84
TX-06	04/06/93	8.58	3.85	4.73
TX-06	06/10/93	8.58	3.71	4.87
TX-06	09/08/93	8.58	4.96	3.62
TX-06	10/08/93	8.58	5.35	3.23
TX-06	11/05/93	8.58	5.54	3.04
TX-06	12/03/93	8.58	5.37	3.21
TX-06	01/05/94	8.58	4.48	4.10
TX-06	02/04/94	8.58	4.43	4.15
TX-06	08/28/95	8.58	4.75	3.83
TX-06	09/27/95	8.58	5.78	2.80
TX-06	04/27/99	8.58	2.62	5.96
TX-06	07/14/99	8.58	4.05	4.53
TX-06	10/18/99	8.58	5.19	3.39
TX-06	01/11/00	8.58	2.98	5.60
TX-06	04/05/00	8.58	3.16	5.42
TX-06	07/18/00	8.58	4.25	4.33
TX-06	10/02/00	8.58	5.23	3.35
TX-06	04/25/06	8.58	3.88	4.70
TX-06A	04/23/02	8.58	3.98	4.60
TX-06A	07/18/02	8.58	4.14	4.44
TX-06A	10/23/02	8.58	5.98	2.60
TX-06A	01/28/03	8.58	3.40	5.18
TX-06A	04/15/03	8.58	3.57	5.01
TX-06A	07/17/03	8.58	5.24	3.34
TX-06A	10/15/03	8.58	6.01	2.57
TX-06A	01/13/04	8.58	3.36	5.22
TX-06A	04/19/04	11.67	4.41	7.26
TX-06A	07/27/04	11.67	5.39	6.28
TX-06A	10/18/04	11.67	5.23	6.44

**Table 3**  
**Groundwater Elevation Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	TOC Elevation ft AMSL	Depth to Water ft below TOC	GW Elevation ft AMSL
TX-06A	01/24/05	11.67	3.66	8.01
TX-06A	04/18/05	11.67	3.89	7.78
TX-06A	07/12/05	11.67	4.78	6.89
TX-06A	10/18/05	11.67	5.63	6.04
TX-06A	01/25/06	11.67	3.00	8.67
TX-06A	04/25/06	11.67	5.54	6.13
TX-06A	11/18/08	11.67	4.56	7.11
TX-06A	11/16/09	11.67	3.99	7.68
TX-06A	10/28/10	11.67	4.47	7.20
TX-06A	10/25/11	11.67	5.40	6.27
TX-06A	11/25/12	11.67	3.03	8.64
TX-06A	11/07/13	11.67	4.87	6.80
TX-06A	11/06/14	11.67	4.03	7.64
TX-06A	12/08/15	11.67	2.80	8.87
TX-06A	12/14/16	11.67	3.26	8.41
TX-06A	12/04/17	11.67	3.36	8.31
TX-06A	12/17/18	11.67	4.18	7.49
TX-06A	12/09/19	11.67	5.20	6.47
TX-06A	12/14/20	11.67	4.32	7.35
TX-06A	04/12/21	11.67	3.91	7.76
TX-06A	12/15/21	11.67	2.90	8.77
TX-06A	12/12/22	11.67	7.46	4.21

**Notes:**

= Indicates data collected during this progress report p

-- = Survey data not available

AMSL = above mean sea level

ft = feet

TOC = Top of monitoring well casing

**Table 4**  
**Performance Product Monitoring Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Date	MW-204			MW-208			MW-209			MW-210			MW-211			MW-212		
	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness
06/01/04	10.68	NP	NP	5.01	NP	NP	—	—	—	6.20	6.15	0.05	5.33	NP	NP	5.60	NP	NP
10/02/04	10.12	NP	NP	4.77	NP	NP	—	—	—	7.09	6.31	0.78	5.04	NP	NP	4.89	NP	NP
10/03/04	10.50	NP	NP	5.98	NP	NP	—	—	—	7.26	6.71	0.55	5.86	NP	NP	6.06	NP	NP
04/19/04	10.95	NP	NP	6.29	NP	NP	—	—	—	6.99	NP	NP	4.90	NP	NP	5.13	NP	NP
05/13/04	11.24	NP	NP	6.07	NP	NP	—	—	—	6.95	NP	NP	4.78	NP	NP	4.80	NP	NP
08/06/04	11.35	NP	NP	4.76	NP	NP	—	—	—	5.52	NP	NP	4.64	NP	NP	4.41	NP	NP
06/07/04	11.55	NP	NP	5.06	NP	NP	—	—	—	6.98	NP	NP	4.55	NP	NP	4.61	NP	NP
11/08/04	11.79	NP	NP	6.51	NP	NP	—	—	—	7.22	NP	NP	7.18	NP	NP	7.27	NP	NP
09/09/04	11.79	NP	NP	6.66	NP	NP	—	—	—	7.19	7.18	0.01	7.16	NP	NP	7.14	7.14	Trace
06/10/04	11.76	NP	NP	6.58	NP	NP	—	—	—	7.18	NP	NP	7.11	NP	NP	7.08	NP	NP
09/11/04	11.61	NP	NP	6.17	NP	NP	—	—	—	7.04	7.01	0.03	6.93	NP	NP	6.95	6.95	Trace
10/12/04	—	—	—	3.91	NP	NP	—	—	—	6.96	NP	NP	5.31	NP	NP	5.00	NP	NP
11/01/05	11.04	NP	NP	3.80	NP	NP	—	—	—	5.78	NP	NP	4.85	4.85	Trace	4.71	NP	NP
11/02/05	10.81	10.81	Trace	4.47	NP	NP	—	—	—	6.19	6.18	0.01	5.71	NP	NP	5.68	NP	NP
11/03/05	11.18	NP	NP	5.48	NP	NP	—	—	—	6.73	NP	NP	6.56	6.56	Trace	6.50	NP	NP
04/18/05	10.98	NP	NP	5.97	NP	NP	—	—	—	6.95	6.81	0.14	6.18	NP	NP	6.42	NP	NP
05/25/05	10.98	NP	NP	4.78	NP	NP	—	—	—	6.12	NP	NP	5.73	NP	NP	5.78	NP	NP
09/06/05	11.15	NP	NP	5.74	NP	NP	—	—	—	6.68	6.67	0.01	6.11	NP	NP	6.33	NP	NP
11/07/05	11.40	NP	NP	6.12	NP	NP	—	—	—	7.13	NP	NP	6.32	NP	NP	6.65	NP	NP
08/19/05	11.64	NP	NP	6.25	NP	NP	—	—	—	6.91	NP	NP	6.50	NP	NP	7.85	NP	NP
09/16/05	11.83	NP	NP	6.51	NP	NP	—	—	—	7.32	NP	NP	6.85	NP	NP	7.02	NP	NP
10/18/05	11.98	NP	NP	6.06	NP	NP	—	—	—	6.93	NP	NP	6.51	NP	NP	6.54	NP	NP
09/11/05	11.67	NP	NP	4.43	NP	NP	—	—	—	6.34	NP	NP	4.86	NP	NP	4.10	NP	NP
05/12/05	11.48	NP	NP	4.65	NP	NP	—	—	—	6.57	NP	NP	—	—	—	—	—	—
01/26/06	9.96	NP	NP	4.72	NP	NP	—	—	—	5.83	NP	NP	6.65	NP	NP	3.95	NP	NP
02/28/06	10.24	NP	NP	5.34	NP	NP	—	—	—	6.28	NP	NP	4.53	NP	NP	4.88	NP	NP
03/24/06	10.57	NP	NP	5.34	NP	NP	—	—	—	4.20	NP	NP	5.74	NP	NP	4.94	NP	NP
04/18/06	10.78	NP	NP	5.41	NP	NP	—	—	—	6.46	6.45	0.01	5.81	NP	NP	5.28	NP	NP
05/18/06	11.06	NP	NP	6.02	NP	NP	—	—	—	7.01	NP	NP	6.32	NP	NP	5.56	NP	NP
06/19/06	11.26	NP	NP	5.98	NP	NP	—	—	—	6.91	NP	NP	6.23	NP	NP	5.48	NP	NP
08/28/06	11.74	NP	NP	6.45	NP	NP	—	—	—	7.25	NP	NP	6.63	NP	NP	5.68	NP	NP
09/15/06	11.83	NP	NP	6.21	NP	NP	—	—	—	7.02	NP	NP	6.54	NP	NP	5.53	NP	NP
10/11/06	11.96	NP	NP	6.10	NP	NP	—	—	—	6.95	NP	NP	5.93	NP	NP	5.48	NP	NP
11/29/06	—	—	—	4.19	NP	NP	—	—	—	5.83	NP	NP	5.39	NP	NP	4.27	NP	NP
12/13/06	10.53	NP	NP	3.60	NP	NP	—	—	—	5.58	5.58	0.01	4.39	NP	NP	2.81	NP	NP
01/31/07	10.17	NP	NP	3.98	NP	NP	—	—	—	6.32	6.09	0.23	5.58	NP	NP	4.26	NP	NP
02/26/07	10.56	NP	NP	4.55	NP	NP	—	—	—	6.04	NP	NP	5.24	NP	NP	4.12	NP	NP
03/20/07	10.68	NP	NP	4.68	NP	NP	—	—	—	6.42	6.41	0.01	5.68	NP	NP	4.82	NP	NP
04/26/07	10.99	NP	NP	—	NP	NP	—	—	—	—	NP	NP	6.15	NP	NP	4.97	4.96	0.01
05/25/07	11.29	NP	NP	5.68	NP	NP	—	—	—	7.05	NP	NP	6.60	NP	NP	5.11	NP	NP
06/15/07	11.50	NP	NP	5.93	NP	NP	—	—	—	7.04	NP	NP	6.35	NP	NP	5.03	NP	NP
07/19/07	11.70	NP	NP	5.82	5.81	0.01	—	—	—	6.81	6.80	0.01	6.34	NP	NP	5.29	5.28	0.01
08/17/07	11.81	NP	NP	5.90	NP	NP	—	—	—	6.75	NP	NP	6.22	NP	NP	5.35	NP	NP
09/11/07	—	NP	NP	6.24	NP	NP	—	—	—	7.28	7.28	<.01	6.68	6.68	<.01	5.73	NP	NP
10/29/07	11.80	NP	NP	5.60	NP	NP	—	—	—	6.68	NP	NP	5.25	NP	NP	6.03	NP	NP
11/12/07	11.84	NP	NP	5.56	NP	NP	—	—	—	6.58	6.57-6.58	<.01	5.82	NP	NP	4.83	—	—



**Table 4**  
**Performance Product Monitoring Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Date	MW-204			MW-208			MW-209			MW-210			MW-211			MW-212		
	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness
12/26/07	10.84	NP	NP	4.09	NP	NP	—	—	—	5.85	5.84	<.01	4.84	4.85	<.01	4.44	4.43	<.01
01/11/08	10.64	NP	NP	3.84	NP	NP	—	—	—	5.26	5.25	0.01	4.13	4.12	<.01	3.64	3.63	<.01
02/13/08	10.65	NP	NP	4.58	NP	NP	—	—	—	6.60	6.25	0.35	5.75	NP	NP	4.84	NP	NP
03/14/08	11.05	NP	NP	5.37	NP	NP	—	—	—	6.31	NP	NP	5.65	NP	NP	5.01	NP	NP
04/18/08	10.78	NP	NP	5.41	NP	NP	—	—	—	6.46	6.45	0.01	5.81	NP	NP	5.28	NP	NP
05/05/08	11.39	NP	NP	5.84	NP	NP	—	—	—	7.06	7.05	0.01	6.39	NP	NP	5.49	NP	NP
05/20/08	11.53	NP	NP	5.84	NP	NP	—	—	—	7.03	7.02	0.01	6.69	NP	NP	5.52	NP	NP
06/30/08	11.67	NP	NP	5.85	NP	NP	—	—	—	dry	NP	NP	6.35	6.34	0.01	5.45	5.44	0.01
07/10/08	11.70	NP	NP	5.70	NP	NP	—	—	—	6.83	6.80	0.03	6.23	NP	NP	5.24	NP	NP
08/13/08	11.75	NP	NP	5.61	NP	NP	—	—	—	6.75	NP	NP	6.25	NP	NP	6.17	NP	NP
09/02/08	11.82	NP	NP	5.86	NP	NP	—	—	—	6.98	NP	NP	6.40	NP	NP	5.71	NP	NP
10/10/08	11.82	NP	NP	7.11	NP	NP	—	—	—	5.83	NP	NP	6.59	NP	NP	5.83	NP	NP
11/10/08	10.02	NP	NP	4.68	NP	NP	—	—	—	6.40	NP	NP	5.61	NP	NP	5.21	NP	NP
12/08/08	11.48	NP	NP	5.53	NP	NP	—	—	—	6.70	6.52	0.18	5.82	NP	Sheen	5.17	NP	Sheen
01/07/09	11.00	NP	NP	3.93	NP	NP	—	—	—	5.32	NP	Sheen	4.51	NP	Sheen	4.41	NP	Sheen
02/17/09	11.60	NP	NP	5.20	NP	NP	—	—	—	6.40	NP	Sheen	5.72	NP	Sheen	5.21	NP	Sheen
03/06/09	11.21	NP	NP	4.67	NP	NP	—	—	—	6.02	5.59	0.43	4.45	NP	Sheen	4.83	NP	Sheen
04/07/09	—	—	—	—	—	—	—	—	—	6.98	6.96	0.02	—	—	—	—	—	—
07/09/09	11.55	NP	NP	—	—	—	—	—	—	6.90	NP	Sheen	6.34	NP	Sheen	5.56	NP	Sheen
10/20/09	11.75	NP	NP	4.90	NP	NP	—	—	—	6.28	NP	Sheen	5.63	NP	Sheen	4.91	NP	Sheen
01/05/10	10.98	NP	NP	3.60	NP	NP	—	—	—	5.78	NP	Sheen	3.55	NP	NP	3.30	NP	NP
04/26/10	10.7	NP	NP	5.04	NP	NP	—	—	—	6.29	6.28	0.01	5.76	NP	NP	5.05	NP	NP
07/22/10	11.44	NP	NP	5.83	NP	NP	—	—	—	10.02	NP	Sheen	6.74	NP	NP	5.37	NP	Sheen
10/20/10	11.68	NP	NP	5.90	NP	NP	—	—	—	6.78	NP	Sheen	6.20	NP	Sheen	5.45	NP	Sheen
12/12/10	10.79	NP	NP	4.45	NP	NP	—	—	—	5.97	NP	<0.01	5.27	NP	NP	4.62	NP	Sheen
04/08/11	9.97	NP	NP	4.62	NP	NP	—	—	—	5.72	5.71	0.01	5.22	NP	NP	4.82	NP	NP
07/28/11	11.08	NP	NP	5.71	NP	NP	—	—	—	6.90	6.89	0.01	6.22	NP	NP	5.38	NP	NP
09/21/11	11.75	NP	NP	6.19	NP	NP	—	—	—	7.06	7.05	0.01	6.55	NP	NP	5.78	NP	Sheen
03/26/12	—	—	—	4.68	NP	NP	—	—	—	6.09	5.76	0.33	5.08	NP	NP	4.19	NP	Sheen
06/12/12	11.20	NP	NP	5.24	NP	NP	—	—	—	7.25	6.38	0.87	5.86	NP	NP	4.69	NP	Sheen
09/27/12	—	—	—	8.39	NP	NP	—	—	—	7.29	6.98	0.31	6.73	NP	NP	5.47	NP	Sheen
11/27/12	10.81	NP	NP	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12/20/12	—	—	—	2.15	NP	NP	—	—	—	5.40	4.72	0.68	1.97	NP	NP	0.00	NP	NP
02/22/13	10.81	NP	NP	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
03/29/13	—	—	—	—	—	—	—	—	—	6.53	6.44	0.09	5.97	NP	Sheen	4.90	NP	Sheen
05/16/13	11.30	NP	NP	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
06/28/13	—	—	—	4.98	NP	NP	—	—	—	6.35	6.33	0.02	5.68	NP	NP	4.42	NP	Sheen
09/06/13	11.77	NP	NP	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
09/11/13	—	—	—	5.67	NP	Sheen	—	—	—	6.63	NP	NP	—	—	—	5.32	4.82	0.50
09/12/13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.03	0.49
10/30/13	—	—	—	5.97	NP	NP	—	—	—	7.08	6.96	0.12	6.43	NP	NP	5.29	5.28	0.01
11/07/13	11.73	NP	NP	5.51	NP	NP	—	—	—	6.44	6.41	0.03	5.68	NP	NP	5.54	5.51	0.03
01/16/14	—	—	—	5.46	NP	NP	5.46	5.51	0.05	6.48	6.36	0.12	5.51	NP	NP	5.47	5.43	0.04
02/27/14	—	—	—	4.72	NP	NP	6.04	NP	Sheen	6.79	6.12	0.67	5.01	NP	NP	6.12	NP	Sheen
03/25/14	—	—	—	4.91	NP	NP	5.90	NP	NP	6.96	5.84	1.12	5.38	NP	NP	6.30	NP	NP
04/22/14	10.78	NP	NP	4.98	NP	NP	5.89	NP	NP	6.32	5.98	0.34	5.33	NP	NP	5.85	NP	Sheen

**Table 4**  
**Performance Product Monitoring Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Date	MW-204			MW-208			MW-209			MW-210			MW-211			MW-212		
	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness
06/10/14	—	—	—	5.62	NP	Sheen	8.31	NP	NP	7.08	6.85	0.23	6.02	NP	NP	—	NP	NP
07/24/14	—	—	—	5.50	NP	NP	6.91	NP	NP	6.64	6.56	0.08	6.85	NP	NP	6.06	NP	Sheen
08/28/14	—	—	—	5.73	NP	NP	6.79	NP	NP	6.72	6.65	0.07	6.06	NP	NP	6.23	NP	NP
09/23/14	—	—	—	5.76	NP	NP	5.73	NP	NP	6.65	6.55	0.10	5.96	NP	NP	6.08	NP	NP
10/22/14	—	—	—	4.82	NP	NP	4.91	NP	NP	5.87	NP	NP	4.96	NP	NP	4.13	NP	Sheen
11/05/14	11.04	NP	NP	4.50	NP	NP	6.60	NP	NP	6.45	5.90	0.55	4.70	NP	NP	5.12	NP	NP
12/18/14	—	—	—	4.28	NP	NP	5.77	NP	NP	5.49	5.26	0.23	4.50	NP	NP	4.89	NP	NP
01/27/15	—	—	—	4.52	NP	NP	4.88	NP	NP	6.15	5.60	0.55	4.82	NP	NP	5.38	NP	NP
02/26/15	—	—	—	4.92	NP	NP	5.54	NP	NP	6.69	5.88	0.81	5.38	NP	NP	5.59	NP	NP
03/11/15	10.75	NP	NP	5.29	NP	NP	5.55	NP	NP	6.56	6.15	0.41	5.52	NP	NP	5.45	NP	Sheen
04/21/15	—	—	—	5.08	NP	NP	—	—	—	6.44	6.36	0.08	5.50	NP	NP	5.85	NP	NP
05/19/15	11.21	NP	NP	5.31	NP	NP	8.60	NP	NP	6.50	6.49	0.01	5.71	NP	NP	5.67	NP	NP
06/11/15	—	—	—	5.34	NP	NP	—	—	—	6.48	NP	NP	5.70	NP	NP	5.46	NP	NP
07/29/15	11.59	NP	NP	5.81	NP	NP	—	—	—	6.73	NP	NP	6.10	NP	NP	5.85	NP	NP
08/25/15	—	—	—	5.95	NP	NP	—	—	—	6.23	NP	NP	6.17	NP	NP	6.82	NP	NP
09/24/15	—	—	—	5.72	NP	NP	—	—	—	6.60	NP	NP	5.72	NP	NP	6.33	NP	NP
10/15/15	—	—	—	5.35	NP	NP	—	—	—	6.30	NP	NP	5.30	NP	NP	5.82	NP	NP
11/20/15	—	—	—	4.37	NP	NP	—	—	—	6.47	5.67	0.80	4.78	NP	NP	5.51	NP	NP
12/09/15	9.91	NP	NP	2.55	NP	NP	—	—	—	4.45	4.45	Trace	2.80	NP	NP	3.61	NP	NP
02/23/16	—	—	—	4.18	NP	NP	—	—	—	5.82	5.23	0.59	4.45	NP	NP	4.38	NP	Odor
04/22/16	—	—	—	4.90	NP	NP	—	—	—	5.96	5.83	0.13	4.67	NP	NP	5.37	NP	NP
05/03/16	—	—	—	5.27	NP	NP	—	—	—	6.42	6.19	0.23	5.63	NP	NP	6.00	NP	NP
06/02/16	—	—	—	5.34	NP	NP	—	—	—	6.44	6.44	Odor	5.77	NP	NP	6.18	NP	NP
07/14/16	—	—	—	5.58	NP	NP	—	—	—	6.67	NP	NP	6.02	NP	NP	6.27	NP	NP
08/18/16	—	—	—	5.80	NP	NP	—	—	—	6.78	6.78	Odor	6.16	NP	NP	6.44	NP	NP
09/08/16	—	—	—	5.88	NP	NP	—	—	—	6.78	6.78	Odor	6.22	NP	NP	6.55	NP	NP
10/21/16	—	—	—	5.40	NP	NP	—	—	—	6.32	Trace	Trace	6.01	NP	NP	6.10	NP	NP
11/17/16	—	—	—	3.67	NP	NP	—	—	—	5.43	4.49	0.94	3.86	NP	NP	4.68	NP	NP
12/01/16	—	—	—	3.93	NP	NP	—	—	—	6.00	4.94	1.06	4.14	NP	NP	4.88	NP	NP
12/14/16	10.34	NP	NP	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
01/11/17	—	—	—	2.83	NP	NP	—	—	—	5.38	5.34	0.04	3.18	NP	NP	3.88	NP	Sheen
02/14/17	—	—	—	3.81	NP	NP	—	—	—	5.69	4.75	0.94	4.02	NP	NP	4.79	NP	NP
03/13/17	9.83	NP	NP	4.04	NP	NP	—	—	—	5.98	5.17	0.81	4.27	NP	NP	4.98	NP	NP
04/13/17	—	—	—	3.78	NP	NP	—	—	—	6.42	5.03	1.39	4.02	NP	NP	5.02	NP	NP
05/08/17	—	—	—	4.78	NP	NP	—	—	—	6.74	5.83	0.91	5.32	NP	NP	5.31	NP	NP
06/13/17	—	—	—	5.00	NP	NP	—	—	—	6.18	5.98	0.20	5.36	NP	NP	5.60	NP	NP
07/18/17	—	—	—	5.32	NP	NP	—	—	—	6.47	6.43	0.04	5.78	NP	NP	5.83	NP	NP
08/22/17	11.34	NP	NP	5.32	NP	NP	—	—	—	6.42	NP	NP	5.76	NP	NP	5.92	NP	NP
09/13/17	—	—	—	5.68	NP	NP	—	—	—	6.60	NP	NP	—	—	—	6.21	NP	NP
10/31/17	—	—	—	5.58	NP	NP	—	—	—	6.64	NP	NP	—	—	—	6.17	NP	NP
11/13/17	—	—	—	4.67	NP	NP	—	—	—	6.08	NP	NP	—	—	—	4.98	NP	NP
12/04/17	10.84	NP	NP	4.15	NP	NP	—	—	—	6.05	5.53	0.52	—	—	—	5.38	NP	NP
01/24/18	—	—	—	3.55	NP	NP	—	—	—	5.34	4.95	0.39	3.78	NP	NP	4.16	NP	NP
02/15/18	—	—	—	4.68	NP	NP	—	—	—	6.65	5.64	1.01	4.40	NP	NP	5.42	NP	NP
03/06/18	10.55	NP	NP	4.57	NP	NP	—	—	—	6.19	5.80	0.39	5.03	NP	NP	5.46	NP	NP
04/12/18	—	—	—	4.72	NP	NP	—	—	—	4.96	4.87	0.09	5.68	NP	NP	5.37	NP	NP

**Table 4**  
**Performance Product Monitoring Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Date	MW-204			MW-208			MW-209			MW-210			MW-211			MW-212		
	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness
05/02/18	—	—	—	4.85	NP	NP	—	—	—	6.22	5.80	0.42	5.17	NP	NP	5.54	NP	NP
06/12/18	11.04	NP	NP	5.25	NP	NP	—	—	—	6.50	6.47	0.03	5.73	NP	NP	6.06	NP	NP
07/12/18	—	—	—	5.24	NP	NP	—	—	—	6.40	6.39	0.01	6.70	NP	NP	5.94	NP	NP
08/23/18	—	—	—	5.57	NP	NP	—	—	—	6.56	6.55	0.01	5.97	NP	NP	6.08	NP	NP
09/05/18	8.20	NP	NP	5.75	NP	NP	—	—	—	6.74	NP	NP	6.16	NP	NP	6.35	NP	NP
10/11/18	—	—	—	5.18	NP	NP	—	—	—	6.32	NP	NP	5.50	NP	NP	5.83	NP	NP
11/07/18	—	—	—	5.01	NP	NP	—	—	—	6.33	NP	NP	5.56	NP	NP	5.66	NP	NP
12/17/18	11.10	NP	NP	4.13	NP	NP	—	—	—	5.31	NP	NP	4.14	NP	NP	4.43	NP	NP
01/16/19	—	—	—	4.48	NP	NP	—	—	—	6.07	5.35	0.72	4.30	NP	NP	5.56	NP	NP
02/20/19	—	—	—	3.98	NP	NP	—	—	—	6.45	5.02	1.43	4.22	NP	NP	4.32	NP	NP
03/18/19	10.51	NP	NP	4.95	4.94	0.01	—	—	—	6.67	5.96	0.71	5.34	NP	NP	6.12	NP	NP
04/10/19	—	—	—	4.66	NP	NP	—	—	—	5.24	NP	NP	4.98	NP	NP	5.78	5.75	0.03
05/15/19	—	—	—	4.19	NP	NP	—	—	—	7.05	6.22	0.83	5.38	NP	NP	6.13	6.10	0.03
06/26/19	—	—	—	5.47	NP	NP	—	—	—	6.58	6.56	0.02	6.88	NP	NP	6.11	NP	NP
07/24/19	—	—	—	5.43	NP	NP	—	—	—	6.59	6.58	0.01	5.88	NP	NP	5.96	NP	NP
08/13/19	—	—	—	5.45	NP	NP	—	—	—	6.58	6.57	0.01	5.72	NP	NP	6.02	NP	NP
09/17/19	11.65	NP	NP	5.23	NP	NP	—	—	—	6.18	6.13	0.05	5.54	NP	NP	6.28	6.25	0.03
10/16/19	—	—	—	5.61	NP	NP	—	—	—	6.47	6.45	0.02	5.77	NP	NP	6.36	NP	NP
11/05/19	—	—	—	5.62	NP	NP	—	—	—	6.78	6.68	0.10	6.01	NP	NP	6.51	NP	NP
12/09/19	11.54	NP	NP	5.08	NP	NP	—	—	—	6.27	NP	NP	5.54	NP	NP	6.14	NP	NP
01/28/20	—	—	—	3.05	NP	NP	—	—	—	4.13	4.06	0.07	3.12	NP	NP	2.03	NP	NP
02/26/20	—	—	—	4.81	NP	NP	—	—	—	6.71	5.78	0.93	5.19	NP	NP	4.97	NP	Sheen
04/27/20	10.94	NP	NP	5.18	NP	NP	—	—	—	6.43	6.23	0.20	5.47	NP	NP	5.29	NP	NP
06/16/20	—	—	—	5.25	NP	NP	—	—	—	5.69	5.56	0.13	5.72	NP	NP	6.25	NP	NP
06/29/20	11.26	NP	NP	5.08	NP	NP	—	—	—	6.58	6.50	0.08	5.78	NP	NP	5.85	NP	NP
07/29/20	—	—	—	5.20	NP	NP	—	—	—	6.43	6.42	0.01	5.67	NP	NP	6.31	NP	NP
08/27/20	—	—	—	5.41	NP	NP	—	—	—	6.71	6.70	0.01	5.85	NP	NP	6.15	NP	NP
09/21/20	11.59	NP	NP	5.09	NP	NP	—	—	—	6.35	NP	NP	5.45	NP	NP	6.23	NP	NP
10/29/20	—	—	—	5.58	NP	NP	—	—	—	6.87	6.50	0.37	5.99	NP	NP	6.23	NP	NP
11/30/20	—	—	—	4.82	NP	NP	—	—	—	6.23	5.78	0.45	5.11	NP	NP	5.10	NP	NP
12/14/20	11.22	NP	NP	4.75	NP	NP	—	—	—	6.05	5.91	0.14	5.28	NP	NP	5.83	NP	NP
01/21/21	—	—	—	4.27	NP	NP	—	—	—	6.96	4.9	2.06	4.82	NP	NP	5.63	NP	NP
02/16/21	—	—	—	3.69	NP	NP	—	—	—	5.83	4.92	0.91	4.18	NP	NP	4.25	NP	NP
03/23/21	—	—	—	4.53	NP	NP	—	—	—	6.57	6.11	0.46	5.37	NP	NP	5.74	NP	NP
04/12/21	—	—	—	5.28	NP	NP	—	—	—	6.42	6.32	0.10	5.65	NP	NP	6.31	NP	NP
05/12/21	—	—	—	5.54	NP	NP	—	—	—	6.61	6.57	0.04	5.86	NP	NP	6.21	NP	NP
06/14/21	—	—	—	4.97	NP	NP	—	—	—	6.15	NP	NP	5.24	NP	NP	5.62	NP	NP
07/15/21	—	—	—	5.31	NP	NP	—	—	—	6.36	6.32	0.04	5.60	NP	NP	6.01	NP	NP
08/18/21	—	—	—	5.52	NP	NP	—	—	—	6.60	NP	Sheen	5.90	NP	NP	6.16	NP	NP
09/22/21	11.65	NP	NP	5.46	NP	NP	—	—	—	6.50	NP	NP	5.70	NP	NP	6.10	NP	NP
10/21/21	—	—	—	5.32	NP	NP	—	—	—	6.36	NP	NP	5.50	NP	NP	6.05	NP	NP
11/23/21	—	—	—	4.28	NP	NP	—	—	—	6.20	5.38	0.82	4.42	NP	NP	5.19	NP	NP
12/14/21	10.42	NP	NP	3.99	NP	NP	—	—	—	5.12	NP	NP	4.39	NP	NP	4.79	NP	NP
01/25/22	—	—	—	4.34	NP	NP	—	—	—	6.34	5.45	0.89	4.85	NP	NP	5.67	NP	NP
02/28/22	—	—	—	4.59	NP	NP	—	—	—	6.31	NP	NP	4.51	NP	NP	2.86	NP	NP
03/28/22	10.48	NP	NP	4.63	NP	NP	—	—	—	5.92	NP	NP	5.00	NP	NP	5.98	NP	NP
04/18/22	—	—	—	5.08	NP	NP	—	—	—	6.18	6.15	0.03	5.28	NP	NP	5.98	NP	NP
05/23/22	—	—	—	4.81	NP	NP	—	—	—	6.50	6.29	0.21	5.28	NP	NP	5.70	NP	NP
06/27/22	11.18	NP	NP	5.02	NP	NP	—	—	—	6.21	6.06	0.15	5.28	NP	NP	5.90	NP	NP
07/20/22	—	—	—	5.03	NP	NP	—	—	—	6.24	NP	NP	5.42	NP	NP	5.85	NP	NP
08/23/22	—	—	—	5.55	NP	NP	—	—	—	6.62	6.60	0.02	5.94	NP	NP	6.19	NP	NP
09/19/22	11.58	NP	NP	5.58	NP	NP	—	—	—	6.99	NP	NP	5.93	NP	NP	6.19	NP	NP

**Table 4**  
**Performance Product Monitoring Data**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Date	MW-204			MW-208			MW-209			MW-210			MW-211			MW-212		
	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness	Groundwater Depth	Product Depth	Product Thickness
10/11/22	—	—	—	5.54	NP	NP	—	—	—	6.59	6.59	Sheen	5.77	NP	NP	6.34	NP	NP
11/22/22	—	—	—	5.59	NP	NP	—	—	—	6.56	6.54	0.02	5.59	NP	NP	5.61	NP	NP
12/12/22	—	—	—	4.21	NP	NP	—	—	—	5.15	NP	NP	4.39	NP	NP	4.70	NP	NP

**Notes:**  
 = Indicates data collected during this progress report period  
 Depth relative to the measuring point at the top of the monitoring well PVC pipe  
 Product depth/thick = product depth/thickness in well measured in feet  
 — = not measured  
 NP = no product detected

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-05	05/04/16	14.3	357	3.38	6.26	31.6	9.99	--	--	--	--	--	--
MW-05	12/14/16	12.22	308	5.94	6.45	47	0	--	--	--	--	--	--
MW-05	06/14/17	14.8	249	1.7	6.37	25.4	5.13	--	--	--	--	--	--
MW-05	12/07/17	15.16	263	791.21	6.73	-165.1	8.37	--	--	--	--	--	--
MW-05	06/12/18	15.66	211	1.47	6.35	-44.7	6.88	--	--	--	--	--	--
MW-05	12/18/18	15	299	1.73	7.28	-23.6	80	--	--	--	--	--	--
MW-05	05/15/19	15.3	294	0.85	6.92	18.3	45	--	--	--	--	--	--
MW-05	12/10/19	14.31	300	4.76	5.91	32.8	16	--	--	--	--	--	--
MW-05	06/29/20	14.7	289	0.31	6.74	198.90	11	--	--	--	--	--	--
MW-05	12/14/20	13.95	292	0.71	8.25	148.90	16	--	--	--	--	--	--
MW-05	06/15/21	9.16	276	0.99	6.77	29.8	22	--	--	--	--	--	--
MW-05	12/15/21	13.5	241	0.57	10.40	-83.3	21	--	--	--	--	--	--
MW-05	04/18/22	12.06	356	0.14	7.87	77.8	13	--	--	--	--	--	--
MW-05	06/29/22	15	351	0.71	6.21	36.9	34	--	--	--	--	--	--
MW-05	12/14/22	13.77	375	0.21	7.81	220.9	3	--	--	--	--	--	--
MW-101	12/13/16	8.35	244	1.67	6.81	-75	0	--	--	--	--	--	--
MW-101	12/06/17	10.99	103	0.32	6.75	-12.3	9	--	--	--	--	--	--
MW-101	12/19/18	12.5	239	1.38	7.39	-74.6	11	--	--	--	--	--	--
MW-101	12/09/19	13.13	207	3.59	6.49	-69.6	44	--	--	--	--	--	--
MW-101	12/16/20	12.73	243	0.25	7.67	118.40	48	--	--	--	--	--	--
MW-101	12/14/21	11.5	314	0.59	6.79	124.0	25	--	--	--	--	--	--
MW-101	12/12/22	11.79	278	0.4	6.75	130.7	5	--	--	--	--	--	--
MW-102	12/14/16	9.44	438	1.96	6.77	32	0	--	--	--	--	--	--
MW-102	12/05/17	11.76	310	1.14	6.43	106.3	9.6	--	--	--	--	--	--
MW-102	12/18/18	14.2	415	1.51	7.49	-35.9	12	--	--	--	--	--	--
MW-102	12/10/19	13.55	410	3.43	6.16	59.4	27	--	--	--	--	--	--
MW-102	12/16/20	13.66	477	0.41	7.72	117.60	30	--	--	--	--	--	--
MW-102	12/16/21	12.2	295	0.77	8.10	73.9	11	--	--	--	--	--	--

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-102	12/12/22	12.27	346	0.55	6.54	-46.3	83	--	--	--	--	--	--
MW-104	05/05/16	17.11	420	0.65	6.19	-105.1	4.31	--	--	--	--	--	--
MW-104	12/14/16	10.9	340	1.76	6.49	-70	0	--	--	--	--	--	--
MW-104	06/14/17	17.09	323	0.82	7.09	-39.3	2.61	--	--	--	--	--	--
MW-104	12/07/17	15.6	349	0.61	6.65	-4	0	--	--	--	--	--	--
MW-104	06/12/18	19.32	180	0.54	6.24	-44	2.52	--	--	--	--	--	--
MW-104	12/18/18	15.8	331	1.34	7.35	-41.6	10	--	--	--	--	--	--
MW-104	05/15/19	17.8	258	0.78	6.6	-74.9	6	--	--	--	--	--	--
MW-104	12/10/19	15.35	345	2.66	5.4	74.8	36	--	--	--	--	--	--
MW-104	06/29/20	17.6	395	0.24	6.73	198.90	9	--	--	--	--	--	--
MW-104	12/14/20	16.19	412	0.34	7.75	172.10	13	--	--	--	--	--	--
MW-104	06/15/21	11.03	309	1.74	7.20	58.9	6	--	--	--	--	--	--
MW-104	12/15/21	14.4	275	0.15	10.06	-115.0	9	--	--	--	--	--	--
MW-104	04/18/22	13.97	297	0.11	8.15	62	27	--	--	--	--	--	--
MW-104	06/29/22	17	314	0.52	6.35	-38.2	13	--	--	--	--	--	--
MW-104	12/14/22	15.42	368	0.13	7.74	216.3	2	--	--	--	--	--	--
MW-105	12/14/16	14.63	160	0.32	6.14	-58.1	8.67	--	--	--	--	--	--
MW-105	12/06/17	13.11	136	1.37	6.12	-26.4	0	--	--	--	--	--	--
MW-105	12/18/18	15.5	93	1.01	7.21	-33.7	49	--	--	--	--	--	--
MW-105	12/11/19	15.53	166	0.48	7.31	-17.2	25	--	--	--	--	--	--
MW-105	12/14/20	14.90	289	0.50	7.83	155.60	27	--	--	--	--	--	--
MW-105	12/15/21	13.0	170	0.13	9.91	-101.9	15	--	--	--	--	--	--
MW-105	12/14/22	13.2	234	0.18	7.8	221.3	15	--	--	--	--	--	--
MW-111	05/04/16	15.2	148	3.67	6.29	4.6	23.2	--	--	--	--	--	--
MW-111	12/14/16	13.4	295	0.35	6.45	-87.3	6.48	--	--	--	--	--	--
MW-111	06/14/17	16.6	112	1.12	7.08	1	8.2	--	--	--	--	--	--
MW-111	12/06/17	15.03	386	10.65	6.42	-51.3	5.13	--	--	--	--	--	--
MW-111	06/12/18	17.56	118	0.73	6.22	-46.2	4.01	--	--	--	--	--	--
MW-111	12/18/18	15	417	1.25	7.76	-46.6	20	--	--	--	--	--	--

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-111	05/15/19	16.1	147	0.75	7.57	-55.6	14	--	--	--	--	--	--
MW-111	12/11/19	15.42	280	0.4	7.54	-13.1	6	--	--	--	--	--	--
MW-111	06/29/20	19	116	0.55	6.75	206.50	9	--	--	--	--	--	--
MW-111	12/14/20	15.93	242	0.28	7.61	169.80	16	--	--	--	--	--	--
MW-111	06/15/21	10.31	110	1.05	6.87	73.4	22	--	--	--	--	--	--
MW-111	12/15/21	14.9	238	0.18	9.85	-72.1	6	--	--	--	--	--	--
MW-111	04/18/22	12.31	139	0.09	8.15	62.3	44	--	--	--	--	--	--
MW-111	06/27/22	18.4	119	0.62	6.21	11.8	34	--	--	--	--	--	--
MW-111	12/14/22	12.94	220	0.15	7.43	190.3	3	--	--	--	--	--	--
MW-112A	05/05/16	14.28	448	0.87	6.41	-87	4.41	--	--	--	--	--	--
MW-112A	12/12/16	13.7	401	0.67	6.51	-87.1	9.78	--	--	--	--	--	--
MW-112A	06/15/17	15.75	498	0.6	7.26	-62.6	--	--	--	--	--	--	--
MW-112A	12/07/17	13.97	359	0.82	6.5	-27.9	0	--	--	--	--	--	--
MW-112A	06/13/18	16.28	517	0.26	6.51	-56.1	0	--	--	--	--	--	--
MW-112A	12/20/18	14	495	0.12	6.75	-101	128	--	--	--	--	--	--
MW-112A	05/16/19	10.91	529	0.52	6.27	-104	77	--	--	--	--	--	--
MW-112A	12/12/19	13.87	620	0.5	8.9	-80.8	12	--	--	--	--	--	--
MW-112A	06/29/20	15.7	430	0.32	6.76	189.10	16	--	--	--	--	--	--
MW-112A	12/14/20	14.67	399	0.18	7.77	123.70	5	--	--	--	--	--	--
MW-112A	06/15/21	9.58	338	0.89	6.56	31.4	4	--	--	--	--	--	--
MW-112A	12/15/21	14.4	243	0.19	9.95	-85.8	12	--	--	--	--	--	--
MW-112A	04/18/22	11.44	305	0.09	8.24	56.9	18	--	--	--	--	--	--
MW-112A	06/28/22	16.2	272	0.52	6.27	-37.2	14	--	--	--	--	--	--
MW-112A	12/13/22	12.79	254	0.1	6.38	-36.0	25	--	--	--	--	--	--
MW-113	06/27/22	15.4	284	0.54	6.28	-38.4	37	--	--	--	--	--	--
MW-113	12/14/22	12.47	265	0.21	7.6	209.5	8	--	--	--	--	--	--
MW-114	06/27/22	15.4	139	1.32	6.16	53.6	33	--	--	--	--	--	--
MW-114	12/14/22	12.68	216	0.3	7.77	222.2	30	--	--	--	--	--	--

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-115	06/27/22	16.9	248	0.51	6.11	-33.7	46	--	--	--	--	--	--
MW-115	12/14/22	13.69	208	0.18	7.8	224.1	5	--	--	--	--	--	--
MW-201	01/14/04	12	282	1.98	5.59	-95.5	1.5	--	--	--	--	--	--
MW-201	04/20/04	11.4	101	5.52	5	61.3	7	ND	--	--	5.71	--	--
MW-201	01/26/05	9	720	9.12	5.48	129	9	--	--	--	--	--	--
MW-201	04/20/05	11.9	700	6.24	6.66	83	8	0	--	--	7.67	--	--
MW-201	07/13/05	15.4	99	0.16	5.64	178.1	1.9	--	--	--	--	--	--
MW-201	10/20/05	14.1	535	0.42	7.21	49.2	3.9	--	--	--	--	--	--
MW-201	01/26/06	8.3	24	7.47	7.02	-72.5	4	--	--	--	--	--	--
MW-201	11/20/08	9.3	172	14.08	6.12	268	38.2	--	--	--	--	--	--
MW-201	04/07/09	--	--	--	--	--	--	--	--	--	--	--	--
MW-201	11/19/09	10.6	13.2	7.79	5.21	61	6.5	--	--	--	--	--	--
MW-201	10/27/10	12.7	15.2	6.92	4.79	157	0.5	--	--	--	--	--	--
MW-201	10/26/11	11.53	655	2.77	7.59	-76	5.9	--	--	--	--	--	--
MW-201	11/27/12	--	--	--	--	--	--	--	--	--	--	--	--
MW-201	11/06/13	11.78	800	0	6.68	-74	0	--	--	--	--	--	--
MW-201	11/06/14	14.1	121	0	6.08	297	3.3	--	--	--	--	--	--
MW-201	12/13/16	8.12	47	3.58	6.13	142.3	9.27	--	--	--	--	--	--
MW-201	12/06/17	11.3	57	14.37	6.08	37.7	12.2	--	--	--	--	--	--
MW-201	12/19/18	12.6	387	0.65	6.81	-87.4	30	--	--	--	--	--	--
MW-201	12/16/20	11.99	116	0.79	6.75	145.80	120	--	--	--	--	--	--
MW-201	12/12/22	10.64	634	0.27	7.08	148.3	15	--	--	--	--	--	--
MW-202	01/14/04	8	52	12.4	5.32	-40.2	9.1	--	--	--	--	--	--
MW-202	04/20/04	12.1	317	1.31	5.27	112	9.8	3	--	--	< 1	--	--
MW-202	01/26/05	11.6	218	1.69	4.8	3	126	--	--	--	--	--	--
MW-202	04/20/05	12.6	44	0	7.78	-60	26	8	--	--	<1	--	--
MW-202	07/13/05	15.7	281	0.11	6.09	-22	6.3	--	--	--	--	--	--
MW-202	10/20/05	15.5	576	0.44	6.42	-47.9	5.5	--	--	--	--	--	--
MW-202	01/26/06	10.78	213	0.18	7.73	-104.7	70	--	--	--	--	--	--
MW-202	11/20/08	14.5	532	3.65	6.4	232	10.2	36.6	--	--	< 1	--	--



**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-202	04/07/09	11.86	0.175	0	6.12	-82	56.1	--	--	--	--	--	--
MW-202	11/19/09	12.4	51.6	1.65	5.81	-53	29.5	19	--	--	82	--	--
MW-202	04/27/10	12.3	34	0.22	5.46	-96	55.4	--	--	--	--	--	--
MW-202	10/27/10	15	29.5	2.35	6.15	-48	24	7.4	--	--	< 1.0	--	--
MW-202	10/26/11	12.9	214	2.45	8.22	-104.2	2.72	8.5	--	--	< 0.50	--	--
MW-202	03/02/12	10.03	334	0	6.3	-39	27.2	--	--	--	--	--	--
MW-202	06/13/12	12.5	284	4.36	7.22	-59	25.7	--	--	--	--	--	--
MW-202	09/26/12	14.2	332	0	6.74	-112	25	--	--	--	--	--	--
MW-202	11/27/12	12.99	383	0	7.33	-70	77.7	--	--	--	15	--	--
MW-202	11/06/13	13.67	263	2.28	5.79	-43.6	4.9	3	--	--	0.76	< 0.200	0.439
MW-202	11/06/14	15.87	373	0	6.47	-49	107	5	< 0.25	< 0.25	7	0.288	0.631
MW-202	12/10/15	12.85	241	0.42	6.42	-21.3	98.6	1.5	< 0.10	< 0.10	11.6	24.2	0.628
MW-202	05/03/16	15.95	232	0.36	6.2	-45.6	16.9	--	--	--	--	--	--
MW-202	12/13/16	10.66	223	0.39	6.33	-102.4	9.52	0.5	< 0.0400	< 0.0400	1.24 J	45.3	0.401
MW-202	06/14/17	14.76	222	0.33	7.08	-145.6	9	--	--	--	--	--	--
MW-202	12/06/17	11.62	153	0.71	6	-49	4.5	2.75	< 0.0400	< 0.0400	28.6	11.2	0.45
MW-202	06/14/18	14.22	159	0.69	6.04	-2.9	9.87	--	--	--	--	--	--
MW-202	12/19/18	12.6	287	0.28	6.84	-87.4	22	14	< 0.0400	< 0.0400	58.4	17.9	0.649
MW-202	05/16/19	12.6	266	0.48	6.53	-91.9	71	--	--	--	--	--	--
MW-202	12/10/19	12.88	278	4.97	6.12	-10.2	50	3.5	<0.0600	<0.0600	8.61	28.3	0.543
MW-202	06/29/20	15.4	406	0.77	7.24	173.70	42	--	--	--	--	--	--
MW-202	12/16/20	12.44	272	0.20	7.36	111.10	88	1.20	<0.200	<0.400	9.44 J+	12.90	0.436
MW-202	06/14/21	8.10	254	1.50	6.63	170.6	34	--	--	--	--	--	--
MW-202	12/16/21	11.4	174	0.81	7.76	3.8	125	--	--	--	4.00 J	0.32 J	0.532
MW-202	06/29/22	14.1	637	0.76	6.96	6.3	58	--	--	--	--	--	--
MW-202	12/12/22	10.49	430	0.2	7.21	154.0	52	--	--	--	100	0.122 J	0.868
MW-203	01/13/04	12.4	243	2.91	6.38	-6.9	13.7	--	--	--	--	--	--
MW-203	04/19/04	13	369	1.02	6.58	110	39.2	1	--	--	2.4	--	--
MW-203	07/27/04	16.4	514	1.12	6.11	90.9	32.2	--	--	--	--	--	--
MW-203	10/18/04	14.8	643	0.35	9.42	136.8	110	--	--	--	--	--	--
MW-203	01/25/05	12.9	476	2.79	6.37	21	210	--	--	--	--	--	--

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-203	04/19/05	12.8	44	0	6.22	0	5	5.5	--	--	6.48	--	--
MW-203	07/13/05	15	351	0.67	6.34	-46	15	--	--	--	--	--	--
MW-203	10/20/05	15.9	902	1.12	6.69	-48.7	34	--	--	--	--	--	--
MW-203	01/23/06	11.4	131	2.2	6.45	7.6	60	--	--	--	--	--	--
MW-203	11/18/08	13.9	448	10.3	7.11	87	190	1.35	--	--	17.1	--	--
MW-203	04/08/09	12.23	136	1.87	6.83	-31	338	--	--	--	--	--	--
MW-203	11/17/09	12.2	25.8	5.49	6.28	197	45.6	< 0.1	--	--	8.3	--	--
MW-203	04/26/10	12.7	40.9	0.3	6.81	-109	80.1	--	--	--	--	--	--
MW-203	10/25/10	14.1	43.8	1.58	6.1	-4	51.8	4.3	--	--	14	--	--
MW-203	05/23/11	--	--	--	--	--	--	--	--	--	--	--	--
MW-203	10/26/11	13.98	384	2.94	8.4	-80.9	10.9	8.8	--	--	< 0.50	--	--
MW-203	06/13/12	12.8	375	4.27	7.2	-38	22.3	--	--	--	--	--	--
MW-203	11/27/12	14.83	250	0	6.61	22	41.7	--	--	--	24.4	--	--
MW-203	11/06/13	12.59	486	0.18	6.35	-51	0	3	--	--	< 0.50	3.68	0.178
MW-203	11/06/14	16.13	236	4.55	6.71	135.1	28.4	1.5	0.42 J	< 0.25	14.5	< 0.200	0.127
MW-203	12/09/15	12.51	0.407	0	6.05	-60	67.2	5	< 0.10	< 0.10	4.13	24	0.197
MW-203	05/04/16	12.93	266	4.91	6.42	-108	14.5	--	--	--	--	--	--
MW-203	12/13/16	10.46	221	0.73	6.25	-88	9.6	0.5	< 0.0400	< 0.0400	2.27	14.1	0.134
MW-203	06/14/17	15.02	203	0.23	6.09	-205.4	12.7	--	--	--	--	--	--
MW-203	12/08/17	11.65	274	1.6	6.3	43.8	0	1.25	< 0.0400	< 0.0400	21.6	3.32	0.166
MW-203	06/14/18	13.9	265	1.93	6.25	3.9	35.1	--	--	--	--	--	--
MW-203	12/20/18	12.8	357	0.78	7.41	-44.6	>1000	1.4	0.307	0.307	7.81	2.32	0.195
MW-203	05/16/19	10.89	353	1.89	5.52	-1	99	--	--	--	--	--	--
MW-203	12/10/19	12.77	441	4.84	5.3	0.5	41	3	<0.0600	<0.0600	1.34 J	20	0.207
MW-203	06/29/20	15.1	339	1.06	7.18	-9.10	10	--	--	--	--	--	--
MW-203	12/15/20	12.26	319	0.77	8.07	130.10	87	2.00	1.49	<0.400	35.80	<1.00	0.0182
MW-203	06/14/21	7.69	259	1.28	6.33	21.6	406	--	--	--	--	--	--
MW-203	12/16/21	11.6	193	0.21	8.30	16.1	16	--	--	--	16.9	<0.5	0.0505
MW-203	06/28/22	14.1	571	0.57	6.52	13.2	513	--	--	--	--	--	--
MW-203	12/14/22	11.74	469	0.23	6.93	174.7	5	--	--	--	7.94	8.34	0.693
MW-204	12/13/16	10.72	173	0.99	5.84	21	4	--	--	--	--	--	--

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-204	12/06/17	13.48	129	12.04	5.6	49.8	6.22	--	--	--	--	--	--
MW-204	12/19/18	12.9	218	0.33	6.98	-66.1	27	--	--	--	--	--	--
MW-204	12/10/19	13.47	340	1.83	6.01	-6	22	--	--	--	--	--	--
MW-204	12/16/20	13.41	347	1.00	6.27	190.10	70	--	--	--	--	--	--
MW-204	12/16/21	10.5	144	0.22	7.70	-17.2	25	--	--	--	--	--	--
MW-204	12/12/22	11.69	247	0.58	6.51	-76.1	26	--	--	--	--	--	--
MW-206A	12/12/16	11.31	482	0.68	6.6	-104.9	9.44	--	--	--	--	--	--
MW-206A	12/08/17	11.87	491	1.39	6.63	34	0	--	--	--	--	--	--
MW-206A	12/20/18	13.1	605	0.81	7.41	-52.3	70	--	--	--	--	--	--
MW-206A	12/10/19	13.08	617	2.28	6.07	-41.9	11	--	--	--	--	--	--
MW-206A	12/16/20	12.02	718	0.22	9.45	42.10	440	--	--	--	--	--	--
MW-206A	12/16/21	8.6	394	0.61	8.20	15.9	21	--	--	--	--	--	--
MW-206A	12/12/22	9.59	404	0.17	7.02	-68.2	96	--	--	--	--	--	--
MW-213	05/03/16	14.65	12440	0.13	8.26	-330	0	--	--	--	--	--	--
MW-213	12/13/16	9.57	18.7	5.52	8.28	-321	5.6	--	--	--	--	--	--
MW-213	06/14/17	15.37	10550	0.23	7.03	-330.2	7.36	--	--	--	--	--	--
MW-213	12/07/17	12.43	13640	0.55	8.14	-72.3	0	--	--	--	--	--	--
MW-213	06/12/18	14.43	8410	0.91	7.65	-91.3	3.02	--	--	--	--	--	--
MW-213	12/19/18	12.8	11390	0.82	7.57	-45.6	5	--	--	--	--	--	--
MW-213	05/16/19	14.8	11641	1.84	7.5	79.5	2	--	--	--	--	--	--
MW-213	12/11/19	10.91	1322	1.28	8.51	-112.7	16	--	--	--	--	--	--
MW-213	06/29/20	13	16341	0.34	7.83	191.70	9	--	--	--	--	--	--
MW-213	12/16/20	12.38	17,924	0.08	7.99	53.20	0	--	--	--	--	--	--
MW-213	06/14/21	7.18	17,427	0.47	7.89	113.6	3	--	--	--	--	--	--
MW-213	12/16/21	9.9	13,386	0.85	9.67	-101.5	5	--	--	--	--	--	--
MW-213	06/29/22	13.8	20,936	0.43	8.09	-313.6	25	--	--	--	--	--	--
MW-213	12/12/22	11.24	3,297	0.26	6.83	140.2	5	--	--	--	--	--	--
MW-214	05/03/16	14.91	10960	0.44	8.16	-363	0	--	--	--	--	--	--
MW-214	12/14/16	10.5	312	7.24	6.98	39	0	--	--	--	--	--	--

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-214	06/14/17	15.55	10395	0.05	8.14	-358.6	0.85	--	--	--	--	--	--
MW-214	12/07/17	14.01	7725	838.05	8.01	-355.1	3.11	--	--	--	--	--	--
MW-214	06/12/18	14.77	3900	0.74	7.82	-90.5	0	--	--	--	--	--	--
MW-214	12/19/18	13.4	11888	0.12	7.45	-101.6	29	--	--	--	--	--	--
MW-214	05/16/19	15.7	10667	0.59	7.43	-62.3	3	--	--	--	--	--	--
MW-214	12/11/19	11.41	1576	1.16	10.33	-211.5	9	--	--	--	--	--	--
MW-214	06/29/20	15.93	1516	1.66	7.91	-152.70	12	--	--	--	--	--	--
MW-214	12/16/20	13.00	17,750	0.15	6.90	95.20	6	--	--	--	--	--	--
MW-214	06/14/21	8.21	2,117	1.49	7.47	78.3	2	--	--	--	--	--	--
MW-214	12/16/21	12.5	8,441	0.30	9.34	-172.8	5	--	--	--	--	--	--
MW-214	06/29/22	14.3	1,680	3.25	7.97	-189.6	13	--	--	--	--	--	--
MW-214	12/12/22	12.4	7,989	0.17	6.52	-50	10	--	--	--	--	--	--
MW-301	02/22/16	12.32	449	0.34	6.5	-127.1	15.1	--	--	--	--	--	--
MW-301	05/02/16	17.58	257	0.29	6.6	-119.6	6.74	--	--	--	--	--	--
MW-301	08/29/16	18.76	183	1.96	6.86	5	0	--	--	--	--	--	--
MW-301	12/12/16	10.16	357	2.37	6.73	-140	0	--	--	--	--	--	--
MW-301	03/13/17	11.62	355	0	6.72	-125	0	--	--	--	--	--	--
MW-301	06/13/17	15.6	192	0.37	6.59	-107.4	--	--	--	--	--	--	--
MW-301	08/22/17	20.23	187	0	7.32	-105	0	--	--	--	--	--	--
MW-301	12/08/17	14.93	151	1.2	6.89	-118.3	-11	--	--	--	--	--	--
MW-301	03/06/18	12.6	435	0.82	6.78	19.7	3.19	--	--	--	--	--	--
MW-301	06/13/18	16.7	521	0.21	6.61	-76.4	1.8	--	--	--	--	--	--
MW-301	09/06/18	18.95	651	0.16	6.57	-94.8	1.34	7	--	--	--	--	--
MW-301	12/20/18	15.1	836	0.12	6.53	-50	14	--	--	--	--	--	--
MW-301	03/19/19	13.4	930	1.02	7.52	-48.5	119	--	--	--	--	--	--
MW-301	05/16/19	12.3	693	0.71	6.11	-52	97	--	--	--	--	--	--
MW-301	09/17/19	15.31	373	0.87	6.7	-23.8	11	--	--	--	--	--	--
MW-301	12/11/19	14.25	755	10.14	7.15	55.9	64	--	--	--	--	--	--
MW-301	04/28/20	13.4	628	0.51	7.56	14.60	14	--	--	--	--	--	--
MW-301	06/29/20	20.47	572	0.66	6.50	-28.40	60	--	--	--	--	--	--
MW-301	09/21/20	19.2	699	0.37	6.29	20.80	12	--	--	--	--	--	--

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**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-301	12/15/20	11.20	611	0.40	7.53	116.90	33	--	--	--	--	--	--
MW-301	04/13/21	10.6	347	2.26	6.01	35.3	76	--	--	--	--	--	--
MW-301	06/14/21	11.44	726	1.78	7.00	37.3	27	--	--	--	--	--	--
MW-301	09/22/21	18.21	615	1.43	6.54	-35.6	55	--	--	--	--	--	--
MW-301	12/16/21	10.17	502	0.14	6.60	82.3	112	--	--	--	--	--	--
MW-301	03/29/22	12.17	592	0.14	6.82	160.7	30	--	--	--	--	--	--
MW-301	06/27/22	15.9	601	0.44	6.45	-105.6	65	--	--	--	--	--	--
MW-301	09/21/22	16.48	402	0.90	6.40	335.6	42	--	--	--	--	--	--
MW-301	12/13/22	12.78	587	0.09	6.39	-31.4	80	--	--	--	--	--	--
MW-302	03/01/12	--	--	--	--	--	--	--	--	--	--	--	--
MW-302	06/12/12	--	--	--	--	--	--	--	--	--	--	--	--
MW-302	06/28/12	--	--	--	--	--	--	--	--	--	--	--	--
MW-302	09/25/12	--	--	--	--	--	--	--	--	--	--	--	--
MW-302	11/25/12	--	--	--	--	--	--	--	--	--	--	--	--
MW-302	11/05/13	14.81	346	0.1	6.42	-67	0	6.0-6.5	--	--	13.2	< 0.200	0.349
MW-302	11/03/14	15.91	342	0.53	6.5	-27.8	5.06	2.5	< 0.10	< 0.10	< 0.50	0.765	0.493
MW-302	12/10/15	14.58	337	0.35	6.63	-104.8	0	1.5	< 0.10	< 0.10	< 0.50	27.4	0.402
MW-302	05/04/16	13.6	371	4.92	6.51	-116.5	2.49	--	--	--	--	--	--
MW-302	12/15/16	10.93	388	0.95	6.58	-89	0	1	< 0.0400	< 0.0400	< 0.128	35.1	0.572
MW-302	06/13/17	16.99	143	0.3	5.79	39.2	--	--	--	--	--	--	--
MW-302	08/23/17	20.32	358	9.36	7.08	-54	2.7	--	--	--	--	--	--
MW-302	12/05/17	13.54	755	0.89	5.82	30.4	8.95	4.25	< 0.0400	< 0.0400	97.2	42.9	2.15
MW-302	03/07/18	11.57	984	0.27	6.15	12	9.95	--	--	--	--	--	--
MW-302	06/13/18	16.08	446	0.81	6.04	-61.4	5.51	--	--	--	--	--	--
MW-302	09/06/18	19.67	424	0.74	6.49	-27	3.37	1.75	--	--	--	--	--
MW-302	12/20/18	15.9	726	0.1	6.4	73	55	7	0.105	0.105	364	1.4	2.52
MW-302	03/19/19	14.5	1321	0.4	7.44	-54.1	58	--	--	--	--	--	--
MW-302	05/16/19	12.83	589	0.7	5.81	-53	43	--	--	--	--	--	--
MW-302	09/17/19	14.71	424	0.79	6.75	-35.3	14	--	--	--	--	--	--
MW-302	12/11/19	16.95	1359	2.13	8.06	-57.4	19	3	<0.0600	<0.0600	629	67.4	3.52
MW-302	04/28/20	14	655	0.33	7.32	-25.30	16	--	--	--	--	--	--

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**Shell Harbor Island Terminal**  
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Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-302	06/29/20	15.22	509	0.88	6.29	-30.80	34	--	--	--	--	--	--
MW-302	09/21/20	18	499	0.84	6.30	46.20	39	--	--	--	--	--	--
MW-302	12/15/20	10.90	692	0.38	7.46	116.20	131	1.80	<0.200	<0.400	11.80	12.40	1.74
MW-302	04/13/21	13.4	409	1.39	6.53	-53.4	26	--	--	--	--	--	--
MW-302	06/15/21	10.57	538	0.45	7.21	6.0	26	--	--	--	--	--	--
MW-302	09/23/21	16.29	630	1.77	5.97	70.0	17	--	--	--	--	--	--
MW-302	12/16/21	10.70	597	0.10	7.67	20.3	35	--	--	--	104	0.282 J	2.74
MW-302	03/28/22	11.51	769	0.04	7.41	115.1	12	--	--	--	--	--	--
MW-302	06/28/22	16	936	0.79	6.4	-115.3	11	--	--	--	--	--	--
MW-302	09/21/22	16.92	550	0.09	7.22	343.0	18	--	--	--	--	--	--
MW-302	12/13/22	12.55	220	0.18	6.39	-43.9	19	--	--	--	39.1	31.8	0.607
MW-303	05/04/16	11.9	91	2.92	6.42	-73.9	9.31	--	--	--	--	--	--
MW-303	12/12/16	11.2	185	1.29	6.49	-50	0	--	--	--	--	--	--
MW-303	06/13/17	15.03	69	0.3	6.2	15.9	--	--	--	--	--	--	MN
MW-303	12/08/17	12.72	257	1.74	5.18	77.1	4.48	--	--	--	--	--	--
MW-303	03/06/18	11.47	382	0.76	5.59	91.7	3.47	--	--	--	--	--	--
MW-303	06/13/18	14.32	148	0.64	5.84	-19.6	4.22	--	--	--	--	--	--
MW-303	09/06/18	18.26	388	0.32	6.38	-56.1	4.4	6	--	--	--	--	--
MW-303	12/20/18	12.9	561	0.39	5.51	145	18	--	--	--	--	--	--
MW-303	03/19/19	11.1	470	0.59	7.19	-34.9	20	--	--	--	--	--	--
MW-303	05/16/19	10.49	590	1.8	5.56	-19	29	--	--	--	--	--	--
MW-303	09/17/19	14.68	474	1.3	6.31	-24.7	7	--	--	--	--	--	--
MW-303	12/11/19	13.89	570	0.71	7.8	-53.9	41	--	--	--	--	--	--
MW-303	04/28/20	12.7	238	0.43	6.65	40.80	20	--	--	--	--	--	--
MW-303	06/29/20	14.79	566	0.72	7.22	2.10	24	--	--	--	--	--	--
MW-303	09/21/20	18.8	1105	0.25	6.50	1.40	20	--	--	--	--	--	--
MW-303	12/15/20	10.93	382	0.42	7.20	115.80	15	--	--	--	--	--	--
MW-303	04/13/21	9.1	87	2.46	5.91	36.1	26	--	--	--	--	--	--
MW-303	06/14/21	9.33	368	1.32	6.65	6.7	12	--	--	--	--	--	--
MW-303	09/22/21	18.13	1,158	1.25	6.53	-47.5	11	--	--	--	--	--	--
MW-303	12/15/21	9.0	251	0.43	7.58	14.9	8	--	--	--	--	--	--

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-303	03/28/22	10.79	212	0.06	6.93	144.3	12	--	--	--	--	--	--
MW-303	06/28/22	15.2	300	0.48	6.03	-51.3	13	--	--	--	--	--	--
MW-303	09/21/22	15.76	641	0.09	6.45	343.4	23	--	--	--	--	--	--
MW-303	12/13/22	10.75	345	0.16	6.44	-16.9	16	--	--	--	--	--	--
MW-304	11/05/13	12.2	396	0.1	6.6	-119	0	7	--	--	< 0.50	0.345	0.273
MW-304	11/03/14	14.86	310	0.62	6.46	-36.9	11.2	5	< 0.10	< 0.10	0.51	3.60 J	0.297 J
MW-304	12/10/15	12.81	345	0.35	6.55	100.1	3.99	3	< 0.10	< 0.10	0.873	33.7	0.39
MW-304	05/04/16	12.9	337	1.95	6.35	-103.1	6.29	--	--	--	--	--	--
MW-304	12/15/16	9.2	342	2.4	6.65	-92	0	0.5	< 0.0400	< 0.0400	3.35	28.2	0.276
MW-304	06/13/17	16.82	162	1.47	6.27	-24.2	--	--	--	--	--	--	--
MW-304	08/23/17	20.76	529	0	7.09	-55	0.1	--	--	--	--	--	--
MW-304	12/05/17	13.01	1421	1	3.42	134.2	3.96	2.25	< 0.0400	< 0.0400	253	18.6	8.94
MW-304	03/06/18	12.36	794	1.52	4.82	105.9	3.92	--	--	--	--	--	--
MW-304	06/13/18	16.04	305	0.19	6.12	-63.2	5.78	--	--	--	--	--	--
MW-304	09/06/18	20.2	439	0.48	4.72	127.5	3.83	--	--	--	--	--	--
MW-304	12/20/18	14.3	830	0.19	4.19	272	96	6.5	0.0730 J	0.0730 J	520	2.51	2.74
MW-304	03/19/19	11.8	155	0.71	7.53	-30.3	24	--	--	--	--	--	--
MW-304	05/16/19	10.89	367	1.27	4.82	36	9	--	--	--	--	--	--
MW-304	09/17/19	13.56	323	1.29	6.73	5.4	15	--	--	--	--	--	--
MW-304	12/11/19	15.3	1518	5.46	8.24	91.6	62	6	<0.0600	<0.0600	908	11.3	4.79
MW-304	04/28/20	12.4	324	0.59	6.92	25.80	10	--	--	--	--	--	--
MW-304	06/29/20	14.78	301	0.78	6.83	-13.60	26	--	--	--	--	--	--
MW-304	09/21/20	16.7	393	0.22	5.78	59.30	41	--	--	--	--	--	--
MW-304	12/15/20	11.07	457	0.33	7.32	120.80	32	1.00	<0.200	<0.400	75.10	50.60	0.483
MW-304	04/13/21	9.0	92	2.60	6.00	79.8	33	--	--	--	--	--	--
MW-304	06/15/21	9.80	224	1.12	6.49	55.5	8	--	--	--	--	--	--
MW-304	09/22/21	17.36	370	1.33	5.72	19.8	15	--	--	--	--	--	--
MW-304	12/16/21	9.17	244	0.06	6.60	108.2	23	--	--	--	72.8	19	1.18
MW-304	03/28/22	11.80	135	0.10	6.79	152.3	10	--	--	--	--	--	--
MW-304	06/28/22	15.9	230	0.45	6.64	11.3	10	--	--	--	--	--	--
MW-304	09/20/22	18.11	345	0.11	6.28	349.1	12	--	--	--	--	--	--

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-304	12/13/22	11.01	317	0.22	6.37	-24.1	17	--	--	--	51.6	8.8	0.462
MW-307	11/26/12	12.7	332	0	7.18	-62	36.6	--	--	--	1.5	--	--
MW-307	11/06/13	12.31	231	0.07	6.42	-106	0.8	3.5	--	--	< 0.50	< 0.200	0.217
MW-307	11/04/14	14.49	383	0.26	6.86	-107	6.9	4.5	< 0.10	< 0.10	< 0.50	18.2	0.513
MW-307	12/09/15	12.78	225	0.51	6.4	-77.6	7.89	2.25	< 0.10	< 0.10	< 0.50	29.6	0.338
MW-307	02/23/16	10.43	225	0.27	6.21	-68.9	9.98	--	--	--	--	--	--
MW-307	05/03/16	12.71	211	0.39	6.05	-54	9.27	--	--	--	--	--	--
MW-307	08/30/16	16.9	198	1.18	6.91	67	0	--	--	--	--	--	--
MW-307	12/13/16	10.28	138	0.57	6.46	-87.4	8.09	1.5	< 0.0400	< 0.0400	< 0.256	21.2	0.235
MW-307	03/14/17	11.62	224	0	6.46	-79	0	--	--	--	--	--	--
MW-307	06/15/17	12.72	126	0.33	5.4	15.1	1.91	--	--	--	--	--	--
MW-307	08/23/17	17.87	149	0	7.03	-13	2.1	--	--	--	--	--	--
MW-307	12/06/17	14.55	405	1.49	6.18	-47.1	0	0.6	< 0.0400	< 0.0400	465	37.1	1.07
MW-307	03/08/18	13.9	270	0.38	6.42	2.6	5.1	--	--	--	--	--	--
MW-307	06/14/18	13.8	205	0.45	6.55	-23	2.92	--	--	--	--	--	--
MW-307	09/04/18	18.44	235	0.99	6.11	-25.6	0	2	--	--	--	--	--
MW-307	12/19/18	16.6	343	2.15	7.69	28.7	17	1.4	< 0.0400	< 0.0400	82.6	7.61	0.669
MW-307	03/18/19	14.3	530	0.85	6.79	-62.3	20	--	--	--	--	--	--
MW-307	05/16/19	14.1	315	0.72	6.82	-90.6	4	--	--	--	--	--	--
MW-307	09/17/19	13.21	231	1.15	6.95	1.6	10	--	--	--	--	--	--
MW-307	12/10/19	15.65	541	1.37	6.88	-44.6	18	5.5	<0.0600	<0.0600	210	60.4	1.21
MW-307	04/27/20	13.6	677	0.6	6.72	-96.40	43	--	--	--	--	--	--
MW-307	06/29/20	14.8	505	0.34	6.82	115.90	40	--	--	--	--	--	--
MW-307	09/21/20	15.8	476	0.41	5.96	37.20	29	--	--	--	--	--	--
MW-307	12/16/20	13.16	694	0.32	7.50	130.10	0	2.40	<0.200	<0.400	8.26 J+	51.80	1.17
MW-307	04/12/21	11.2	276	1.91	6.47	-56.9	65	--	--	--	--	--	--
MW-307	06/14/21	6.85	352	0.51	7.35	156.3	11	--	--	--	--	--	--
MW-307	09/22/21	16.03	661	1.12	6.10	0.8	17	--	--	--	--	--	--
MW-307	12/14/21	11.0	423	0.30	9.10	-24.0	18	--	--	--	22.1	0.172 J	0.764
MW-307	03/28/22	11.21	403	0.01	7.43	114.4	40	--	--	--	--	--	--
MW-307	06/29/22	15.2	430	0.66	6.88	34.8	19	--	--	--	--	--	--



**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-307	09/20/22	18.41	685	0.18	7.13	341.8	13	--	--	--	--	--	--
MW-307	12/12/22	11.27	322	0.43	6.45	-16.4	12	--	--	--	1.43 J	0.366 J	0.678
MW-308	02/23/16	10.09	657	0.32	6.78	-36.3	9.17	--	--	--	--	--	--
MW-308	05/03/16	13.49	431	0.31	6.52	-42.7	7.44	--	--	--	--	--	--
MW-308	08/30/16	16.93	224	1.43	7	50	0	--	--	--	--	--	--
MW-308	12/13/16	10.31	577	0.51	6.75	-22.5	8.43	1.5	< 0.0400	< 0.0400	141	1.53	1.05
MW-308	03/14/17	10.27	587	0	6.99	86	0	--	--	--	--	--	--
MW-308	06/15/17	13.16	355	0.9	7.07	-53	7.5	--	--	--	--	--	--
MW-308	08/23/17	18.34	235	0	7.15	-32	0	--	--	--	--	--	--
MW-308	12/06/17	13.3	591	801.24	6.76	-73.2	3.97	1.7	< 0.0400	< 0.0400	21.4	1.24	1.49
MW-308	03/08/18	10.08	758	0.29	6.74	-26.7	6.79	--	--	--	--	--	--
MW-308	06/14/18	14.41	208	0.43	6.34	-13.5	4.1	--	--	--	--	--	--
MW-308	09/05/18	17.87	270	0.64	6.57	-45.2	0	2	--	--	--	--	--
MW-308	12/19/18	10.7	579	1.68	6.94	52.4	30	0	< 0.0400	< 0.0400	48.1	0.167 J	0.0912
MW-308	03/18/19	12.5	912	0.63	7.03	-61.3	15	--	--	--	--	--	--
MW-308	05/16/19	13.2	311	0.29	6.78	-107.3	10	--	--	--	--	--	--
MW-308	09/17/19	12.9	213	1.61	6.64	2.6	12	--	--	--	--	--	--
MW-308	12/09/19	14.07	386	1.89	6.32	-53.5	10	5.5	<0.0600 J	<0.0600 J	93.9	16.1	1.01
MW-308	04/27/20	13.3	825	0.77	6.43	-73.10	31	--	--	--	--	--	--
MW-308	06/29/20	15.3	726	0.44	7.05	108.80	24	--	--	--	--	--	--
MW-308	09/21/20	15.7	489	0.7	5.69	239.30	38	--	--	--	--	--	--
MW-308	12/16/20	11.78	556	0.39	7.62	123.70	11	2.60	<0.200	<0.400	3.79 J+	4.57	0.293
MW-308	04/12/21	10.4	323	2.15	6.72	142.2	38	--	--	--	--	--	--
MW-308	06/14/21	7.31	600	1.15	6.97	137.7	11	--	--	--	--	--	--
MW-308	09/22/21	15.90	589	1.44	6.39	-17.2	6	--	--	--	--	--	--
MW-308	12/14/21	7.7	548	0.87	6.95	150.0	10	--	--	--	20.9	<0.5	0.219
MW-308	03/28/22	10.54	647	0.01	7.32	121.8	11	--	--	--	--	--	--
MW-308	06/29/22	15.3	439	0.66	6.68	7.6	17	--	--	--	--	--	--
MW-308	09/20/22	17.72	723	0.29	7.08	337.8	28	--	--	--	--	--	--
MW-308	12/12/22	9.79	369	0.38	6.46	34.4	83	--	--	--	48.0	0.162 J	0.00254 J

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-309	05/04/16	14.84	208	2.8	6.5	-102.7	8.08	--	--	--	--	--	--
MW-309	12/12/16	11.39	250	0.67	6.46	-110.3	9.47	--	--	--	--	--	--
MW-309	06/13/17	15.23	147	0.21	6.49	-89.1	--	--	--	--	--	--	--
MW-309	12/05/17	14.56	215	1.1	6.72	-87.3	-20.7	--	--	--	--	--	--
MW-309	06/12/18	16.23	161	0.53	6.41	-42	7.48	--	--	--	--	--	--
MW-309	12/20/18	13.9	410	0.16	6.8	-112	21	--	--	--	--	--	--
MW-309	05/16/19	11.48	588	0.57	6.16	-109	62	--	--	--	--	--	--
MW-309	12/11/19	14.91	554	0.37	7.49	-70.1	37	--	--	--	--	--	--
MW-309	06/29/20	17.23	582	0.72	6.71	-12.60	77	--	--	--	--	--	--
MW-309	12/15/20	12.09	6.76	0.36	7.53	119.30	91	--	--	--	--	--	--
MW-309	06/15/21	11.34	322	0.59	6.52	23.4	68	--	--	--	--	--	--
MW-309	12/15/21	12.8	384	0.07	8.17	-22.8	6	--	--	--	--	--	--
MW-309	06/28/22	16	287	0.51	6.35	-76.8	151	--	--	--	--	--	--
MW-309	12/13/22	12.43	298	0.11	6.4	-29.9	120	--	--	--	--	--	--
MW-310	11/28/12	13.97	385	0	7.22	-88	80.6	--	--	--	< 0.50	--	--
MW-310	11/05/13	14.07	396	0.05	6.44	-95	0	2.0-2.5	--	--	< 0.50	0.982	0.528
MW-310	11/04/14	15.97	393	0.03	6.88	-101	0	1.5	< 0.10	< 0.10	< 0.50	11.5	0.615
MW-310	12/10/15	13.23	313	0.45	6.39	-78.5	0	2	< 0.10	< 0.10	< 0.50	34.8	0.554
MW-310	02/22/16	11.72	358	0.29	6.4	-98.5	3.83	--	--	--	--	--	--
MW-310	05/02/16	15.68	270	0.34	6.18	-67.1	8.56	--	--	--	--	--	--
MW-310	08/29/16	19.29	283	1.64	6.82	29	0	--	--	--	--	--	--
MW-310	12/15/16	11.6	258	1.26	6.49	-70	0	2	< 0.0400	< 0.0400	1.13	26.4	0.485
MW-310	03/13/17	11.24	317	0	6.53	-102	0	--	--	--	--	--	--
MW-310	06/15/17	15.8	229	0.33	6.21	-69.1	--	--	--	--	--	--	--
MW-310	08/22/17	23.88	365	0	6.96	-80	21.4	--	--	--	--	--	--
MW-310	12/05/17	13.45	603	1.39	4.01	101	3.3	1.5	< 0.0400	< 0.0400	44.2	1.55	2.66
MW-310	03/06/18	12.75	946	0.3	5.25	72.8	5.8	--	--	--	--	--	--
MW-310	06/13/18	17.54	464	0.2	5.84	-34.4	2.01	--	--	--	--	--	--
MW-310	09/06/18	20	293	0.67	5.45	74	2.13	3	--	--	--	--	--
MW-310	12/20/18	15.9	605	1.43	7.1	49.6	18	3.2	0.346	0.346	318	7.48	1.63
MW-310	03/19/19	14.4	804	1.25	7.21	-21.1	28	--	--	--	--	--	--

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-310	05/16/19	12.36	695	1.09	4.51	87	72	--	--	--	--	--	--
MW-310	09/17/19	13.46	281	0.83	6.93	-23.9	16	--	--	--	--	--	--
MW-310	12/11/19	16.4	1551	12.52	6.92	155.8	28	5	<0.0600	<0.0600	999	53.1	7.24
MW-310	04/28/20	14	1460	0.54	6.71	64.40	18	--	--	--	--	--	--
MW-310	06/29/20	15.03	908	0.99	6.96	-21.80	47	--	--	--	--	--	--
MW-310	09/21/20	17.8	745	2.68	6.01	249.70	12	--	--	--	--	--	--
MW-310	12/15/20	11.86	1,020	0.33	7.57	116.90	64	1.60	<0.200	<0.400	167	64.90	1.48
MW-310	04/12/21	13.8	386	1.67	6.39	-28.8	92	--	--	--	--	--	--
MW-310	06/15/21	12.16	571	0.64	7.05	45.9	53	--	--	--	--	--	--
MW-310	09/22/21	18.17	789	1.05	6.02	-15.7	51	--	--	--	--	--	--
MW-310	12/16/21	12.25	648	0.06	6.66	-28.1	85	--	--	--	90.8	0.339 J	2.5
MW-310	03/29/22	11.83	677	0.21	6.95	154.3	22	--	--	--	--	--	--
MW-310	06/28/22	15.4	752	0.41	6.41	-98.6	37	--	--	--	--	--	--
MW-310	09/20/22	19.95	572	0.48	6.32	316.7	23	--	--	--	--	--	--
MW-310	12/13/22	10.61	399	0.31	6.39	-54.3	44	--	--	--	22.2	7.74	0.857
MW-311	11/05/14	16.57	606	0	7.42	-146	7	1.5	< 0.25	< 0.25	42.3	< 0.200	1.57
MW-311	12/10/15	14.15	482	0	6.35	-103	1.4	0.75	< 0.10	< 0.10	46.4	27.4	1.45
MW-311	02/22/16	13.84	583	0.26	6.45	-103.1	4.19	--	--	--	--	--	--
MW-311	05/04/16	14.42	564	1.02	6.49	-109.3	6.22	--	--	--	--	--	--
MW-311	08/29/16	22.58	384	1.01	6.89	22	7.66	--	--	--	--	--	--
MW-311	12/15/16	12.91	270	0.4	6.64	-107.3	7.38	3	< 0.0400	< 0.0400	23.7	22.7	0.801
MW-311	03/13/17	12.31	424	0.31	6.73	-98.5	0	--	--	--	--	--	--
MW-311	06/15/17	15.25	453	0.95	7.16	-87.5	--	--	--	--	--	--	--
MW-311	08/22/17	19.69	390	8.27	7.1	-72	0	--	--	--	--	--	--
MW-311	12/07/17	15.15	276	0.38	6.61	-33.2	0	3.75	< 0.0400 J	< 0.0400 J	28.4	8.42	0.703
MW-311	03/08/18	10.87	585	1.04	6.62	-17.2	0	--	--	--	--	--	--
MW-311	06/13/18	17.24	366	0.25	6.44	-45.7	0	--	--	--	--	--	--
MW-311	09/05/18	19.44	455	0.19	6.27	38.8	3.11	--	--	--	--	--	--
MW-311	12/20/18	14.6	522	1.15	7.33	-72.6	14	1.7	< 0.0400	< 0.0400	8.59	4.44	1.02
MW-311	03/18/19	14.8	530	0.32	6.71	-73.9	3	--	--	--	--	--	--
MW-311	05/16/19	14.3	519	0.1	6.82	-71.4	5	--	--	--	--	--	--

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-311	09/17/19	13.98	338	0.62	6.61	-22.9	3	--	--	--	--	--	--
MW-311	12/12/19	15.24	674	0.8	7.22	-84.4	3	4.5	<0.0600	<0.0600	8.28	41.5	1.81
MW-311	04/27/20	14.2	792	0.72	7.60	-83.20	9	--	--	--	--	--	--
MW-311	06/29/20	15.2	957	0.44	6.97	121.90	15	--	--	--	--	--	--
MW-311	09/21/20	17.5	763	0.26	6.53	-51.20	16	--	--	--	--	--	--
MW-311	12/15/20	14.11	877	0.20	7.80	118.00	30	2.80	<0.200	<0.400	74.20	18.30	2.04
MW-311	04/13/21	13.0	338	2.30	6.75	-71.2	18	--	--	--	--	--	--
MW-311	09/22/21	17.34	812	1.57	6.70	-50.1	9	--	--	--	--	--	--
MW-311	12/16/21	10.67	473	0.08	7.34	37.4	8	--	--	--	4.42	0.144 J	1.77
MW-311	03/29/22	13.47	728	0.01	7.18	137.7	2	--	--	--	--	--	--
MW-311	06/28/22	15.7	636	0.46	6.48	-98.6	17	--	--	--	--	--	--
MW-311	09/20/22	19.90	764	0.03	6.42	380.4	6	--	--	--	--	--	--
MW-311	12/13/22	14.18	616	0.13	6.42	-48.6	6	--	--	--	0.429 J	6.14	1.89
MW-312	11/05/14	17.07	459	0.58	6.78	-92	0	5.7	< 0.25	< 0.25	< 1.3	< 0.200	0.787
MW-312	12/10/15	13.74	434	0	6.3	-89	0	1.5	< 0.10	< 0.10	< 0.50	16.8	0.717
MW-312	02/23/16	13.69	578	0.22	6.63	-113.5	8.84	--	--	--	--	--	--
MW-312	05/04/16	14.77	539	1.19	6.63	-122.1	4.05	--	--	--	--	--	--
MW-312	08/29/16	24.31	480	1.01	6.89	28	0	--	--	--	--	--	--
MW-312	12/15/16	13.74	452	0.4	6.74	-121.8	9.47	4	< 0.0400	< 0.0400	< 0.500	20.4	0.924
MW-312	03/13/17	12.95	598	0	6.81	-126	0	--	--	--	--	--	--
MW-312	06/15/17	15.14	465	0.27	6.68	-106.8	--	--	--	--	--	--	--
MW-312	08/23/17	19.07	460	0	7.3	-81	0	--	--	--	--	--	--
MW-312	12/07/17	16.15	351	0.88	6.66	-107.7	1.17	2.6	< 0.0400	< 0.0400	488	3.95	0.664
MW-312	03/08/18	11.91	501	1.12	6.88	-6.3	0	--	--	--	--	--	--
MW-312	06/13/18	15.38	349	1.59	6.58	-106.1	0.92	--	--	--	--	--	--
MW-312	09/05/18	20.03	417	0.16	6.55	-72.6	3.75	6	--	--	--	--	--
MW-312	12/20/18	14.1	429	0.75	7.29	-45.3	7	2.5	< 0.0400	< 0.0400	0.164 J	4.35	0.715
MW-312	03/19/19	12.6	553	0.58	7.74	-41	3	--	--	--	--	--	--
MW-312	05/16/19	13.8	524	0.67	6.7	-101.9	2	--	--	--	--	--	--
MW-312	09/17/19	13.84	289	0.55	6.54	-31.9	2	--	--	--	--	--	--
MW-312	12/12/19	14.76	514	0.36	8.17	-86.4	5	2	<0.0600	<0.0600	0.63	22	0.957

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-312	04/28/20	14.9	596	0.36	7.64	-85.90	4	--	--	--	--	--	--
MW-312	06/29/20	15.03	491	0.94	6.39	-25.70	12	--	--	--	--	--	--
MW-312	09/21/20	17.5	607	0.33	6.56	-35.30	20	--	--	--	--	--	--
MW-312	12/15/20	13.39	571	0.28	7.75	118.20	35	3.00	<0.200	<0.400	<1.20	6.93	1.08
MW-312	04/13/21	12.3	286	2.10	6.78	-84.4	17	--	--	--	--	--	--
MW-312	06/16/21	8.65	476	2.05	6.93	17.3	3	--	--	--	--	--	--
MW-312	09/22/21	16.72	805	2.04	6.62	-30.2	10	--	--	--	--	--	--
MW-312	12/16/21	10.85	338	0.04	7.04	35.2	6	--	--	--	<0.500	0.115 J	0.83
MW-312	03/29/22	12.62	452	0.03	6.89	158.7	1	--	--	--	--	--	--
MW-312	06/29/22	14.5	635	0.78	6.48	10.1	30	--	--	--	--	--	--
MW-312	09/20/22	19.81	714	0.32	6.80	361.9	9	--	--	--	--	--	--
MW-312	12/13/22	13.2	440	0.24	6.48	-12.9	19	--	--	--	4.73	0.399 J	0.903
MW-313	08/29/16	21.96	489	1.07	6.88	23	0	--	--	--	--	--	--
MW-313	12/12/16	14.13	474	1.04	6.82	-34.9	9.06	--	--	--	--	--	--
MW-313	03/13/17	11.3	850	0.03	6.78	-23	3.5	--	--	--	--	--	--
MW-313	06/15/17	15.94	374	1.32	6.85	-24.6	--	--	--	--	--	--	--
MW-313	08/22/17	23.47	400	8.21	7.39	-62	0	--	--	--	--	--	--
MW-313	12/07/17	15.72	395	0.99	6.95	24.8	3.22	--	--	--	--	--	--
MW-313	03/07/18	11.05	615	0.89	6.96	36.8	8.42	--	--	--	--	--	--
MW-313	06/13/18	16.73	400	0.46	6.76	-44.1	3.02	--	--	--	--	--	--
MW-313	09/05/18	20.55	447	0.18	6.76	-29.7	1.34	--	--	--	--	--	--
MW-313	12/20/18	14.7	555	1.03	7.07	-52.9	43	--	--	--	--	--	--
MW-313	03/19/19	11.1	686	0.73	7.81	-30.4	6	--	--	--	--	--	--
MW-313	05/16/19	14.5	781	0.42	7.05	-39.1	10	--	--	--	--	--	--
MW-313	09/17/19	15.71	343	0.71	6.65	-25.3	7	--	--	--	--	--	--
MW-313	12/12/19	14.86	574	0.64	7.99	-55.7	5	--	--	--	--	--	--
MW-313	04/27/20	15.6	683	1.21	7.87	3.40	11	--	--	--	--	--	--
MW-313	06/29/20	16.33	486	1.81	6.73	-74.50	32	--	--	--	--	--	--
MW-313	09/21/20	18.7	605	0.55	6.84	21.90	13	--	--	--	--	--	--
MW-313	12/15/20	13.54	718	0.22	7.93	109.70	69	--	--	--	--	--	--
MW-313	04/13/21	12.9	250	2.02	6.85	-69.0	48	--	--	--	--	--	--

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-313	06/16/21	9.60	441	0.99	7.38	30.4	38	--	--	--	--	--	--
MW-313	09/22/21	17.25	668	1.34	6.95	-41.6	28	--	--	--	--	--	--
MW-313	12/16/21	11.89	401	0.19	7.16	30.7	80	--	--	--	--	--	--
MW-313	03/29/22	11.77	390	0.10	7.10	141.2	10	--	--	--	--	--	--
MW-313	06/28/22	17.4	631	1.12	6.65	10.8	154	--	--	--	--	--	--
MW-313	09/20/22	21	573	0.05	6.99	378.8	24	--	--	--	--	--	--
MW-313	12/13/22	11.68	548	0.15	6.38	-28.6	81	--	--	--	--	--	--
MW-314	08/30/16	20.6	565	1.23	6.87	82	8.52	--	--	--	--	--	--
MW-314	12/14/16	13.42	471	0.52	6.73	-90.3	9.44	--	--	--	--	--	--
MW-314	03/13/17	12.34	626	0	6.73	-53	3.9	--	--	--	--	--	--
MW-314	06/14/17	18.28	447	0.46	7.07	-87.9	8.2	--	--	--	--	--	--
MW-314	08/23/17	18.35	453	0	7.33	-35	3.6	--	--	--	--	--	--
MW-314	12/06/17	14	413	0.68	6.56	-62.5	4.2	--	--	--	--	--	--
MW-314	03/07/18	11.95	583	0.9	6.84	23.5	8.42	--	--	--	--	--	--
MW-314	06/12/18	15.92	455	0.74	6.7	-110	2.91	--	--	--	--	--	--
MW-314	09/05/18	18.9	427	0.4	6.49	-40.8	4.24	--	--	--	--	--	--
MW-314	12/20/18	14.7	567	0.16	6.79	-87	29	--	--	--	--	--	--
MW-314	03/19/19	11.4	564	0.97	7.12	-32.4	48	--	--	--	--	--	--
MW-314	05/16/19	11.01	714	0.77	6.27	-61	79	--	--	--	--	--	--
MW-314	09/17/19	--	--	--	--	--	--	--	--	--	--	--	--
MW-314	12/10/19	13.97	725	1.55	5.67	-36	7	--	--	--	--	--	--
MW-314	04/28/20	13.2	749	0.44	7.55	-53.60	7	--	--	--	--	--	--
MW-314	06/29/20	18.27	639	1.02	6.53	-29.80	16	--	--	--	--	--	--
MW-314	09/22/20	16.5	758	0.49	6.28	22.60	16	--	--	--	--	--	--
MW-314	12/15/20	13.53	800	0.15	7.78	114.80	35	--	--	--	--	--	--
MW-314	04/13/21	10.7	272	2.02	6.54	-7.9	58	--	--	--	--	--	--
MW-314	03/28/22	12.03	731	0.06	7.77	76.2	83	--	--	--	--	--	--
MW-314	06/28/22	15.7	819	0.46	6.36	-58.1	14	--	--	--	--	--	--
MW-314	09/20/22	19.23	638	0.10	6.48	351.7	13	--	--	--	--	--	--
MW-315	08/29/16	20.56	558	1.04	6.86	2	8.44	--	--	--	--	--	--

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
MW-315	12/12/16	12.07	488	1.45	6.74	-102	0	--	--	--	--	--	--
MW-315	03/13/17	12.81	522	0	6.77	-117	0	--	--	--	--	--	--
MW-315	06/15/17	14.2	450	1.27	7.21	-99	--	--	--	--	--	--	--
MW-315	08/23/17	18.2	465	0	7.3	-68	0	--	--	--	--	--	--
MW-315	12/07/17	14.59	372	0.84	6.68	-28.7	0	--	--	--	--	--	--
MW-315	03/08/18	11.74	448	1.34	6.84	20.7	0	--	--	--	--	--	--
MW-315	06/13/18	15.32	325	1	6.58	-41.5	0	--	--	--	--	--	--
MW-315	09/05/18	18.81	378	0.12	6.39	-28.8	0.54	--	--	--	--	--	--
MW-315	12/20/18	14.5	460	0.32	7.15	-92	5	--	--	--	--	--	--
MW-315	03/18/19	14.7	497	0.81	6.74	-65.4	3	--	--	--	--	--	--
MW-315	05/16/19	13.6	508	0.2	6.83	-64.3	3	--	--	--	--	--	--
MW-315	09/17/19	13.01	311	0.58	6.37	-41.8	4	--	--	--	--	--	--
MW-315	12/12/19	14.4	587	0.79	7.98	-67.8	3	--	--	--	--	--	--
MW-315	04/27/20	14.8	591	0.53	7.67	-70	8	--	--	--	--	--	--
MW-315	06/29/20	14.3	584	0.64	6.92	189.80	9	--	--	--	--	--	--
MW-315	09/21/20	16.7	589	0.25	6.43	-26.20	14	--	--	--	--	--	--
MW-315	12/15/20	13.69	588	0.09	7.80	119.30	43	--	--	--	--	--	--
MW-315	04/13/21	13.1	289	2.23	6.65	-68.2	22	--	--	--	--	--	--
MW-315	06/16/21	8.01	501	1.37	6.79	0.9	3	--	--	--	--	--	--
MW-315	09/22/21	17.62	785	1.14	6.45	-19.0	10	--	--	--	--	--	--
MW-315	12/16/21	10.40	304	1.36	7.31	-8.2	10	--	--	--	--	--	--
MW-315	03/29/22	12.06	519	0.08	7.21	134.1	3	--	--	--	--	--	--
MW-315	06/28/22	14.4	583	0.48	6.44	-86.4	15	--	--	--	--	--	--
MW-315	09/20/22	17.79	634	0.10	7.32	356.7	5	--	--	--	--	--	--
MW-315	12/13/22	11.9	570	0.25	6.29	-23.1	87	--	--	--	--	--	--
SH-04	05/05/16	14.18	129	1.43	6.47	-107.3	8.73	--	--	--	--	--	--
SH-04	12/14/16	8.88	133	0.39	6.41	-48.2	7.21	--	--	--	--	--	--
SH-04	06/14/17	17.02	116	0.27	6.33	52.7	1.67	--	--	--	--	--	--
SH-04	12/05/17	15.32	134	0.71	6.72	-65.4	3.51	--	--	--	--	--	--
SH-04	06/13/18	16.5	140	0.47	6.12	-54.2	1.05	--	--	--	--	--	--
SH-04	12/18/18	12.3	180	1.05	7.31	-30.6	19	--	--	--	--	--	--

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
SH-04	05/16/19	9.31	226	0.91	5.71	-126	13	--	--	--	--	--	--
SH-04	12/11/19	14.43	391	0.63	7.51	-12.1	19	--	--	--	--	--	--
SH-04	06/29/20	14.4	219	0.49	6.46	215.30	8	--	--	--	--	--	--
SH-04	12/14/20	14.00	371	0.29	7.56	151.80	21	--	--	--	--	--	--
SH-04	06/15/21	8.75	190	0.94	7.00	57.0	6	--	--	--	--	--	--
SH-04	12/15/21	11.6	140	0.15	9.84	-77.1	6	--	--	--	--	--	--
SH-04	04/18/22	9.00	220	0.09	8.12	64.6	39	--	--	--	--	--	--
SH-04	06/28/22	16.9	198	0.49	6.02	-11.9	16	--	--	--	--	--	--
SH-04	12/13/22	9.50	90	0.08	6.41	-25.2	20	--	--	--	--	--	--
TX-03A	01/13/04	14	480	1.4	6.39	-59	1.8	--	--	--	--	--	--
TX-03A	04/19/04	13.7	560	1.44	6.18	21	2.4	6	--	--	< 1	--	--
TX-03A	07/27/04	17.9	589	1.31	6.26	68	3	--	--	--	--	--	--
TX-03A	10/18/04	16.7	595	2.77	6.63	-100	42	--	--	--	--	--	--
TX-03A	01/24/05	14.6	563	1.79	5.11	5	43.1	--	--	--	--	--	--
TX-03A	04/19/05	13.8	552	0	6.47	-86	20	4	--	--	< 1	--	--
TX-03A	07/12/05	17.3	477	0.16	6.55	-121	55.6	--	--	--	--	--	--
TX-03A	10/31/07	--	--	--	--	--	--	--	--	--	--	--	--
TX-03A	11/20/08	15.8	821	0.49	6.87	-59	31.8	30.4	--	--	< 1	--	--
TX-03A	04/08/09	12.84	236	0	6.58	-145	43.1	--	--	--	--	--	--
TX-03A	11/17/09	16.3	50.6	1.29	6.39	-102	9.7	36	--	--	1.2	--	--
TX-03A	04/27/10	13.2	52.8	0.21	5.76	-153	9.5	--	--	--	--	--	--
TX-03A	10/25/10	15.5	42.5	1.39	6.68	-115	48	30	--	--	6.8	--	--
TX-03A	05/23/11	--	--	--	--	--	--	--	--	--	--	--	--
TX-03A	10/27/11	15.44	478	1.72	8.5	-100.9	--	20.3	--	--	< 0.50	--	--
TX-03A	03/01/12	12.29	564	0	6.71	-118	12.6	--	--	--	--	--	--
TX-03A	06/12/12	14	507	4	7.19	-103	4.5	--	--	--	--	--	--
TX-03A	09/25/12	17.83	514	0	6.48	-139	15.2	--	--	--	--	--	--
TX-03A	11/28/12	13.79	439	0	6.7	-104	--	--	--	--	< 0.50	--	--
TX-03A	11/05/13	10.98	528	0.06	6.57	-114	0	4	--	--	< 0.50	< 0.200	0.47
TX-03A	11/04/14	16.8	424	0.38	6.49	-39	5.83	6	< 0.10	< 0.10	< 0.50	6.18	0.523
TX-03A	12/10/15	15.11	456	0.25	6.51	-103.5	6.7	0.5	< 0.10	< 0.10	< 0.50	31.7	0.5



**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature oC	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
TX-03A	02/22/16	12.73	484	0.3	6.34	-109.1	7.22	--	--	--	--	--	--
TX-03A	05/02/16	15.06	418	0.22	6.36	-103.1	3.96	--	--	--	--	--	--
TX-03A	08/29/16	18.69	395	2.27	6.84	18	0	--	--	--	--	--	--
TX-03A	12/15/16	12.31	295	0.29	6.54	-109.9	8.97	2	< 0.0400	< 0.0400	< 0.500	37.8	0.517
TX-03A	03/13/17	11.74	287	0.23	6.74	-109.5	0	--	--	--	--	--	--
TX-03A	06/13/17	14.63	322	0.24	6.32	-98	--	--	--	--	--	--	--
TX-03A	08/22/17	18.97	317	0	7.07	-87	0	--	--	--	--	--	--
TX-03A	12/05/17	13.23	477	1.83	6.57	-104.1	2.77	1.5	< 0.0400	< 0.0400	219	25.1	0.784
TX-03A	03/27/18	12.27	465	0.65	6.19	71.9	3.37	--	--	--	--	--	--
TX-03A	06/13/18	15.4	407	4.12	6.07	-82.4	0.69	--	--	--	--	--	--
TX-03A	09/06/18	19.9	551	0.14	6.24	-76.8	1.26	--	--	--	--	--	--
TX-03A	12/20/18	16.5	369	0.1	6.67	-116	16	4.5	< 0.0400	< 0.0400	19	6.46	0.465
TX-03A	03/19/19	13.9	550	0.45	7.55	-67.1	8	--	--	--	--	--	--
TX-03A	05/16/19	12.64	538	0.51	6.11	-84	12	--	--	--	--	--	--
TX-03A	09/17/19	16.79	348	0.97	6.41	3.1	8	--	--	--	--	--	--
TX-03A	12/11/19	16.75	1514	1.86	8.64	-94	5	3	<0.0600 J	<0.0600 J	704	104	2.99
TX-03A	04/28/20	14.1	881	0.46	7.5	-65.10	12	--	--	--	--	--	--
TX-03A	06/29/20	16.13	577	1.24	6.36	-20.20	13	--	--	--	--	--	--
TX-03A	09/21/20	18.1	505	0.32	6.22	74	15	--	--	--	--	--	--
TX-03A	12/15/20	13.20	501	0.31	7.59	114.00	15	2.40	<0.200	<0.400	42.30	26.20	1.16
TX-03A	04/12/21	11.6	259	1.91	6.26	-6.2	40	--	--	--	--	--	--
TX-03A	06/16/21	9.02	416	1.35	7.60	39.3	3	--	--	--	--	--	--
TX-03A	09/23/21	17.45	633	1.17	6.09	-5.6	7	--	--	--	--	--	--
TX-03A	03/28/22	12.57	540	0.12	7.24	126.9	12	--	--	--	--	--	--
TX-03A	06/28/22	15.4	521	0.5	6.49	-91.2	14	--	--	--	--	--	--
TX-03A	09/21/22	16.84	473	0.41	7.29	348.7	29	--	--	--	--	--	--
TX-03A	12/13/22	14.22	368	0.25	6.43	-49.9	8	--	--	--	8.86	0.109 J	0.927
TES-MW-1	12/13/16	8.37	99	7.01	5.86	89	0	--	--	--	--	--	--
TES-MW-1	12/06/17	10	69	6.02	5.67	39.9	5.7	--	--	--	--	--	--
TES-MW-1	12/19/18	11.2	172	1.3	6.68	-96	24	--	--	--	--	--	--
TES-MW-1	12/09/19	13.42	172	6.2	6.51	63.9	11	--	--	--	--	--	--

**Table 5**  
**Compliance Monitoring Natural Attenuation Parameters**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Field Parameters						Laboratory Parameters					
		Temperature °C	Conductivity µS/cm	Dissolved Oxygen mg/L	pH	ORP mv	Turbidity NTU	Ferrous Iron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrite mg/L	Sulfate mg/L	Iron Dissolved mg/L	Manganese Dissolved mg/L
TES-MW-1	12/16/20	12.07	98	0.92	7.72	135.70	36	--	--	--	--	--	--
TES-MW-1	12/14/21	11.2	93	0.70	7.71	132.1	34	--	--	--	--	--	--
TES-MW-1	12/12/22	11.24	430	0.61	6.89	130.7	1	--	--	--	--	--	--
TX-04	12/12/16	10.65	353	0.82	7.02	-108	0	--	--	--	--	--	--
TX-04	12/05/17	12.06	167	0.68	7.01	-10.8	23.2	--	--	--	--	--	--
TX-04	12/18/18	14.5	233	1.26	7.69	-48.3	44	--	--	--	--	--	--
TX-04	12/12/19	14.81	295	0.44	8.46	-83.3	14	--	--	--	--	--	--
TX-04	12/14/20	14.54	334	0.17	7.81	136.90	7	--	--	--	--	--	--
TX-04	12/15/21	10.4	207	0.21	8.32	-3.0	17	--	--	--	--	--	--
TX-04	12/13/22	12.4	199	0.07	6.4	-47.2	77	--	--	--	--	--	--
TX-06A	12/12/16	11.95	212	0.55	6.55	-97.3	6.56	--	--	--	--	--	--
TX-06A	12/05/17	14.43	248	1.15	6.69	-63.6	5.63	--	--	--	--	--	--
TX-06A	12/20/18	14.5	257	0.17	6.76	-99	11	--	--	--	--	--	--
TX-06A	12/10/19	13.58	230	4.49	5.62	8.6	12	--	--	--	--	--	--
TX-06A	12/14/20	13.92	341	0.20	7.74	123.80	17	--	--	--	--	--	--
TX-06A	12/15/21	12.1	174	0.25	7.85	9.5	10	--	--	--	--	--	--

**Note:**

= Indicates data collected during this progress report period

°C = degrees Celsius

J = indicates a estimated value

J+ = The result is an estimated quantity, but the result may be biased high.

< = not detected at or above the indicated limit. Beginning June 12, 2012, limits shown are laboratory Method Detection Limits (MDLs). Prior to June 12, 2012, limits shown are lal

mg/L = milligrams per liter

mV = millivolts

NM = not measured

NTU = nephelometric turbidity unit

ORP = oxidation-reduction potential

µS/cm = microsiemens per centimeter

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-05	01/15/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	0.37	< 0.5	--
MW-05	04/21/04	0.0015	< 0.001	0.0053	< 0.001	< 0.25	0.41	< 0.5	--
MW-05	07/28/04	0.0015	0.001	< 0.001	0.0017	< 0.25	< 0.25	< 0.5	--
MW-05	10/19/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
MW-05	01/25/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
MW-05	04/18/05	< 0.001	< 0.001	< 0.001	< 0.001	0.072	< 0.25	< 0.5	--
MW-05	07/12/05	< 0.001	< 0.001	< 0.001	< 0.001	0.25	< 0.25	< 0.5	--
MW-05	10/19/05	< 0.001	< 0.001	< 0.001	< 0.001	0.11	< 0.25	< 0.5	--
MW-05	01/26/06	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.05	< 0.238	< 0.476	--
MW-05	11/19/08	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	< 0.25	< 0.5	--
MW-05	11/17/09	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	< 0.1	< 0.1	--
MW-05	10/29/10	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	0.14	< 0.1	--
MW-05	05/23/11	<.0003	<.0005	<.0003	<.0007	0.0744	--	--	--
MW-05	10/25/11	< 0.0010	< 0.0010	< 0.0010	< 0.0020	0.115	< 0.095	< 0.19	--
MW-05	11/29/12	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.0954	< 0.095	--
MW-05	11/07/13	< 0.00020	0.00083 J	< 0.00020	0.00087 J	0.345	< 0.049	< 0.097	--
MW-05	11/06/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	0.0507 J	0.137	< 0.094	--
MW-05	12/08/15	< 0.00020	< 0.0010	< 0.0010	< 0.0030	< 0.100	< 0.233	< 0.388	--
MW-05	05/04/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000162	70.9 J	< 0.0398	< 0.0598	--
MW-05	12/14/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0178	< 0.0436	< 0.0654	--
MW-05	06/14/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	< 0.0860	< 0.129	--
MW-05	12/07/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	0.0968 J	0.105 J	< 0.121	--
MW-05	06/12/18	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	< 0.114	< 0.124	--
MW-05	12/19/18	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.230 J	0.119 J	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-05	05/15/19	< 0.000200	< 0.000170	< 0.000190	< 0.000580	0.0589	< 0.108	< 0.118	--
MW-05	12/10/19	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.111 J	< 0.121	--
MW-05	06/30/20	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	< 0.113	< 0.124	--
MW-05	12/14/20	<0.00020	<0.0002	<0.00020	<0.0005	<0.250	0.163	<0.340	--
MW-05	06/15/21	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	<0.240	<0.401	--
MW-05	12/15/21	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	<0.254	<0.424	--
MW-05	04/18/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	<0.235	<0.392	--
MW-05	06/29/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	<0.243	<0.405	--
MW-05	12/14/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.387	0.191 J	--
MW-101	01/16/04	< 0.001	< 0.001	< 0.001	0.0028	0.55	< 0.25	< 0.5	--
MW-101	04/20/04	0.0016	< 0.001	< 0.001	0.0014	0.67	< 0.25	< 0.5	--
MW-101	07/28/04	0.0012	< 0.001	< 0.001	0.0011	1	< 0.25	< 0.5	--
MW-101	10/18/04	0.0011	< 0.001	< 0.001	< 0.001	0.42	< 0.25	< 0.5	--
MW-101	01/26/05	< 0.001	< 0.001	< 0.001	0.0011	0.51	< 0.25	< 0.5	--
MW-101	04/19/05	0.0016	< 0.001	< 0.001	< 0.001	0.58	< 0.25	< 0.5	--
MW-101	07/13/05	< 0.001	< 0.001	< 0.001	< 0.001	0.31	< 0.25	< 0.5	--
MW-101	10/10/05	< 0.001	< 0.001	< 0.001	< 0.001	0.16	< 0.25	< 0.5	--
MW-101	01/27/06	< 0.0005	< 0.0005	< 0.0005	< 0.001	0.223	< 0.236	< 0.476	--
MW-101	11/18/08	< 0.005	< 0.005	< 0.005	< 0.005	0.1	< 0.25	< 0.5	--
MW-101	11/18/09	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	< 0.1	< 0.1	--
MW-101	10/26/10	< 0.0005	< 0.001	< 0.001	< 0.001	0.15	0.13	< 0.1	--
MW-101	10/27/11	< 0.0010	< 0.0010	< 0.0010	< 0.0020	0.0936	< 0.10	< 0.20	--
MW-101	11/26/12	< 0.00020	< 0.00020	< 0.00020	< 0.00046	0.188 J	0.0937 J	< 0.10	--
MW-101	11/06/13	< 0.00020	< 0.00020	< 0.00020	< 0.00046	0.118 J	< 0.0048	< 0.0095	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-101	11/04/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.0048	< 0.0095	--
MW-101	12/09/15	< 0.00020	< 0.0010	< 0.0010	< 0.0030	< 0.100	0.129	< 0.201	--
MW-101	12/13/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.101	0.0983 J	< 0.0632	--
MW-101	12/06/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	0.237	0.246 J	< 0.127	--
MW-101	12/19/18	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	0.127 J	0.157 J	< 0.115	--
MW-101	12/09/19	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.155 J	< 0.125	--
MW-101	12/16/20	<0.00020 J	<0.0002 J	<0.00020 J	<0.0005 J	<0.250	<0.238	<0.397	--
MW-101	12/14/21	<0.000400	<0.00100	<0.00100	<0.00300	0.433	0.305	0.128 J	--
MW-101	12/12/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	<0.247	<0.411	--
MW-102	01/14/04	0.0021	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
MW-102	04/21/04	0.0036	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
MW-102	07/28/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
MW-102	10/18/04	0.0011	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
MW-102	01/25/05	0.0024	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
MW-102	04/18/05	0.0027	< 0.001	< 0.001	< 0.001	< 0.05	< 0.25	< 0.5	--
MW-102	07/13/05	< 0.001	< 0.001	< 0.001	< 0.001	0.077	< 0.25	< 0.5	--
MW-102	10/19/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.25	< 0.5	--
MW-102	01/26/06	0.00498	< 0.0005	0.00174	0.00201	< 0.05	< 0.238	< 0.472	--
MW-102	11/19/08	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	< 0.25	< 0.5	--
MW-102	11/18/09	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	< 0.1	< 0.1	--
MW-102	10/28/10	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	< 0.1	< 0.1	--
MW-102	10/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0020	< 0.20	0.113	< 0.20	--
MW-102	11/28/12	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.050	< 0.10	--
MW-102	11/07/13	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.047	0.144 J	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-102	11/04/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.0568 J	< 0.094	--
MW-102	12/08/15	< 0.0020	< 0.0010	< 0.0010	< 0.0030	< 0.100	< 0.233	< 0.388	--
MW-102	12/14/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0178	< 0.0413	< 0.0620	--
MW-102	12/05/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	< 0.0834	< 0.125	--
MW-102	12/05/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	< 0.0834	< 0.125	--
MW-102	12/19/18	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.774	0.197 J	--
MW-102	12/10/19	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.151 J	< 0.123	--
MW-102	12/16/20	< 0.00020 J	< 0.0002 J	< 0.00020 J	< 0.0005 J	< 0.250	< 0.248	< 0.413	--
MW-102	12/16/21	< 0.000400	< 0.00100	< 0.00100	< 0.00300	< 0.150	< 0.240	< 0.401	--
MW-102	12/12/22	< 0.000400	< 0.00100	< 0.00100	< 0.00300	< 0.150	< 0.226	0.143 J	--
MW-104	01/15/04	0.0019	< 0.001	0.15	0.1028	<b>2.7</b>	1.2	< 0.5	0.00555
MW-104	01/15/04	0.0012	< 0.001	0.1	0.0706	<b>2</b>	1.3	< 0.5	< 0.005
MW-104	04/21/04	0.0066	0.0025	0.35	0.0931	<b>4.3</b>	1.7	< 0.5	0.00575
MW-104	07/28/04	0.0018	< 0.001	0.048	0.017	<b>2.2</b>	0.87	< 0.5	< 0.005
MW-104	07/28/04	0.0017	< 0.001	0.049	0.019	<b>2.1</b>	1.3	< 0.5	< 0.005
MW-104	10/19/04	< 0.001	< 0.001	0.0021	0.0016	< 0.25	0.61	< 0.5	< 0.005
MW-104	01/24/05	< 0.001	< 0.001	0.0012	< 0.001	< 0.25	0.74	< 0.5	< 0.005
MW-104	04/18/05	< 0.001	< 0.001	0.057	0.0067	<b>1.4</b>	1.2	< 0.5	< 0.005
MW-104	07/12/05	0.0014	< 0.001	0.11	0.012	<b>1.8</b>	0.7	< 0.5	< 0.005
MW-104	10/19/05	< 0.001	< 0.001	0.024	0.0049	0.29	0.62	< 0.5	< 0.005
MW-104	01/25/06	0.00245	0.00129	0.33	0.0273	<b>2.07</b>	3.73	< 0.962	0.0077
MW-104	10/30/07	--	--	--	--	<b>1.25</b>	--	--	< 0.002
MW-104	05/20/08	--	--	--	--	<b>4</b>	2.1	< 0.5	--
MW-104	11/18/08	--	--	--	--	0.13	0.69	< 0.5	< 0.005

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-104	04/08/09	--	--	--	--	<b>1.8</b>	1.6	< 0.1	0.00326
MW-104	11/17/09	< 0.0005	< 0.001	0.0016	< 0.001	0.21	0.17	< 0.1	0.00778
MW-104	04/27/10	--	--	--	--	<b>3.9</b>	2.5	0.27	0.00232
MW-104	10/26/10	--	--	--	--	0.23	0.23	< 0.1	--
MW-104	05/23/11	<0.0006	0.003	0.104	0.0018	<b>4.44</b>	0.448	<0.097	< 0.01
MW-104	10/25/11	--	--	--	--	<b>3.38</b>	0.413	< 0.20	< 0.01
MW-104	03/01/12	0.00079 J	0.0015	0.0467	0.0016 J	<b>3.69</b>	--	--	--
MW-104	06/13/12	--	--	--	--	<b>4.78</b>	0.423	< 0.10	< 0.01
MW-104	09/26/12	0.00066 J	0.0024	0.0509	0.0019 J	<b>4.54</b>	--	--	--
MW-104	11/29/12	0.00038 J	0.00037 J	0.0113	< 0.00046	0.592	0.315	< 0.098	--
MW-104	05/14/13	--	--	--	--	<b>5.07</b>	0.601	< 0.096	< 0.01
MW-104	11/07/13	--	--	--	--	<b>3.62</b>	0.666 J	< 0.095	< 0.01
MW-104	04/24/14	--	--	--	--	<b>5.68</b>	1.13	0.100 J	< 0.01
MW-104	11/05/14	--	--	--	--	0.441	0.527	0.221	< 0.01
MW-104	05/20/15	--	--	--	--	<b>2.82</b>	0.686	< 0.097	< 0.01
MW-104	12/09/15	--	--	--	--	< 0.100	0.408	< 0.398	< 0.00200
MW-104	05/05/16	--	--	--	--	<b>7.45</b>	2.85	0.144 J	0.00285
MW-104	12/14/16	--	--	--	--	<b>3.61</b>	2.22	0.155 J	0.000902 J
MW-104	06/14/17	--	--	--	--	<b>4.85</b>	2.9	0.159 J	0.00444
MW-104	12/07/17	< 0.0000993	< 0.000312	0.00411	< 0.000442	0.53	1.34	0.126 J	--
MW-104	06/12/18	--	--	--	--	<b>3.04</b>	1.86	< 0.122	0.00207 J
MW-104	12/19/18	--	--	--	--	0.552	2.25	0.967	0.00185 J
MW-104	05/15/19	--	--	--	--	<b>2.59</b>	1.64	0.316 J	0.00163 J
MW-104	12/10/19	--	--	--	--	0.956	0.713	< 0.122	< 0.000995
MW-104	06/30/20	--	--	--	--	<b>1.02</b>	0.914	0.117 J	0.00408

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-104	12/14/20	<0.00020	<0.0002	0.00171	<0.0005	0.487	1.56	1.31	<0.004
MW-104	06/15/21	--	--	--	--	0.948	0.753	<0.395	<0.0600
MW-104	12/15/21	--	--	--	--	0.300	0.456	0.175 J	<0.0600
MW-104	04/18/22	--	--	--	--	0.896	0.503	<0.393	<0.0051
MW-104	06/29/22	<0.000400	<0.00100	0.00106	<0.00300	0.648	0.381	<0.413	<0.0051
MW-104	12/14/22	--	--	--	--	0.153	2.57	1.01	<0.0051
MW-105	01/15/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	1.4	< 0.5	0.00647
MW-105	04/21/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	0.65	< 0.5	0.00793
MW-105	07/27/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	2.2	< 0.5	0.0128
MW-105	10/19/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	1.8	< 0.5	0.0311
MW-105	01/24/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	3	< 0.5	0.00824
MW-105	04/18/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	1.3	0.78	0.00615
MW-105	07/12/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	1.7	< 0.5	< 0.005
MW-105	10/18/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	1.7	0.66	< 0.005
MW-105	01/25/06	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.05	3.95	< 0.962	0.00321
MW-105	11/19/08	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	--	--	< 0.005
MW-105	11/17/09	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	0.17	< 0.1	0.021
MW-105	10/26/10	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	--	--	--
MW-105	10/25/11	< 0.0010	< 0.0010	< 0.0010	< 0.0020	< 0.20	0.253	< 0.20	< 0.01
MW-105	11/26/12	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.291	< 0.098	< 0.01
MW-105	11/07/13	< 0.00020	< 0.00020	< 0.00020	< 0.000046	< 0.050	0.189	< 0.095	<b>0.0179</b>
MW-105	11/05/14	< 0.00020	< 0.00020	< 0.00020	< 0.000046	< 0.050	0.377	0.192	< 0.01
MW-105	12/08/15	< 0.00020	< 0.0010	< 0.0010	< 0.0030	< 0.100	0.406	0.408	<b>0.0152</b>
MW-105	12/14/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0178	0.85	0.377	<b>0.0116</b>



**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
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Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-105	12/06/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	0.146 J	0.624	0.176 J	< 0.00200
MW-105	12/19/18	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.672	0.737	0.0107
MW-105	12/11/19	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.388	0.382 J	<b>0.00754</b>
MW-105	12/14/20	<0.00020	<0.0002	<0.00020	<0.0005	<0.250	1.81	0.972	0.00421
MW-105	12/15/21	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.523	0.670	<b>0.0324 J</b>
MW-105	12/14/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	1.25	0.679	<b>0.0143 J</b>
MW-111	01/15/04	0.047	< 0.001	< 0.001	< 0.001	< 0.25	0.98	< 0.5	--
MW-111	04/21/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	0.48	< 0.5	--
MW-111	07/27/04	0.015	< 0.001	< 0.001	0.0012	< 0.25	0.45	< 0.5	--
MW-111	10/19/04	0.036	0.0012	< 0.001	0.0035	0.35	0.45	< 0.5	--
MW-111	01/25/05	<b>0.079</b>	< 0.005	< 0.005	< 0.005	0.58 J	0.63	< 0.5	--
MW-111	04/18/05	< 0.001	< 0.001	< 0.001	< 0.001	0.096	< 0.25	< 0.5	--
MW-111	07/12/05	0.0094	< 0.001	< 0.001	< 0.001	0.23	0.26	< 0.5	--
MW-111	10/18/05	0.017	< 0.001	< 0.001	0.0013	0.26	0.27	< 0.5	--
MW-111	01/25/06	<b>0.0956</b>	0.00189	0.000796	0.0037	0.683	0.998	< 0.481	--
MW-111	11/19/08	0.014	< 0.005	< 0.005	< 0.005	0.23	0.37	< 0.5	--
MW-111	11/17/09	0.041	< 0.001	< 0.001	< 0.001	0.24	0.11	< 0.1	--
MW-111	10/26/10	0.0043	< 0.001	< 0.001	< 0.001	< 0.1	0.12	< 0.1	--
MW-111	05/23/11	0.00064	<.0005	<.0003	<.0007	<0.050	--	--	--
MW-111	10/25/11	0.00094	< 0.0010	< 0.0010	< 0.0020	< 0.20	0.122	< 0.20	--
MW-111	11/29/12	0.0248	0.001	< 0.00020	0.0012 J	0.371	0.269	< 0.10	--
MW-111	11/07/13	<b>0.0845</b>	0.001	0.00023 J	0.00069 J	0.208	0.174	< 0.095	--
MW-111	11/05/14	<b>0.0574</b>	0.0012	0.00083 J	0.00047 J	0.232	0.167	0.118 J	--
MW-111	12/08/15	<b>0.386</b>	0.00649	0.00291	0.00333	0.944	0.335	<0.388	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-111	05/04/16	<b>0.0719</b>	0.00157	0.00158	0.00125 J	0.294	0.141	< 0.0598	--
MW-111	12/14/16	<b>0.248</b>	0.00375 J	0.00243 J	<0.00442	0.739 J	0.343	0.0883 J	--
MW-111	06/14/17	0.00575	0.000480 J	< 0.000198	0.000466 J	0.0836 J	0.142 J	< 0.123	--
MW-111	12/06/17	<b>0.202</b>	0.00632	0.00214	0.00507	0.792	0.597	< 0.132	--
MW-111	06/12/18	0.0273	0.00181	0.000334 J	0.00238 J	0.227	0.210 J	< 0.123	--
MW-111	12/19/18	0.0592	0.00574	0.0012	0.00475	0.766	1.27	0.462	--
MW-111	05/15/19	0.00484	< 0.000170	< 0.000190	< 0.000580	0.149	0.195 J	< 0.117	--
MW-111	12/11/19	0.000270 J	< 0.000312	< 0.000198	< 0.000422	< 0.0704	0.255 J	< 0.125	--
MW-111	06/29/20	0.00124	0.000637 J	< 0.000198	0.000648 J	0.0898 J	< 0.110	< 0.120	--
MW-111	12/14/20	0.00163	0.000945	< 0.00020	0.00118	< 0.250	0.346	0.348	--
MW-111	06/15/21	0.000251 J	0.000593 J	< 0.00100	0.00100 J	0.120 J	< 0.233	< 0.389	--
MW-111	12/15/21	0.00337	0.00161	0.000247 J	0.00166 J	0.421	0.340	0.149 J	--
MW-111	04/18/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	<0.229	<0.381	--
MW-111	06/27/22	0.00274	<0.00100	<0.00100	<0.00300	0.11 J	0.118 J	<0.402	--
MW-111	12/14/22	0.0538	0.00333	0.000527 J	0.00259 J	0.49	1.31	0.326 J	--
MW-112A	01/15/04	0.02	< 0.001	< 0.001	< 0.001	0.25	0.63	< 0.5	--
MW-112A	04/21/04	< 0.005	< 0.005	< 0.005	< 0.005	< 1.2	0.56	< 0.75	--
MW-112A	07/27/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	0.51	< 0.5	--
MW-112A	10/19/04	0.0013	< 0.001	< 0.001	< 0.001	< 0.25	0.68	< 0.5	--
MW-112A	01/24/05	0.003	0.0012	< 0.001	0.001	0.44	0.65	< 0.5	--
MW-112A	04/20/05	< 0.001	< 0.001	< 0.001	< 0.001	0.42	1.4	< 0.5	--
MW-112A	07/12/05	0.0029	< 0.001	< 0.001	< 0.001	0.28	0.48	< 0.5	--
MW-112A	10/18/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.25	< 0.5	--
MW-112A	01/26/06	0.00211	< 0.0005	< 0.0005	< 0.001	0.236	0.602	< 0.485	--

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**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-112A	11/19/08	< 0.005	< 0.005	< 0.005	< 0.005	0.3	1.3	< 0.5	--
MW-112A	11/18/09	0.00075	< 0.001	< 0.001	< 0.001	0.2	0.23	< 0.1	--
MW-112A	10/29/10	0.036	< 0.001	< 0.001	0.0015	0.77	0.6	< 0.1	--
MW-112A	05/24/11	0.00041	<0.0005	<0.0003	<0.0007	0.129	--	--	--
MW-112A	10/25/11	0.0055	< 0.0010	< 0.0010	< 0.0020	0.292	0.2	< 0.20	--
MW-112A	11/25/12	0.0058	0.00022 J	0.00037 J	< 0.00046	0.197 J	0.282	< 0.10	--
MW-112A	11/04/13	0.0238	0.00068 J	0.0376	0.0012 J	0.909	1.72	< 0.19	--
MW-112A	11/06/14	0.0156	0.0014	0.028	0.0016 J	0.76	1.43	0.295	--
MW-112A	12/08/15	0.0297	0.00368	0.00219	0.00406	<b>1.31</b>	5.89	< 0.389	--
MW-112A	05/05/16	0.0248	0.00131	0.0992	0.00688	<b>1.75</b>	7.96	0.132 J	--
MW-112A	12/12/16	0.0426	0.00666	0.0109	0.0103	<b>2.27</b>	2.77	0.180 J	--
MW-112A	06/15/17	0.0348	0.0037	0.02	0.00464 J	<b>1.46</b>	7.34	0.210 J	--
MW-112A	12/07/17	0.00111	0.00169	< 0.000198	0.00196 J	0.811	1.71	0.151 J	--
MW-112A	06/13/18	0.0289	0.00297	0.134	0.00748	<b>2.39</b>	<b>12.6</b>	0.150 J	--
MW-112A	12/20/18	0.00166	0.00171	0.000248 J	0.00196 J	0.728	2.93	0.789	--
MW-112A	05/16/19	0.0111	0.00173	0.0231	0.00208 J	<b>2</b>	2.37	0.222 J	--
MW-112A	12/12/19	0.0149	0.00296	0.00154	0.00385	<b>1.91</b>	<b>12.2</b>	0.419 J	--
MW-112A	06/30/20	0.00354 J	0.000903 J	0.0215 J	0.00155 J	<b>1.05</b>	3.62	0.204 J	--
MW-112A	12/14/20	0.00442	0.00253	0.00186	0.00375	<b>1.77 J+</b>	2.30	1.02	--
MW-112A	06/15/21	0.00207	0.000659 J	0.00702	0.00189 J	0.976	2.58	0.161 J	--
MW-112A	12/15/21	0.00235	0.00147	0.000665 J	0.00213 J	<b>2.34</b>	1.10	0.215 J	--
MW-112A	04/18/22	0.00102	0.000759 J	0.0279	0.00269 J	<b>1.87</b>	1.39	<0.389	--
MW-112A	06/28/22	0.00139	0.000935 J	0.0106	0.00263 J	<b>1.26</b>	0.675	<0.407	--
MW-112A	12/13/22	0.00263	0.00159	0.000729 J	0.00225 J	<b>1.06</b>	2.67	0.686	--

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Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-113	06/27/22	<b>0.156</b>	0.00522	0.00405	0.00540	<150	0.933	0.156 J	--
MW-113	12/14/22	0.0650	0.00466	<0.00100	<0.00300	0.177	1.24	0.44	--
MW-114	06/27/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.413	0.16 J	--
MW-114	12/14/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.339	0.523	--
MW-115	06/27/22	<0.000400	<0.00100	<0.00100	<0.00300	0.372	4.93	0.24 J	--
MW-115	12/14/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	1.24	0.42 J	--
MW-201	01/14/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
MW-201	04/20/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
MW-201	01/26/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	0.33	< 0.5	--
MW-201	04/20/05	< 0.001	< 0.001	< 0.001	0.0021	< 0.25	< 0.25	< 0.5	--
MW-201	07/13/05	< 0.001	< 0.001	< 0.001	< 0.001	0.12	0.7	< 0.5	--
MW-201	10/20/05	< 0.001	< 0.001	< 0.001	< 0.001	0.22	4.6	2.3	--
MW-201	01/26/06	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.050	0.342	< 0.476	--
MW-201	11/20/08	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	0.41	< 0.5	--
MW-201	11/19/09	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	< 0.1	< 0.1	--
MW-201	10/27/10	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	0.18	< 0.1	--
MW-201	10/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0020	0.0899	1.46	0.181	--
MW-201	11/27/12	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.122	< 0.10	--
MW-201	11/06/13	< 0.00020	< 0.00020	< 0.00020	< 0.00046	0.0964 J	0.52	< 0.094	--
MW-201	11/06/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.173	0.195	--
MW-201	12/10/15	< 0.00020	< 0.0010	< 0.0010	< 0.0030	0.121	0.323	< 0.389	--
MW-201	12/13/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0178	0.203	0.174 J	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-201	12/06/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.159 J	< 0.132	--
MW-201	12/19/18	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.281	0.383 J	--
MW-201	12/16/20	<0.00020 J	<0.0002 J	<0.00020 J	<0.0005 J	<0.250	0.315	<0.368	--
MW-201	12/12/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.556	0.163 J	--
MW-202	01/14/04	< 0.001	< 0.001	< 0.001	< 0.001	<b>2.5</b>	<b>15</b>	< 10	--
MW-202	04/20/04	0.014	0.0062	0.074	0.021	<b>4.4</b>	<b>28</b>	< 10	--
MW-202	01/26/05	< 0.005	< 0.005	< 0.005	< 0.005	<b>7.7</b>	5.2	< 5	--
MW-202	04/20/05	0.016	0.0022	0.036	0.0237	<b>3.7</b>	6.2	< 5	--
MW-202	07/13/05	0.016	0.0033	0.067	0.0191	<b>3.5</b>	6.2	< 1	--
MW-202	10/20/05	0.019	0.0021	0.058	0.0056	<b>3.3</b>	5.9	< 2.5	--
MW-202	01/26/06	0.0224	0.00598	0.041	0.0191	<b>5.79</b>	<b>11.2</b>	< 4.76	--
MW-202	04/25/06	0.00749	0.00378	0.062	0.0124	<b>6.78</b>	8.7	<4.85	--
MW-202	10/12/06	0.00936	0.00339	0.0828	0.00616	<b>5.65</b>	<b>11.5</b>	0.834	--
MW-202	04/26/07	0.00825	0.0048	0.063	<0.015	<b>4.78</b>	8.24	1.05	--
MW-202	10/30/07	--	--	--	--	<b>4.55</b>	<b>10.9</b>	< 1	--
MW-202	05/20/08	--	--	--	--	<b>2.3</b>	1.8	< 2.5	--
MW-202	11/20/08	--	--	--	--	<b>5</b>	2.2	< 0.5	--
MW-202	04/07/09	--	--	--	--	<b>4.8</b>	<b>14</b>	< 0.1	--
MW-202	11/19/09	--	--	--	--	<b>6.6</b>	<b>20</b>	< 0.5	--
MW-202	04/27/10	--	--	--	--	<b>3.3</b>	6.4	0.12	--
MW-202	10/27/10	0.0081	0.0031	0.066	0.0022	<b>6</b>	5.4	< 0.1	--
MW-202	05/23/11	--	--	--	--	<b>3.5</b>	1.84	< 0.097	--
MW-202	10/26/11	--	--	--	--	<b>4.3</b>	1.02	< 0.21	--
MW-202	03/02/12	0.0053	0.0019	0.0107	0.0013 J	<b>3.87</b>	--	--	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-202	06/13/12	--	--	--	--	<b>3.31</b>	1.54	< 0.10	--
MW-202	09/26/12	0.0058	0.0029 J	0.0378	< 0.0018	<b>4.07</b>	--	--	--
MW-202	11/27/12	0.0113	0.0034	0.0274	0.0022	<b>6.07</b>	2.67	< 0.30	--
MW-202	05/15/13	--	--	--	--	<b>3.83</b>	1.62	< 0.096	--
MW-202	11/06/13	< 0.00020	0.0027	0.0335	0.0012 J	<b>4.68</b>	1.29	< 0.095	--
MW-202	04/22/14	--	--	--	--	<b>3.22</b>	2.18	< 0.28	--
MW-202	11/06/14	0.0083	0.0026	0.0154	0.0011	<b>5.1</b>	2.45	0.282 J	--
MW-202	05/19/15	--	--	--	--	<b>2.96</b>	0.842	< 0.096	--
MW-202	12/10/15	0.00419	0.00124	0.00277	< 0.0030	<b>5.67</b>	<b>27.2</b>	0.565	--
MW-202	05/03/16	--	--	--	--	<b>2.89</b>	2.29	0.111 J	--
MW-202	12/13/16	0.00606	0.0028	0.00901	0.00110 J	<b>2.92</b>	4.04	0.201	--
MW-202	06/14/17	--	--	--	--	<b>2.58</b>	3.68	0.134 J	--
MW-202	12/06/17	0.00102	< 0.000312	0.00144	0.00129 J	<b>3.02</b>	<b>25.8</b>	0.402 J	--
MW-202	06/14/18	--	--	--	--	<b>1.49</b>	4.1	0.166 J	--
MW-202	12/19/18	0.00178	0.000839 J	0.00444	0.00187 J	<b>4.74</b>	<b>48.3</b>	1.69	--
MW-202	05/16/19	--	--	--	--	<b>3.04</b>	<b>11.8</b>	0.718	--
MW-202	12/10/19	0.00179	0.00159	0.0128	0.00202 J	<b>4.29</b>	<b>24</b>	0.534	--
MW-202	06/29/20	--	--	--	--	<b>1.78</b>	<b>13.1</b>	0.412	--
MW-202	12/16/20	0.00132 J	0.000409 J-	0.00236 J	<0.0005 J	<b>3.47</b>	<b>36.60</b>	0.641	--
MW-202	06/14/21	--	--	--	--	<b>1.32</b>	4.52	0.327 J	--
MW-202	12/16/21	0.00275	0.000751 J	0.00121	0.00169 J	<b>3.71</b>	<b>17.0</b>	0.706	--
MW-202	06/29/22	--	--	--	--	<b>3.33</b>	2.84	1.09	--
MW-202	12/12/22	0.00314	0.00111	0.00193	0.00155 J	<b>2.98</b>	<b>22.1</b>	0.505	--
MW-203	01/13/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-203	04/19/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	0.26	< 0.5	--
MW-203	07/27/04	0.013	< 0.001	0.0069	< 0.001	<b>2.6</b>	0.45	< 0.5	--
MW-203	10/19/04	0.013	< 0.001	0.015	0.0025	<b>1.6</b>	< 0.25	< 0.5	--
MW-203	10/19/04	0.017	< 0.001	0.012	0.0018	<b>1.4</b>	< 0.25	< 0.5	--
MW-203	01/25/05	0.0063	< 0.001	0.011	0.0013	<b>1.6</b>	0.52	0.68	--
MW-203	04/19/05	0.0068	< 0.001	0.0018	< 0.001	0.63	< 0.25	0.55	--
MW-203	07/13/05	0.01	< 0.001	0.0077	< 0.001	0.89	< 0.25	< 0.5	--
MW-203	10/20/05	0.023	0.002	0.021	0.0026	<b>4.2</b>	2.1	1.1	--
MW-203	01/23/06	0.00186	< 0.0005	0.00182	0.00125	0.76	0.565	< 0.943	--
MW-203	04/26/16	0.00694	0.00076	0.00079	<0.003	<b>1.38</b>	0.66	0.625	--
MW-203	10/13/16	0.023	0.00553	0.00448	0.00652	<b>6.22</b>	7.39	1.34	--
MW-203	04/27/17	0.00502	<0.0005	0.00053	<0.003	<b>1.24</b>	0.507	0.515	--
MW-203	05/20/08	--	--	--	--	0.6	0.32	< 0.5	--
MW-203	11/18/08	--	--	--	--	0.17	< 0.25	< 0.5	--
MW-203	04/08/09	--	--	--	--	< 0.1	0.12	0.11	--
MW-203	11/17/09	--	--	--	--	< 0.1	< 0.1	< 0.1	--
MW-203	04/26/10	--	--	--	--	0.16	0.18	< 0.1	--
MW-203	10/25/10	--	--	--	--	0.92	0.36	< 0.1	--
MW-203	05/23/11	--	--	--	--	0.333	0.0854	0.314	--
MW-203	10/26/11	--	--	--	--	<b>1.38</b>	0.262	0.118	--
MW-203	06/13/12	--	--	--	--	0.459	0.134	0.332	--
MW-203	11/27/12	--	--	--	--	<b>1.05</b>	0.0943 J	< 0.10	--
MW-203	05/15/13	--	--	--	--	0.144 J	< 0.048	< 0.096	--
MW-203	11/06/13	--	--	--	--	0.68	< 0.047	< 0.094	--
MW-203	04/22/14	--	--	--	--	0.164	0.210 J	0.732 J	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-203	11/06/14	--	--	--	--	0.102	0.0933 J	0.168 J	--
MW-203	05/19/15	--	--	--	--	0.285	0.166	0.170 J	--
MW-203	12/09/15	--	--	--	--	< 0.100	0.319	< 0.394	--
MW-203	05/04/16	--	--	--	--	0.575	0.161	0.133 J	--
MW-203	5/5/2016 DUF	--	--	--	--	0.534	0.151	0.134 J	--
MW-203	12/13/16	--	--	--	--	0.203	0.234	0.125 J	--
MW-203	06/14/17	--	--	--	--	0.0898 J	0.212 J	0.172 J	--
MW-203	12/08/17	--	--	--	--	<b>1.56</b>	0.323	< 0.122	--
MW-203	06/14/18	--	--	--	--	0.156	0.152 J	0.167 J	--
MW-203	12/20/18	--	--	--	--	0.107 J	0.806	0.944	--
MW-203	05/16/19	--	--	--	--	0.471	0.185 J	0.159 J	--
MW-203	12/10/19	--	--	--	--	<b>1.74</b>	0.495	0.189 J	--
MW-203	06/29/20	--	--	--	--	0.256	0.209 J	0.181 J	--
MW-203	12/15/20	--	--	--	--	0.282	<0.229	0.930	--
MW-203	06/15/21	--	--	--	--	<0.150	<0.246	0.267 J	--
MW-203	12/16/21	--	--	--	--	0.129 J	0.138 J	0.273 J	--
MW-203	06/28/22	--	--	--	--	0.0343 J	0.645	1.56	--
MW-203	12/14/22	--	--	--	--	0.227	0.993	0.35 J	--
MW-204	07/27/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	1.6	< 0.5	--
MW-204	01/26/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	6.2	< 1	--
MW-204	04/18/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	1.5	0.79	--
MW-204	07/13/05	< 0.001	< 0.001	< 0.001	< 0.001	0.076	1.1	0.59	--
MW-204	10/19/05	< 0.001	< 0.001	< 0.001	< 0.001	0.082	0.45	< 0.5	--
MW-204	01/26/06	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.05	5.53	< 0.952	--



**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-204	04/25/06	<0.0005	<0.0005	<0.0005	<0.003	0.0755	2.51	1.11	--
MW-204	10/12/06	<0.0005	<0.0005	<0.0005	<0.003	0.0634	0.896	0.519	--
MW-204	04/26/07	<0.0005	<0.0005	<0.0005	<0.003	0.0855	1.81	0.749	--
MW-204	10/30/07	--	--	--	--	< 0.05	--	--	--
MW-204	11/20/08	< 0.005	< 0.005	< 0.005	< 0.005	0.13	1	< 0.5	--
MW-204	11/19/09	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	3.5	0.16	--
MW-204	10/27/10	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	0.29	< 0.1	--
MW-204	10/27/11	< 0.0010	< 0.0010	< 0.0010	< 0.0020	0.066	0.599	< 0.20	--
MW-204	11/27/12	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.975	< 0.10	--
MW-204	11/06/13	0.00057 J	< 0.00020	< 0.00020	< 0.00046	0.0762 J	0.28	0.0976 J	--
MW-204	11/06/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.505	0.321	--
MW-204	12/10/15	< 0.00020	< 0.0010	< 0.0010	< 0.0030	< 0.100	0.579	< 0.388	--
MW-204	12/13/16	0.000187 J	< 0.000312	0.000555 J	< 0.000442	< 0.0178	0.507	0.215	--
MW-204	12/06/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.786	0.232 J	--
MW-204	12/19/18	0.000204 J	< 0.000312	< 0.000198	< 0.000442	0.138 J	0.599	0.729	--
MW-204	12/10/19	0.00105	< 0.000312	< 0.000198	< 0.000442	<0.0704	0.238 J	0.128 J	--
MW-204	12/16/20	0.0003 J	0.000245 J-	<0.00020 J	<0.0005 J	<0.250	0.303	0.405	--
MW-204	12/16/21	0.000342 J	<0.00100	<0.00100	<0.00300	<0.150	0.379	0.413	--
MW-204	12/12/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.351	0.458	--
MW-206A	01/22/04	< 0.001	< 0.001	< 0.001	0.004	< 0.25	< 0.25	< 0.5	--
MW-206A	04/19/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
MW-206A	07/27/04	< 0.005	< 0.005	< 0.005	< 0.005	< 1.2	1.8	0.78	--
MW-206A	10/19/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	2	1.1	--
MW-206A	01/25/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	2.1	2.2	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-206A	04/18/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	1.3	1.5	--
MW-206A	07/13/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	1.2	1.9	--
MW-206A	10/20/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	2.1	7.9	--
MW-206A	01/26/06	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.05	4.41	2.54	--
MW-206A	11/20/08	< 0.005	< 0.005	< 0.005	< 0.005	< 0.25	2.1	1.7	--
MW-206A	11/19/09	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	0.1	< 0.1	--
MW-206A	10/25/10	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	< 0.1	0.18	--
MW-206A	10/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0020	< 0.20	0.141	< 0.20	--
MW-206A	11/27/12	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.116	0.111 J	--
MW-206A	11/06/13	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.047	< 0.094	--
MW-206A	11/06/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.236	0.392	--
MW-206A	12/08/15	< 0.00020	< 0.0010	< 0.0010	< 0.0030	< 0.100	< 0.242	< 0.403	--
MW-206A	12/12/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0178	0.18	0.135 J	--
MW-206A	12/08/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.258	0.239 J	--
MW-206A	12/20/18	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	2.25	3.96	--
MW-206A	12/10/19	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.591	0.396	--
MW-206A	12/16/20	< 0.00020	< 0.0002	< 0.00020	< 0.0005	< 0.250	< 0.236	< 0.394	--
MW-206A	12/16/21	< 0.000400	< 0.00100	< 0.00100	< 0.00300	< 0.150	0.150 J	0.215 J	--
MW-206A	12/12/22	< 0.000400	< 0.00100	< 0.00100	< 0.00300	< 0.150	0.264	0.575	--
MW-213	01/14/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
MW-213	04/20/04	< 0.005	< 0.005	< 0.005	< 0.005	< 0.25	< 0.25	< 0.5	--
MW-213	07/28/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
MW-213	10/19/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
MW-213	01/25/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-213	04/19/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.25	< 0.5	--
MW-213	07/12/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.25	< 0.5	--
MW-213	10/20/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	0.34	< 0.5	--
MW-213	01/26/06	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.05	0.653	< 0.495	--
MW-213	10/30/07	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--	--
MW-213	11/19/08	< 0.005	< 0.005	< 0.005	< 0.005	< 0.25	< 0.25	< 0.5	--
MW-213	04/07/09	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	< 0.1	< 0.1	--
MW-213	11/18/09	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	< 0.1	< 0.1	--
MW-213	04/26/10	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	< 0.1	< 0.1	--
MW-213	10/28/10	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	< 0.1	< 0.1	--
MW-213	05/24/11	< 0.0003	< 0.0005	< 0.0003	< 0.0007	< 0.050	< 0.049	< 0.098	--
MW-213	10/25/11	< 0.0010	< 0.0010	< 0.0010	< 0.0020	< 0.20	< 0.11	< 0.21	--
MW-213	06/12/12	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.050	< 0.10	--
MW-213	11/29/12	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.050	< 0.10	--
MW-213	05/15/13	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.048	< 0.096	--
MW-213	11/05/13	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.0625 J	< 0.095	--
MW-213	04/23/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.0586	< 0.094	--
MW-213	11/05/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.0782 J	< 0.094	--
MW-213	05/19/15	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.102	< 0.10	--
MW-213	12/09/15	< 0.00020	< 0.0010	< 0.0010	< 0.0030	< 0.100	< 0.235	< 0.392	--
MW-213	05/03/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000162	< 0.100	0.0415 J	< 0.0593	--
MW-213	12/13/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.100	0.115 J	< 0.0622	--
MW-213	06/14/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.128 J	< 0.123	--
MW-213	12/07/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.158 J	< 0.121	--
MW-213	06/12/18	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	< 0.111	< 0.121	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-213	12/19/18	< 0.000930	0.000320 J	< 0.000198	< 0.000442	0.0717 J	0.434	0.411	--
MW-213	05/16/19	< 0.000200	0.000349 J	< 0.000190	< 0.000580	0.0912	0.153 J	< 0.123	--
MW-213	12/11/19	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.147 J	< 0.117	--
MW-213	06/29/20	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-213	12/16/20	<0.00020 J	<0.0002 J	<0.00020 J	<0.0005 J	<0.250	<0.233	<0.388	--
MW-213	06/14/21	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	<0.235	<0.392	--
MW-213	12/16/21	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.158 J	0.199 J	--
MW-213	06/29/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.163 J	<0.475	--
MW-213	12/12/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.27	0.268 J	--
MW-214	01/14/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
MW-214	04/20/04	< 0.005	< 0.005	< 0.005	< 0.005	< 0.25	< 0.25	< 0.5	--
MW-214	07/28/04	< 0.005	< 0.005	< 0.005	< 0.005	< 1.2	< 0.25	< 0.5	--
MW-214	10/19/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
MW-214	01/25/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	0.36	< 0.5	--
MW-214	04/19/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	0.3	< 0.5	--
MW-214	07/12/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	0.29	< 0.5	--
MW-214	10/20/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	0.33	< 0.5	--
MW-214	01/26/06	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.05	0.91	< 0.476	--
MW-214	10/30/07	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--	--
MW-214	05/05/08	< 0.005	< 0.005	< 0.005	< 0.005	< 0.25	0.91	< 0.5	--
MW-214	07/10/08	--	--	--	--	--	< 0.5	< 1	--
MW-214	11/19/08	< 0.005	< 0.005	< 0.005	< 0.005	< 0.25	0.8	< 0.5	--
MW-214	04/07/09	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	0.17	< 0.1	--
MW-214	11/18/09	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	0.11	< 0.1	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-214	04/26/10	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	0.19	< 0.1	--
MW-214	10/28/10	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	< 0.1	< 0.1	--
MW-214	05/24/11	<0.0003	<0.0005	<0.0003	<0.0007	<0.050	0.127	<0.097	--
MW-214	10/25/11	< 0.0010	< 0.0010	< 0.0010	< 0.0020	< 0.20	0.126	< 0.21	--
MW-214	06/12/12	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.050	0.135 J	--
MW-214	11/29/12	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.048	< 0.095	--
MW-214	05/15/13	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.0857 J	< 0.096	--
MW-214	11/05/13	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.0552 J	< 0.094	--
MW-214	04/23/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.118	< 0.094	--
MW-214	11/05/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.168	0.103	--
MW-214	05/19/15	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.106	< 0.094	--
MW-214	12/09/15	< 0.00020	< 0.0010	< 0.0010	< 0.0030	< 0.100	0.248	< 0.392	--
MW-214	05/03/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000162	< 0.100	0.123	< 0.0594	--
MW-214	12/14/16	< 0.0000930	< 0.000312	0.000275 J	< 0.000442	0.0226 J	0.13	< 0.0600	--
MW-214	06/14/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.214 J	< 0.121	--
MW-214	12/07/17	< 0.0000930 J	< 0.000312 J	< 0.000198 J	< 0.000442 J	< 0.0704 J	0.305	< 0.128	--
MW-214	06/12/18	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.170 J	< 0.120	--
MW-214	12/19/18	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.547	0.415	--
MW-214	05/16/19	< 0.000200	0.000303 J	< 0.000190	< 0.000580	< 0.0550	0.213 J	< 0.122	--
MW-214	12/11/19	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.239 J	< 0.121	--
MW-214	06/29/20	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-214	12/16/20	<0.00020 J	<0.0002 J	<0.00020 J	<0.0005 J	<0.250	<0.218	<0.363	--
MW-214	06/14/21	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.122 J	<0.395	--
MW-214	12/16/21	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.172 J	0.129 J	--
MW-214	06/29/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.181 J	0.135 J	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-214	12/12/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.367	0.275 J	--
MW-301	03/02/12	<b>0.24</b>	0.0138	0.0099	0.0212	<b>3.37</b>	--	--	--
MW-301	09/25/12	<b>0.333</b>	0.0131	0.0186	0.0192	<b>4.02</b>	--	--	--
MW-301	11/28/12	<b>0.241</b>	0.0099	0.0125	0.0106	<b>2.76</b>	--	--	--
MW-301	02/21/13	<b>0.659</b>	0.0175	0.0264	0.0173 J	<b>3.98</b>	0.315	< 0.10	--
MW-301	05/15/13	<b>0.357</b>	0.0122	0.0231	0.0145	<b>3.63</b>	--	--	--
MW-301	11/04/13	<b>0.16</b>	0.0097	0.0164	0.0109	<b>2.29</b>	--	--	--
MW-301	04/23/14	<b>0.252</b>	0.0072	0.0135	0.0075	<b>3.57</b>	--	--	--
MW-301	07/24/14	<b>0.314</b>	0.008	0.0143	0.0096	<b>3.7</b>	0.361	< 0.094	--
MW-301	11/03/14	<b>0.108</b>	0.0043 J	0.0046 J	0.0051 J	<b>1.76</b>	--	--	--
MW-301	03/09/15	<b>0.222</b>	0.0067	0.0065	0.0062 J	<b>2.27</b>	--	--	--
MW-301	05/21/15	<b>0.194</b>	0.0069	0.01	0.0060 J	<b>2.24</b>	--	--	--
MW-301	07/28/15	<b>0.116</b>	0.0036	0.0037	0.0019 J	<b>2.09</b>	--	--	--
MW-301	12/10/15	0.0437	0.00351	0.00104	0.00551	<b>1.34</b>	--	--	--
MW-301	02/22/16	<b>0.28</b>	0.00881	0.0104	0.00746	<b>3.65</b>	--	--	--
MW-301	05/02/16	<b>0.17</b>	0.00834	0.0138	0.00663	<b>3.32</b>	--	--	--
MW-301	08/29/16	0.0647	0.00551	0.0103	0.0064	<b>2.9</b>	--	--	--
MW-301	12/12/16	<b>0.251</b>	0.00745	0.0173	0.00633	<b>3</b>	--	--	--
MW-301	03/13/17	<b>0.206</b>	0.00771	0.0117	0.00585	<b>3.02</b>	--	--	--
MW-301	06/13/17	<b>0.111</b>	0.00659 J	0.0128	0.00713 J	<b>2.5</b>	--	--	--
MW-301	08/22/17	0.0652	0.00472	0.0108	0.00366	<b>1.93</b>	--	--	--
MW-301	12/05/17	0.0222	0.00228	0.00217	0.00272 J	<b>1.67</b>	--	--	--
MW-301	03/06/18	<b>0.207</b>	0.00303	0.00542	0.00248 J	<b>1.32</b>	--	--	--
MW-301	06/13/18	0.0132	0.00108	0.00239	0.000821 J	<b>1.27</b>	--	--	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-301	09/06/18	0.00368	0.000585 J	0.000352 J	0.000489 J	<b>1.45</b>	--	--	--
MW-301	12/20/18	0.0175	0.000688 J	0.00259	0.000536 J	0.445	--	--	--
MW-301	03/19/19	<b>0.0999</b>	0.00182	0.00923	0.00182 J	<b>1.34</b>	--	--	--
MW-301	05/16/19	0.00684	< 0.000170	0.000357 J	< 0.000580	0.483	--	--	--
MW-301	09/19/19	0.0000937 J	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-301	12/11/19	0.000093	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-301	04/28/20	0.0399	0.00115	0.00676	0.000676 J	0.368	--	--	--
MW-301	06/29/20	0.0163	< 0.000312	0.00205	< 0.000442	0.114 J	--	--	--
MW-301	09/21/20	0.00732	< 0.001	0.00127	0.000442 J	0.167	--	--	--
MW-301	12/15/20	0.0416	0.00146	0.0109	0.00117	0.441	--	--	--
MW-301	04/13/21	0.0238	0.00105	0.00767	0.000879	<b>1.69</b>	--	--	--
MW-301	06/15/21	0.0168	0.00103	0.00822	0.00101 J	0.439	--	--	--
MW-301	09/22/21	0.00333	< 0.00100	0.00200	0.000535 J	0.226	--	--	--
MW-301	12/16/21	0.0185	0.000723 J	0.00439	0.000768 J	0.471	--	--	--
MW-301	03/29/22	0.0308	0.000663 J	0.00248	0.00113 J	0.572	--	--	--
MW-301	06/28/22	0.0215	0.000854 J	0.00316	0.000735 J	0.478	--	--	--
MW-301	09/21/22	0.00932	0.000952 J	0.00172	0.000953 J	0.245	--	--	--
MW-301	12/13/22	0.0242	0.00151	0.000703 J	0.00148 J	--	--	--	--
MW-302	03/01/12	<b>0.831</b>	0.0275	0.213	0.248	<b>5.33</b>	--	--	--
MW-302	06/12/12	<b>0.574</b>	0.0156	0.0183	0.0244	<b>4.18</b>	--	--	--
MW-302	06/28/12	<b>1.23</b>	0.0437	0.403	0.289	<b>5.65</b>	--	--	--
MW-302	09/25/12	<b>0.657</b>	0.0247	0.18	0.106	<b>4.07</b>	--	--	--
MW-302	11/25/12	<b>0.449</b>	0.0152	0.191	0.177	<b>4.58</b>	--	--	--
MW-302	02/22/13	<b>0.393</b>	0.0149	0.124	0.116	<b>4.15</b>	0.435	< 0.10	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-302	05/14/13	<b>0.873</b>	0.0231	0.236	0.145	<b>4.19</b>	--	--	--
MW-302	09/05/13	<b>0.783</b>	0.0189	0.162	0.0746	<b>3.7</b>	--	--	--
MW-302	11/05/13	<b>0.607</b>	0.0112	0.0977	0.0529	<b>2.69</b>	--	--	--
MW-302	01/16/14	<b>0.404</b>	0.0161	0.0843	0.0504	<b>3.54</b>	--	--	--
MW-302	04/23/14	<b>0.98</b>	0.0269	0.276	0.232	<b>5.86</b>	--	--	--
MW-302	07/24/14	<b>0.656</b>	0.0206	0.178	0.131	<b>4.66</b>	0.363	< 0.094	--
MW-302	11/03/14	<b>0.506</b>	0.0159	0.221	0.176	<b>4.06</b>	0.361	< 0.094	--
MW-302	05/21/15	<b>0.454</b>	0.0161	0.174	0.15	<b>3.44</b>	--	--	< 0.010
MW-302	12/10/15	<b>0.372</b>	0.00853	0.0139	0.0176	<b>2.16</b>	1	< 0.391	--
MW-302	05/04/16	<b>0.595</b>	0.0145	0.27	0.153	<b>3.75</b>	--	--	--
MW-302	12/15/16	<b>0.759</b>	0.0263	0.453	0.117	<b>5.08</b>	1.73	< 0.0630	--
MW-302	06/13/17	<b>0.487</b>	0.0146 J	0.215	0.0524 J	<b>1.98</b>	--	--	--
MW-302	08/23/17	0.047	0.00305	0.00823	0.00647	0.709	--	--	--
MW-302	12/05/17	0.0414	0.00196	0.00271	0.003	<b>1.79</b>	9.96	0.209 J	--
MW-302	03/07/18	0.0707	0.00314	0.043	0.00763	<b>1.61</b>	--	--	--
MW-302	06/13/18	0.0591	0.00363	0.0481	0.0227	1	--	--	--
MW-302	09/06/18	0.0312	0.00138	0.0242	0.00479	0.526	--	--	--
MW-302	12/20/18	0.00121	< 0.000312	0.00431	0.000625 J	0.232	2.5	0.386	--
MW-302	03/19/19	0.0133	0.000823 J	0.0122	0.00433	<b>1.84 J</b>	--	--	--
MW-302	05/16/19	0.0035	0.000363 J	0.00678	0.00177 J	0.578	--	--	--
MW-302	09/19/19	0.0174	0.00115	0.0217	0.00428	0.662	--	--	--
MW-302	12/11/19	0.0132	0.000741 J	0.00976	0.00222 J	0.297	3.69	0.179 J	--
MW-302	04/28/20	0.027	0.00181	0.0397	0.00698	<b>1.23</b>	--	--	--
MW-302	06/30/20	0.0219	0.00152	0.0368	0.00590 J	<b>1.23</b>	--	--	--
MW-302	09/21/20	0.00148	<0.001	0.00888	0.00108 J	0.205	--	--	--



**Table 6**  
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Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-302	12/15/20	0.0404 J	0.00282 J-	0.0684 J	0.0117 J-	<b>1.84</b>	<b>10.80</b>	0.529	--
MW-302	04/13/21	0.00616 J-	0.000526 J	0.0178 J-	0.00419 J-	<b>1.85</b>	--	--	--
MW-302	06/15/21	0.0203	0.00193	0.0614	0.0101	0.886	--	--	--
MW-302	09/23/21	0.0184	0.00373	0.0585	0.00883	0.637	--	--	--
MW-302	12/16/21	0.00644	0.000755 J	0.0211	0.00374	<b>1.19</b>	6.39	0.622	--
MW-302	03/28/22	0.00516	0.000712 J	0.0122	0.00292 J	<b>1.18</b>	--	--	--
MW-302	06/28/22	0.00282	0.000505 J	0.0214	0.00456	0.414	--	--	--
MW-302	09/21/22	0.00527	0.00190	0.0296	0.00693	0.54	--	--	--
MW-302	12/13/22	<0.000400	<0.00100	<0.00100	<0.00300	0.198	0.387	0.145 J	--
MW-303	03/02/12	<b>3.13</b>	0.0759	0.76	0.232	<b>12.3</b>	--	--	--
MW-303	06/13/12	<b>2.9</b>	0.0957	0.884	0.268	<b>12.5</b>	--	--	--
MW-303	09/25/12	<b>1.83</b>	0.0635	0.474	0.146	<b>9.14</b>	--	--	--
MW-303	11/28/12	<b>1.94</b>	0.0873	1.18	0.319	<b>12.6</b>	--	--	--
MW-303	02/21/13	<b>2.34</b>	0.0955	1.29	0.338	<b>12.8</b>	0.674	< 0.10	--
MW-303	05/15/13	<b>1.9</b>	0.0864	0.983	0.272	<b>10.6</b>	--	--	--
MW-303	11/04/13	<b>0.884</b>	0.0278	0.219	0.0544	<b>6.11</b>	--	--	--
MW-303	04/23/14	<b>1.58</b>	0.071	1.114	0.224	<b>11.8</b>	--	--	--
MW-303	07/24/14	<b>0.808</b>	0.0471	0.653	0.161	<b>9.76</b>	0.622	< 0.094	--
MW-303	11/04/14	<b>1.42</b>	0.0618	0.924	0.18	<b>11.5</b>	1	1.15	--
MW-303	05/20/15	<b>0.669</b>	0.0432	0.713	0.157	<b>7.9</b>	--	--	--
MW-303	12/08/15	<b>1.19</b>	0.071	1.33	< 0.300	<b>7.6</b>	2.45	< 0.398	--
MW-303	05/04/16	<b>0.704</b>	0.0625	1.82	0.287	<b>8.6</b>	--	--	--
MW-303	12/12/16	<b>0.831</b>	0.0482	1.45	0.176	<b>8.31</b>	2.52	< 0.0602	--
MW-303	06/13/17	<b>0.353</b>	0.0408	1.54	0.19	<b>5.69</b>	--	--	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-303	12/05/17	<b>0.104</b>	0.0116 J	0.3	0.0400 J	<b>4.29</b>	7.49	< 0.125	--
MW-303	03/06/18	0.039	0.0154	0.147 J	0.0352	<b>2.5</b>	--	--	--
MW-303	06/13/18	<b>0.157</b>	0.0151 J	0.39	0.0317 J	<b>2.94 J</b>	--	--	--
MW-303	09/06/18	0.000729	< 0.000312	0.00117	< 0.000442	< 0.0704	--	--	--
MW-303	12/20/18	0.000581	0.000342 J	0.00136	0.00088 J	0.382	8.25	0.505	--
MW-303	03/19/19	0.0346	0.00611	0.194	0.0111	<b>2.48</b>	--	--	--
MW-303	05/16/19	0.0173	0.0017	0.0869	0.00541	<b>1.33</b>	--	--	--
MW-303	09/19/19	0.00776	0.00207	0.0717	0.00326	0.785	--	--	--
MW-303	12/11/19	0.00114	0.000373 J	0.0404	0.00134 J	0.371	2.73	0.281 J	--
MW-303	04/28/20	0.00258	< 0.000312	0.00511	0.00705	<b>2.46</b>	--	--	--
MW-303	06/30/20	0.0152	0.000897 J	0.0386	0.00696	<b>2.64</b>	--	--	--
MW-303	09/22/20	0.02	0.00254	0.153	0.00623	<b>1.86</b>	--	--	--
MW-303	12/15/20	0.0150 J-	0.00412 J-	0.119 J-	0.0146 J-	<b>3.34</b>	5.28	<0.389	--
MW-303	04/13/21	0.0135 J-	0.00170 J-	0.0371 J-	0.0104 J-	<b>4.07</b>	--	--	--
MW-303	06/15/21	0.0258	0.00343	0.133	0.00867	<b>1.94</b>	--	--	--
MW-303	09/22/21	<b>0.252</b>	0.00724	0.344	0.0194	<b>2.29</b>	--	--	--
MW-303	12/15/21	0.0248	0.000620 J	0.0142	0.00435	<b>2.39</b>	6.51	0.385 J	--
MW-303	03/28/22	0.0270	0.00196	0.0638	0.00892	<b>2.63</b>	--	--	--
MW-303	06/28/22	<b>0.107</b>	0.00303	0.0272	0.00922	<b>2.25</b>	--	--	--
MW-303	09/21/22	<b>0.216</b>	0.00710	0.0558	0.0121	<b>1.99</b>	--	--	--
MW-303	12/13/22	<b>0.139</b>	0.00483	0.0580	0.00982	<b>1.18</b>	3.73	0.321 J	--
MW-304	03/01/12	<b>0.686</b>	0.0351	0.214	0.264	<b>5.64</b>	--	--	--
MW-304	06/12/12	<b>1.04</b>	0.0408	0.27	0.218	<b>5.98</b>	--	--	--
MW-304	09/25/12	<b>0.63</b>	0.024	0.198	0.105	<b>3.93</b>	--	--	--

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**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
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Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-304	11/28/12	<b>0.411</b>	0.0244	0.306	0.252	<b>5.89</b>	--	--	--
MW-304	02/22/13	<b>0.507</b>	0.0225	0.208	0.149	<b>5.56</b>	0.762	0.186 J	--
MW-304	05/14/13	<b>0.645</b>	0.0283	0.209	0.144	<b>4.73</b>	--	--	--
MW-304	09/05/13	<b>0.862</b>	0.0188	0.0849	0.0616	<b>3.09</b>	--	--	--
MW-304	11/05/13	<b>0.695</b>	0.0163	0.0629	0.054	<b>2.67</b>	--	--	--
MW-304	01/16/14	<b>0.79</b>	0.0194	0.0472	0.0571	<b>4.89</b>	--	--	--
MW-304	04/23/14	<b>0.778</b>	0.0248	0.185	0.147	<b>5.93</b>	--	--	--
MW-304	07/24/14	<b>0.437</b>	0.0173	0.109	0.0666	<b>3.59</b>	0.557	< 0.094	--
MW-304	11/03/14	<b>1.11</b>	0.0421	0.48	0.214	<b>3.32</b>	0.366	< 0.094	--
MW-304	05/20/15	<b>0.486</b>	0.0136	0.115	0.0373	<b>3.3</b>	--	--	< 0.010
MW-304	12/10/15	<b>0.775</b>	0.0312	0.336	0.114	<b>4.37</b>	1.55	< 0.387	--
MW-304	05/04/16	<b>0.527</b>	0.0187	0.355	0.0559	<b>4.05</b>	--	--	--
MW-304	12/15/16	<b>0.749</b>	0.0271	0.586	0.0664	<b>5.75</b>	1.78	0.0686 J	--
MW-304	06/13/17	<b>0.209</b>	0.0113	0.413	0.0246 J	<b>2.2</b>	--	--	--
MW-304	08/23/17	0.021	0.00437	0.0124	0.00494	0.566	--	--	--
MW-304	12/05/17	0.000217 J	< 0.000312	< 0.000494 J	0.00118 J	0.291	3.2	< 0.122	--
MW-304	03/06/18	0.000493	< 0.000312	0.000337 J	< 0.000442	0.562	--	--	--
MW-304	06/13/18	0.00107	< 0.000312	0.00561	0.00104 J	0.425	--	--	--
MW-304	09/06/18	0.000535	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-304	12/20/18	< 0.000093	< 0.000312	< 0.000198	< 0.000442	< 0.0704	1.5	0.219 J	--
MW-304	03/19/19	0.000448	< 0.000312	0.000514 J	< 0.000442	0.105 J	--	--	--
MW-304	05/16/19	< 0.000200	< 0.000170	< 0.000190	< 0.000580	< 0.055	--	--	--
MW-304	09/19/19	0.000242 J	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-304	12/11/19	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.188 J	0.120 U	--
MW-304	04/28/20	0.00171	< 0.000312	0.000281 J	< 0.000442	0.113 J	--	--	--

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Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-304	06/30/20	0.0399	0.000627 J	0.000544 J	< 0.000442	0.131 J	--	--	--
MW-304	09/21/20	0.0623	0.000391 J	0.00109	0.000491 J	0.191	--	--	--
MW-304	12/15/20	0.0363	0.000932	0.00188	0.000883	0.26	4.22	<0.393	--
MW-304	04/13/21	0.00194	<0.000200	0.00107 J+	<0.000500	0.307	--	--	--
MW-304	06/15/21	0.0263	<0.00100	0.000697 J	<0.00300	0.230	--	--	--
MW-304	09/22/21	0.0389	<0.00100	0.000696 J	<0.00300	0.225	--	--	--
MW-304	12/16/21	0.00339	<0.00100	0.00132	0.000646 J	0.406	1.86	0.292 J	--
MW-304	03/28/22	0.0276	0.000750 J	0.00125	0.000843 J	0.624	--	--	--
MW-304	06/28/22	0.0169	0.000903 J	0.00318	0.00112 J	0.549	--	--	--
MW-304	09/20/22	<b>0.133</b>	0.000434 J	0.00181	0.00134 J	0.594	--	--	--
MW-304	12/13/22	0.00466	<0.00100	0.000588 J	0.000748 J	0.364	2.15	0.674	--
MW-305	03/01/12	<b>1.14</b>	0.0227	0.0389	0.0375 J	<b>5.84</b>	--	--	--
MW-305	06/11/12	<b>1.34</b>	0.0221	0.0517	0.0331 J	<b>5.97</b>	--	--	--
MW-305	09/26/12	<b>1.27</b>	0.0229	0.0388	0.0355 J	<b>5.89</b>	--	--	--
MW-305	11/28/12	<b>0.286</b>	0.0061	0.0032 J	0.014	<b>1.53</b>	--	--	--
MW-305	05/15/13	<b>0.397</b>	0.0263	0.29	0.0867	<b>6.28</b>	--	--	--
MW-305	11/07/13	<b>0.0844</b>	0.025	0.216	0.0919	<b>3.59</b>	--	--	--
MW-305	04/23/14	<b>0.0884</b>	0.0139	0.0941	0.0454	<b>2.82</b>	--	--	--
MW-305	11/06/14	0.0419	0.0052	0.002	0.0306	<b>1.16</b>	--	--	--
MW-305	05/21/15	<b>0.12</b>	0.0101	0.191	0.108	<b>2.81</b>	--	--	--
MW-306	03/01/12	<b>0.606</b>	0.015	0.0353	0.718	<b>4.74</b>	--	--	--
MW-306	06/11/12	<b>0.393</b>	0.0115	0.0509	0.763	<b>5.09</b>	--	--	--
MW-306	09/26/12	<b>1.05</b>	0.0261	0.135	0.147	<b>6.56</b>	--	--	--

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Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-306	11/28/12	<b>0.393</b>	0.0125	0.0183	0.0895	<b>3.06</b>	--	--	--
MW-306	05/15/13	<b>0.746</b>	0.0472	0.837	3.7	<b>18.5</b>	--	--	--
MW-306	11/07/13	<b>0.101</b>	0.0502	0.482	2.65	<b>12.8</b>	--	--	--
MW-306	04/23/14	<b>0.0762</b>	0.0345	0.325	1.97	<b>11</b>	--	--	--
MW-306	11/06/14	<b>0.119</b>	0.0226	0.302 J	0.939 J	<b>5.59</b>	--	--	--
MW-306	05/21/15	<b>0.106</b>	0.0354 J	0.874	5.15	<b>20.6</b>	--	--	--
MW-307	11/26/12	<b>2.15</b>	0.0858	0.833	0.513	<b>10.9</b>	--	--	--
MW-307	02/22/13	<b>0.497</b>	0.0358	0.226	0.145	<b>6.02</b>	0.604	< 0.094	--
MW-307	05/15/13	<b>0.437</b>	0.0461	0.167	0.12	<b>4.56</b>	--	--	--
MW-307	09/05/13	<b>0.643</b>	0.0645	0.154	0.131	<b>5.3</b>	--	--	--
MW-307	11/06/13	<b>0.568</b>	0.0448 J	0.104	0.0912	<b>4.39</b>	--	--	--
MW-307	04/22/14	<b>0.52</b>	0.0408	0.241	0.152	<b>5.68</b>	--	--	--
MW-307	11/04/14	<b>0.596</b>	0.039	0.176	0.095	<b>5.16</b>	0.632	< 0.095	--
MW-307	03/09/15	<b>0.444</b>	0.0358	0.271	0.104	<b>5.41</b>	--	--	--
MW-307	05/19/15	<b>0.306</b>	0.0273	0.14	0.0673	<b>3.44</b>	0.479	< 0.096	--
MW-307	07/29/15	<b>0.298</b>	0.0245	0.109	0.0434	<b>4.09</b>	--	--	--
MW-307	12/09/15	<b>0.699</b>	0.0585	0.334	0.131	<b>5.03</b>	1.63	< 0.392	--
MW-307	02/23/16	<b>0.498</b>	0.0417	0.578	0.110 J	<b>4.98</b>	--	--	--
MW-307	05/03/16	<b>0.469</b>	0.0338	0.456	0.0981	<b>5.04</b>	1.55	< 0.0597	--
MW-307	08/30/16	<b>0.261</b>	0.0299	0.222	0.195	<b>5.13</b>	--	--	--
MW-307	12/13/16	<b>0.275</b>	0.0255	0.302	0.102	<b>4.02</b>	1.34	0.0812 J	--
MW-307	03/14/17	<b>0.418</b>	0.0311	0.54	0.136	<b>6.33</b>	--	--	--
MW-307	06/15/17	<b>0.166</b>	0.0242	0.283	0.194 J	<b>4.18</b>	1.32	< 0.121	--
MW-307	08/23/17	<b>0.102 J</b>	0.0162	0.095	0.0912	<b>3.22</b>	1.33	< 0.126	--

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Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-307	12/06/17	0.0501	0.00663	0.0479	0.0134	0.977	1.04	< 0.128	--
MW-307	03/08/18	<b>0.15</b>	0.0158	0.134	0.0255	<b>2.09</b>	--	--	--
MW-307	06/14/18	<b>0.243</b>	0.0256	0.315	0.0329	<b>2.71</b>	1.45	< 0.120	--
MW-307	09/05/18	0.0507	0.00339	0.016	0.00343	<b>1.45</b>	--	--	--
MW-307	12/19/18	0.027	0.000413 J	0.0119	0.00153 J	<b>1.17</b>	1.79	0.396 J	--
MW-307	03/18/19	0.0587	0.00269	0.05	0.00393	0.965	--	--	--
MW-307	05/16/19	0.0324	0.00693	0.026	0.0113	<b>2.47</b>	2.74	0.265 J	--
MW-307	09/19/19	0.0126	< 0.000312	0.00135	< 0.000442	0.444	--	--	--
MW-307	12/10/19	0.00497	< 0.000312	0.000291 J	< 0.000442	0.28	0.66	< 0.118	--
MW-307	04/27/20	<b>0.0974</b>	0.00608	0.159	0.0267	<b>1.45</b>	--	--	--
MW-307	06/29/20	<b>0.0946</b>	0.00479	0.0909	0.0164	<b>1.18</b>	7.11	0.273 J	--
MW-307	09/21/20	<b>0.21</b>	0.0102	0.156	0.0516	<b>2.01</b>	--	--	--
MW-307	12/16/20	<b>0.106 J-</b>	0.0072 J-	0.0622 J	0.0336 J-	<b>1.52</b>	7.75	<0.379	--
MW-307	04/12/21	<b>0.133 J</b>	0.0228 J-	0.0930 J	0.0950 J	<b>4.06 J+</b>	--	--	--
MW-307	06/14/21	<b>0.230</b>	0.0180	0.282	0.0885	<b>2.02</b>	6.68	0.422	--
MW-307	09/22/21	<b>0.135</b>	0.0145	0.109	0.0717	<b>1.83</b>	--	--	--
MW-307	12/14/21	0.0426	0.00493	0.0921	0.0402	<b>2.39</b>	4.92	0.492	--
MW-307	03/28/22	<b>0.0982</b>	0.0223	0.147	0.0988	<b>3.69</b>	--	--	--
MW-307	06/29/22	<b>0.149</b>	0.0318	0.176	0.158 J	<b>2.87</b>	4.02	0.33 J	--
MW-307	09/20/22	<b>0.16</b>	0.0199	0.117	0.108	<b>2.49</b>	--	--	--
MW-307	12/12/22	<b>0.0820</b>	0.0190	0.0740	0.0793	<b>2.00</b>	5.93	0.699	--
MW-308	11/26/12	<b>0.144</b>	0.0010 J	0.0072	0.0013 J	0.778	--	--	--
MW-308	02/22/13	<b>0.668</b>	0.0078 J	0.0443	0.0059 J	<b>3.48</b>	0.354	< 0.10	--
MW-308	05/15/13	<b>0.392</b>	0.0052 J	0.0427	< 0.0046	<b>2.54</b>	--	--	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-308	11/06/13	<b>0.237</b>	0.0033 J	0.0056	0.0026 J	<b>1.65</b>	--	--	--
MW-308	04/22/14	0.0165	< 0.00020	0.00036 J	< 0.00046	0.146	--	--	--
MW-308	11/04/14	<b>0.132</b>	0.0012	0.0044	0.00058	0.782	< 0.048	< 0.095	--
MW-308	03/09/15	<b>0.121 J</b>	0.002	0.00064 J	0.0013 J	<b>1.1</b>	--	--	--
MW-308	05/19/15	<b>0.213</b>	0.0013 J	< 0.00050	< 0.0012	0.973	--	--	--
MW-308	07/29/15	<b>0.242</b>	0.0017 J	0.0014 J	< 0.0012	<b>1.77</b>	--	--	--
MW-308	12/09/15	<b>0.146</b>	0.00361	0.0284	0.00527	<b>1.19</b>	--	--	--
MW-308	02/23/16	0.00711	< 0.000038	0.000101 J	< 0.0000160	0.0619	--	--	--
MW-308	05/03/16	<b>0.281</b>	0.000903 J	0.00376	0.000680 J	<b>1.41</b>	--	--	--
MW-308	08/30/16	<b>0.196</b>	< 0.00312	< 0.00198	< 0.00162	<b>1.48</b>	--	--	--
MW-308	12/13/16	0.0309	< 0.000312	0.000529 J	< 0.000442	0.207	--	--	--
MW-308	03/14/17	0.000861	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-308	06/15/17	<b>0.383</b>	0.00147	0.00107	0.000477 J	<b>1.28</b>	--	--	--
MW-308	08/23/17	<b>0.234</b>	< 0.00312	< 0.00198	< 0.00442	0.812 J	--	--	--
MW-308	12/06/17	<b>0.085</b>	< 0.000312	0.000717 J	< 0.000442	0.245	--	--	--
MW-308	03/08/18	<b>0.252</b>	0.000314 J	< 0.000198	< 0.000442	0.55	--	--	--
MW-308	06/14/18	<b>0.238</b>	0.000765 J	0.00226	< 0.000442	0.487	--	--	--
MW-308	09/05/18	0.00741	< 0.000312	< 0.000198	< 0.000442	0.118 J	--	--	--
MW-308	12/19/18	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-308	03/18/19	0.000815	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-308	05/16/19	0.00703	< 0.000170	< 0.000190	< 0.000580	0.397	--	--	--
MW-308	09/19/19	0.0096	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-308	12/09/19	0.000322 J	< 0.000312	< 0.000198	< 0.000442	0.118 J	--	--	--
MW-308	04/27/20	0.00314	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-308	06/29/20	0.00406	< 0.000312	0.000292 J	< 0.000442	0.140 J	--	--	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-308	09/21/20	0.0175	0.00145	<0.001	<0.003	0.185	--	--	--
MW-308	12/16/20	<b>0.0730 J</b>	0.0954 J	0.026 J	0.0417 J	0.30	--	--	--
MW-308	04/12/21	0.0365 J+	0.000521 J+	0.000515 J+	<0.000500	0.267	--	--	--
MW-308	06/14/21	0.0572	0.00139	0.000975 J	0.00155 J	0.793	--	--	--
MW-308	09/22/21	<b>0.129</b>	0.00408	0.000975 J	0.00257 J	<b>1.25</b>	--	--	--
MW-308	12/14/21	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	--	--	--
MW-308	03/28/22	0.00476	<0.00100	0.000244 J	<0.00300	0.106 J	--	--	--
MW-308	06/29/22	<0.000400	<0.00100	0.000281 J	0.000485 J	0.0545 J	--	--	--
MW-308	09/20/22	0.0461	0.00355	0.000888 J	0.00171 J	0.696	--	--	--
MW-308	12/12/22	0.00143	<0.00100	<0.00100	<0.00300	<0.150	--	--	--
MW-309	11/28/12	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	--	--	--
MW-309	02/21/13	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.0790 J	< 0.10	--
MW-309	05/16/13	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	--	--	--
MW-309	11/06/13	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	--	--	--
MW-309	04/23/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	--	--	--
MW-309	07/24/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.102	< 0.094	--
MW-309	11/03/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.048	< 0.095	--
MW-309	05/20/15	< 0.00020	< 0.00020	0.00027 J	< 0.00046	0.0542 J	--	--	--
MW-309	12/08/15	< 0.00020	< 0.0010	< 0.0010	< 0.0030	< 0.100	< 0.241	< 0.402	--
MW-309	05/04/16	< 0.0000930	< 0.000312	0.000337 J	< 0.000162	< 0.100	--	--	--
MW-309	12/12/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0178	0.0834 J	< 0.0595	--
MW-309	06/13/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-309	12/05/17	0.000184 J	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.0877 J	< 0.128	--
MW-309	06/12/18	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--



**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-309	12/20/18	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.220 J	< 0.118	--
MW-309	05/16/19	< 0.000200	< 0.000170	< 0.000190	< 0.000580	0.3	--	--	--
MW-309	12/11/19	< 0.000930	< 0.000312	< 0.000198	< 0.000442	0.0804 J	0.614	< 0.120	--
MW-309	06/29/20	< 0.000930	< 0.000312	< 0.000198	< 0.000442	0.123 J	--	--	--
MW-309	12/15/20	< 0.00020	< 0.0002	< 0.00020	< 0.0005	< 0.250	0.292	< 0.390	--
MW-309	06/15/21	< 0.000400	< 0.00100	< 0.00100	< 0.00300	0.150	--	--	--
MW-309	12/15/21	< 0.000400	< 0.00100	< 0.00100	< 0.00300	0.113 J	0.273	0.140 J	--
MW-309	06/28/22	< 0.000400	< 0.00100	< 0.00100	< 0.00300	0.108 J	--	--	--
MW-309	12/13/22	< 0.000400	< 0.00100	< 0.00100	< 0.00300	< 0.150	0.249	< 0.391	--
MW-310	11/28/12	<b>0.86</b>	0.0265	0.211	0.147	<b>5.74</b>	--	--	--
MW-310	02/21/13	<b>1.8</b>	0.0768	0.506	0.18	<b>8.37</b>	0.603	< 0.10	--
MW-310	05/14/13	<b>0.993</b>	0.0703	0.654	0.175	<b>6.49</b>	--	--	--
MW-310	09/05/13	<b>0.96</b>	0.0598	0.31	0.11	<b>5.51</b>	--	--	--
MW-310	11/05/13	<b>0.772</b>	0.0409	0.226	0.0846	<b>4.92</b>	--	--	--
MW-310	01/16/14	<b>0.821</b>	0.0414	0.189	0.0775	<b>5.94</b>	--	--	< 0.001 <sup>1</sup>
MW-310	04/23/14	<b>0.796</b>	0.0432	0.187	0.0607	<b>5.88</b>	--	--	--
MW-310	07/24/14	<b>0.92</b>	0.0489	0.368	0.0647	<b>6.36</b>	0.605	< 0.094	--
MW-310	11/04/14	<b>0.739</b>	0.0387	0.132	0.0538	<b>5.15</b>	0.613	< 0.094	--
MW-310	03/09/15	<b>0.736</b>	0.0475	0.189	0.0606	<b>4.71</b>	--	--	--
MW-310	05/21/15	<b>0.641</b>	0.0464	0.169	0.0572	<b>4.39</b>	--	--	< 0.010
MW-310	07/28/15	<b>0.714</b>	0.0428	0.181	0.0488	<b>3.72</b>	--	--	--
MW-310	12/10/15	<b>0.405</b>	0.0396	0.0771	0.0564	<b>3.89</b>	2.75	< 0.390	--
MW-310	02/23/16	<b>0.755</b>	0.0436	0.303	0.0615	<b>4.86</b>	--	--	--
MW-310	05/02/16	<b>0.655</b>	0.0349	0.324	0.0721	<b>4.82</b>	--	--	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-310	08/29/16	<b>0.734</b>	0.0608	0.209	0.0885	<b>5.38</b>	--	--	--
MW-310	12/15/16	<b>0.673</b>	0.0504	0.289	0.0747	<b>5.92</b>	1.72	< 0.0624	--
MW-310	03/13/17	<b>0.809</b>	0.0541	0.387	0.0848	<b>5.58</b>	--	--	--
MW-310	06/15/17	<b>0.984</b>	0.0504	0.318	0.0635	<b>4.29</b>	--	--	--
MW-310	08/22/17	0.0562	0.0135	0.0416	0.0297	<b>2.17</b>	--	--	--
MW-310	12/05/17	0.00444	0.000430 J	0.0122	0.0172	0.459	1.66	< 0.122	--
MW-310	03/06/18	0.0293	< 0.000312	0.00108	0.00167 J	0.724	--	--	--
MW-310	06/13/18	0.0448	0.00103	0.0098	0.00308	0.748	--	--	--
MW-310	09/06/18	0.0182	0.000905 J	< 0.000198	0.000637 J	0.284	--	--	--
MW-310	12/20/18	0.00126	< 0.000312	< 0.000198	< 0.000442	0.0782 J	0.652	0.126 J	--
MW-310	03/19/19	0.00127	< 0.000312	0.000226 J	< 0.000442	0.297	--	--	--
MW-310	05/16/19	< 0.000200	< 0.000170	< 0.000190	< 0.000580	0.24	--	--	--
MW-310	09/19/19	0.000104 J	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-310	12/11/19	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	0.0739 J	0.453	< 0.120	--
MW-310	04/28/20	0.00595	< 0.000312	0.000357 J	< 0.000442	0.579	--	--	--
MW-310	06/30/20	0.00523	< 0.000312	0.000481 J	< 0.000442	0.669 J	--	--	--
MW-310	09/21/20	0.00903	<0.001	0.000681 J	<0.003	0.427	--	--	--
MW-310	12/15/20	0.00622	<0.0002	0.00156	<0.0005	0.726	8.62	0.508	--
MW-310	04/12/21	0.0221 J-	0.000414 J	0.00269 J-	0.000570 J-	<b>1.61</b>	--	--	--
MW-310	06/15/21	0.0289	0.000421 J	0.00359	0.00117 J	0.554	--	--	--
MW-310	09/22/21	0.0159	<0.00100	0.00137	<0.00300	0.343	--	--	--
MW-310	12/16/21	0.0166	<0.00100	0.00170	0.000730 J	<b>1.40</b>	6.76	0.667	--
MW-310	03/29/22	0.0313	0.000978 J	0.00948	0.00296 J	<b>1.55</b>	--	--	--
MW-310	06/28/22	0.0392	0.000966 J	0.0179	0.00550	0.924	--	--	--
MW-310	09/20/22	0.0244	0.00129	0.00162	0.00206 J	0.77	--	--	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
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Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-310	12/13/22	0.0163	0.00103	0.000555 J	0.00144 J	0.463	4.64	0.743	--
MW-311	11/05/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.048	< 0.095	< 0.010
MW-311	03/09/15	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	--	--	--
MW-311	06/11/15	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	--	--	--
MW-311	07/28/15	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	--	--	--
MW-311	12/10/15	< 0.00020	< 0.0010	< 0.0010	< 0.0030	< 0.100	--	--	--
MW-311	02/23/16	< 0.000320	< 0.000380	< 0.000860	< 0.000160	< 0.0178	--	--	--
MW-311	05/04/16	0.000716	< 0.000312	< 0.000198	< 0.000162	0.0260 J	--	--	--
MW-311	08/29/16	< 0.000930	< 0.000312	< 0.000198	< 0.000162	< 0.0178	--	--	--
MW-311	12/15/16	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0178	--	--	--
MW-311	03/13/17	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-311	06/15/17	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-311	08/22/17	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-311	12/07/17	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-311	03/08/18	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-311	06/13/18	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-311	09/05/18	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-311	12/20/18	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	--	--	--
MW-311	03/18/19	0.000107 J	0.000409 J	< 0.000198	< 0.000442	0.3	--	--	--
MW-311	05/16/19	0.000237 J	0.000976 J	< 0.000190	< 0.000580	0.618	--	--	--
MW-311	09/19/19	0.000211 J	< 0.000312	< 0.000198	< 0.000442	0.461	--	--	--
MW-311	12/12/19	< 0.000930	< 0.000312	0.000290 J	0.000839 J	0.751	--	--	--
MW-311	04/27/20	0.000221 J	0.00104	0.000292 J	0.000654 J	0.919	--	--	--
MW-311	06/30/20	0.000252 J	0.000799 J	0.000361 J	0.000883 J	<b>1.41 J</b>	--	--	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-311	09/22/20	0.000313 J	0.00122	0.000351 J	0.000558 J	0.894	--	--	--
MW-311	12/15/20	0.000211	0.000865	0.000386	0.000641	<b>1.66 J+</b>	--	--	--
MW-311	04/13/21	<0.000200	0.00102	0.000247	<0.000500	<b>1.32</b>	--	--	--
MW-311	09/23/21	0.00207	0.00309	0.000899 J	0.000789 J	<b>1.20</b>	--	--	--
MW-311	12/16/21	0.000347 J	0.000923 J	0.000343 J	0.00105 J	<b>1.63</b>	--	--	--
MW-311	03/29/22	0.000243 J	0.000909 J	0.000302 J	0.000828 J	<b>1.66</b>	--	--	--
MW-311	06/28/22	0.00253	0.00349	0.000596 J	0.000644 J	<b>2.05</b>	--	--	--
MW-311	09/20/22	0.00223	0.00339	0.000472 J	0.00113 J	<b>1.57</b>	--	--	--
MW-311	12/13/22	0.00374	0.00260	0.000542 J	0.00100 J	<b>1.32</b>	--	--	--
MW-312	11/05/14	<b>0.239</b>	0.0058	0.0065	0.0102	<b>1.64</b>	1.13	0.132 J	< 0.010
MW-312	03/09/15	<b>0.357</b>	0.0044 J	0.0086	0.0050 J	<b>1.91</b>	--	--	--
MW-312	06/11/15	<b>0.204</b>	0.0034 J	0.0023 J	0.0027 J	<b>1.35</b>	--	--	--
MW-312	07/28/15	<b>0.313</b>	0.0041 J	0.0030 J	0.0032 J	<b>1.65</b>	--	--	--
MW-312	12/10/15	<b>0.0718</b>	0.00333	0.00222	0.00461	<b>1.26</b>	--	--	--
MW-312	02/23/16	<b>0.327</b>	0.00354	0.00759	0.00416	<b>1.96</b>	--	--	--
MW-312	05/04/16	<b>0.414</b>	0.00399	0.00662	0.00376	<b>2.22</b>	--	--	--
MW-312	08/29/16	<b>0.37</b>	0.00457 J	0.00354 J	0.00394 J	<b>2.3</b>	--	--	--
MW-312	12/15/16	<b>0.356</b>	0.00336 J	0.00556 J	< 0.000442	<b>2.27</b>	--	--	--
MW-312	03/13/17	<b>0.35</b>	0.00362	0.00527	0.00375	<b>2.07</b>	--	--	--
MW-312	06/15/17	<b>0.383</b>	0.00372	0.00425	0.00368 J	<b>1.89</b>	--	--	--
MW-312	08/23/17	<b>0.33</b>	0.00395	0.00279	0.00422	<b>2.02</b>	--	--	--
MW-312	12/07/17	<b>0.241</b>	0.00441	0.00223	0.00708	<b>1.72</b>	--	--	--
MW-312	03/08/18	<b>0.261</b>	0.00273 J	0.00260 J	0.00311 J	<b>1.77</b>	--	--	--
MW-312	06/13/18	<b>0.284</b>	0.0044	0.00243	0.0048	<b>1.69</b>	--	--	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-312	09/05/18	<b>0.283</b>	0.00405	0.00306	0.0041	<b>2.06</b>	--	--	--
MW-312	12/20/18	<b>0.126</b>	0.00284	0.00231	0.00361	<b>1.44</b>	--	--	--
MW-312	03/19/19	<b>0.183</b>	0.00372	0.00472	0.00447	<b>2.07</b>	--	--	--
MW-312	05/16/19	<b>0.189</b>	0.00286	0.00353	0.00290 J	<b>2.5</b>	--	--	--
MW-312	09/19/19	<b>0.0928</b>	0.00233	0.00307	0.00220 J	<b>1.64</b>	--	--	--
MW-312	12/12/19	<b>0.094</b>	0.00251	0.00341	0.00275 J	<b>1.7</b>	--	--	--
MW-312	04/28/20	<b>0.0721</b>	0.00213	0.00315	0.00274 J	<b>1.66</b>	--	--	--
MW-312	06/30/20	<b>0.0792</b>	0.00238	0.00406	0.00208 J	<b>1.47</b>	--	--	--
MW-312	09/22/20	<b>0.176</b>	0.00286	0.0068	0.00295 J	<b>2.69</b>	--	--	--
MW-312	12/15/20	0.0498	0.00251	0.00437	0.00284	<b>2.56 J+</b>	--	--	--
MW-312	04/13/21	<b>0.121</b>	0.00244	0.00453	0.00219	--	--	--	--
MW-312	06/16/21	0.0472	0.00214	0.00250	0.00199 J	<b>1.57</b>	--	--	--
MW-312	09/23/21	0.0398	0.00264	0.00329	0.00226 J	<b>1.83</b>	--	--	--
MW-312	12/16/21	0.0300	0.00225	0.00290	0.00237 J	<b>2.99</b>	--	--	--
MW-312	03/29/22	0.0136	0.00172	0.00240	0.00180 J	<b>2.77</b>	--	--	--
MW-312	06/29/22	0.0358	0.00269	0.00230	0.00205 J	<b>2.28</b>	--	--	--
MW-312	09/20/22	0.0203	0.00240	0.00207	0.00231 J	<b>1.90</b>	--	--	--
MW-312	12/13/22	0.00392	0.00214	0.00126	0.00198 J	<b>1.72</b>	--	--	--
MW-313	08/29/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000162	< 0.0178	0.218	< 0.0603	--
MW-313	12/12/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.100	0.207	< 0.0598	--
MW-313	03/13/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.146 J	< 0.121	--
MW-313	06/15/17	< 0.0000930	< 0.000312	< 0.000198	0.000463 J	< 0.0704	0.165 J	< 0.122	--
MW-313	08/22/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.222 J	< 0.121	--
MW-313	12/07/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.153 J	< 0.120	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-313	03/07/18	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	< 0.120	< 0.131	--
MW-313	06/13/18	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.139 J	< 0.123	--
MW-313	09/05/18	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.362	0.255 J	--
MW-313	12/20/18	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.468	0.327 J	--
MW-313	03/19/19	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.174 J	< 0.117	--
MW-313	05/16/19	< 0.000200	< 0.000170	< 0.000190	< 0.000580	0.0807	0.207 J	0.164 J	--
MW-313	09/19/19	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.237	< 0.114	--
MW-313	12/12/19	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.473	0.153 J	--
MW-313	04/27/20	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.149 J	< 0.122	--
MW-313	06/30/20	0.000136 J	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.260	< 0.116	--
MW-313	09/22/20	<0.0004	<0.001	<0.001	<0.003	<0.150	0.309	<0.408	--
MW-313	12/15/20	<0.00020	<0.0002	<0.00020	<0.0005	<0.250	0.288	<0.388	--
MW-313	04/13/21	<0.000200	<0.000200	<0.000200	<0.000500	<0.250	0.272	<0.350	--
MW-313	06/16/21	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.156 J	<0.401	--
MW-313	09/23/21	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.161 J	<0.392	--
MW-313	12/16/21	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.359	0.185 J	--
MW-313	03/29/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	<0.237	<0.395	--
MW-313	06/28/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.177 J	0.14 J	--
MW-313	09/20/22	<0.000400	<0.00100	<0.00100	<0.00300	0.0407 J	<0.23	<0.383	--
MW-313	12/13/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.523	0.333 J	--
MW-314	08/30/16	< 0.000930	< 0.000312	< 0.000198	< 0.000162	0.182	0.293	< 0.0599	--
MW-314	12/14/16	0.00432	0.000374 J	< 0.000198	< 0.000442	0.298	0.401	0.0679 J	--
MW-314	03/13/17	< 0.000930	< 0.000312	< 0.000198	< 0.000442	0.0891 J	0.245	< 0.120	--
MW-314	06/14/17	< 0.000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.227 J	< 0.122	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-314	08/23/17	< 0.000930	< 0.000312	< 0.000198	< 0.000442	0.136 J	0.283	< 0.124	--
MW-314	12/06/17	0.000153 J	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.285	< 0.122	--
MW-314	03/07/18	0.00726	< 0.000312	< 0.000198	< 0.000442	0.131 J	0.336	< 0.127	--
MW-314	06/12/18	< 0.000930	< 0.000312	< 0.000198	< 0.000442	0.121 J	0.46	< 0.121	--
MW-314	09/05/18	< 0.000930	< 0.000312	< 0.000198	< 0.000442	0.203	0.825	0.501	--
MW-314	12/20/18	0.000564	0.000600 J	< 0.000198	< 0.000442	0.138 J	0.788	0.471	--
MW-314	03/19/19	< 0.000930	< 0.000312	< 0.000198	< 0.000442	0.157	0.608	0.139 J	--
MW-314	05/16/19	< 0.000200	< 0.000170	< 0.000190	< 0.000580	0.201	2.09	0.248 J	--
MW-314	12/10/19	< 0.000105 J	0.000400 J	< 0.000198	< 0.000442	0.26	1.44	0.178 J	--
MW-314	04/28/20	0.000578	< 0.000312	< 0.000198	< 0.000442	0.283	2.36	0.186 J	--
MW-314	06/29/20	< 0.000930	< 0.000312	< 0.000198	< 0.000442	0.147 J	2.57	0.214 J	--
MW-314	09/22/20	0.00584	0.000903 J	< 0.001	0.000807 J	0.345	1.60	0.155 J	--
MW-314	12/15/20	0.0146	0.00182	0.00036	0.00186	0.578	1.84	< 0.379	--
MW-314	04/13/21	< 0.000200	0.000391 J+	< 0.000200	< 0.000500	0.363	2.75	0.745	--
MW-314	03/28/22	0.000477	0.000624 J	< 0.00100	0.000682 J	0.253	0.682	< 0.391	--
MW-314	06/28/22	< 0.000400	0.000346 J	< 0.00100	< 0.00300	0.253	0.936	0.166 J	--
MW-314	09/20/22	0.00523	0.00187	0.0294	0.00795	0.634	2.63	0.237 J	--
MW-315	08/29/16	<b>0.0965</b>	0.00265	0.000548 J	0.00135 J	0.453	1.55	< 0.0600	--
MW-315	12/12/16	0.0174	0.00361	0.0023	0.00408	<b>1.17</b>	1.29	0.0871 J	--
MW-315	03/13/17	0.0295	0.00478	0.00153	0.00793	<b>1.24</b>	1.64	< 0.121	--
MW-315	06/15/17	<b>0.0804</b>	0.00426	0.000634 J	0.00965	<b>1.2</b>	2.95	< 0.122	--
MW-315	08/23/17	<b>0.0727</b>	0.00403	0.000909 J	0.00871	<b>1.71</b>	2.74	< 0.123	--
MW-315	12/07/17	0.00479	0.00377	0.000382 J	0.00756	<b>1.19</b>	2.21	< 0.121	--
MW-315	03/08/18	0.0435	0.00411	0.000736 J	0.00712	<b>1.39</b>	1.15	< 0.125	--

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**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-315	06/13/18	0.0619	0.00529	0.000648 J	0.00762	<b>1.19</b>	1.78	< 0.120	--
MW-315	09/05/18	0.0178	0.00461	0.000476 J	0.00904	<b>1.33</b>	2.89	0.267 J	--
MW-315	12/20/18	0.00283	0.00464	0.000599 J	0.0106	<b>1.16</b>	3.06	0.310 J	--
MW-315	03/18/19	0.0233	0.00363	0.000959 J	0.0039	<b>1.4</b>	1.89	0.149 J	--
MW-315	05/16/19	0.0565	0.00393	0.000584 J	0.00399	<b>2.16</b>	2.38	0.179 J	--
MW-315	09/19/19	0.0361	0.0036	0.000542 J	0.00353	<b>1.29</b>	2.61	0.133 J	--
MW-315	12/12/19	0.00334	0.00389	0.000667 J	0.005	<b>1.68</b>	3.96	0.266 J	--
MW-315	04/27/20	0.051	0.00406	0.000695 J	0.00368	<b>1.66</b>	2.81	0.126 J	--
MW-315	06/30/20	0.0699	0.00574	0.000878 J	0.00413	<b>1.82</b>	2.74	0.155 J	--
MW-315	09/22/20	0.0297	0.00383	0.000625 J	0.00266 J	<b>1.78</b>	2.89	0.171 J	--
MW-315	12/15/20	0.0028	0.0044	0.000673	0.00368	<b>2.26 J+</b>	3.34	<0.385	--
MW-315	04/13/21	0.0666 J	0.00493	0.00141	0.00256	<b>2.90 J+</b>	5.04	0.691	--
MW-315	06/16/21	0.0578	0.00411	0.00182	0.00289 J	<b>1.66</b>	3.32	0.218 J	--
MW-315	09/23/21	0.00915	0.00392	0.000428 J	0.00276 J	<b>1.48</b>	3.27	0.180 J	--
MW-315	12/16/21	0.00421	0.00375	0.000543 J	0.00251 J	<b>2.81</b>	3.23	0.296 J	--
MW-315	03/29/22	0.0452	0.00420	0.000890 J	0.00252 J	<b>2.41</b>	2.44	0.136 J	--
MW-315	06/28/22	0.0177	0.00382	0.000548 J	0.00284 J	<b>2.37</b>	2.31	0.207 J	--
MW-315	09/20/22	0.00610	0.00379	0.000566 J	0.00230 J	<b>2.21</b>	2.98	0.194 J	--
MW-315	12/13/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.47	0.323 J	--
SH-04	01/13/04	<b>1.2</b>	0.21	0.14	2.11	<b>15</b>	4.7	< 2.5	--
SH-04	04/20/04	<b>1.5</b>	0.49	0.64	5.79	<b>26</b>	6.2	< 10	--
SH-04	07/27/04	<b>1.3</b>	0.13	0.55	1.78	<b>15</b>	5.4	0.53	--
SH-04	04/20/05	<b>0.98</b>	0.061	0.36	1.07	<b>11</b>	4.2	< 1.5	--
SH-04	04/25/06	<b>1.25</b>	0.089	0.65	2.31	<b>20</b>	8.23	2.52	--



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Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SH-04	10/30/07	<b>0.884</b>	0.0315	0.315	0.0814	<b>&lt;5.0</b>	--	--	--
SH-04	05/20/08	<b>1.1</b>	0.048	0.52	0.657	<b>8.9</b>	4.8	0.92	--
SH-04	11/20/08	<b>0.79</b>	0.032	0.23	0.0384	<b>6.6</b>	2.7	< 0.5	--
SH-04	04/08/09	<b>0.87</b>	0.04	0.25	0.19	<b>9.2</b>	4.7	< 0.1	--
SH-04	11/16/09	<b>0.48</b>	0.023	0.068	0.016	<b>4.9</b>	3.7	< 0.1	--
SH-04	04/27/10	<b>0.71</b>	0.027	0.27	0.13	<b>7.3</b>	4.7	0.39	--
SH-04	10/25/10	<b>0.58</b>	0.019	0.18	0.013	<b>4</b>	2.8	< 0.1	--
SH-04	05/23/11	<b>0.655</b>	0.0145	0.151	0.034	<b>5.4</b>	1.84	0.13	--
SH-04	10/27/11	<b>0.393</b>	0.02	0.0926	0.0279	<b>5.35</b>	1.22	< 0.19	--
SH-04	03/01/12	<b>0.614</b>	0.0227	0.0932	0.0124 J	<b>5.53</b>	--	--	--
SH-04	06/11/12	<b>0.426</b>	0.0142	0.112	0.0198 J	<b>6</b>	1.49	0.393	--
SH-04	09/25/12	<b>0.124</b>	0.0184	0.461	0.139	<b>6.52</b>	--	--	--
SH-04	11/25/12	<b>0.073</b>	0.0079 J	0.609	0.326	<b>8.15</b>	0.762	< 0.098	--
SH-04	05/15/13	0.0016 J	0.0005	0.0042	0.0032 J	<b>2.16</b>	0.376	< 0.096	--
SH-04	11/04/13	0.0032	0.00043 J	0.0071	0.005	<b>1.05</b>	0.134	< 0.094	--
SH-04	04/24/14	0.0091	0.00053 J	0.00090 J	0.0014 J	0.938	0.469	0.0944 J	--
SH-04	11/06/14	0.0249	0.0023	0.0173	0.0072	0.984	0.608	< 0.094	--
SH-04	05/21/15	0.0094	0.00048 J	0.0035	0.0021	0.78	0.171	< 0.094	--
SH-04	12/08/15	0.0155	0.00118	0.00359	0.00409	0.927	1.74	0.422	--
SH-04	05/05/16	0.000454	< 0.000312	0.000939 J	0.000887 J	0.941	0.23	< 0.0601	--
SH-04	12/14/16	0.00534	0.000990 J	0.0199	0.0123	0.843	1	0.102 J	--
SH-04	06/14/17	0.00158	0.000468 J	0.00192	0.00208 J	0.702	0.242 J	0.138 J	--
SH-04	12/07/17	0.00934	0.0015	0.00205	0.00351	0.796	1.78	< 0.136	--
SH-04	06/13/18	0.0052	0.000593 J	0.0042	0.00212 J	0.724	0.187 J	< 0.123	--
SH-04	12/19/18	0.0118	0.00195	0.0125	0.00477	0.804	0.954	0.210 J	--

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Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SH-04	05/16/19	0.00169	0.000346 J	0.00225	0.00227 J	<b>1.35</b>	0.582	0.174 J	--
SH-04	12/11/19	0.012	0.00186	0.00139	0.00342	0.0805	1.26	< 0.121	--
SH-04	06/30/20	0.00239	0.000477 J	0.00124	0.00123 J	0.379	0.256	< 0.119	--
SH-04	12/14/20	0.0118	0.00164	0.00587	0.00262	0.359	2.78	0.472	--
SH-04	06/15/21	0.00525	0.000511 J	0.00294	0.00162 J	0.472	0.209 J	<0.404	--
SH-04	12/15/21	0.0167	0.00172	0.00150	0.00380	<b>1.29</b>	2.67	0.400 J	--
SH-04	04/18/22	0.00626	0.00105	0.00384	0.00457	<b>1.17</b>	0.549	<0.392	--
SH-04	06/28/22	0.0117	0.00110	0.00263	0.00226 J	0.813	0.38	0.14 J	--
SH-04	12/13/22	0.00697	0.00107	0.00327	0.00283 J	0.369	1.82	0.417	--
TES-MW-1	01/14/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
TES-MW-1	04/20/04	0.0067	< 0.001	0.011	0.043	< 0.25	< 0.25	< 0.5	--
TES-MW-1	04/20/04	0.0075	< 0.001	0.013	0.049	< 0.25	< 0.25	< 0.5	--
TES-MW-1	07/28/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
TES-MW-1	10/18/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
TES-MW-1	01/25/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
TES-MW-1	01/25/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	< 0.25	< 0.5	--
TES-MW-1	04/19/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.25	< 0.5	--
TES-MW-1	07/13/05	0.001	< 0.001	0.006	0.0189	0.1	< 0.25	< 0.5	--
TES-MW-1	10/20/05	0.0039	< 0.001	0.013	0.0437	0.23	< 0.25	< 0.5	--
TES-MW-1	01/27/06	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.05	< 0.240	< 0.481	--
TES-MW-1	11/18/08	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	< 0.25	< 0.5	--
TES-MW-1	11/18/09	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	< 0.1	< 0.1	--
TES-MW-1	10/26/10	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	< 0.1	< 0.1	--
TES-MW-1	05/24/11	<0.0003	<0.0005	<0.0003	<0.0007	<0.050	--	--	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TES-MW-1	10/27/11	< 0.0010	< 0.0010	< 0.0010	< 0.0020	< 0.20	< 0.10	< 0.20	--
TES-MW-1	11/26/12	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.050	< 0.10	--
TES-MW-1	11/06/13	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.048	< 0.095	--
TES-MW-1	11/04/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.048	< 0.095	--
TES-MW-1	12/09/15	< 0.00020	< 0.0010	< 0.0010	< 0.0030	< 0.100	< 0.234	< 0.390	--
TES-MW-1	12/13/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0178	< 0.0466	< 0.0699	--
TES-MW-1	12/06/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	< 0.0816	< 0.122	--
TES-MW-1	12/19/18	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	< 0.106	< 0.116	--
TES-MW-1	12/09/19	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	< 0.111	< 0.121	--
TES-MW-1	12/16/20	< 0.00020	< 0.0002	< 0.00020	< 0.0005	< 0.250	< 0.238	< 0.397	--
TES-MW-1	12/14/21	< 0.000400	< 0.00100	< 0.00100	< 0.00300	< 0.150	< 0.237	0.162 J	--
TES-MW-1	12/12/22	< 0.000400	< 0.00100	< 0.00100	< 0.00300	< 0.150	< 0.256	< 0.427	--
TX-03A	01/13/04	<b>2.9</b>	0.018	0.038	0.091	<b>2.7</b>	0.86	< 0.5	--
TX-03A	04/19/04	<b>4.4</b>	0.047	0.12	0.11	<b>12</b>	1.3	< 0.5	--
TX-03A	07/27/04	<b>1.7</b>	0.011	0.016	0.037	<b>5.2</b>	0.81	< 0.5	--
TX-03A	10/18/04	<b>3.2</b>	0.024	0.062	0.093	<b>7.5</b>	1.2	< 0.5	--
TX-03A	01/24/05	<b>2.5</b>	0.02	< 0.01	0.065	<b>8.2</b>	0.54	< 0.5	--
TX-03A	04/19/05	<b>2.5</b>	0.021	0.026	0.049	<b>6.1</b>	0.47	< 0.5	--
TX-03A	07/12/05	<b>3.1</b>	0.024	0.044	0.054	<b>10</b>	0.32	< 0.5	--
TX-03A	10/31/07	<b>2.2</b>	0.0233	0.0601	0.0503	< 5.0	--	--	--
TX-03A	05/20/08	<b>0.88</b>	0.007	0.016	0.01	<b>3</b>	--	--	--
TX-03A	11/20/08	<b>2.1</b>	0.019	0.038	0.018	<b>4.5</b>	--	--	--
TX-03A	04/08/09	<b>1.2</b>	< 0.025	0.028	< 0.025	<b>3.5</b>	--	--	--
TX-03A	11/17/09	<b>0.97</b>	0.0078	0.016	0.011	<b>2.4</b>	--	--	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TX-03A	04/27/10	<b>1.7</b>	0.0096	0.0087	0.0099	<b>4.6</b>	--	--	--
TX-03A	10/25/10	<b>1.7</b>	0.011	0.067	0.013	<b>3.3</b>	--	--	--
TX-03A	05/23/11	<b>1.78</b>	<0.025	0.044	<0.035	<b>7.53</b>	--	--	--
TX-03A	10/27/11	<b>3.44</b>	0.0712	0.147	0.111	<b>8.51</b>	--	--	--
TX-03A	03/01/12	<b>1.74</b>	0.0261	0.0272	0.0345 J	<b>5.58</b>	--	--	--
TX-03A	06/12/12	<b>1.57</b>	0.0200 J	0.0139 J	0.0300 J	<b>6.78</b>	--	--	--
TX-03A	09/25/12	<b>1.7</b>	0.0298	0.041	0.0501	<b>5.53</b>	--	--	--
TX-03A	11/28/12	<b>1.18</b>	0.0188 J	0.0232	0.0357 J	<b>4.91</b>	--	--	--
TX-03A	02/21/13	<b>2.81</b>	0.0403	0.0421	0.0489 J	<b>8.2</b>	0.32	< 0.10	--
TX-03A	05/15/13	<b>2.15</b>	0.0459 J	0.189	0.0643 J	<b>3.11</b>	--	--	--
TX-03A	11/05/13	<b>2.72</b>	0.0343 J	0.0364 J	0.0411 J	<b>6.01</b>	--	--	--
TX-03A	04/23/14	<b>1.22</b>	0.0171	0.0251	0.027	<b>5.76</b>	--	--	--
TX-03A	07/24/14	<b>1.64</b>	0.0317	0.0698	0.052	<b>7.55</b>	0.382	< 0.094	--
TX-03A	11/04/14	<b>0.941</b>	0.0137	0.0366	0.0269	<b>5.76</b>	0.448	< 0.094	--
TX-03A	03/09/15	<b>1.86</b>	0.0246 J	0.0581	0.0390 J	<b>7.16</b>	--	--	--
TX-03A	05/21/15	<b>1.15</b>	0.0144 J	0.0462	0.0260 J	<b>3.4</b>	--	--	--
TX-03A	07/28/15	<b>1.72</b>	0.0213 J	0.118	0.0355 J	<b>5.42</b>	--	--	--
TX-03A	12/10/15	<b>0.635</b>	0.0126	0.026	0.0253	<b>3.32</b>	1.34	< 0.391	--
TX-03A	02/23/16	<b>1.78</b>	0.0274	0.0882	0.0385	<b>5.17</b>	--	--	--
TX-03A	05/02/16	<b>1.54</b>	0.037	0.208	0.0503	<b>6.3</b>	--	--	--
TX-03A	08/29/16	<b>0.844</b>	0.0257	0.246	0.053	<b>5.89</b>	--	--	--
TX-03A	12/15/16	<b>0.995</b>	0.0197 J	0.0697	0.0357 J	<b>4.81</b>	1.73	0.125 J	--
TX-03A	03/13/17	<b>0.76</b>	0.0208	0.0901	0.0352 J	<b>3.66</b>	--	--	--
TX-03A	06/13/17	<b>1.37</b>	0.0361	0.246	0.0618 J	<b>5.36</b>	--	--	--
TX-03A	08/22/17	<b>1.08</b>	0.0233	0.137	0.0363	<b>4.55</b>	--	--	--

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Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TX-03A	12/05/17	<b>0.258</b>	0.00697 J	0.0172 J	0.0126 J	<b>3.07</b>	2.03	0.172 J	--
TX-03A	03/27/18	<b>0.135</b>	0.00114	0.00395	0.000969 J	<b>1.21</b>	--	--	--
TX-03A	06/13/18	<b>0.204</b>	0.0024	0.015	0.000713 J	0.97	--	--	--
TX-03A	09/06/18	<b>0.263</b>	0.00308	0.0252	0.00115 J	<b>1.31</b>	--	--	--
TX-03A	12/20/18	0.0278	0.000612 J	0.00282	0.000499 J	0.768	2.88	1.05	--
TX-03A	03/19/19	0.0131 J	< 0.000312	0.00143	< 0.000442	0.938	--	--	--
TX-03A	05/16/19	<b>0.102 J</b>	< 0.000170	0.00115 J	< 0.000580 J	0.991	--	--	--
TX-03A	09/19/19	0.00642	< 0.000312	0.00722	< 0.000442	0.446	--	--	--
TX-03A	12/11/19	0.00173	< 0.000312	0.0017	< 0.000442	0.521	1.72	0.154 J	--
TX-03A	04/28/20	0.023	< 0.000312	0.000578 J	< 0.000442	0.181	--	--	--
TX-03A	06/30/20	0.00796	< 0.000312	0.00135	< 0.000442	0.129 J	--	--	--
TX-03A	09/21/20	0.00527	< 0.001	0.00293	< 0.003	0.139 J	--	--	--
TX-03A	12/15/20	0.00499	0.00022	0.0029	< 0.0005	< 0.250	0.520	< 0.371	--
TX-03A	04/12/21	0.0665 J	0.00151	0.00955	< 0.000500	0.465	--	--	--
TX-03A	06/16/21	0.0416	0.00151	0.0192	0.000832 J	0.285	--	--	--
TX-03A	09/23/21	0.0183	0.000973 J	0.00677	0.000651 J	0.221	--	--	--
TX-03A	03/28/22	<b>0.121</b>	0.00255	0.0120	0.00163 J	0.998	--	--	--
TX-03A	06/28/22	<b>0.114</b>	0.00632	0.0132	0.00356	<b>1.39</b>	--	--	--
TX-03A	09/21/22	0.00895	0.000999 J	0.00181	0.00111 J	0.294	--	--	--
TX-03A	12/13/22	<b>0.122</b>	0.00701	0.00140	0.00682	<b>1.05</b>	1.51	0.598	--
TX-04	01/13/04	0.025	0.0055	< 0.001	0.0194	0.65	0.59	< 0.5	--
TX-04	04/21/04	0.0025	0.0017	< 0.001	0.0031	0.47	2.2	< 0.75	--
TX-04	07/27/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	1.5	< 0.5	--
TX-04	10/18/04	< 0.001	< 0.001	< 0.001	0.0022	0.28	1.2	< 0.5	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TX-04	01/24/05	0.031	0.0071	< 0.001	0.0204	0.87	0.64	< 0.5	--
TX-04	04/20/05	0.014	0.0036	< 0.001	0.0085	0.54	0.73	< 0.5	--
TX-04	07/12/05	< 0.001	< 0.001	< 0.001	0.0014	0.34	0.82	< 0.5	--
TX-04	10/18/05	< 0.001	< 0.001	< 0.001	< 0.001	0.2	1.1	< 0.5	--
TX-04	01/25/06	0.00127	0.001	< 0.0005	0.00151	0.206	0.835	< 0.476	--
TX-04	11/18/08	< 0.005	< 0.005	< 0.005	< 0.005	0.076	< 0.25	< 0.5	--
TX-04	11/16/09	< 0.0005	< 0.001	< 0.001	< 0.001	0.17	0.13	< 0.1	--
TX-04	10/25/10	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	0.17	< 0.1	--
TX-04	05/23/11	<0.0003	<0.0005	<0.0003	<0.0007	0.0554	--	--	--
TX-04	10/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0020	< 0.20	0.0966	< 0.20	--
TX-04	11/26/12	0.0013	0.00038 J	< 0.00020	0.00052 J	0.0980 J	0.0807 J	< 0.10	--
TX-04	11/04/13	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.0492 J	< 0.095	--
TX-04	11/06/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.048	< 0.096	--
TX-04	12/08/15	0.000268	< 0.0010	< 0.0010	< 0.0030	< 0.100	< 0.245	< 0.408	--
TX-04	12/12/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0178	0.0762 J	< 0.0608	--
TX-04	12/05/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	< 0.0834	< 0.125	--
TX-04	12/19/18	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	< 0.104	< 0.114	--
TX-04	12/12/19	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.122 J	< 0.119	--
TX-04	12/14/20	<0.00020	<0.0002	<0.00020	<0.0005	<0.250	<0.110	<0.351	--
TX-04	12/15/21	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	<0.247	<0.411	--
TX-04	12/13/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	<0.232	<0.386	--
TX-06A	01/14/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	5.8	< 1	--
TX-06A	04/21/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	3.4	< 0.75	--
TX-06A	07/27/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	3.6	< 0.5	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
	Model Toxics Control Act Method A Cleanup Level	0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TX-06A	10/18/04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	4.1	< 0.5	--
TX-06A	01/24/05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.25	2.7	< 0.5	--
TX-06A	04/20/05	< 0.001	< 0.001	< 0.001	< 0.001	0.18	6.3	< 1.5	--
TX-06A	07/13/05	< 0.001	< 0.001	< 0.001	< 0.001	0.26	2.5	< 0.5	--
TX-06A	10/18/05	< 0.001	< 0.001	< 0.001	< 0.001	0.072	0.93	< 0.5	--
TX-06A	01/26/06	< 0.0005	< 0.0005	< 0.0005	< 0.001	0.126	1.57	< 0.476	--
TX-06A	11/18/08	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	0.49	< 0.5	--
TX-06A	11/17/09	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	0.24	< 0.1	--
TX-06A	10/28/10	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.1	0.72	< 0.1	--
TX-06A	10/25/11	< 0.0010	< 0.0010	< 0.0010	< 0.0020	0.0519	0.499	< 0.21	--
TX-06A	11/25/12	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.50	0.716	< 0.098	--
TX-06A	11/07/13	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.358	< 0.095	--
TX-06A	11/06/14	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.758	0.184	--
TX-06A	12/08/15	< 0.00020	< 0.0010	< 0.0010	< 0.0030	< 0.100	1.03	<0.388	--
TX-06A	12/12/16	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0178	0.433	0.0707 J	--
TX-06A	12/05/17	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.36	< 0.122	--
TX-06A	12/20/18	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.592	0.244 J	--
TX-06A	12/10/19	< 0.0000930	< 0.000312	< 0.000198	< 0.000442	< 0.0704	0.244	< 0.119	--
TX-06A	12/14/20	<0.00020	<0.0002	<0.00020	<0.0005	<0.250	1.32	0.589	--
TX-06A	12/15/21	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.589	0.146 J	--
TX-06A	12/12/22	<0.000400	<0.00100	<0.00100	<0.00300	<0.150	0.659	0.21 J	--
MW-01	07/28/15	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	--	--	--

**Table 6**  
**BTEX, Petroleum Hydrocarbons, and Lead in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	Volatile Organic Compounds				Hydrocarbons			Lead
		Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg	TPHd	TPHo	Total
Model Toxics Control Act Method A Cleanup Level		0.071	200	29	NE	1	10	10	0.0058
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L

**Note:**

= Indicates data collected during this progress report period

\* = Cleanup levels per the Cleanup Action Plan (Ecology, 1998)

<sup>1</sup> = Dissolved lead result

**Bold** = indicate detected concentration greater than cleanup level

BTEX = benzene, toluene, ethylbenzene, and total xylenes

J = Result is less than the reporting limit, but greater than or equal to the method detection limit, and the concentration is an approximate

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

< = not detected at or above the indicated limit. Beginning June 12, 2012, limits shown are laboratory Method Detection Limits (MDLs). F

mg/L = milligrams per liter

NA = not analyzed

NE = not established

TPHg = Total petroleum hydrocarbons as gasoline analyzed by Northwest Method NWTPH-Gx.

TPHd = Total petroleum hydrocarbons as diesel analyzed by Northwest Method NWTPH-Dx.

TPHo = Total petroleum hydrocarbons as oil analyzed by Northwest Method NWTPH-Dx.



**Table 7  
Carcinogenic PAHs in Groundwater  
Shell Harbor Island Terminal  
Seattle, Washington**

Sample ID	Sample Date	PAHs						
		Benzo(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo(k)-fluoranthene	Chrysene	Dibenz(a,h)-anthracene	Indeno(1,2,3-cd)pyrene
Model Toxics Control Act Method A Cleanup Level		0.000031	0.000031	0.000031	0.000031	0.000031	0.000031	0.000031
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-213	01/14/04	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-213	04/20/04	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-213	07/28/04	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-213	10/19/04	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-213	01/25/05	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-213	04/19/05	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-213	07/12/05	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-213	10/20/05	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-213	01/26/06	< 0.0000943	< 0.0000943	< 0.0000943	< 0.0000943	< 0.0000943	< 0.0000943	< 0.0000943
MW-213	10/30/07	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW-213	11/19/08	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW-213	04/07/09	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-213	11/18/09	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-213	04/26/10	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-213	10/28/10	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-213	05/24/11	< 0.00003	< 0.00003	< 0.00003	< 0.00003	< 0.00003	< 0.00003	< 0.00003
MW-213	10/25/11	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
MW-213	06/12/12	< 0.000050	< 0.000041	< 0.000035	< 0.000039	< 0.000045	< 0.000035	< 0.000035
MW-213	11/29/12	< 0.000053	< 0.000041	< 0.000035	< 0.000039	< 0.000045	< 0.000035	< 0.000035
MW-213	05/15/13	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000042	< 0.000033	< 0.000033
MW-213	11/05/13	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000043	< 0.000033	< 0.000033
MW-213	04/23/14	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000043	< 0.000033	< 0.000033
MW-213	11/05/14	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000042	< 0.000033	< 0.000033

**Table 7  
Carcinogenic PAHs in Groundwater  
Shell Harbor Island Terminal  
Seattle, Washington**

Sample ID	Sample Date	PAHs						
		Benzo(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo(k)-fluoranthene	Chrysene	Dibenz(a,h)-anthracene	Indeno(1,2,3-cd)pyrene
Model Toxics Control Act Method A Cleanup Level		0.000031	0.000031	0.000031	0.000031	0.000031	0.000031	0.000031
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-213	05/19/15	< 0.0014	< 0.0011	< 0.0013	< 0.0013	< 0.0016	< 0.0012	< 0.0013
MW-213	12/09/15	< 0.0000948	< 0.0000948	< 0.0000948	< 0.0000948	< 0.0000948	< 0.0000948	< 0.0000948
MW-213	05/03/16	< 0.00000920	< 0.0000101	< 0.0000101	< 0.0000138	< 0.00000644	< 0.0000120	< 0.0000202
MW-213	12/13/16	0.0000122	< 0.0000887	< 0.0000108	< 0.0000148	< 0.00000690	< 0.0000128	< 0.0000217
MW-213	06/14/17	< 0.0000888	< 0.0000109	< 0.0000109	< 0.0000148	< 0.00000691	< 0.0000128	< 0.0000217
MW-213	12/07/17	< 0.00000965	< 0.0000106	< 0.0000106	< 0.0000145	< 0.00000676	< 0.0000125	< 0.0000212
MW-213	06/12/18	< 0.0000103	< 0.0000113	< 0.0000113	< 0.0000154	< 0.00000720	< 0.0000134	< 0.0000226
MW-213	12/19/18	< 0.0000119	< 0.0000119	< 0.0000109	< 0.0000149	< 0.00000893	< 0.0000129	< 0.0000218
MW-213	05/16/19	< 0.0000119	< 0.0000119	< 0.0000109	< 0.0000149	< 0.00000893	< 0.0000129	< 0.0000218
MW-213	12/11/19	< 0.0000119	< 0.0000896	< 0.0000109	< 0.0000149	< 0.00000995	< 0.0000129	< 0.0000219
MW-213	06/29/20	<0.0000124	<0.0000124	<0.0000113	<0.0000154	<0.0000103	<0.0000134	<0.0000226
MW-213	12/16/20	<0.0000503	<0.000101	<0.0000503	<0.0000503	<0.000101	<0.000101	<0.0000503
MW-213	06/14/21	<0.0000506	<0.000101	<0.0000506	<0.0000506	<0.000101	<0.000101	<0.0000506
MW-213	12/16/21	<0.0000895	<0.0000895	<0.0000895	<0.0000895	<0.0000895	<0.0000895	<0.0000895
MW-213	06/29/22	<0.0000905	<0.0000905	<0.0000905	<0.0000905	<0.0000905	<0.0000905	<0.0000905
MW-213	12/12/22	<0.0000905	<0.0000905	<0.0000905	<0.0000905	<0.0000905	<0.0000905	<0.0000905
MW-214	01/30/03	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-214	04/17/03	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-214	07/17/03	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-214	10/16/03	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-214	01/14/04	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-214	04/20/04	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-214	07/28/04	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

**Table 7**  
**Carcinogenic PAHs in Groundwater**  
**Shell Harbor Island Terminal**  
**Seattle, Washington**

Sample ID	Sample Date	PAHs						
		Benzo(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo(k)-fluoranthene	Chrysene	Dibenz(a,h)-anthracene	Indeno(1,2,3-cd)pyrene
Model Toxics Control Act Method A Cleanup Level		0.000031	0.000031	0.000031	0.000031	0.000031	0.000031	0.000031
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-214	10/19/04	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-214	01/25/05	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-214	04/19/05	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-214	07/12/05	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-214	10/20/05	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-214	01/26/06	< 0.000099	< 0.000099	< 0.000099	< 0.000099	< 0.000099	< 0.000099	< 0.000099
MW-214	10/30/07	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW-214	05/05/08	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW-214	11/19/08	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW-214	04/07/09	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-214	11/18/09	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-214	04/26/10	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-214	10/28/10	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
MW-214	05/24/11	< 0.000029	< 0.000029	< 0.000029	< 0.000029	< 0.000029	< 0.000029	< 0.000029
MW-214	10/25/11	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
MW-214	06/12/12	< 0.000051	< 0.000040	< 0.000034	< 0.000038	< 0.000044	< 0.000034	< 0.000034
MW-214	11/29/12	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000042	< 0.000033	< 0.000033
MW-214	05/15/13	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000042	< 0.000033	< 0.000033
MW-214	11/05/13	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000042	< 0.000033	< 0.000033
MW-214	04/23/14	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000043	< 0.000033	< 0.000033
MW-214	11/05/14	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000042	< 0.000033	< 0.000033
MW-214	05/19/15	< 0.0013	< 0.0010	< 0.0012	< 0.0013	< 0.0015	< 0.0012	< 0.0013
MW-214	12/09/15	< 0.0000908	< 0.0000908	< 0.0000908	< 0.0000908	< 0.0000908	< 0.0000908	< 0.0000908
MW-214	05/04/16	< 0.0000926	< 0.000102	< 0.000102	< 0.000139	< 0.0000648	< 0.000120	< 0.0000204

**Table 7  
Carcinogenic PAHs in Groundwater  
Shell Harbor Island Terminal  
Seattle, Washington**

Sample ID	Sample Date	PAHs						
		Benzo(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo(k)-fluoranthene	Chrysene	Dibenz(a,h)-anthracene	Indeno(1,2,3-cd)pyrene
Model Toxics Control Act Method A Cleanup Level		0.000031	0.000031	0.000031	0.000031	0.000031	0.000031	0.000031
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-214	12/14/16	0.00000994	< 0.0000883	< 0.0000108	< 0.0000147	< 0.00000687	< 0.0000128	< 0.0000216
MW-214	06/14/17	< 0.0000850	< 0.0000104	< 0.0000104	< 0.0000142	< 0.00000661	< 0.0000123	< 0.0000208
MW-214	12/07/17	< 0.0000102	< 0.0000112	< 0.0000112	< 0.0000153	< 0.00000713	< 0.0000132	< 0.0000224
MW-214	06/12/18	< 0.00000976	< 0.0000107	< 0.0000107	< 0.0000146	< 0.00000683	< 0.0000127	< 0.0000215
MW-214	12/19/18	< 0.0000119	< 0.0000119	< 0.0000109	< 0.0000149	< 0.00000894	< 0.0000129	< 0.0000219
MW-214	05/16/19	< 0.0000119	< 0.0000119	< 0.0000109	< 0.0000149	< 0.00000894	< 0.0000129	< 0.0000219
MW-214	12/11/19	0.0000141 J	< 0.0000921	< 0.0000113	< 0.0000154	< 0.0000102	< 0.0000133	< 0.0000225
MW-214	06/29/20	<0.0000117	<0.0000117	<0.0000108	<0.0000147	<0.00000977	<0.0000127	<0.0000215
MW-214	12/16/20	<0.0000517	<0.000103	<0.0000517	<0.0000517	<0.000103	<0.000103	<0.0000517
MW-214	06/14/21	<0.0000499	<0.0000999	<0.0000499	<0.0000499	<0.0000999	<0.0000999	<0.0000499
MW-214	12/16/21	<0.0000905	<0.0000905	<0.0000905	<0.0000905	<0.0000905	<0.0000905	<0.0000905
MW-214	06/29/22	<0.0000910	0.0000123 J	<0.0000910	<0.0000910	0.0000148 J	<0.0000910	<0.0000910
MW-214	12/12/22	<0.0000904	<0.0000904	<0.0000904	<0.0000904	<0.0000904	<0.0000904	<0.0000904
MW-301	07/24/14	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000042	< 0.000033	< 0.000033
MW-301	05/21/15	< 0.0014	< 0.0011	< 0.0013	< 0.0013	< 0.0016	< 0.0012	< 0.0013
MW-302	07/24/14	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000042	< 0.000033	< 0.000033
MW-302	05/21/15	< 0.0013	< 0.0010	< 0.0012	< 0.0013	< 0.0015	< 0.0012	< 0.0013
MW-303	07/24/14	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000043	< 0.000033	< 0.000033
MW-303	05/20/15	< 0.0014	< 0.0011	< 0.0013	< 0.0013	< 0.0016	< 0.0012	< 0.0013
MW-304	07/24/14	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000042	< 0.000033	< 0.000033

**Table 7  
Carcinogenic PAHs in Groundwater  
Shell Harbor Island Terminal  
Seattle, Washington**

Sample ID	Sample Date	PAHs						
		Benzo(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo(k)-fluoranthene	Chrysene	Dibenz(a,h)-anthracene	Indeno(1,2,3-cd)pyrene
Model Toxics Control Act Method A Cleanup Level		0.000031	0.000031	0.000031	0.000031	0.000031	0.000031	0.000031
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-304	05/20/15	< 0.0013	< 0.0010	< 0.0012	< 0.0013	< 0.0015	< 0.0012	< 0.0013
MW-309	07/24/14	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000042	< 0.000033	< 0.000033
MW-309	05/20/15	< 0.0014	< 0.0011	< 0.0013	< 0.0014	< 0.0016	< 0.0012	< 0.0013
MW-310	07/24/14	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000042	< 0.000033	< 0.000033
MW-310	05/21/15	< 0.0013	< 0.0010	< 0.0012	< 0.0013	< 0.0015	< 0.0012	< 0.0013
MW-311	11/05/14	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000042	< 0.000033	< 0.000033
MW-312	11/05/14	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000042	< 0.000033	< 0.000033
TX-03A	07/24/14	< 0.000050	< 0.000039	< 0.000033	< 0.000037	< 0.000042	< 0.000033	< 0.000033
TX-03A	05/21/15	< 0.0014	< 0.0010	< 0.0013	< 0.0013	< 0.0016	< 0.0012	< 0.0013

**Note:**

= Indicates data collected during this progress report period

\* = Cleanup levels per the Cleanup Action Plan (Ecology, 1998)

J = Result is less than the reporting limit, but greater than or equal to the method detection limit, and the concentration is an app

< = not detected at or above the indicated limit. Beginning June 12, 2012, limits shown are

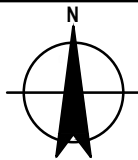
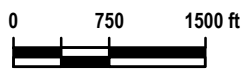
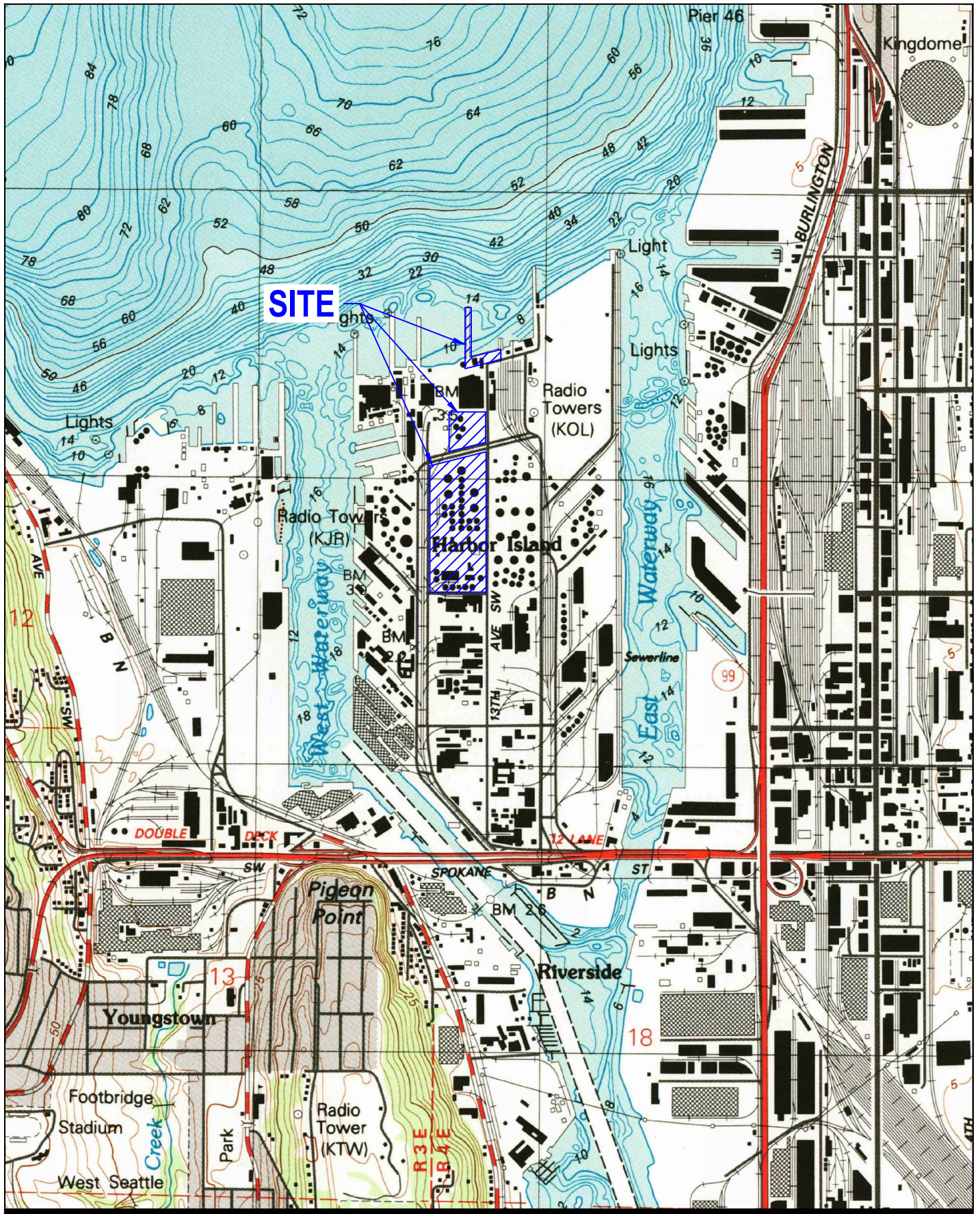
ID = identification

mg/L = milligrams per liter

PAHs = polycyclic aromatic hydrocarbons

# Figures





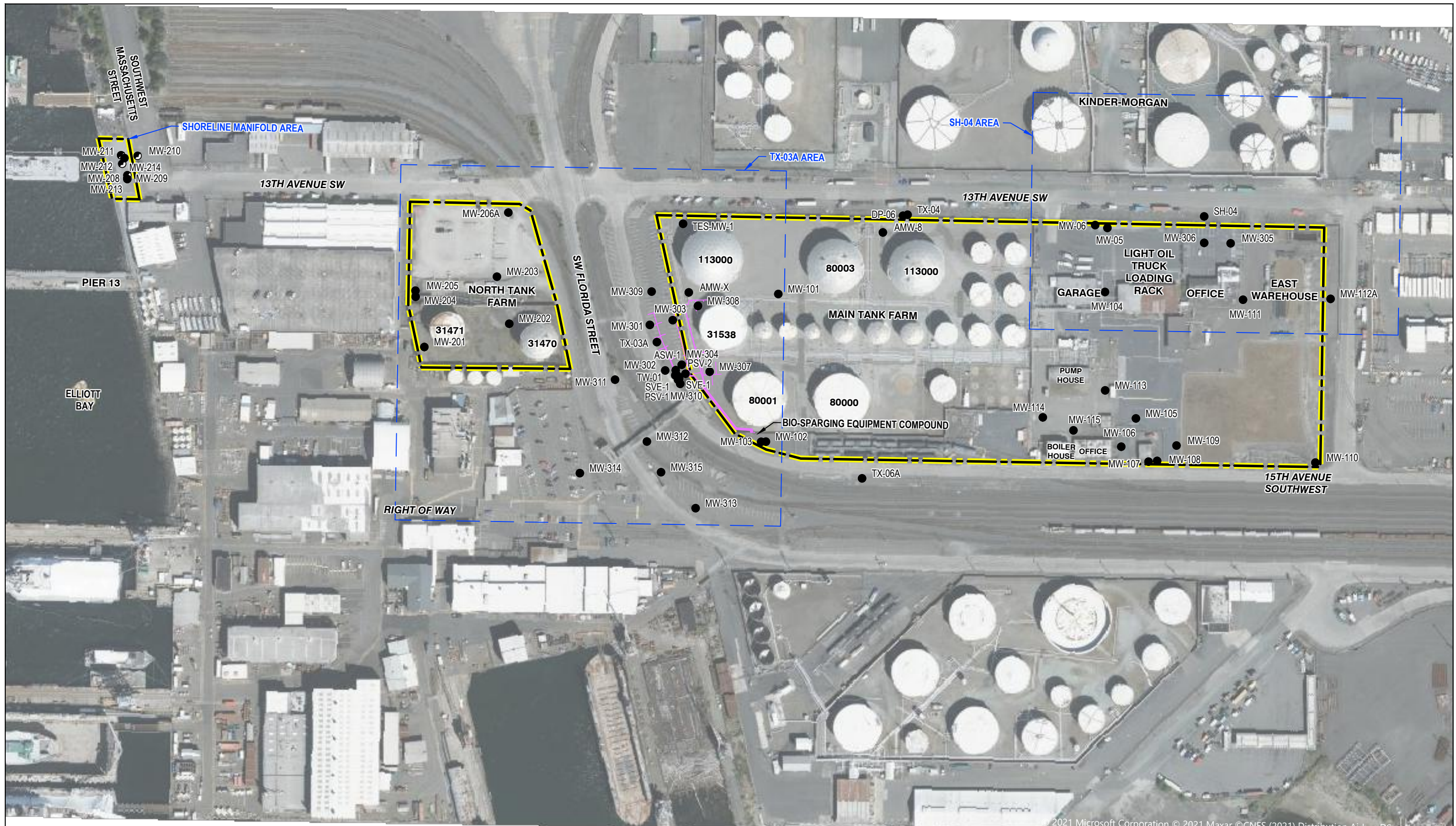
SHELL DISTRIBUTION TERMINAL  
 2555 13TH AVENUE SW  
 SEATTLE, WASHINGTON

Project No. 11218519  
 Date February 2023

SITE LOCATION MAP

FIGURE 1

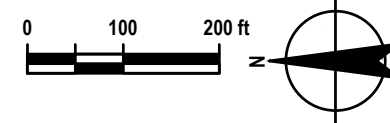




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**LEGEND**

- - - SHELL PROPERTY LINE
- MW-214 ● MONITORING WELL LOCATION
- MW-210 ● PRODUCT RECOVERY WELL LOCATION
- - - BIO-SPARGING LINE



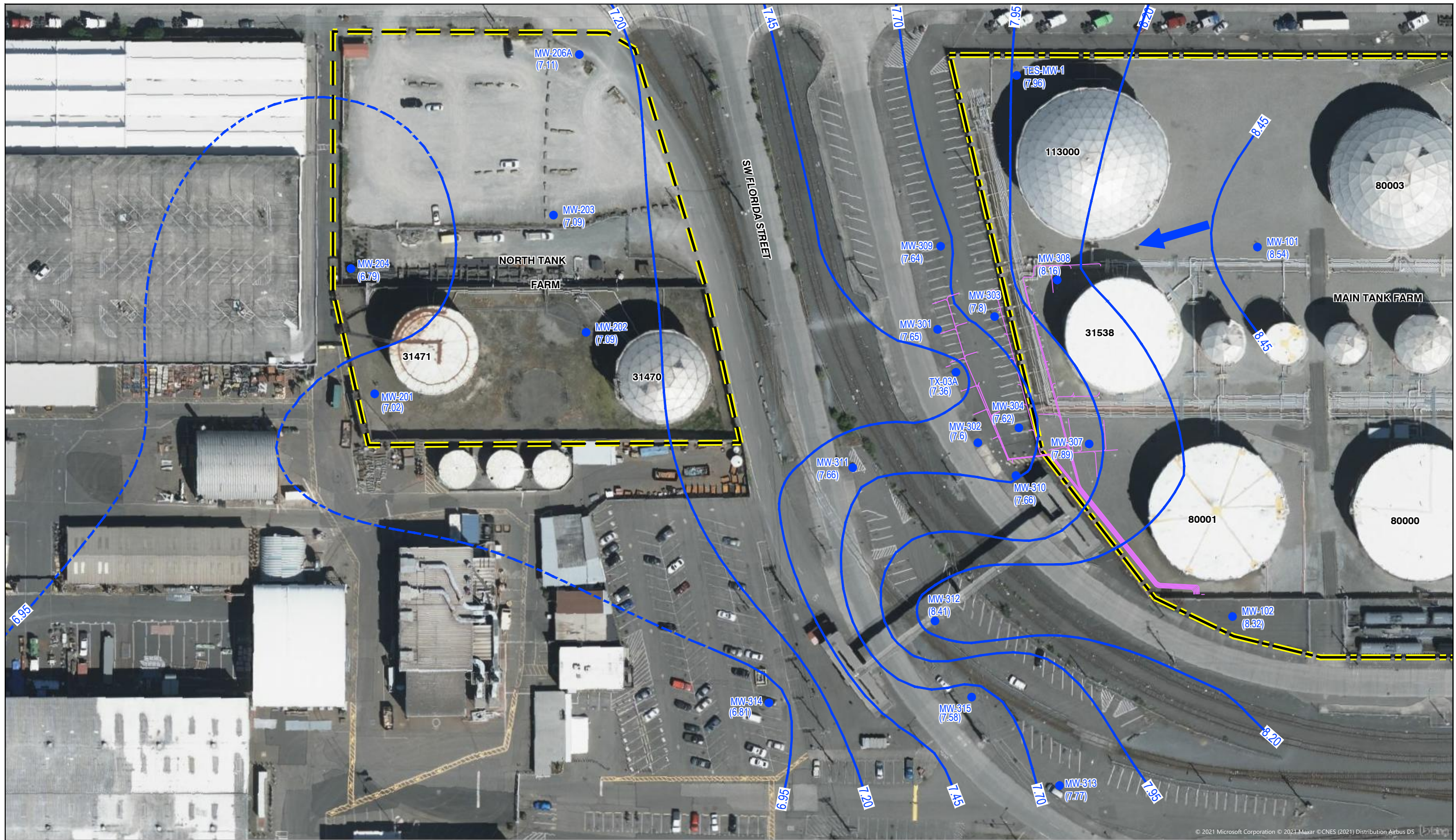
SHELL DISTRIBUTION TERMINAL  
2555 13th AVENUE SW  
SEATTLE, WASHINGTON

Project No. 11218519  
Date September 2022

SITE PLAN

FIGURE 2

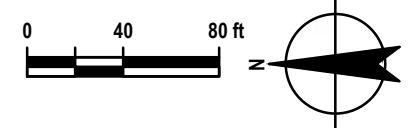




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LEGEND	
	SHELL PROPERTY LINE
	MW-214 MONITORING WELL LOCATION
	MW-210 PRODUCT RECOVERY WELL LOCATION
	BIO-SPARGING LINE
	GROUNDWATER ELEVATION
	GROUNDWATER ELEVATION CONTOUR
	GROUNDWATER FLOW DIRECTION

NOTE: Contours dashed where inferred and are based on Site-wide measurements

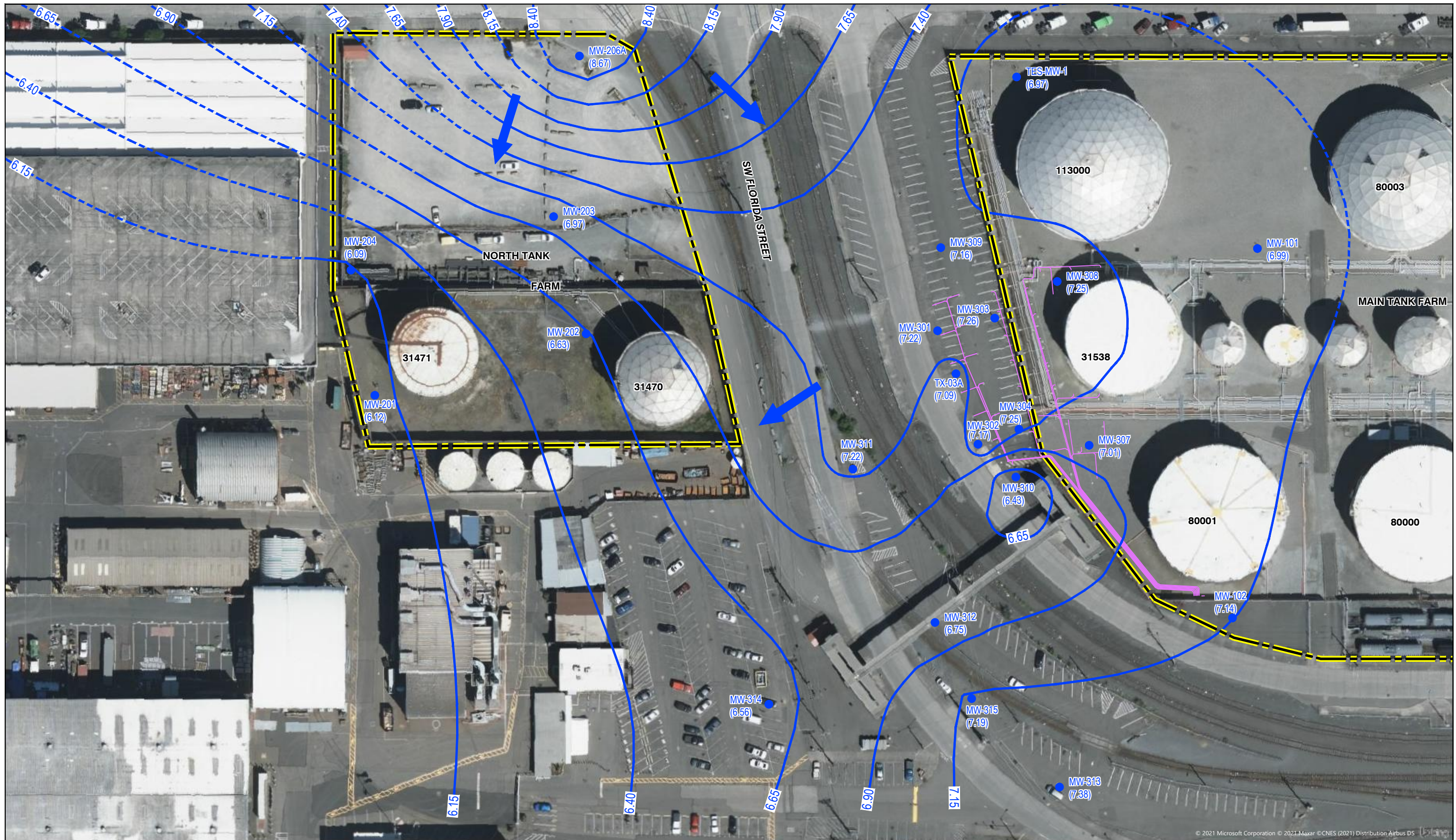


SHELL DISTRIBUTION TERMINAL  
 2555 13th AVENUE SW  
 SEATTLE, WASHINGTON  
 TX-03A AREA  
 GROUNDWATER SURFACE  
 CONTOUR MAP - 3/28/2022 (1Q2022)

Project No. 11218519  
 Date February 2023

FIGURE 3



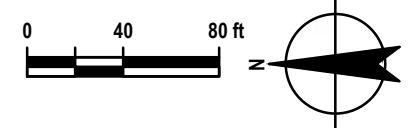


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**LEGEND**

- - - SHELL PROPERTY LINE
- MW-214 MONITORING WELL LOCATION
- MW-210 PRODUCT RECOVERY WELL LOCATION
- BIO-SPARGING LINE
- (6.12) GROUNDWATER ELEVATION
- 6.15 GROUNDWATER ELEVATION CONTOUR
- ➔ GROUNDWATER FLOW DIRECTION

NOTE: Contours dashed where inferred and are based on Site-wide measurements



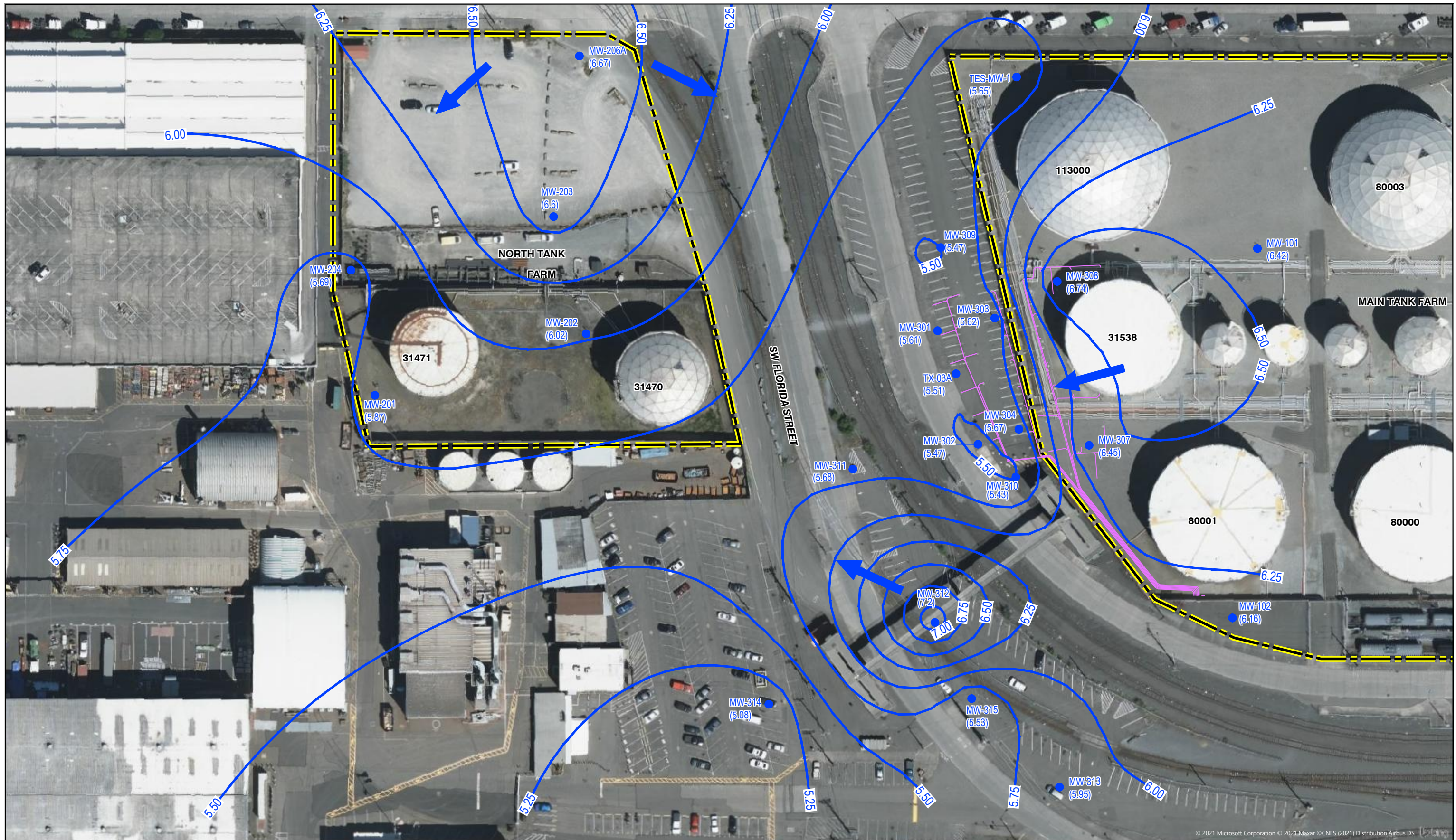
SHELL DISTRIBUTION TERMINAL  
 2555 13th AVENUE SW  
 SEATTLE, WASHINGTON

TX-03A AREA  
 GROUNDWATER SURFACE  
 CONTOUR MAP - 6/27/2022 (2Q2022)

Project No. 11218519  
 Date February 2023

**FIGURE 4**

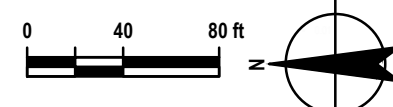




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**LEGEND**

- - - SHELL PROPERTY LINE
- MW-214 MONITORING WELL LOCATION
- MW-210 PRODUCT RECOVERY WELL LOCATION
- BIO-SPARGING LINE
- (5.87) GROUNDWATER ELEVATION
- 5.50 GROUNDWATER ELEVATION CONTOUR
- ➔ GROUNDWATER FLOW DIRECTION



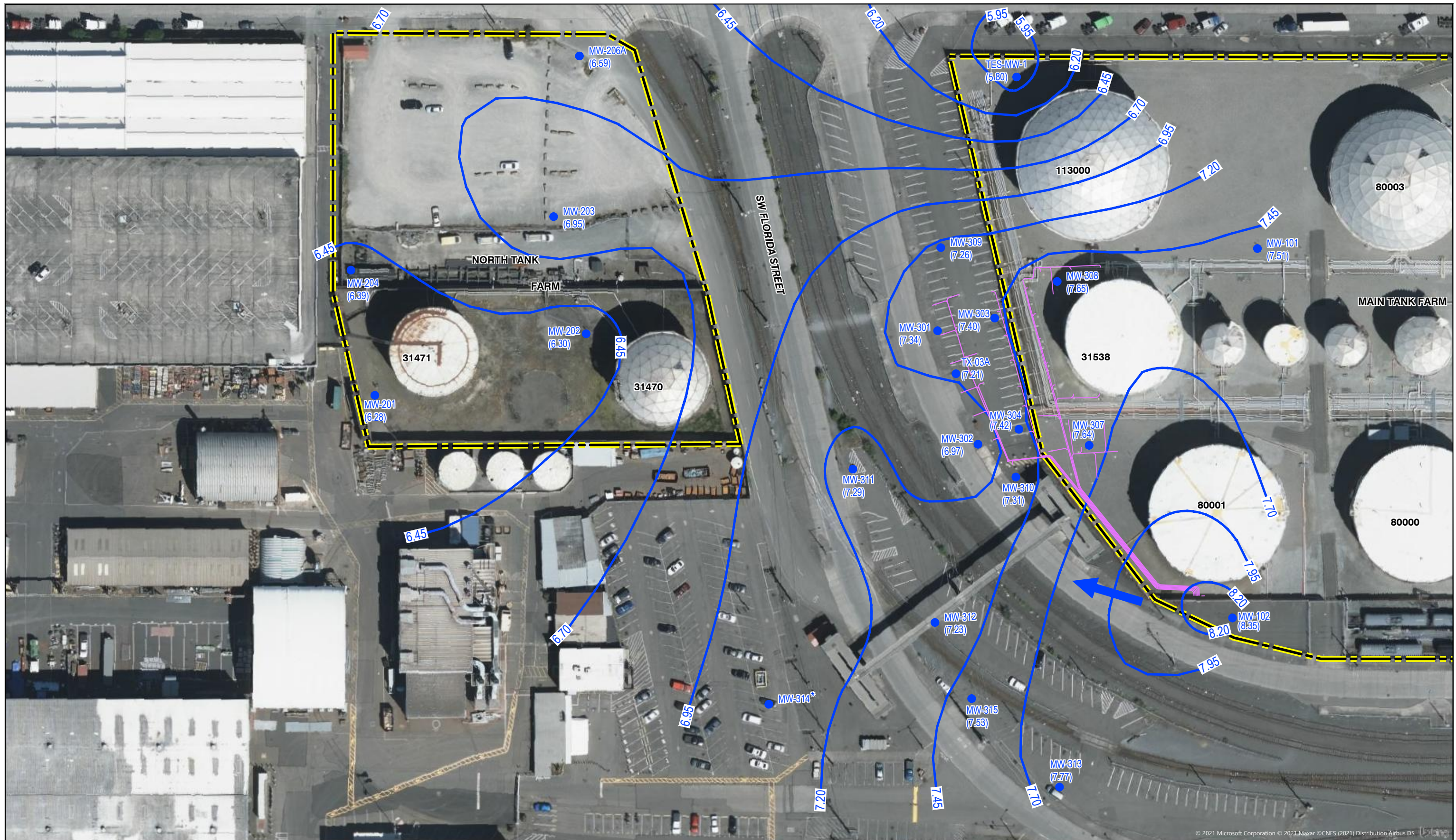
SHELL DISTRIBUTION TERMINAL  
 2555 13th AVENUE SW  
 SEATTLE, WASHINGTON

**TX-03A AREA  
 GROUNDWATER SURFACE  
 CONTOUR MAP - 9/19/2022 (3Q2022)**

Project No. 11218519  
 Date February 2023

**FIGURE 5**





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<p><b>LEGEND</b></p> <p>--- SHELL PROPERTY LINE</p> <p>MW-214 ● MONITORING WELL LOCATION</p> <p>MW-210 ● PRODUCT RECOVERY WELL LOCATION</p> <p>--- BIO-SPARGING LINE</p>		<p>(6.12) GROUNDWATER ELEVATION</p> <p>6.45 GROUNDWATER ELEVATION CONTOUR</p> <p>→ GROUNDWATER FLOW DIRECTION</p> <p>* COULD NOT ACCESS THE WELL DURING THE DECEMBER EVENT</p>	<p>NOTE: Contours dashed where inferred and are based on Site-wide measurements</p>	<p>0 40 80 ft</p>		<p>SHELL DISTRIBUTION TERMINAL 2555 13th AVENUE SW SEATTLE, WASHINGTON</p> <p>TX-03A AREA GROUNDWATER SURFACE CONTOUR MAP - 12/12/2022 (4Q2022)</p>	<p>Project No. 11218519 Date February 2023</p>
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**FIGURE 6**

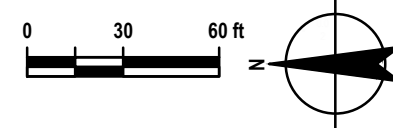




**LEGEND**

- - - SHELL PROPERTY LINE
- MW-214 MONITORING WELL LOCATION
- MW-210 PRODUCT RECOVERY WELL LOCATION
- BIO-SPARGING LINE

- (8.15) GROUNDWATER ELEVATION
- 7.65 GROUNDWATER ELEVATION CONTOUR
- ➔ GROUNDWATER FLOW DIRECTION

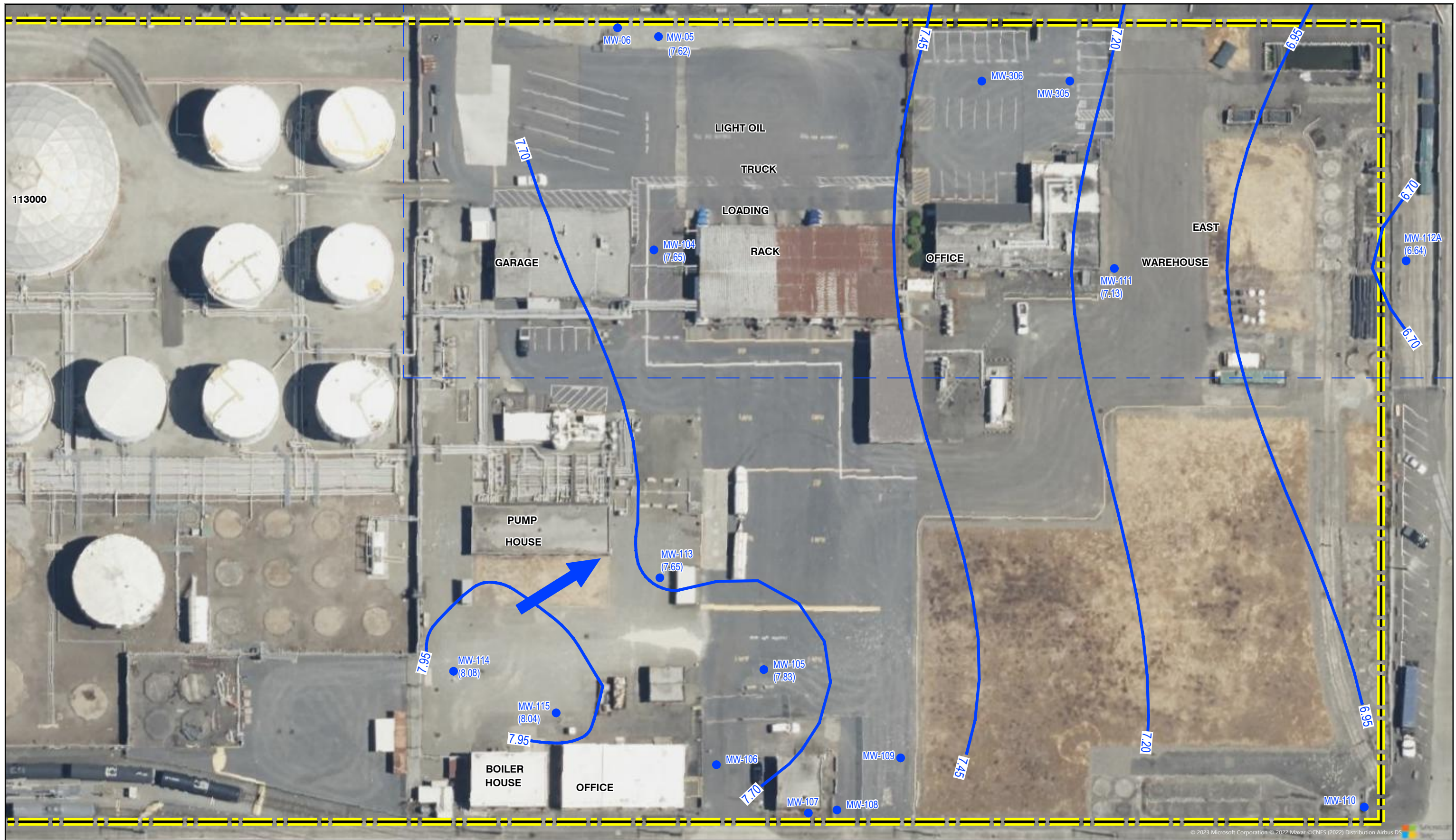


SHELL DISTRIBUTION TERMINAL  
 2555 13th AVENUE SW  
 SEATTLE, WASHINGTON  
 PUMP HOUSE AREA  
 GROUNDWATER SURFACE  
 CONTOUR MAP - 6/27/2022

Project No. 11218519  
 Date February 2023

**FIGURE 7**

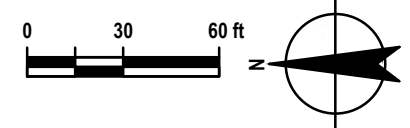




**LEGEND**

- SHELL PROPERTY LINE
- MW-214 MONITORING WELL LOCATION
- MW-210 PRODUCT RECOVERY WELL LOCATION
- BIO-SPARGING LINE

- (8.08) GROUNDWATER ELEVATION
- GROUNDWATER ELEVATION CONTOUR
- ➔ GROUNDWATER FLOW DIRECTION

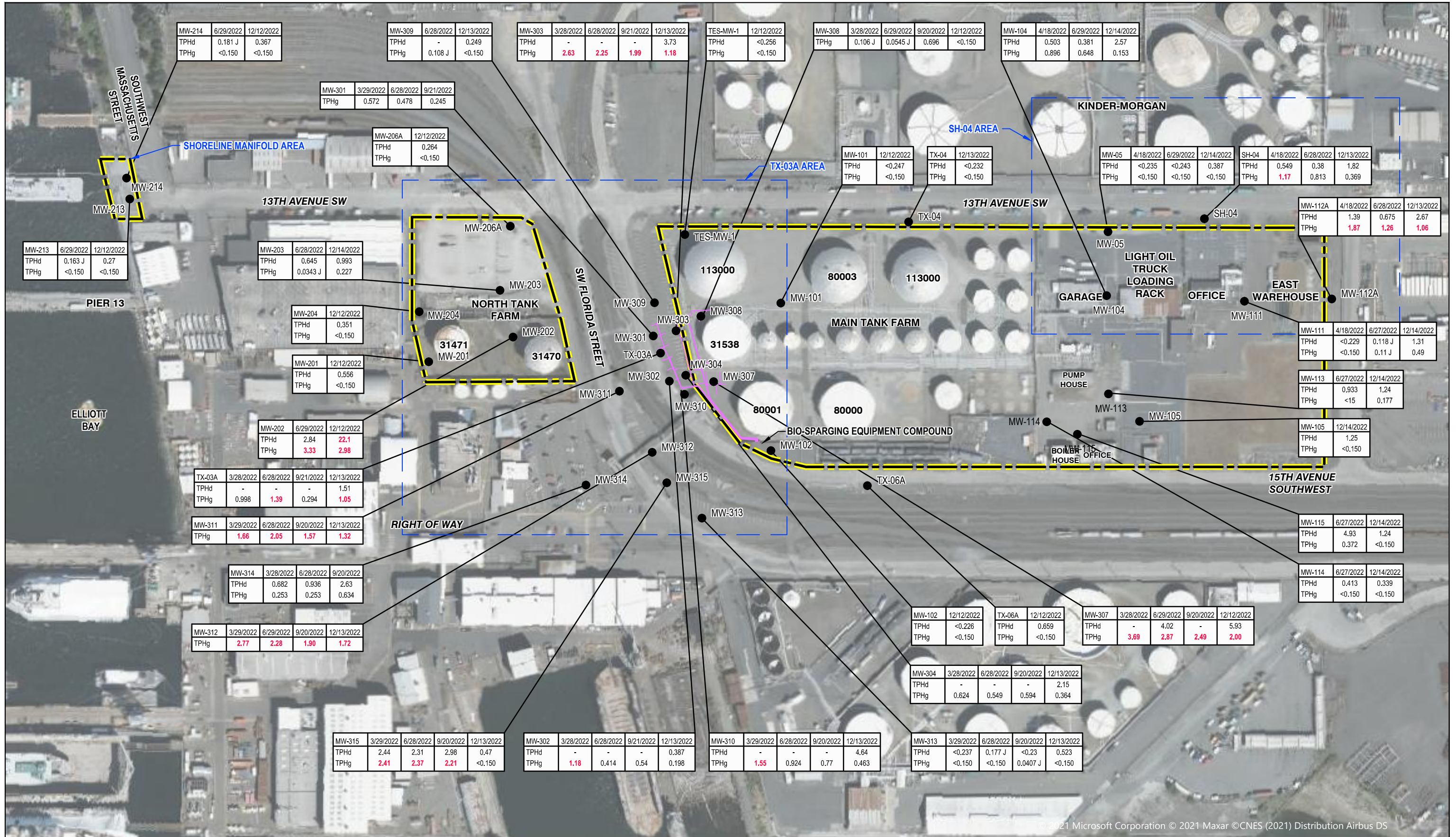


SHELL DISTRIBUTION TERMINAL  
 2555 13th AVENUE SW  
 SEATTLE, WASHINGTON  
**PUMP HOUSE AREA**  
 GROUNDWATER SURFACE  
 CONTOUR MAP - 12/12/2022

Project No. 11218519  
 Date February 2023

**FIGURE 8**





**LEGEND**

- SHELL PROPERTY LINE
- MW-214 ● MONITORING WELL LOCATION
- BIO-SPARGING LINE

**NOTES:**

- RESULTS ARE IN MILLIGRAMS PER LITER (mg/L)
- RED INDICATES DETECTED CONCENTRATIONS GREATER THAN CLEANUP LEVEL
- TPHg CLEANUP LEVEL = 1 mg/L
- TPHd CLEANUP LEVEL = 10 mg/L
- < NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT
- NOT ANALYZED
- J REPORTED VALUE IS ESTIMATED

**SCALE:** 0 100 200 ft

**GHD**

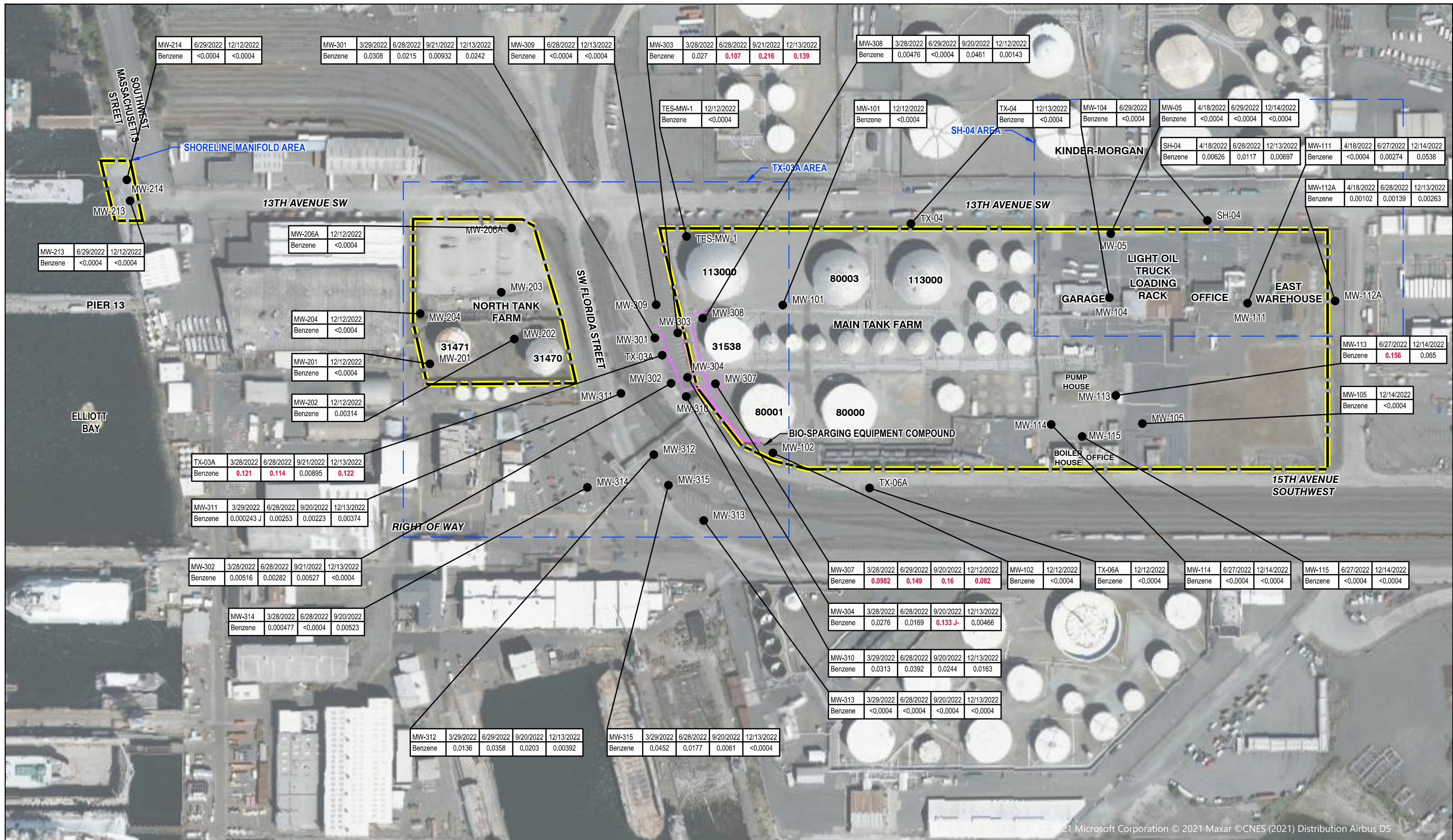
**SHELL DISTRIBUTION TERMINAL**  
 2555 13th AVENUE SW  
 SEATTLE, WASHINGTON

**GASOLINE AND DIESEL CONCENTRATIONS - 2022**

Project No. 11218519  
 Date February 2023

**FIGURE 9**





**LEGEND**

- SHELL PROPERTY LINE
- MW-214 MONITORING WELL LOCATION
- BIO-SPARGING LINE

**NOTES:**

- RESULTS ARE IN MILLIGRAMS PER LITER (mg/L)
- RED INDICATES DETECTED CONCENTRATIONS GREATER THAN CLEANUP LEVEL
- BENZENE CLEANUP LEVEL = 0.071 mg/L
- < NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT
- NOT ANALYZED
- J REPORTED VALUE IS ESTIMATED

**Scale:** 0 100 200 ft

**GHD**

**SHELL DISTRIBUTION TERMINAL**  
2555 13th AVENUE SW  
SEATTLE, WASHINGTON

**BENZENE CONCENTRATIONS - 2022**

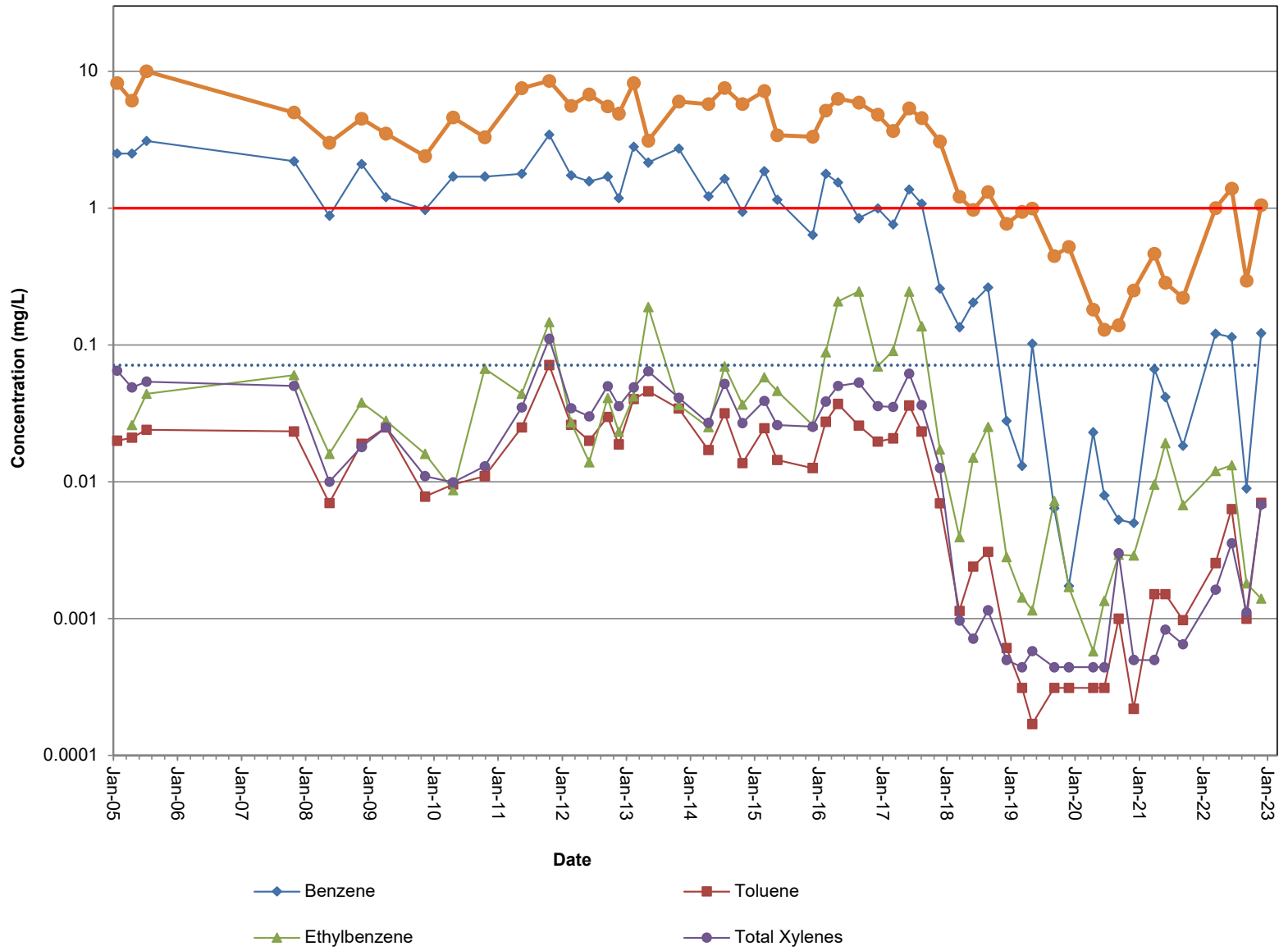
Project No. 11218519  
Date February 2023

**FIGURE 10**



Figure 11: TX-03A Area Monitoring Well TX-03A BTEX and Gasoline Concentrations

Shell - Harbor Island Terminal



# Appendices

# **Appendix A**

**Field Sampling Data Sheets**

Monitoring Well Gauging Field Log - Shoreline

Project No: 11218519  
SAP: 357032  
PlaNet ID: MIGUS357032  
Location: 2555 13th Avenue SW Seattle (Harbor Island Terminal)

Personnel: N. Adamowski

Date: 1/25/22

Well ID	Time Gauged	Depth to Product	Depth to Water	Comments
MW-208	1010	-	4.34	
NW-210	1025	5.45	6.34	
MW-211	1040	-	4.85	
MW-212	1050	-	5.67	



Monitoring Well Gauging Field Log - Shoreline

Project No: 11218519  
SAP: 357032  
PlaNet ID: MIGUS357032  
Location: 2555 13th Avenue SW Seattle (Harbor Island Terminal)

Personnel: JOE LEWANDOWSKI

Date: 02/28/22

Well ID	Time Gauged	Depth to Product	Depth to Water	Comments
MW-208	1015	—	4.59	
NW-210	1025	—	6.31	
MW-211	1021	—	4.51	
MW-212	1018	—	2.86	



Monitoring Well Gauging Field Log - Shoreline

Project No: 11218519  
SAP: 357032  
PlaNet ID: MIGUS357032  
Location: 2555 13th Avenue SW Seattle (Harbor Island Terminal)

Personnel: N. Adamowski

Date: 5/23/22

Well ID	Time Gauged	Depth to Product	Depth to Water	Comments
MW-208	1350		4.81	
NW-210	1430	6.29	6.50	
MW-211	1400		5.28	
MW-212	1415		5.70	



Monitoring Well Gauging Field Log - Shoreline

Project No: 11218519  
 SAP: 357032  
 PlaNet ID: MIGUS357032  
 Location: 2555 13th Avenue SW Seattle (Harbor Island Terminal)

Personnel: N. Adamowski

Date: 7/20/22

Well ID	Time Gauged	Depth to <del>Product</del> <sup>water</sup>	Depth to <del>Water</del> <sup>product</sup>	Comments
MW-208	1010	5.03	-	
NW-210	1040	6.24	-	Absorbent replaced
MW-211	1025	5.42	-	
MW-212	1035	5.85	-	



Monitoring Well Gauging Field Log Shoreline

8-23-22

SAP: 357032

Personnel: N. Adamowski / A. Meslar

Well ID	Time Gauged	Depth to Product	Depth to Water	Comments
MW-208	0955	—	5.55	
NW-210	1005	6.60	6.62	Absorbent Sock replaced
MW-211	0945	—	5.94	
MW-212	0950	—	6.19	No product saturation





Monitoring Well Gauging Field Log - Shoreline

Project No: 11218519  
SAP: 357032  
PlaNet ID: MIGUS357032  
Location: 2555 13th Avenue SW Seattle (Harbor Island Terminal)

Personnel: N. Adamowski

Date: 10/11/22

Well ID	Time Gauged	Depth to Product	Depth to Water	Comments
MW-208	0900		5.54	
NW-210	0907	6.59	6.59	Absorbent not saturated
MW-211	0926		5.77	
MW-212	0945		6.34	



Monitoring Well Gauging Field Log - Shoreline

Project No: 11218519  
 SAP: 357032  
 PlaNet ID: MIGUS357032  
 Location: 2555 13th Avenue SW Seattle (Harbor Island Terminal)

Personnel: Arthur Clauss / Michael Cyrier

Date: 11 / 22 / 22

Well ID	Time Gauged	(ft) Depth to Product	(ft) Depth to Water	Comments
MW-208	0959	—	5.59 ft	Two of three bolt receivers stripped. [2" well]
NW-210	1025	6.54 ft	6.56 ft	Oil sorbent sock stained and <del>super</del> heavily saturated. All three bolt receivers stripped, [2" well] ↳ oil sorbent sock replaced.
MW-211	1042	—	5.59 ft	No Comments. [4" well]
MW-212	1100	—	5.61 ft	Oil sorbent sock had staining, but not saturated. sock not replaced. Only two bolts present on monument. [4" well].



→ Locations of wells distorted. Appear to be accurate in reference to each other, but not accurate indicative of actual location on map.  
 Ex. - MW-210 → Located inside fencing, not in parking lot.

1Q Groundwater Monitoring Program Field Form  
Shell Harbor Island Terminal  
Seattle, Washington

Well ID	1st Quarter Program				Total Depth (ft bgs)	Screened Interval (ft bgs)	Comments
	Time Gauged	Depth to GW	Depth to Product	Sample Analytes			
<b>TX-03A Area - North Tank Farm</b>							
MW-201	0837	13.16	--	--	15	5.0 - 14.5	
MW-202	0833	12.77	--	--	15	5.0 - 14.5	
MW-203	0848	6.90	--	--	15	5.0 - 14.5	
MW-204	0844	10.48	--	--	15	5.0 - 14.5	
MW-206A	0853	8.79	--	--	15	5.0 - 14.5	
<b>TX-03A Area - Excluding the North Tank Farm</b>							
MW-101	1118	9.67	--	--	15	5.0 - 14.5	
MW-102	1100	7.28	--	--	15	5.0 - 14.5	
MW-301	0915	4.91	--	BTEX, Gx	15	5.0 - 15.0	
MW-302	1243	5.25	--	BTEX, Gx	15	5.0 - 15.0	
MW-303	0919	4.84	--	BTEX, Gx	15	5.0 - 15.0	
MW-304	0909	5.08	--	BTEX, Gx	15	5.0 - 15.0	
MW-307	1110	7.73	--	BTEX, Gx	15	5.0 - 15.0	
MW-308	1114	7.43	--	BTEX, Gx	15	5.0 - 15.0	
MW-309	0923	5.03	--	--	15	5.0 - 15.0	
MW-310	0901	5.86	--	BTEX, Gx	15	5.0 - 15.0	
MW-311	0922	7.25	--	BTEX, Gx	15	5.0 - 15.0	
MW-312	0930	5.90	--	BTEX, Gx	15	5.0 - 15.0	
MW-313	0934	5.48	--	BTEX, Gx, Dx	15	5.0 - 15.0	
MW-314	0940	6.68	--	BTEX, Gx, Dx	15	5.0 - 15.0	
MW-315	0937	7.03	--	BTEX, Gx, Dx	15	5.0 - 15.0	
TES-MW-1	1122	8.19	--	--	18	3.0 - 18.0	
TX-03A	0911	4.90	--	BTEX, Gx	16	6.0 - 16.0	
<b>Shoreline Manifold Area</b>							
MW-208	0810	4.63	--	--	16.5	5.0 - 14.5	
MW-210	0821	5.92	--	--	15	unknown	
MW-211	0814	5.00	--	--	13	5.0 - 13.0	
MW-212	0818	5.98	--	--	12	unknown	

**Notes:**

BTEX = benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8260B  
ft bgs = below ground surface  
TPH-Gx = total petroleum hydrocarbons as gasoline by NWTPH-Gx  
TPH-Dx = total petroleum hydrocarbons as diesel by NWTPH-Dx

### Monitoring Well Gauging Field Log - Shoreline

Date:

Job No:

SAP:

Incident No 300036

Location: 2555 13th Ave SW, Seattle (Harbor Island Terminal)

Personnel:

Well ID	Time Gauged	Depth to Water	Depth to Product	Comments
MW-208	0810	4.63	—	
MW-210	0821	5.92	—	Absorbant sock REPLACED
MW-211	0814	5.00	—	
MW-212	0818	5.98	—	Absorbant sock REPLACED

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220328-J01</u>	Client: <u>GHD</u>
Sampler: <u>J0</u>	Gauging Date: <u>03/29/22</u>
Well I.D.: <u>MW-301</u>	Well Diameter (in.): <u>⑤</u> 3 4 6 8
Total Well Depth (ft.): <u>14.68</u>	Depth to Water (ft.): <u>4.91</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>FVC</u> Grade	Flow Cell Type: <u>YSI-536</u>

Purge Method: <u>2" Grundfos Pump</u>	<u>Peristaltic Pump</u>	Bladder Pump
Sampling Method: <u>Dedicated Tubing</u>	New Tubing	Other <u>—</u>
Start Purge Time: <u>1118</u>	Flow Rate: <u>200ml/m</u>	Pump Depth: <u>10ft</u>

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.)
1121	17.25	6.93	0.598	45	0.10	158.8	600	5.00
1124	12.24	6.90	0.595	39	0.10	159.5	1200	5.13
1127	12.20	6.87	0.594	35	0.12	160.0	1800	5.21
1130	12.19	6.85	0.591	32	0.14	160.2	2400	5.21
1133	12.17	6.82	0.592	30	0.14	160.7	3000	5.21

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000 ml</u>
Sampling Time: <u>1134</u>	Sampling Date: <u>03/29/22</u>
Sample I.D.: <u>MW-301</u>	Laboratory: <u>TA</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>see coc</u>
Equipment Blank I.D.: <u>@</u> Time	Duplicate I.D.: <u>—</u>

**LOW FLOW WELL MONITORING DATA SHEET**

Project #: <u>220328-501</u>	Client: <u>GHD</u>
Sampler: <u>50</u>	Gauging Date: <u>03/28/22</u>
Well I.D.: <u>MW-302</u>	Well Diameter (in.): <u>(2)</u> 3 4 6 8 <u>   </u>
Total Well Depth (ft.): <u>15.03</u>	Depth to Water (ft.): <u>5.25</u>
Depth to Free Product: <u>   </u>	Thickness of Free Product (feet): <u>   </u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump                      Peristaltic Pump                      Bladder Pump  
 Sampling Method: Dedicated Pubing                      New Tubing                      Other \_\_\_\_\_  
 Start Purge Time: 1247                      Flow Rate: 200 ml/m                      Pump Depth: 12.5 ft

Time	Temp. ( <u>C</u> or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>ml</u> )	Depth to Water (ft.)
1250	11.28	7.39	0.779	12	0.04	115.7	600	5.34
1253	11.31	7.40	0.779	12	0.04	115.5	1200	5.34
1256	11.35	7.41	0.779	12	0.04	115.6	1800	5.34
1259	11.45	7.41	0.770	13	0.04	115.2	2400	5.34
1302	11.48	7.41	0.768	12	0.04	115.2	3000	5.34
1305	11.51	7.41	0.769	12	0.04	115.1	3600	5.34

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000 ml</u>
Sampling Time: <u>1306</u>	Sampling Date: <u>03/28/22</u>
Sample I.D.: <u>MW-302</u>	Laboratory: <u>Pass TA</u>
Analyzed for:        TPH-G    BTEX    MTBE    TPH-D        Other: <u>see COC</u>	
Equipment Blank I.D.: <u>@</u> _____	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220328-501</u>	Client: <u>GHD</u>
Sampler: <u>50</u>	Gauging Date: <u>03/28/22</u>
Well I.D.: <u>MW-303</u>	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): <u>14.74</u>	Depth to Water (ft.): <u>4.84</u>
Depth to Free Product: <u>        </u>	Thickness of Free Product (feet): <u>        </u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-550</u>

Purge Method: <u>2" Grundfos Pump</u>	<u>Peristaltic</u> Pump	Bladder Pump
Sampling Method: <u>Dedicated</u> Tubing	New Tubing	Other <u>        </u>
Start Purge Time: <u>1347</u>	Flow Rate: <u>200 ml/m</u>	Pump Depth: <u>10ft</u>

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.)
1350	10.70	6.93	0.214	14	0.07	144.1	600	4.96
1353	10.75	6.93	0.214	13	0.07	144.3	1200	5.11
1356	10.76	6.93	0.212	12	0.07	144.4	1800	5.11
1359	10.77	6.93	0.212	12	0.06	144.4	2400	5.11
1402	10.79	6.93	0.212	12	0.06	144.3	3000	5.11

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000 ml</u>
Sampling Time: <u>1403</u>	Sampling Date: <u>03/28/22</u>
Sample I.D.: <u>MW-303</u>	Laboratory: <u>TA</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>see COC</u>
Equipment Blank I.D.: <u>@</u> Time <u>        </u>	Duplicate I.D.: <u>        </u>

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220328-J01</u>	Client: <u>GHD</u>
Sampler: <u>JD</u>	Gauging Date: <u>03/28/22</u>
Well I.D.: <u>MW-304</u>	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): <u>14.68</u>	Depth to Water (ft.): <u>5.08</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1416      Flow Rate: 200 ml/m      Pump Depth: 10 ft

Time	Temp. ( <u>C</u> or °F)	pH	Cond. ( <u>mS/cm</u> or μS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>ml</u> )	Depth to Water (ft.)
1419	11.58	6.76	0.136	12	0.11	153.4	600	5.08
1422	11.63	6.77	0.138	10	0.12	153.0	1200	5.08
1425	11.75	6.80	0.137	10	0.11	152.4	1800	5.08
1428	11.79	6.79	0.136	10	0.10	152.2	2400	5.08
1431	11.80	6.79	0.135	10	0.10	152.3	3000	5.08

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

Sampling Time: 1432      Sampling Date: 03/28/22

Sample I.D.: MW-304      Laboratory: TA

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

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



## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220328-501</u>	Client: <u>LHD</u>
Sampler: <u>50</u>	Gauging Date: <u>03/28/22</u>
Well I.D.: <u>MW-307</u>	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): <u>17.45</u>	Depth to Water (ft.): <u>7.73</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>451-556</u>

Purge Method: <u>2" Grundfos Pump</u>	<u>Peristaltic Pump</u>	Bladder Pump
Sampling Method: <u>Dedicated Tubing</u>	<u>New Tubing</u>	Other
Start Purge Time: <u>11:32</u>	Flow Rate: <u>200ml/m</u>	Pump Depth: <u>12.5ft</u>

Time	Temp. ( <u>2</u> 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.)
1135	11.27	7.61	0.420	32	0.01	102.6	600	7.80
1138	11.15	7.53	0.417	40	0.01	107.2	1200	7.80
1141	11.18	7.48	0.411	38	0.01	110.2	1800	7.80
1144	11.22	7.45	0.408	37	0.01	112.6	2400	7.80
1147	11.21	7.43	0.403	40	0.01	114.4	3000	7.80

Did well dewater? Yes <input checked="" type="radio"/> No <input type="radio"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>1148</u>	Sampling Date: <u>03/28/22</u>
Sample I.D.: <u>MW-307</u>	Laboratory: <u>PTA</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>see COC</u>
Equipment Blank I.D.: <u>@</u> Time	Duplicate I.D.: <u>—</u>

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220328-501</u>	Client: <u>GHD</u>
Sampler: <u>50</u>	Gauging Date: <u>03/28/22</u>
Well I.D.: <u>MW-308</u>	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): <u>17.31</u>	Depth to Water (ft.): <u>7.43</u>
Depth to Free Product: <u>          </u>	Thickness of Free Product (feet): <u>          </u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1202      Flow Rate: 200ml/m      Pump Depth: 12.5ft

Time	Temp. <u>(C or °F)</u>	pH	Cond. <u>(mS/cm or μS/cm)</u>	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>ml</u> )	Depth to Water (ft.)
<u>1205</u>	<u>10.73</u>	<u>7.30</u>	<u>0.633</u>	<u>66</u>	<u>0.04</u>	<u>121.7</u>	<u>600</u>	<u>7.43</u>
<u>1208</u>	<u>10.69</u>	<u>7.32</u>	<u>0.646</u>	<u>30</u>	<u>0.01</u>	<u>121.4</u>	<u>1200</u>	<u>7.43</u>
<u>1211</u>	<u>10.60</u>	<u>7.32</u>	<u>0.649</u>	<u>13</u>	<u>0.01</u>	<u>121.5</u>	<u>1800</u>	<u>7.43</u>
<u>1214</u>	<u>10.58</u>	<u>7.32</u>	<u>0.647</u>	<u>12</u>	<u>0.01</u>	<u>121.6</u>	<u>2400</u>	<u>7.43</u>
<u>1217</u>	<u>10.54</u>	<u>7.32</u>	<u>0.647</u>	<u>11</u>	<u>0.01</u>	<u>121.8</u>	<u>3000</u>	<u>7.43</u>

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>1218</u>	Sampling Date: <u>03/28/22</u>
Sample I.D.: <u>MW-308</u>	Laboratory: <u>JA</u>
Analyzed for:      TPH-G    BTEX    MTBE    TPH-D <u>Other</u> <u>see COC</u>	
Equipment Blank I.D.: <u>@</u> _____	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220328-JD1</u>	Client: <u>GAD</u>
Sampler: <u>JD</u>	Gauging Date: <u>03-29-22</u>
Well I.D.: <u>MW. 310</u>	Well Diameter (in.): <u>(2)</u> 3 4 6 8
Total Well Depth (ft.): <u>14.55</u>	Depth to Water (ft.): <u>5.85</u>
Depth to Free Product: <u>          </u>	Thickness of Free Product (feet): <u>          </u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>451-550</u>

Purge Method: <u>2" Grundfos Pump</u>	<u>Peristaltic Pump</u>	Bladder Pump
Sampling Method: <u>Dedicated Tubing</u>	<u>New Tubing</u>	Other <u>          </u>
Start Purge Time: <u>1047</u>	Flow Rate: <u>200 ml/min</u>	Pump Depth: <u>10.5 ft</u>

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.)
1050	11.71	6.98	0.682	28	0.20	153.3	600	5.85
1053	11.75	6.95	0.680	25	0.20	153.6	1200	5.85
1056	11.77	6.93	0.680	23	0.19	153.7	1800	5.85
1059	11.80	6.95	0.679	21	0.20	154.0	2400	5.85
1102	11.83	6.95	0.677	22	0.21	154.3	3000	5.85

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000 ml</u>
Sampling Time: <u>1103</u>	Sampling Date: <u>03/29/22</u>
Sample I.D.: <u>MW-310</u>	Laboratory: <u>TA</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	<u>Other</u> <u>see COC</u>
Equipment Blank I.D.: <u>@</u> Time	Duplicate I.D.: <u>          </u>



## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220328-501</u>	Client: <u>GHD</u>
Sampler: <u>JD</u>	Gauging Date: <u>03/29/22</u>
Well I.D.: <u>MW-312</u>	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): <u>14.90</u>	Depth to Water (ft.): <u>5.90</u>
Depth to Free Product: <u>          </u>	Thickness of Free Product (feet): <u>          </u>
Referenced to: <u>PVO</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other             
 Start Purge Time: 1012      Flow Rate: 200ml/m      Pump Depth: 10.5ft

Time	Temp. ( <u>C</u> or °F)	pH	Cond. ( <u>mS/cm</u> or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>mL</u> )	Depth to Water (ft.)
1015	12.74	7.03	0.456	2	0.05	155.9	600	5.90
1018	12.70	6.98	0.453	2	0.04	156.7	1200	5.90
1021	12.67	6.92	0.450	2	0.03	157.3	1800	5.96
1024	12.65	6.90	0.450	1	0.03	157.9	2400	5.90
1027	12.62	6.89	0.452	1	0.03	158.7	3000	5.90

Did well dewater? Yes  No       Amount actually evacuated: 3000ml/m  
 Sampling Time: 1028      Sampling Date: 03/29/22  
 Sample I.D.: MW-312      Laboratory: TA  
 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 #: <u>220328-501</u>	Client: <u>GHD</u>
Sampler: <u>JD</u>	Gauging Date: <u>03/28/22</u>
Well I.D.: <u>MW-314</u>	Well Diameter (in.): <u>(2)</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>14.73</u>	Depth to Water (ft.): <u>6.68</u>
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1003      Flow Rate: 200 ml/m      Pump Depth: 10.5ft

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.)
1006	11.94	7.72	0.773	87	0.07	74.7	600	6.78
1009	11.98	7.75	0.753	82	0.07	74.4	1200	6.78
1012	12.00	7.75	0.737	86	0.06	74.8	1800	6.78
1015	12.01	7.76	0.735	84	0.06	75.3	2400	6.78
1018	12.03	7.77	0.731	83	0.06	76.2	3000	6.78

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000 ml</u>
Sampling Time: <u>1019</u>	Sampling Date: <u>03/28/22</u>
Sample I.D.: <u>MW.314</u>	Laboratory: <u>TA</u>
Analyzed for:      TPH-G    BTEX    MTBE    TPH-D      Other: <u>see COC</u>	
Equipment Blank I.D.: <u>@</u> _____	Duplicate I.D.: _____



## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220328-501</u>	Client: <u>GHD</u>
Sampler: <u>JD</u>	Gauging Date: <u>03/29/22</u>
Well I.D.: <u>MW-315</u>	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): <u>14.95</u>	Depth to Water (ft.): <u>7.03</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVO</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0906      Flow Rate: 200 ml/min      Pump Depth: 11ft

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.)
0909	11.96	7.22	0.522	6	0.14	134.5	600	7.03
0912	11.98	7.20	0.520	5	0.12	134.2	1200	7.03
0915	12.02	7.19	0.520	4	0.10	134.2	1800	7.03
0918	12.03	7.20	0.520	3	0.08	133.9	2400	7.03
0921	12.06	7.21	0.519	3	0.08	134.1	3000	7.03

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>0922</u>	Sampling Date: <u>03/29/22</u>
Sample I.D.: <u>MW-315</u>	Laboratory: <u>JA</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>see COC</u>
Equipment Blank I.D.: <u>@</u>	Duplicate I.D.: <u>—</u>

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220328-J01</u>	Client: <u>GHD</u>
Sampler: <u>J0</u>	Gauging Date: <u>03/28/22</u>
Well I.D.: <u>M<sup>50</sup> TX-03A</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 <u>    </u>
Total Well Depth (ft.): <u>14.74</u>	Depth to Water (ft.): <u>4.40</u>
Depth to Free Product: <u>    </u>	Thickness of Free Product (feet): <u>    </u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other       
 Start Purge Time: 1318      Flow Rate: 200ml/m      Pump Depth: 10ft

Time	Temp. ( <u>or</u> °F)	pH	Cond. ( <u>mS/cm</u> or <u>µS/cm</u> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>ml</u> )	Depth to Water (ft.)
1321	12.14	7.20	0.528	19	0.10	127.3	600	5.03
1324	12.24	7.20	0.531	17	0.11	127.2	1200	5.03
1327	12.49	7.21	0.535	12	0.12	127.0	1800	5.03
1330	12.54	7.22	0.538	13	0.12	128.7	2400	5.03
1333	12.57	7.24	0.540	12	0.12	126.9	3000	5.03

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>1334</u>	Sampling Date: <u>03/28/22</u>
Sample I.D.: <u>TX-03A</u>	Laboratory: <u>TA</u>
Analyzed for:      TPH-G    BTEX    MTBE    TPH-D      Other: <u>see COC</u>	
Equipment Blank I.D.: <u>@</u> <small>Time</small>	Duplicate I.D.: <u>    </u>



# Shell Oil Products US Chain Of Custody Record

## LAB (LOCATION)

- ACCUTEST ( )
- CALSCIENCE ( )
- TESTAMERICA ( )
- Other ( )

### Please Check Appropriate Box:

- SGW FDG
- PIPELINE
- RETAIL
- CHEMICALS
- CONSULTANT
- LUBES
- TRANSPORTATION
- OTHER

Lab Vendor # \_\_\_\_\_ Dropdown:

SAMPLING COMPANY: **Blaine Tech Services, Inc** LOG CODE: **BTSS**

ADDRESS: **1680 Rogers Ave, San Jose, CA, 95112**

PROJECT CONTACT (Handy or PDP Report to): **Jacquelyn England** BILL TO CONTACT E-MAIL: **jacquelyn.england@ghd.com**

TELEPHONE: **(707)523-1010** FAX: \_\_\_\_\_

TURNAROUND TIME (CALENDAR DAYS):  5 DAYS  3 DAYS  2 DAYS  24 HOURS  RESULTS NEEDED ON WEEKEND

DELIVERABLES:  LEVEL 1  LEVEL 2  LEVEL 3  LEVEL 4  OTHER (SPECIFY) \_\_\_\_\_

TEMPERATURE ON RECEIPT C°: \_\_\_\_\_ Cooler #1: \_\_\_\_\_ Cooler #2: \_\_\_\_\_ Cooler #3: \_\_\_\_\_

SPECIAL INSTRUCTIONS OR NOTES: \_\_\_\_\_

LAB USE ONLY: \_\_\_\_\_

FIELD NOTES: \_\_\_\_\_

TEMPERATURE ON RECEIPT C°: \_\_\_\_\_

Container PID Readings or Laboratory Notes: \_\_\_\_\_

LAB USE ONLY	SAMPLING		MATRIX	PRESERVATIVE				NO. OF CONT.	UNIT COST	REQUESTED ANALYSIS	NON-UNIT COST	FIELD NOTES:
	DATE	TIME		HCL	HNO3	H2SO4	NONE					
	03/29/12	1134	WT	X				4	8260C BTEX	6020A Total Lead		
	03/29/12	1306	WT	X				4	8270D SIM PAHs	352 Nitrate & Nitrite		
	03/29/12	1403	WT	X				4	3000 Sulfate	6020A Diss. Iron & Manganese (lab filter)		
	03/29/12	1432	WT	X				4	NWTFH-GX			
	03/29/12	1448	WT	X				4				
	03/29/12	2118	WT	X				4				
	03/29/12	1103	WT	X				4				
	03/29/12	0957	WT	X				4				
	03/29/12	1028	WT	X				4				
	03/29/12	0850	WT	X				6				

Relinquished by (Signature): *[Signature]* Date: **03/29/12** Time: **1300**

Received by (Signature): *[Signature]* Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by (Signature): \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by (Signature): \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Shipped Via **UPS**



# Shell Oil Products US Chain of Custody Record

## LAB (LOCATION)

ACCUTEST ( )  
 CALSCIENCE ( )  
 TESTAMERICA ( )  
 Other ( )

SOW FDG  
 CHEMICALS  
 TRANSPORTATION

PIPELINE  
 CONSULTANT  
 OTHER

RETAIL  
 LUBES

Lab Vendor # \_\_\_\_\_ Dropdown

SAMPLING COMPANY:  
**Blaine Tech Services, Inc**  
 ADDRESS: 1680 Rogers Ave, San Jose, CA, 95112

LOG CODE: BTSS

PROJECT CONTACT (Hardcopy or PDF Report to):  
 Jacquelyn England  
 1680 Rogers Ave, San Jose, CA, 95112  
 PHONE NO.: (707) 923-1010  
 E-MAIL: jacquelyn.england@gtnd.com

TELEPHONE: (707) 923-1010  
 FAX: jacquelyn.england@gtnd.com

STANDARD (14 DAY)  
 5 DAYS  
 3 DAYS  
 24 HOURS  
 RESULTS NEEDED ON WEEKEND

LA - RWQCB REPORT FORMAT  
 UST AGENCY:

DELIVERABLES:  LEVEL 1  LEVEL 2  LEVEL 3  LEVEL 4  OTHER (SPECIFY) \_\_\_\_\_

TEMPERATURE ON RECEIPT C° Cooler #1 \_\_\_\_\_ Cooler #2 \_\_\_\_\_

**SPECIAL INSTRUCTIONS OR NOTES :**

SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 EDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED  
 PROVIDE LEDD DISK

CHECK IF NO INCIDENT # APPLIES  
 DATE: 03/29/22  
 PAGE: 2 of 2

Print Bill To Contact Name: \_\_\_\_\_  
 Plan/Net/ Site or Project ID: \_\_\_\_\_  
 PO # \_\_\_\_\_  
 GSAP Project ID: \_\_\_\_\_

SITE ADDRESS: Street and City  
**2555 13th Avenue**  
 EDI DELIVERABLE TO (Name, Company, Office Location):  
**Jacquelyn England, GHD, Santa Rosa**  
 STATE: WA  
 PHONE NO.: (707) 923-1010  
 E-MAIL: jacquelyn.england@ghd.com  
 GHB Project / Task Number: 11218519  
 RECOM Other ID: \_\_\_\_\_

REQUESTED ANALYSIS

UNIT COST	NON-UNIT COST	FIELD NOTES:
8260C BTEX		
NWTFH-DX		
8270D SIM P4H6		
300 0 Sulfate		
6020A Total Lead		
353 2 Nitrate & Nitrite		
6020A Diss. Iron & Manganese (lab filter)		
300 0 Chloride		
2320B Alkalinity		

LAB USE ONLY	Field Sample Identification		SAMPLING		MATRIX	PRESERVATIVE			NO. OF CONT.	
	DATE	TIME	DATE	TIME		HCL	HNO3	H2SO4		NONE
	MW-314		03/29/22	10A	WT	X				0
	MW-315		03/29/22	0922	WT	X				6
	TX-03A		03/29/22	1334	WT	X				4
	TB-1		03/29/22	0900	WT	X				2

Requisitioned by (Signature) \_\_\_\_\_ Date: 03/29/22 Time: 1300  
 Received by (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Requisitioned by (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Shipped Via UPS

ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

INCIDENT # 220328-501  
 ADDRESS 2555 13th Ave SW  
 CITY & STATE TZ Seattle, WA

DATE: 03/28/22

Well ID	Observations Upon Arrival				Well Pad / Surface Condition	Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	Photos of Well Condition	Repair Date and PM Initials
	Manway Cover, Type, Condition & Size	Well Labeled / Painted Properly*	Well Cap (Gripper) Condition	Well Lock Condition				
MW-201	Standpipe Flush G P 2	Y	G	R	G		Y	
MW-202	Standpipe Flush G P 2	Y	G	R	G		Y	
MW-203	Standpipe Flush G P 2	Y	G	R	G	3 of 3 bolts missing	Y	
MW-204	Standpipe Flush G P 2	Y	G	R	G		Y	
MW-205	Standpipe Flush G P 2	Y	G	R	G		Y	
MW-101	Standpipe Flush G P 2	Y	G	R	G		Y	
MW-102	Standpipe Flush G P 2	Y	G	R	G		Y	
MW-301	Standpipe Flush G P 2	Y	G	R	G	1 of 2 bolts missing	Y	
MW-302	Standpipe Flush G P 2	Y	G	R	G		Y	
MW-303	Standpipe Flush G P 2	Y	G	R	G		Y	
MW-304	Standpipe Flush G P 2	Y	G	R	G		Y	
TOTAL # CAPS REPLACED =				0	TOTAL # OF LOCKS REPLACED			

Remediation Compound Type (Check boxes that apply)	Condition of Enclosure		Condition of Area Inside Enclosure		Compound Security	Emergency Contact Info Visible	Cleaning / Repairs Recommended and Conducted	Photos of Condition	Repair Date and PM Initials
	Condition of Enclosure	Condition of Area Inside Enclosure	Condition of Area Inside Enclosure	Compound Security					
NA									
Building									
Building w/ Fence Comp.	G	P	G	P	N/A	Y		Y	N
Fenced Compound									
Trailer									
Number of Drums On-site	Does the Label Reveal the Source of the Contents	Labeled Correctly and Writing Legible	Drum Condition	Confirm Drums Related to Environmental	Drums Located to Min Business Interference	Detailed Explanation of Any Issues Resolved		Photos of Drum Condition	Date Drums Removed from Site and PM Initials
—	Y	N	N/A	Y	Y	Y		Y	N

G = Good (Acceptable) R = Replaced  
 P = Poor (needs attention) NL = No Lock Required  
 Note: All repairs other than locks and grippers require Shell PM approval prior to repair.  
 \* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.  
 Version 2.4, March 2008

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Jonah Davis / B15  
 Print or type Name of Field Personnel & Consultant Company

ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

INCIDENT # 220328-501

ADDRESS 2555 13th Ave SW

DATE: 03/28/22

CITY & STATE Seattle, WA

Well ID	Manway Cover, Type, Condition & Size			Observations Upon Arrival			Well Pad / Surface Condition	Well Lock Condition	Well Cap (Gripper) Condition	Note Repairs Made and Performed	Detailed Explanation of Maintenance Recommended	Photos of Well Condition	Repair Date and PM Initials
	Standpipe	Flush	Size (inch)	Well Labeled / Painted Properly*	Well Cap (Gripper) Condition	Well Lock Condition							
MW-307	Standpipe	Flush	2	Y	G	R	G	R	G			Y	
MW-308	Standpipe	Flush	2	Y	G	R	G	R	G			Y	
MW-309	Standpipe	Flush	2	Y	G	R	G	R	G			Y	
MW-310	Standpipe	Flush	2	Y	G	R	G	R	G			Y	
MW-311	Standpipe	Flush	2	Y	G	R	G	R	G			Y	
MW-312	Standpipe	Flush	2	Y	G	R	G	R	G			Y	
MW-313	Standpipe	Flush	2	Y	G	R	G	R	G			Y	
MW-314	Standpipe	Flush	2	Y	G	R	G	R	G			Y	
MW-315	Standpipe	Flush	2	Y	G	R	G	R	G			Y	
IPS-MW-1	Standpipe	Flush	4	Y	G	R	G	R	G			Y	
IX-300A	Standpipe	Flush	2	Y	G	R	G	R	G			Y	
TOTAL # CAPS REPLACED = 0												TOTAL # OF LOCKS REPLACED = 0	
Condition of Soil Boring Patches of Abandoned Monitoring Wells													
Remediation Compound Type (Check boxes that apply)													
NA													
Building													
Building w/ Fence Comp.													
Fenced Compound													
Trailer													
Condition of Enclosure													
G													
Condition of Enclosure													
G													
Labeled Correctly and Writing Legible													
Y													
Does the Label Reveal the Source of the Contents													
Y													
Number of Drums On-site													
Y													
Condition of Area Inside Enclosure													
G													
Condition of Area Inside Enclosure													
P													
Compound Security													
P													
Emergency Contact Info Visible													
Y													
Cleaning / Repairs Recommended and Conducted													
N/A													
Photos of Condition													
Y													
Photos of Condition													
Y													
Detailed Explanation of Any Issues Resolved													
Drums Located to Min Business Interference													
Y													
Confirm Drums Related to Environmental													
Y													
Drums Located to Min Business Interference													
Y													
Date Drums Removed from Site and PM Initials													

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Jonah Davis / B15  
Print or type Name of Field Personnel & Consultant Company

G = Good (Acceptable) R = Replaced  
P = Poor (needs attention) NL = No Lock Required  
Note: All repairs other than locks and grippers require Shell PM approval prior to repair.  
\* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.  
Version 2.4, March 2008

ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

INCIDENT # 220328-501  
 DATE: 03/28/22

ADDRESS 2555 13th Ave SW  
 CITY & STATE Seattle, WA

Well ID	Manway Cover, Type, Condition & Size			Observations Upon Arrival			Well Pad / Surface Condition	Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	Photos of Well Condition	Repair Date and PM Initials	
	Manway Cover	Type	Condition & Size	Well Labeled / Painted Properly*	Well Cap (Gripper) Condition	Well Lock Condition					Well Pad / Surface Condition
MW-208	Standpipe	Flush	G P 2	Y	G	R	G		Y		
MW-210	Standpipe	Flush	G P 2	Y	G	R	G		Y		
MW-214	Standpipe	Flush	G P 4	Y	G	R	G		Y		
MW-217	Standpipe	Flush	G P 4	Y	G	R	G		Y		
	Standpipe	Flush	G P	Y	G	R	G		Y		
	Standpipe	Flush	G P	Y	G	R	G		Y		
	Standpipe	Flush	G P	Y	G	R	G		Y		
	Standpipe	Flush	G P	Y	G	R	G		Y		
	Standpipe	Flush	G P	Y	G	R	G		Y		
	Standpipe	Flush	G P	Y	G	R	G		Y		
	Standpipe	Flush	G P	Y	G	R	G		Y		
	Standpipe	Flush	G P	Y	G	R	G		Y		
	Standpipe	Flush	G P	Y	G	R	G		Y		
TOTAL # CAPS REPLACED =				0							
TOTAL # OF LOCKS REPLACED				0							

Remediation Compound Type (Check boxes that apply)	Condition of Enclosure		Condition of Area Inside Enclosure		Compound Security		Emergency Contact Info Visible		Cleaning / Repairs Recommended and Conducted	Photos of Condition	Repair Date and PM Initials
	Condition of Enclosure	Condition of Area Inside Enclosure	Compound Security	Emergency Contact Info Visible	Drums Located to Min Business Interference	Detailed Explanation of Any Issues Resolved	Photos of Drum Condition	Date Drums Removed from Site and PM Initials			
NA											
Building											
Building w/ Fence Comp.											
Fenced Compound											
Trailer											
Does the Label Reveal the Source of the Contents	Y	N	N/A	Y	N	N/A	Y	N		Y	N

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Jonah Davis / BIS  
 Print or type Name of Field Personnel & Consultant Company

G = Good (Acceptable) R = Replaced  
 P = Poor (needs attention) NL = No Lock Required  
 Note: All repairs other than locks and grippers require Shell PM approval prior to repair.  
 \* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.  
 Version 2.4, March 2008





WELL GAUGING DATA

Project # 220418-(cm) Date 4/18/22 Client AT<sup>cm</sup> GHD

Site 2555 13th Ave SW, Seattle

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
MW-05	0916	2	-	-	-	-	5.35	18.96		
MW-111	0903 0857 <sup>cm</sup>	2	-	-	-	-	4.38 <del>6.04</del>	14.67		
MW-112A	0857	2	odor	-	-	-	6.04	14.65		
SH-04	0849	2	-	-	-	-	4.95 <sup>cm</sup> 9.15	18.06		
MW-104	0908	2	-	-	-	-	5.21	14.72		
MW-208	0930	2	-	-	-	-	5.08	-		
MW-210	0836	2	odor	6.15	0.03	-	6.18	-		
MW-211	0827	4	-	-	-	-	5.28	-		
MW-212	0834	4	odor	-	-	-	5.98	-		

### Monitoring Well Gauging Field Log - Shoreline

Date:

Job No:

SAP:

Incident No 300036

Location: 2555 13th Ave SW, Seattle (Harbor Island Terminal)

Personnel:

Well ID	Time Gauged	Depth to Water	Depth to Product	Comments
MW-208	0830	5.08	—	
MW-210	0836	6.18	6.15	Absorbant sock
MW-211	0827	5.28	—	
MW-212	0834	5.98	—	Absorbant sock

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 220418-Cm1	Client: GHD
Sampler: Cm	Gauging Date: 4/18/22
Well I.D.: MW-05	Well Diameter (in.): ② 3 4 6 8 _____
Total Well Depth (ft.): 18.96	Depth to Water (ft.): 5.35
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <u>PVC</u> Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0924      Flow Rate: 200 mL/min      Pump Depth: 12 ft

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	11.69	7.90	354	18	0.15	76.5	<del>176.76.5</del> cm 600	5.45
0930	12.09	7.89	355	12	0.16	77.0	1200	5.50
0933	12.05	7.90	356	13	0.13	76.5	1800	5.50
0936	11.95	7.88	356	12	0.14	77.1	2400	5.50
0939	12.06	7.87	356	13	0.14	77.8	3000	5.50

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: 3000 mL
Sampling Time: 0942	Sampling Date: 4/18/22
Sample I.D.: MW-05	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	<u>Other?</u> see COC
Equipment Blank I.D.: @ _____	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 220418-CMI	Client: GHD
Sampler: CM	Gauging Date: 4/18/22
Well I.D.: MW-104	Well Diameter (in.): ② 3 4 6 8
Total Well Depth (ft.): 14.72	Depth to Water (ft.): 5.21
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	Flow Cell Type: Y81-SS6

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump  
 Sampling Method: Dedicated Tubing New Tubing Other  
 Start Purge Time: 0953 Flow Rate: 200 mL/min Pump Depth: 10 ft

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.)
0956	13.46	8.01	295	33	0.10	70.2	600	5.23
0959	13.62	8.08	297	19	0.12	66.0	1200	5.23
<sup>CM</sup> <del>09</del> 1002	13.86	8.11	294	28	0.10	64.1	1800	5.23
1005	13.94	8.13	298	29	0.10	62.7	2400	5.23
1008	13.97	8.15	297	<sup>CM</sup> 327	0.11	62.0	3000	5.23

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: 3000 mL
Sampling Time: 1011	Sampling Date: 4/18/22
Sample I.D.: MW-104	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	<input checked="" type="radio"/> Other see CoC
Equipment Blank I.D.: @	Duplicate I.D.:

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 220418-cml	Client: GAD
Sampler: cm	Gauging Date: 4/18/22
Well I.D.: MW-111	Well Diameter (in.): (2) 3 4 6 8
Total Well Depth (ft.): 14.67	Depth to Water (ft.): 4.38
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1027      Flow Rate: 200 mL/min      Pump Depth: 9.5 ft

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or <u>µS/cm</u> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1030	11.74	8.11	136	53	0.10	64.3	600	4.46
1033	11.94	8.14	136	50	0.10	62.7	1200	4.46
1036	12.22	8.15	134	43	0.09	62.0	1800	4.46
1039	12.24	8.17	136	44	0.09	61.4	2400	4.46
1042	12.31	8.15	139	44	0.09	62.3	3000	4.46

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: 3000 mL
Sampling Time: 1045	Sampling Date: 4/18/22
Sample I.D.: MW-111	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	<u>Other:</u> See COC
Equipment Blank I.D.: @ _____	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 220418-cm1	Client: GHD
Sampler: cm	Gauging Date: 4/18/22
Well I.D.: MW-112A	Well Diameter (in.): ② 3 4 6 8
Total Well Depth (ft.): 14.65	Depth to Water (ft.): 6.04
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1132      Flow Rate: 200 mL/min      Pump Depth: 10.5 ft

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.)
1135	10.83	8.12	275	30	0.11	64.4	600	6.17
1138	11.04	8.18	288	29	0.09	60.7	1200	6.17
1141	11.30	8.21	291	17	0.08	58.9	1800	6.17
1144	11.45	8.22	298	17	0.08	57.8	2400	6.17
1147	11.44	8.24	305	18	0.09	56.9	3000	6.17

Did well dewater? Yes  No       Amount actually evacuated: 3000 mL

Sampling Time: 1150      Sampling Date: 4/18/22

Sample I.D.: MW-112A      Laboratory: JA

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 #: 220418-cm1	Client: GHD
Sampler: cm	Gauging Date: 4/18/22
Well I.D.: SH-04	Well Diameter (in.): 2 3 4 6 8
Total Well Depth (ft.): 18.06	Depth to Water (ft.): 9.95 <sup>cm</sup> 9.15
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: <u>PVO</u> Grade	Flow Cell Type: VSI-SS6

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump  
 Sampling Method: Dedicated Tubing New Tubing Other \_\_\_\_\_  
 Start Purge Time: 1103 Flow Rate: 200 ml/min Pump Depth: 11.5 ft

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.)
1106	9.23	8.12	216	51	0.09	64.7	600	9.15
1109	9.21	8.12	216	50	0.07	64.0	1200	9.15
1112	9.04	8.14	226	42	0.10	63.4	1800	9.15
1115	9.06	8.14	224	41	0.09	63.0	2400	9.15
1118	9.00	8.12	220	39	0.09	64.6	3000	9.15

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: 3000 ml
Sampling Time: 1121	Sampling Date: 4/18/22
Sample I.D.: SH-04	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	<u>Other:</u> see COC
Equipment Blank I.D.: @ _____	Duplicate I.D.: _____



# Shell Oil Products US Chain Of Custody Record

LAB (LOCATION)

- ACQUSTEC ( )
- CALSCIENCE ( )
- TESTAMERICA ( )
- Other ( )

### Please Check Appropriate Box:

- SGW FDG
- PIPELINE
- RETAIL
- CHEMICALS
- CONSULTANT
- LUBES
- TRANSPORTATION
- OTHER

Lab Vendor # \_\_\_\_\_

Dropdown

SAMPLING COMPANY:

Blaine Tech Services, Inc

ADDRESS:

1680 Rogers Ave, San Jose, CA, 95112

PROJECT CONTACT (Hardcopy or PDF Report to):

Jacquelyn England

TELEPHONE: (707)523-1010

FAX: jacquelyn.england@ghd.com

TURNAROUND TIME (CALENDAR DAYS):

- STANDARD (14 DAY)
- 5 DAYS
- 3 DAYS
- 2 DAYS
- 24 HOURS
- RESULTS NEEDED ON WEEKEND

LA - RWQCB REPORT FORMAT

- LEVEL 1
- LEVEL 2
- LEVEL 3
- LEVEL 4
- OTHER (SPECIFY) \_\_\_\_\_

DELIVERABLES:

TEMPERATURE ON RECEIPT C° Cooler #1 \_\_\_\_\_ Cooler #3 \_\_\_\_\_

### SPECIAL INSTRUCTIONS OR NOTES:

- SHELL CONTRACT RATE APPLIES
- STATE REIMBURSEMENT RATE APPLIES
- EDD NOT NEEDED
- RECEIPT VERIFICATION REQUESTED
- PROVIDE LEDD DISK

Print Bill To Contact Name:

Planef Site or Project ID:

CHECK IF NO INCIDENT # APPLIES

DATE: 4/18/12

PAGE: 1 of 1

GSAP Project ID

PO #

SITE ADDRESS: Street and City

2555 13th Avenue

State

WA

PHONE NO:

(707)523-1010

EDP DELIVERABLE TO (Name, Company, Office Location):

Jacquelyn England, GHD, Santa Rosa

SAMPLER NUMBER (Print):

jacquelyn.england@ghd.com

Lab# USE ONLY

GHD Project / Task Number:

11218519

AECOM Other ID

Christina Mroz

### REQUESTED ANALYSIS

UNIT COST

NON-UNIT COST

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

ANALYSIS	UNIT COST	NON-UNIT COST
8260C BTEX		
NWTPH-Dx		
8270D SIM PAHs		
300.0 Sulfate		
6020A Total Lead		
353.2 Nitrate & Nitrite		
6020A Diss. Iron & Manganese (lab filter)		
300.0 Chloride		
2320B Alkalinity		

Date:

4/18/12

Time:

1330

Date:

Time:

Date:

Time:

Relinquished by (Signature)

Relinquished by (Signature)

Shipped via UPS

Relinquished by (Signature)

ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

INCIDENT # \_\_\_\_\_  
 DATE: 4/18/22  
 ADDRESS 2555 13th Ave SW  
 CITY & STATE Seattle WA

Well ID	Observations Upon Arrival				Well Pad / Surface Condition	Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	Photos of Well Condition	Repair Date and PM Initials	
	Manway Cover, Type, Condition & Size	Well Labeled / Painted Properly*	Well Cap (Gripper) Condition	Well Lock Condition					
MW-05	Standpipe Flush G P	Y	R	R	G		Y		
MW-11	Standpipe Flush G P	Y	R	R	G	3/3 bolts missing	Y		
MW-12A	Standpipe Flush G P	Y	R	R	G	3/2 bolts missing	Y		
MW-104	Standpipe Flush G P	Y	R	R	G	3/3 bolts missing / no cap	Y		
SH-04	Standpipe Flush G P	Y	R	R	G		Y		
MW-208	Standpipe Flush G P	Y	R	R	G		Y		
MW-210	Standpipe Flush G P	Y	R	R	G		Y		
MW-211	Standpipe Flush G P	Y	R	R	G		Y		
MW-212	Standpipe Flush G P	Y	R	R	G		Y		
	Standpipe Flush G P	Y	R	R	G		Y		
	Standpipe Flush G P	Y	R	R	G		Y		
TOTAL # CAPS REPLACED = 0								TOTAL # OF LOCKS REPLACED = 0	

Remediation Compound Type (Check boxes that apply)	Condition of Enclosure		Condition of Area Inside Enclosure		Compound Security		Emergency Contact Info Visible		Cleaning / Repairs Recommended and Conducted	Photos of Condition	Repair Date and PM Initials
	Condition of Enclosure	Condition of Area Inside Enclosure	Compound Security	Condition of Area Inside Enclosure	Compound Security	Emergency Contact Info Visible	Emergency Contact Info Visible				
NA											
Building											
Building w/ Fence Comp.											
Fenced Compound											
Trailer											
	Does the Label Reveal the Source of the Contents	Y	N	N/A	Y	N	N/A	Y	N	Y	N
	Number of Drums On-site	Y	N	N/A	Y	N	N/A	Y	N	Y	N
	Does the Label Reveal the Source of the Contents	Y	N	N/A	Y	N	N/A	Y	N	Y	N
	Label Correctly and Writing Legible	Y	N	N/A	Y	N	N/A	Y	N	Y	N
	Drum Condition	G	P	N/A	G	P	N/A	Y	N	Y	N
	Confirm Drums Related to Environmental	Y	N	N/A	Y	N	N/A	Y	N	Y	N
	Drums Located to Min Business Interference	Y	N	N/A	Y	N	N/A	Y	N	Y	N
	Detailed Explanation of Any Issues Resolved	All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).									

L. Bures / BTS  
 Print or type Name of Field Personnel & Consultant Company

G = Good (Acceptable) R = Replaced  
 P = Poor (needs attention) NL = No Lock Required  
 Note: All repairs other than locks and grippers require Shell PM approval prior to repair.  
 \* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.  
 Version 2.4, March 2008



## WELL GAUGING DATA

Project # 220627-LPJ Date 6/27/22 Client GHD

Site SHELL HARBOR ISLAND TERMINAL

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
MW-201	1002	2	—	—	—	—	14.06	21.54	↓	
MW-202	0959	2	—	—	—	—	13.23	21.66		
MW-203	1008	2	—	—	—	—	7.02	14.08		
MW-204	0955	2	—	—	—	—	11.18	17.79		
MW-206A	1013	2	—	—	—	—	7.23	16.50		
MW-101	0852	2	—	—	—	—	11.22	20.13		
MW-102	0833	2	—	—	—	—	8.46	17.52		
MW-301	0919	2	odor	—	—	—	5.34	14.62		
MW-302	0811	2	—	—	—	—	5.68	14.99		
MW-303	0923	2	odor	—	—	—	5.38	14.69		
MW-304	0915	2	—	—	—	—	5.45	14.65		
MW-307	0841	2	—	—	—	—	8.61	17.31		
MW-308	0846	2	—	—	—	—	8.34	17.38		
MW-309	0927	2	—	—	—	—	5.51	14.65		
MW-310	0906	2	—	—	—	—	7.08	14.62		
MW-311	0946	2	—	—	—	—	7.69	14.96		
MW-312	0942	2	—	—	—	—	7.56	14.95		

## WELL GAUGING DATA

Project # 220627-LB1 Date 6/27/22 Client GHD

Site SHELL HARBOR ISLAND TERMINAL

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
MW-313	0933	2	—	—	—	—	5.87	13.63	↓	
MW-314	1503	2	—	—	—	—	6.93	14.81		*
MW-315	0937	2	—	—	—	—	7.42	14.58		
TB-MW-1	0857	2	—	—	—	—	9.18	15.49		
TX-03A	1053	2	—	—	—	—	5.17	14.69		
MW-05	0816	2	—	—	—	—	5.73	18.89		
MW-111	0809	2	—	—	—	—	4.67	14.70		
MW-112A	1404	2	—	—	—	—	6.17	14.57		
SH-04	0822	2	—	—	—	—	9.33	18.06		
MW-104	0812	2	—	—	—	—	5.62	14.67		
MW-208	1026	2	—	—	—	—	5.02	13.63		
MW-210	1041	2	Y	6.06	0.15	—	6.21	—		
MW-211	1037	4	Y	—	—	—	5.28	12.94		
MW-212	1033	4	Y	—	—	—	5.90	11.33		
MW-213	1023	2	—	—	—	—	6.88	38.67		
MW-214	1028	2	—	—	—	—	7.74	39.48		
MW-113	0804	2	—	—	—	—	4.76	14.87		
MW-114	0755	2	—	—	—	—	5.03	14.92		
MW-115	0800	2	—	—	—	—	4.74	14.84	↓	

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LB1</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-202</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>21.66</u>	Depth to Water (ft.): <u>13.23</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI Pro DSS</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump  
 Sampling Method: Dedicated Tubing New Tubing Other \_\_\_\_\_  
 Start Purge Time: 1022 Flow Rate: 200 ML/MIN Pump Depth: 18'

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.)
1025	13.8	6.84	648	63	0.89	19.6	600	13.30
1028	14.1	6.89	640	60	0.76	10.4	1200	13.30
1031	14.1	6.92	638	59	0.74	9.1	1800	13.30
1034	14.1	6.93	638	58	0.73	7.8	2400	13.30
1037	14.1	6.96	637	58	0.76	6.3	3000	13.30

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amount actually evacuated: <u>3000ML</u>
Sampling Time: <u>1038</u>	Sampling Date: <u>6/29/22</u>
Sample I.D.: <u>MW-202</u>	Laboratory: <u>TA</u>
Analyzed for: <u>TPH-G</u> <u>BTEX</u> <u>MTBE</u> <u>TPH-D</u>	Other:
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____



## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LB1</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-203</u>	Well Diameter (in.): <u>3</u> 4 6 8 _____
Total Well Depth (ft.): <u>14.08</u>	Depth to Water (ft.): <u>7.02</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSE Pro DSS</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1112      Flow Rate: 200 ML / MIN      Pump Depth: 11'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or <del>µS/cm</del> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1115	13.9	6.46	586	622	0.83	7.4	600	7.18
1118	14.0	6.48	579	517	0.65	10.3	1200	7.18
1121	14.1	6.50	573	513	0.61	11.8	1800	7.18
1124	14.1	6.51	572	511	0.59	12.4	2400	7.18
1127	14.1	6.52	572	512	0.58	12.8	3000	7.18
1130	14.1	6.52	571	513	0.57	13.2	3600	7.18

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: <u>3600 mL</u>
Sampling Time: <u>1131</u>	Sampling Date: <u>6/28/22</u>
Sample I.D.: <u>MW-203</u>	Laboratory: <u>TA</u>
Analyzed for: <u>TPH-G</u> BTEX MTBE <u>TPH-D</u>	Other:
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>Z20027-LB1</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-301</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>14.62</u>	Depth to Water (ft.): <u>5.34</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSE PRO DS</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1011      Flow Rate: 200 mL/MIN      Pump Depth: 11'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or <del>µS/cm</del> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>ML</u> )	Depth to Water (ft.)
1014	15.6	6.53	718	79	0.66	-88.1	600	5.45
1017	15.6	6.54	610	65	0.54	-101.3	1200	5.45
1020	15.8	6.46	604	65	0.47	-103.7	1800	5.45
1023	15.8	6.45	602	64	0.46	-104.8	2400	5.45
1026	15.9	6.45	601	65	0.44	-105.6	3000	5.45

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000 mL</u>
Sampling Time: <u>1027</u>	Sampling Date: <u>6/27/22</u>
Sample I.D.: <u>MW-301</u>	Laboratory: <u>TA</u>
Analyzed for: <u>TPH-G</u> <u>BTEX</u> MTBE TPH-D      Other:	
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220629-LB1</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-302</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>14.99</u>	Depth to Water (ft.): <u>5.68</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSE Pro DS</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump  
 Sampling Method: Dedicated Tubing New Tubing Other \_\_\_\_\_  
 Start Purge Time: 0858 Flow Rate: 200 ML / MIN Pump Depth: 11'

Time	Temp. ( <del>C</del> or °F)	pH	Cond. (mS/cm or <del>uS/cm</del> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <del>ml</del> )	Depth to Water (ft.)
0901	15.8	6.30	936	16	1.51	-96.4	600	5.71
0904	16.0	6.34	939	11	6.88	-111.3	1200	5.71
0907	16.0	6.37	937	10	6.82	-112.9	1800	5.71
0910	16.0	6.39	936	10	6.80	-114.6	2400	5.71
0913	16.0	6.40	936	11	0.79	-115.3	3000	5.71

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amount actually evacuated: <u>3000 mL</u>
Sampling Time: <u>0914</u>	Sampling Date: <u>6/28/22</u>
Sample I.D.: <u>MW-302</u>	Laboratory: <u>TA</u>
Analyzed for: <del>TPH-G</del> <u>BTEX</u> MTBE TPH-D	Other:
Equipment Blank I.D.: <u>@</u> Time	Duplicate I.D.:

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LB</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-303</u>	Well Diameter (in.): <u>(2)</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>14.69</u>	Depth to Water (ft.): <u>5.38</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI PRO DS</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0752      Flow Rate: 200 ML/MIN      Pump Depth: 11'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or <u>µS/cm</u> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>ml</u> )	Depth to Water (ft.)
0755	15.0	6.09	291	16	0.98	-37.3	600	5.41
0758	15.0	6.01	289	13	0.61	-45.8	1200	5.41
0801	15.1	5.97	291	12	0.52	-47.2	1800	5.41
0804	15.1	5.98	298	13	0.51	-48.3	2400	5.41
0807	15.2	6.01	299	13	0.49	-50.1	3000	5.41
0810	15.2	6.03	300	13	0.48	-51.3	3600	5.41

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amount actually evacuated: <u>3600 mL</u>
Sampling Time: <u>0811</u>	Sampling Date: <u>6/28/22</u>
Sample I.D.: <u>MW-303</u>	Laboratory: <u>TA</u>
Analyzed for:      TPH-G    BTEX    MTBE    TPH-D      Other: <u>SEE COL</u>	
Equipment Blank I.D.:      @      Time      Duplicate I.D.:	

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LB1</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-304</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>14.65</u>	Depth to Water (ft.): <u>5.45</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI Pro DSS</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0826      Flow Rate: 200 mL/MIN      Pump Depth: 11'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or <u>µS/cm</u> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>mL</u> )	Depth to Water (ft.)
0829	15.8	6.66	241	24	0.75	19.4	600	5.58
0832	16.0	6.68	236	14	0.55	13.9	1200	5.58
0835	15.9	6.68	233	11	0.50	9.3	1900	5.58
0838	15.9	6.67	231	11	0.48	9.5	2400	5.58
0841	15.9	6.64	230	10	0.46	10.1	3000	5.58
0844	15.9	6.64	230	10	0.45	11.3	3600	5.58

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3600 mL</u>
Sampling Time: <u>0845</u>	Sampling Date: <u>6/28/22</u>
Sample I.D.: <u>MW-304</u>	Laboratory: <u>TA</u>
Analyzed for: <input checked="" type="checkbox"/> TPH-G <input checked="" type="checkbox"/> BTEX MTBE TPH-D	Other:
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.:

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 220627-LR1	Client: GHD
Sampler: LB	Gauging Date: 6/27/22
Well I.D.: MW-307	Well Diameter (in.): (2) 3 4 6 8
Total Well Depth (ft.): 17.31	Depth to Water (ft.): 8.61
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: YSE RW DS

Purge Method: 2" Grundfos Pump                      Peristaltic Pump                      Bladder Pump  
 Sampling Method: Dedicated Tubing                      New Tubing                      Other \_\_\_\_\_  
 Start Purge Time: 1132                      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.)
1135	14.8	6.78	446	23	0.76	47.3	600	8.68
1138	15.1	6.81	431	20	0.70	40.1	1200	8.68
1141	15.2	6.83	430	18	0.69	37.6	1800	8.68
1144	15.2	6.84	429	18	0.68	36.2	2400	8.68
1147	15.2	6.88	430	19	0.66	34.8	3000	8.68

Did well dewater?    Yes    No	Amount actually evacuated: 3000 mL
Sampling Time: 1148	Sampling Date: 6/29/22
Sample I.D.: MW-307	Laboratory: TA
Analyzed for: TPH-G    BTEX    MTBE    TPH-D	Other:
Equipment Blank I.D.: @	Duplicate I.D.:

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LB</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-308</u>	Well Diameter (in.): <u>Ø 3 4 6 8</u> _____
Total Well Depth (ft.): <u>17.38</u>	Depth to Water (ft.): <u>8.34</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSE PRODS</u>

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: 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.)
1205	15.6	6.84	582	118	0.86	47.4	600	8.38
1208	15.4	6.76	460	56	0.74	18.3	1200	8.38
1211	15.4	6.61	441	34	0.71	10.6	1800	8.38
1214	15.3	6.65	440	18	0.68	9.3	2400	8.38
1217	15.3	6.67	440	17	0.67	8.1	3000	8.38
1220	15.3	6.68	439	17	0.66	7.6	3600	8.38

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amount actually evacuated: <u>3600 ML</u>
Sampling Time: <u>1221</u>	Sampling Date: <u>6/29/22</u>
Sample I.D.: <u>MW-308</u>	Laboratory: <u>TA</u>
Analyzed for:      TPH-G    BTEX    MTBE    TPH-D      Other: <u>SEE COC</u>	
Equipment Blank I.D.:      @      Time      Duplicate I.D.:	



## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LB</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-309</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>14.65</u>	Depth to Water (ft.): <u>5.51</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PYC</u> Grade	Flow Cell Type: <u>YSI Pro DSS</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1039      Flow Rate: 200 mL/MIN      Pump Depth: 11'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or <del>µS/cm</del> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1042	14.9	6.45	320	206	1.06	-50.9	600	5.58
1045	15.6	6.43	296	157	0.60	-71.8	1200	5.58
1048	15.9	6.41	288	150	0.53	-79.0	1800	5.58
1051	16.0	6.39	287	151	0.52	-78.3	2400	5.58
1054	16.0	6.35	287	151	0.51	-76.8	3000	5.58

Did well dewater? Yes  No       Amount actually evacuated: 3000 mL

Sampling Time: 1055      Sampling Date: 6/28/22

Sample I.D.: MW-309      Laboratory: TA

Analyzed for: TPH-G BTEX MTBE TPH-D      Other: \_\_\_\_\_

Equipment Blank I.D.: \_\_\_\_\_ @ \_\_\_\_\_ Time      Duplicate I.D.: \_\_\_\_\_

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>Z20627-LB1</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-310</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>14.62</u>	Depth to Water (ft.): <u>6.31</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI Pro DS</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0924      Flow Rate: 200 mL/MIN      Pump Depth: 12'

Time	Temp. (C or °F)	pH	Cond. (mS/cm or <del>µS/cm</del> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>mL</u> )	Depth to Water (ft.)
0927	14.9	6.42	768	51	0.62	-78.0	600	6.43
0930	15.0	6.43	763	37	0.51	-87.9	1200	6.43
0933	15.2	6.44	748	37	0.45	-94.7	1800	6.43
0936	15.3	6.41	751	36	0.42	-96.9	2400	6.43
0939	15.3	6.41	752	37	0.41	-97.3	3000	6.43
0942	15.4	6.41	752	37	0.41	-98.6	3600	6.43

Did well dewater? Yes <u>No</u>	Amount actually evacuated: <u>3600 mL</u>
Sampling Time: <u>0943</u>	Sampling Date: <u>6/28/22</u>
Sample I.D.: <u>MW-310</u>	Laboratory: <u>TA</u>
Analyzed for: <u>TPH-G</u> <u>BTEX</u> MTBE TPH-D	Other:
Equipment Blank I.D.: <u>@</u> Time	Duplicate I.D.:

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LB1</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-311</u>	Well Diameter (in.): <u>Ø 3 4 6 8</u>
Total Well Depth (ft.): <u>14.96</u>	Depth to Water (ft.): <u>7.69</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSE PRO DSS</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1446      Flow Rate: 200 mL/MIN      Pump Depth: 11'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or <del>µS/cm</del> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <del>m³</del> )	Depth to Water (ft.)
1449	15.8	6.34	638	11	0.76	-53.3	600	7.74
1452	15.7	6.43	636	18	0.53	-87.3	1200	7.74
1455	15.7	6.45	635	17	0.49	-95.6	1800	7.74
1458	15.7	6.47	636	17	0.47	-97.2	2400	7.74
1501	15.7	6.48	636	17	0.46	-98.6	3000	7.74

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amount actually evacuated: <u>3000 mL</u>
Sampling Time: <u>1502</u>	Sampling Date: <u>6/28/22</u>
Sample I.D.: <u>MW-311</u>	Laboratory: <u>TA</u>
Analyzed for: <u>TPH-G</u> <u>BTEX</u> MTBE TPH-D	Other:
Equipment Blank I.D.: <u>@</u> Time	Duplicate I.D.:

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LB</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-312</u>	Well Diameter (in.): <u>3</u> 4 6 8 <u>    </u>
Total Well Depth (ft.): <u>14.95</u>	Depth to Water (ft.): <u>7.56</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>VSE PRODS</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1056      Flow Rate: 200 mL / MIN      Pump Depth: 11'

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.)
1059	14.8	6.28	718	81	1.13	113.3	600	7.59
1102	14.5	6.34	640	43	0.96	46.2	1200	7.59
1105	14.5	6.36	636	40	0.88	19.8	1800	7.59
1108	14.4	6.41	636	31	0.81	11.4	2400	7.59
1111	14.5	6.45	634	30	0.80	10.8	3000	7.59
1114	14.5	6.48	625	30	0.78	10.1	3600	7.59

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3600ML</u>
Sampling Time: <u>1115</u>	Sampling Date: <u>6/29/22</u>
Sample I.D.: <u>MW-312</u>	Laboratory: <u>TA</u>
Analyzed for: <u>TPH-G</u> <u>BTEX</u> MTBE TPH-D	Other: _____
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LB1</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-313</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>13.63</u>	Depth to Water (ft.): <u>5.97</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="checkbox"/> <u>PVC</u> Grade	Flow Cell Type: <u>YSE PRO DSS</u>

Purge Method:  2" Grundfos Pump  Peristaltic Pump  Bladder Pump  
 Sampling Method:  Dedicated Tubing  New Tubing  Other \_\_\_\_\_  
 Start Purge Time: 1216 Flow Rate: 200 mL / MIN Pump Depth: 11'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or <u>µS/cm</u> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>mL</u> )	Depth to Water (ft.)
1219	17.1	6.70	652	321	1.35	11.3	600	5.92
1222	17.3	6.69	646	213	1.23	16.8	1200	5.92
1225	17.3	6.70	640	189	1.17	17.3	1800	5.92
1228	17.5	6.69	630	155	1.15	12.9	2400	5.92
1231	17.5	6.67	631	154	1.13	11.3	3000	5.92
1234	17.4	6.65	631	154	1.12	10.8	3600	5.92

Did well dewater? Yes <input checked="" type="checkbox"/> <u>No</u>	Amount actually evacuated: <u>3600 mL</u>
Sampling Time: <u>1235</u>	Sampling Date: <u>6/28/22</u>
Sample I.D.: <u>MW-313</u>	Laboratory: <u>TA</u>
Analyzed for: <input checked="" type="checkbox"/> <u>TPH-G</u> <input checked="" type="checkbox"/> <u>BTEX</u> <input type="checkbox"/> MTBE <input checked="" type="checkbox"/> <u>TPH-D</u>	Other:
Equipment Blank I.D.: <u>@</u>	Duplicate I.D.:

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LB1</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-314</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>14.81</u>	Depth to Water (ft.): <u>6.93</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI Pro DSS</u>

Purge Method: 2" Grundfos Pump      Peristaltic  Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1510      Flow Rate: 200 ML / MIN      Pump Depth: 11'

Time	Temp. ( <u>C</u> or °F)	pH	Cond. (mS/cm or <u>µS/cm</u> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>mL</u> )	Depth to Water (ft.)
1513	15.4	6.37	818	13	0.74	-36.5	600	7.08
1516	15.5	6.38	819	13	0.53	-48.9	1200	7.08
1519	15.6	6.37	818	13	0.49	-54.1	1800	7.08
1522	15.6	6.37	819	14	0.47	-56.9	2400	7.08
1525	15.7	6.36	819	14	0.46	-58.1	3000	7.08

Did well dewater? Yes <input checked="" type="checkbox"/> No	Amount actually evacuated: <u>3000 mL</u>
Sampling Time: <u>1526</u>	Sampling Date: <u>6/28/22</u>
Sample I.D.: <u>MW-314</u>	Laboratory: <u>TA</u>
Analyzed for: <u>TPH-G</u> <u>BTEX</u> MTBE <u>TPH-D</u>	Other:
Equipment Blank I.D.: <u>@</u> Time	Duplicate I.D.:

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>Z20027-LB1</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-315</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 <u>    </u>
Total Well Depth (ft.): <u>14.58</u>	Depth to Water (ft.): <u>7.42</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI Pro DSS</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1147      Flow Rate: 200 mL/MTN      Pump Depth: 11'

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.)
1150	14.4	6.46	594	19	0.75	-67.4	600	7.53
1153	14.3	6.46	589	13	0.57	-77.6	1200	7.53
1156	14.3	6.45	584	14	0.51	-83.0	1800	7.53
1159	14.4	6.44	584	14	0.49	-85.6	2400	7.53
1202	14.4	6.44	583	15	0.48	-86.4	3000	7.53

Did well dewater? Yes  No       Amount actually evacuated: 3000 mL

Sampling Time: 1203      Sampling Date: 6/28/22

Sample I.D.: MW-315      Laboratory: TA

Analyzed for:      TPH-G    BTEX    MTBE    TPH-D      Other: \_\_\_\_\_

Equipment Blank I.D.:      @      Duplicate I.D.: \_\_\_\_\_



## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LB1</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>TX-03A</u>	Well Diameter (in.): <u>Ø</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>14.69</u>	Depth to Water (ft.): <u>5.17</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSE P20 DSS</u>

Purge Method: 2" Grundfos Pump                      Peristaltic Pump                      Bladder Pump  
 Sampling Method: Dedicated Tubing                      New Tubing                      Other \_\_\_\_\_  
 Start Purge Time: 1538                      Flow Rate: 200 mL / MIN                      Pump Depth: 11'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or <del>µS/cm</del> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <del>ml</del> )	Depth to Water (ft.)
1541	14.9	6.54	536	14	0.88	-62.4	600	5.23
1544	15.2	6.53	523	12	0.60	-80.4	1200	5.23
1547	15.3	6.52	520	13	0.53	-87.6	1800	5.23
1550	15.3	6.49	520	13	0.51	-89.5	2400	5.23
1553	15.4	6.49	521	14	0.50	-91.2	3000	5.23

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000 mL</u>
Sampling Time: <u>1554</u>	Sampling Date: <u>6/28/22</u>
Sample I.D.: <u>TX-03A</u>	Laboratory: <u>TA</u>
Analyzed for: <u>TPH-G</u> <u>BTEX</u> MTBE TPH-D                      Other:	
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>Z20627-LB1</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-05</u>	Well Diameter (in.): <u>Ø</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>18.89</u>	Depth to Water (ft.): <u>5.73</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PYC</u> Grade	Flow Cell Type: <u>YSI PRO DSS</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump  
 Sampling Method: Dedicated Tubing New Tubing Other \_\_\_\_\_  
 Start Purge Time: 0805 Flow Rate: 200 ML/MIN Pump Depth: \_\_\_\_\_

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.)
0808	14.9	6.19	352	79	1.00	30.0	600	5.85
0811	15.0	6.19	352	34	0.72	37.4	1200	5.85
0814	15.0	6.19	351	35	0.69	35.8	1800	5.85
0817	15.0	6.21	351	34	0.70	36.1	2400	5.85
0820	15.0	6.21	351	34	0.71	36.9	3000	5.85

Did well dewater? Yes <u>NO</u>	Amount actually evacuated: <u>3000 mL</u>
Sampling Time: <u>0821</u>	Sampling Date: <u>6/29/22</u>
Sample I.D.: <u>MW-05</u>	Laboratory: <u>TA</u>
Analyzed for: <u>TPH-G</u> <u>BTEX</u> <u>MTBE</u> <u>TPH-D</u>	Other:
Equipment Blank I.D.: <u>@</u> Time	Duplicate I.D.:

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LB1</u>	Client: <u>GH0</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-111</u>	Well Diameter (in.): <u>3</u> 4 6 8 _____
Total Well Depth (ft.): <u>14.70</u>	Depth to Water (ft.): <u>4.67</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(VOC)</u> Grade	Flow Cell Type: <u>YSE PRO DS</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1330      Flow Rate: 200 mL / MIN      Pump Depth: 11'

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.)
1333	18.1	6.32	140	31	0.69	-9.8	600	4.73
1336	18.3	6.26	125	34	0.57	0.4	1200	4.73
1339	18.4	6.22	118	35	0.60	8.6	1800	4.73
1342	18.4	6.21	118	34	0.61	10.3	2400	4.73
1345	18.4	6.21	119	34	0.62	11.8	3000	4.73

Did well dewater? Yes <u>NO</u>	Amount actually evacuated: <u>3000 mL</u>
Sampling Time: <u>1346</u>	Sampling Date: <u>6/27/22</u>
Sample I.D.: <u>MW-111</u>	Laboratory: <u>TA</u>
Analyzed for: <u>TPH-C</u> <u>BTEX</u> <u>MTBE</u> <u>TPH-D</u>	Other: <u>SEE COC</u>
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LB1</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-11ZA</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>14.57</u>	Depth to Water (ft.): <u>6.17</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSE PRO DSS</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1410      Flow Rate: 200 mL / MIN      Pump Depth: 11'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or <del>µS/cm</del> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1413	16.2	6.26	262	12	0.88	-10.3	600	6.22
1416	16.3	6.27	269	10	0.62	-25.1	1200	6.22
1419	16.2	6.27	274	13	0.55	-33.9	1800	6.22
1422	16.2	6.27	273	13	0.53	-35.6	2400	6.22
1425	16.2	6.27	272	14	0.52	-37.2	3000	6.22

Did well dewater? Yes  No       Amount actually evacuated: 3000 mL

Sampling Time: 1426      Sampling Date: 6/28/22

Sample I.D.: MW-11ZA      Laboratory: TA

Analyzed for: TPH-C BTEX MTBE TPH-D      Other: \_\_\_\_\_

Equipment Blank I.D.: \_\_\_\_\_ @ \_\_\_\_\_ Time      Duplicate I.D.: \_\_\_\_\_

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LB1</u>	Client: <u>GH0</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>SH-04</u>	Well Diameter (in.): <u>3</u> 4 6 8 _____
Total Well Depth (ft.): <u>18.06</u>	Depth to Water (ft.): <u>9.33</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSE PRO DSS</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1339      Flow Rate: 200 mL / MIN      Pump Depth: 14'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or <del>µS/cm</del> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1342	16.6	6.16	200	18	0.71	-15.6	600	9.44
1345	16.6	6.08	196	15	0.50	-11.7	1200	9.44
1348	16.9	6.05	196	16	0.52	-11.0	1800	9.44
1351	16.9	6.02	197	16	0.50	-11.3	2400	9.44
1354	16.9	6.02	198	16	0.49	-11.9	3000	9.44

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000 mL</u>
Sampling Time: <u>1355</u>	Sampling Date: <u>6/28/22</u>
Sample I.D.: <u>SH-04</u>	Laboratory: <u>TA</u>
Analyzed for: <u>TPH-C</u> <u>BTEX</u> MTBE <u>TPH-D</u>	Other:
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.:

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LB</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-104</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>14.67</u>	Depth to Water (ft.): <u>5.62</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSE PRO DS</u>

Purge Method: 2" Grundfos Pump      Peristaltic  Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0726      Flow Rate: 200 ML/MIN      Pump Depth: 11'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or <u>µS/cm</u> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>ML</u> )	Depth to Water (ft.)
0729	16.8	6.41	336	22	0.75	-34.2	600	5.68
0732	17.0	6.34	319	18	0.63	-41.4	1200	5.68
0735	17.0	6.32	315	14	0.55	-40.6	1800	5.68
0738	17.0	6.33	315	14	0.53	-39.7	2400	5.68
0741	17.0	6.35	314	13	0.52	-38.2	3000	5.68

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000 ML</u>
Sampling Time: <u>0742</u>	Sampling Date: <u>6/29/22</u>
Sample I.D.: <u>MW-104</u>	Laboratory: <u>TA</u>
Analyzed for: <input checked="" type="checkbox"/> TPH-G <input checked="" type="checkbox"/> BTEX    MTBE <input checked="" type="checkbox"/> TPH-D    Other: <u>SEE COL</u>	
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 220627-LB1	Client: GHD
Sampler: LB	Gauging Date: 6/27/22
Well I.D.: MW-113	Well Diameter (in.): <u>2</u> 3 4 6 8 _____
Total Well Depth (ft.): 14.87	Depth to Water (ft.): 4.76
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI PZC DSS</u>

Purge Method: 2" Grundfos Pump                      Peristaltic Pump                      Bladder Pump  
 Sampling Method: Dedicated Tubing                      New Tubing                      Other \_\_\_\_\_  
 Start Purge Time: 1218                      Flow Rate: 200 mL / MIN                      Pump Depth: 11'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or <del>µS/cm</del> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1221	15.5	6.27	294	74	0.76	-32.7	600	4.83
1224	15.4	6.27	292	58	0.65	-35.9	1200	4.83
1227	15.5	6.26	286	40	0.57	-36.2	1800	4.83
1230	15.6	6.25	282	38	0.55	-35.8	2400	4.83
1233	15.5	6.26	284	37	0.55	-36.3	3000	4.83
1236	15.4	6.28	284	37	0.54	-38.4	3600	4.83

Did well dewater? Yes <input checked="" type="checkbox"/> NO	Amount actually evacuated: <u>3600 mL</u>
Sampling Time: <u>1237</u>	Sampling Date: <u>6/27/22</u>
Sample I.D.: <u>MW-113</u>	Laboratory: <u>TA</u>
Analyzed for: <u>TPH-G</u> <u>BTEX</u> <u>MTBE</u> <u>TPH-D</u>	Other: <u>SEE COC</u>
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____



## LOW FLOW WELL MONITORING DATA SHEET

Project #: 220627-LB1	Client: GHD
Sampler: LB	Gauging Date: 6/27/22
Well I.D.: MW-114	Well Diameter (in.): <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8    _____
Total Well Depth (ft.): 14.92	Depth to Water (ft.): 5.03
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSE Pro DSS</u>

Purge Method:  2" Grundfos Pump     Peristaltic Pump     Bladder Pump  
 Sampling Method:  Dedicated Tubing     New Tubing     Other \_\_\_\_\_  
 Start Purge Time: 1141    Flow Rate: 200 mL / MIN    Pump Depth: 11'

Time	Temp. (C or F)	pH	Cond. (mS/cm or $\mu\text{S/cm}$ )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1144	15.5	6.39	144	58	1.43	41.2	600	5.15
1147	15.4	6.28	142	38	1.28	46.6	1200	5.15
1150	15.4	6.19	141	32	1.24	49.2	1800	5.15
1153	15.3	6.17	140	32	1.28	49.6	2400	5.15
1156	15.4	6.16	140	33	1.30	52.12	3000	5.15
1159	15.4	6.16	139	33	1.32	53.6	3600	5.15

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: 3600 mL
Sampling Time: 1200	Sampling Date: 6/27/22
Sample I.D.: MW-114	Laboratory: TA
Analyzed for: <input checked="" type="checkbox"/> TPH-G <input checked="" type="checkbox"/> BTEX <input type="checkbox"/> MTBE <input checked="" type="checkbox"/> TPH-D <input checked="" type="checkbox"/> Other SEE COC	
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____



## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LR1</u>	Client: <u>GHD</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-213</u>	Well Diameter (in.): <u>Ø</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>38.67</u>	Depth to Water (ft.): <u>6.88</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>RVC</u> Grade	Flow Cell Type: <u>YSI Pro DSS</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0849      Flow Rate: 200 ML/MIN      Pump Depth: 35'

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	13.8	7.91	20982	110	0.83	-260.1	600	6.93
0855	13.9	8.01	20943	77	0.63	-282.3	1200	6.93
0858	13.8	8.03	20939	49	0.53	-299.3	1800	6.93
0901	13.8	8.07	20940	27	0.46	-310.1	2400	6.93
0904	13.8	8.08	20937	26	0.44	-312.8	3000	6.93
0907	13.8	8.09	20936	25	0.43	-313.6	3600	6.93

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amount actually evacuated: <u>3600 mL</u>
Sampling Time: <u>0908</u>	Sampling Date: <u>6/29/22</u>
Sample I.D.: <u>MW-213</u>	Laboratory: <u>TA</u>
Analyzed for: <u>TPH-G</u> <u>BTEX</u> MTBE <u>TPH-D</u>	Other: <u>SEE COC</u>
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220627-LRJ</u>	Client: <u>GHP</u>
Sampler: <u>LB</u>	Gauging Date: <u>6/27/22</u>
Well I.D.: <u>MW-214</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>39.48</u>	Depth to Water (ft.): <u>7.74</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>VE</u> Grade	Flow Cell Type: <u>YSI PRO DSS</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0929      Flow Rate: 200 mL / MIN      Pump Depth: 35'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or <del>µS/cm</del> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <del>mls</del> )	Depth to Water (ft.)
0932	14.1	8.46	1403	15	3.77	-213.4	600	7.81
0935	14.3	8.20	1675	15	3.39	-198.1	1200	7.81
0938	14.3	8.00	1681	14	3.30	-194.3	1800	7.81
0941	14.3	7.98	1680	14	3.28	-191.8	2400	7.81
0944	14.3	7.97	1680	13	3.25	-189.6	3000	7.81

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000 mL</u>
Sampling Time: <u>0945</u>	Sampling Date: <u>6/29/22</u>
Sample I.D.: <u>MW-214</u>	Laboratory: <u>TA</u>
Analyzed for: <u>TPH-G</u> <u>BTEX</u> <u>MTBE</u> <u>TPH-D</u> Other: <u>SEE COC</u>	
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

LAB (LOCATION)

ACCUTEST ( )  
 CALSCIENCE ( )  
 TESTAMERICA ( )  
 Other ( )



Shell Oil Products US Chain Of Custody Record

**Please Check Appropriate Box:**  
 SGW FDG  PIPELINE  RETAIL  
 CHEMICALS  CONSULTANT  LUBES  
 TRANSPORTATION  OTHER

Print Bill To Contact Name: \_\_\_\_\_  
 PO # \_\_\_\_\_  
 GSPAP Project ID \_\_\_\_\_

DATE: 6/29/22  
 PAGE: 1 of 3  
 CHECK, IF NO INCIDENT # APPLIES

SAMPLING COMPANY:  
 Blaine Tech Services, Inc  
 ADDRESS: 1680 Rogers Ave, San Jose, CA, 95112  
 PROJECT CONTACT (Hardcopy or PDF Report to):  
 Jacquelyn England  
 TELEPHONE: (707) 523-1010 FAX: \_\_\_\_\_  
 Bill To Contact E-MAIL: jacquelyn.england@ghd.com

SITE ADDRESS: Street and City  
 2555 13th Avenue  
 STATE: WA  
 PHONE NO.: (707) 523-1010  
 E-MAIL: jacquelyn.england@ghd.com  
 GHD Project / Task Number: 11218519  
 AECOM Other ID: \_\_\_\_\_

LAB USE ONLY  
 L. Boxes

TURNAROUND TIME (CALENDAR DAYS):  
 STANDARD (14 DAY)  5 DAYS  3 DAYS  24 HOURS  
 LA - RVQCB REPORT FORMAT  UST AGENCY:  
 LEVEL 1  LEVEL 2  LEVEL 3  LEVEL 4  OTHER (SPECIFY) \_\_\_\_\_  
 DELIVERABLES: Cooler #1 \_\_\_\_\_ Cooler #2 \_\_\_\_\_ Cooler #3 \_\_\_\_\_  
 RESULTS NEEDED ON WEEKEND

REQUESTED ANALYSIS

FIELD NOTES:  
 TEMPERATURE ON RECEIPT C°  
 31°C 3 350  
 Cont'd 1000 I  
 Container PID Readings  
 or Laboratory Notes

SPECIAL INSTRUCTIONS OR NOTES :  
 SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 EDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED  
 PROVIDE LEDD DISK

UNIT COST

NON-UNIT COST

LAB USE ONLY	Field Sample Identification		PRESERVATIVE				NO. OF CONT.
	DATE	TIME	HCL	HNO3	H2SO4	OTHER	
MW-05	6/29/22	0821	6				6
MW-104	6/29/22	0742	7				7
MW-111	6/29/22	1345	6				6
MW-112A	6/29/22	1420	6				6
MW-113	6/29/22	1257	6				6
MW-114	6/29/22	1200	6				6
MW-115	6/29/22	1124	6				6
MW-202	6/29/22	1038	6				6
MW-203	6/29/22	1131	6				6
MW-213	6/29/22	0908	6			Z	8

6260C BTCX	NWTFPH-DX	3000 Sulfate	6270D SIM PAHS	6020A Total Lead	353.2 Nitrate & Nitrite	6020A Diss. Iron & Manganese (lab filter)	3000 Chloride	2320B Alkalinity
X	X			X				
X	X			X				
X	X			X				
X	X			X				
X	X			X				
X	X			X				
X	X			X				
X	X			X				
X	X			X				

Received by: (Signature) \_\_\_\_\_ Date: 7/5/22 Time: 1450  
 Received by: (Signature) \_\_\_\_\_ Date: 7/5/22 Time: 14:53  
 Received by: (Signature) \_\_\_\_\_ Date: 7/5/22 Time: 14:53

# Shell Oil Products US Chain Of Custody Record



LAB (LOCATION)  
 ACCUTEST (\_\_\_\_\_)  
 CALSCIENCE (\_\_\_\_\_)  
 TESTAMERICA (\_\_\_\_\_)  
 Other (\_\_\_\_\_)

**Please Check Appropriate Box:**

SGW FDG     PIPELINE     RETAIL

CHEMICALS     CONSULTANT     LUBES

TRANSPORTATION     OTHER \_\_\_\_\_

**Print Bill To Contact Name:** \_\_\_\_\_

**PlaNNet Site or Project ID** \_\_\_\_\_

**PO #** \_\_\_\_\_

**GSAP Project ID** \_\_\_\_\_

**DATE:** 6/29/22

**PAGE:** 2 of 3

**Lab Vendor #** \_\_\_\_\_ **Dropdown** \_\_\_\_\_

**SAMPLING COMPANY:**  
 Blaine Tech Services, Inc  
 ADDRESS: 1680 Rogers Ave, San Jose, CA, 95112

**LOG CODE:** BTSS

**PROJECT CONTACT (Handcopy or PDF Report to):**  
 Jacquelyn England  
 ADDRESS: Jacquelyn England, GHD, Santa Rosa (707)523-1010

**TELEPHONE:** (707)523-1010    **FAX:** \_\_\_\_\_

**TURNAROUND TIME (CALENDAR DAYS):**  
 STANDARD (1-4 DAY)     5 DAYS     3 DAYS     24 HOURS     RESULTS NEEDED ON WEEKEND

**DELIVERABLES:**  LA - RWQCB REPORT FORMAT     UST AGENCY: \_\_\_\_\_

**LEVEL 1**  **LEVEL 2**  **LEVEL 3**  **LEVEL 4**  **OTHER (SPECIFY)** \_\_\_\_\_

**TEMPERATURE ON RECEIPT C\* Cooler #1** \_\_\_\_\_ **Cooler #2** \_\_\_\_\_ **Cooler #3** \_\_\_\_\_

**SITE ADDRESS: Street and City**  
 2555 13th Avenue    State WA

**PHONE NO.:** (707)523-1010

**E-MAIL:** jacquelyn.england@ghd.com

**GHD Project / Task Number:** 11218519

**AECOM Other ID** \_\_\_\_\_

**SAMPLER NAME(S) (Print):** L. Bures

**LAB USE ONLY**

**REQUESTED ANALYSIS**

LAB USE ONLY	UNIT COST	NON-UNIT COST	FIELD NOTES:
6260C BTEX	6270D SIM PAHs	6020A Total Lead	TEMPERATURE ON RECEIPT C*
NWTPH-DX	300.0 Sulfate	353.2 Nitrate & Nitrite	Container PID Readings or Laboratory Notes
6270D SIM PAHs		6020A Diss. Iron & Manganese (lab filter)	
NWTPH-GX		300.0 Chloride	
		2320B Alkalinity	

**SPECIAL INSTRUCTIONS OR NOTES :**

SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 EDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED  
 PROVIDE LEOD DISK

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE				NO. OF CONT.
		DATE	TIME		HCL	HNO3	H2SO4	NONE	
	MW-214	6/29/22	0945	W/G	6			2	8
	MW-301	6/29/22	1027	W/G	4				4
	MW-302	6/29/22	0914	W/G	4				4
	MW-303	6/29/22	0811	W/G	4				4
	MW-304	6/29/22	0845	W/G	4				4
	MW-307	6/29/22	1148	W/G	6				6
	MW-308	6/29/22	1221	W/G	4				4
	MW-309	6/29/22	1056	W/G	4				4
	MW-310	6/29/22	0945	W/G	4				4
	MW-311	6/29/22	1502	W/G	4				4

Received by: (Signature) \_\_\_\_\_ Date: 7/5/22 Time: 1450

Received by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

# Shell Oil Products US Chain Of Custody Record



LAB (LOCATION)

- ACCUTEST ( )
- CALSCIENCE ( )
- TESTAMERICA ( )
- Other ( )

Lab Vendor #

Dropdown

**Please Check Appropriate Box:**

- SGW FOG
- PIPELINE
- RETAIL
- CHEMICALS
- CONSULTANT
- LUBES
- TRANSPORTATION
- OTHER

Print Bill To Contact Name:

Platlet Site or Project ID

CHECK IF NO INCIDENT # APPLIES

DATE: 6/29/22

PAGE: 3 of 3

GSAP Project ID

STATE CODE: WA

SITE ADDRESS: Street and City  
**2555 13th Avenue**

EDF DELIVERABLE TO (Name, Company, Office Location)  
 Jacquelyn England, GHD, Santa Rosa

PHONE NO: (707)523-1010

E-MAIL: jacqueyn.england@ghd.com

SAMPLER NAME(S) (Print):  
**L. BORES**

LAB USE ONLY

GHD Project / Task Number:  
 11218519

SAMPLING COMPANY:  
**Blaine Tech Services, Inc**

ADDRESS:  
 1680 Rogers Ave, San Jose, CA, 95112

PROJECT CONTACT (Hierarchy or PDF Report to):  
 Jacquelyn England

TELEPHONE: (707)523-1010

FAX: jacqueyn.england@ghd.com

BIT To Contact E-MAIL:

LOG CODE:  
 BTSS

TURNAROUND TIME (CALENDAR DAYS):  
 STANDARD (14 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS  RESULTS NEEDED ON WEEKEND

LA - RWQCB REPORT FORMAT  UST AGENCY:

DELIVERABLES:  LEVEL 1  LEVEL 2  LEVEL 3  LEVEL 4  OTHER (SPECIFY) \_\_\_\_\_

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

**REQUESTED ANALYSIS**

**SPECIAL INSTRUCTIONS OR NOTES :**

LAB USE ONLY	FIELD SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE	NO. OF CONT.	UNIT COST	NON-UNIT COST	FIELD NOTES:
	MW-312	6/29/22	1115	W/G	HCL	4	8270C SIM PAHS	300.0 Sulfate	
	MW-313	6/29/22	1235	W/G	HNO3	6	NWTFH-DX	300.0 Chloride	
	MW-314	6/29/22	1526	W/G	NONE	6	8260C BTEX	6020A Total Lead	
	MW-315	6/29/22	1703	W/G	OTHER	6		6020A Dis. Iron & Manganese (lab filter)	
	SB-04	6/29/22	1355	W/G		6		353.2 Nitrate & Nitrite	
	TX-03A	6/29/22	1534	W/G		4		6020A Dis. Iron & Manganese (lab filter)	
	TB-1	6/29/22	0800	W/G		2		2320B Alkalinity	
									Container PID Readings or Laboratory Notes

SPECIAL INSTRUCTIONS OR NOTES :

- SHELL CONTRACT RATE APPLIES
- STATE REIMBURSEMENT RATE APPLIES
- EDD NOT NEEDED
- RECEIPT VERIFICATION REQUESTED
- PROVIDE LEDD DISK

Relinquished by (Signature):

Relinquished by (Signature):

Relinquished by (Signature):

Date: 7/5/22 Time: 1450

# TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME		HARBOR ISLAND TERMINAL			PROJECT NUMBER			220627-LB1	
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS		
YSE ProDSS	BTS #4	6/27/22 0545	PH 4.0 7.0 10.0 COND 3900 ORP	3.98 ✓ 7.02 ✓ 10.00 ✓ 3900 ✓	—	20.3	LB		
			237.5 DO	238.4 ✓ 98.6% ✓	—	20.4	LB		
YSE ProDSS	BTS #4	6/28/22 0540	PH 4.0 7.0 10.0 COND 8900 ORP	4.01 ✓ 7.00 ✓ 9.99 ✓ 3901 ✓	—	20.4	LB		
			237.5 DO	236.4 ✓ 100.4% ✓	—	20.4	LB		
YSE ProDSS	BTS #4	6/29/22 0530	PH 4.0 7.0 10.0 COND 3900 ORP	3.96 ✓ 7.02 ✓ 10.03 ✓ 3898 ✓	—	20.3	LB		
			237.5 DO	236.9 ✓ 97.3% ✓	—	20.5	LB		
			100%		—	—	LB		



3Q Groundwater Monitoring Program Field Form

Shell Harbor Island Terminal

Seattle, Washington

Well ID	3rd Quarter Program					Total Depth (ft bgs)	Screened Interval (ft bgs)	Comments (note if absorbant sock is changed)
	Date Gauged	Time Gauged	Depth to Water	Depth to Product	Sample Analytes			
<b>TX-03A Area - North Tank Farm</b>								
MW-201	9/19/22	1107	14.31	--	--	15	5.0 - 14.5	—
MW-202	1058-9/19/22	1135	13.84	--	--	15	5.0 - 14.5	—
MW-203	9/19/22	1135	11.58 <sup>50</sup>	--	--	15	5.0 - 14.5	—
MW-204	9/19/22	1116	11.58	--	--	15	5.0 - 14.5	—
MW-206A	9/19/22	1140	4.23	--	--	15	5.0 - 14.5	—
<b>TX-03A Area - Excluding North Tank Farm</b>								
MW-101	9/19/22	1240	11.79	--	--	15	5.0 - 14.5	—
MW-102	9/19/22	1218	9.44	--	--	15	5.0 - 14.5	—
MW-301	9/19/22	1315	6.95	--	BTEX, Gx	15	5.0 - 15.0	—
MW-302	9/19/22	1300	7.38	--	BTEX, Gx	15	5.0 - 15.0	—
MW-303	9/19/22	1319	7.02	--	BTEX, Gx	15	5.0 - 15.0	—
MW-304	9/19/22	1304	7.03	--	BTEX, Gx	15	5.0 - 15.0	—
MW-307	9/19/22	1227	9.17	--	BTEX, Gx	15	5.0 - 15.0	—
MW-308	9/19/22	1225	8.85	--	BTEX, Gx	15	5.0 - 15.0	—
MW-309	9/19/22	0810	7.20	--	--	15	5.0 - 15.0	—
MW-310	9/19/22	1256	8.08	--	BTEX, Gx	15	5.0 - 15.0	—
MW-311	9/19/22	1331	4.23	--	BTEX, Gx	15	5.0 - 15.0	—
MW-312	9/19/22	1336	7.11	--	BTEX, Gx	15	5.0 - 15.0	—
MW-313	9/19/22	1348	7.30	--	BTEX, Gx, Dx	15	5.0 - 15.0	—
MW-314	9/19/22	1358	8.41	--	BTEX, Gx, Dx	15	5.0 - 15.0	—
MW-315	9/19/22	1342	9.08	--	BTEX, Gx, Dx	15	5.0 - 15.0	—
TES-MW-1	9/19/22	1245	10.50	--	--	18	3.0 - 18.0	—
TX-03A	9/19/22	1310	6.75	--	BTEX, Gx	16	6.0 - 16.0	—
<b>Shoreline Manifold Area</b>								
MW-208	9/19/22	1011	5.58	—	--	16.5	5.0 - 14.5	—
MW-210	9/19/22	1028	6.99	—	--	15	unknown	Absorbant sock replaced
MW-211	9/19/22	1022	5.93	—	--	13	5.0 - 13.0	—
MW-212	9/19/22	1017	6.19	—	--	12	unknown	Absorbant sock replaced

Notes:

BTEX = benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8260B

ft bgs = feet below ground surface

TPH-Gx = total petroleum hydrocarbons as gasoline by NWTPH-Gx

TPH-Dx = total petroleum hydrocarbons as diesel by NWTPH-Dx

Monitoring Well Gauging Field Log - Shoreline  
Shell Harbor Island Terminal  
Seattle, Washington

Date Gauged: 9/19/22  
Personnel: Sarah Davis

Well ID	Time Gauged	Depth to Water	Depth to Product	Comments
MW-208	1011	5.58	—	—
MW-210	1029	6.99	—	Absorbant sock* replaced
MW-211	1022	5.93	—	—
MW-212	1017	6.19	—	Absorbant sock* replaced

\* Please specify if the absorbant sock was changed.

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220919-JM</u>	Client: <u>GHO Shell</u>
Sampler: <u>JD</u>	Gauging Date: <u>9/21/22</u>
Well I.D.: <u>MU-301</u>	Well Diameter (in.): <u>(2)</u> 3 4 6 8 <u>    </u>
Total Well Depth (ft.): <u>14.70</u>	Depth to Water (ft.): <u>6.95</u>
Depth to Free Product: <u>    </u>	Thickness of Free Product (feet): <u>    </u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other       
 Start Purge Time: 0835      Flow Rate: 200ml/m      Pump Depth: 11ft

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.)
0838	16.57	6.61	0.411	48	1.04	332.4	600	6.95
0841	16.50	6.46	0.405	48	0.98	334.2	1200	6.95
0844	16.47	6.42	0.405	41	0.93	336.1	1800	6.95
0847	16.44	6.40	0.403	40	0.92	337.0	2400	6.95
0850	16.48	6.40	0.402	42	0.90	335.6	3000	6.95

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>0851</u>	Sampling Date: <u>9/21/22</u>
Sample I.D.: <u>MW-301</u>	Laboratory: <u>TA</u>
Analyzed for:      TPH-G    BTEX    MTBE    TPH-D <u>(Other)</u> <u>SOE COC</u>	
Equipment Blank I.D.: <u>    </u> @ <u>    </u> Time	Duplicate I.D.: <u>    </u>

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220919-JD1</u>	Client: <u>GHD Shell</u>
Sampler: <u>JD</u>	Gauging Date: <u>9/21/22</u>
Well I.D.: <u>MW-302</u>	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): <u>15.00</u>	Depth to Water (ft.): <u>7.38</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0737      Flow Rate: 200ml/min      Pump Depth: 11 ft

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.)
0740	17.21	7.42	0.557	39	0.27	338.9	600	7.38
0743	17.03	7.35	0.553	27	0.21	340.7	1200	7.38
0746	16.96	7.27	0.550	21	0.11	343.3	1800	7.38
0749	16.95	7.23	0.550	20	0.10	344.2	2400	7.38
0752	16.92	7.22	0.550	18	0.09	343.0	3000	7.38

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>0753</u>	Sampling Date: <u>9/21/22</u>
Sample I.D.: <u>MW-302</u>	Laboratory: <u>IA</u>
Analyzed for:      TPH-G    BTEX    MTBE    TPH-D      Other <input checked="" type="checkbox"/> <u>see \$COC</u>	
Equipment Blank I.D.: <u>@</u> Time	Duplicate I.D.: <u>—</u>

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220919-501</u>	Client: <u>GAD Shell</u>
Sampler: <u>50</u>	Gauging Date: <u>9/21/22</u>
Well I.D.: <u>MW-303</u>	Well Diameter (in.): <u>2</u> 4 6 8
Total Well Depth (ft.): <u>14.76</u>	Depth to Water (ft.): <u>7.02</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0904      Flow Rate: 200ml/m      Pump Depth: 11ft

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.)
0907	16.13	6.75	0.663	34	0.27	340.8	600	7.27
0910	15.88	6.67	0.651	28	0.16	342.7	1200	7.27
0913	15.82	6.49	0.646	26	0.12	343.5	1800	7.27
0916	15.78	6.48	0.643	24	0.10	344.1	2400	7.27
0919	15.76	6.45	0.641	23	0.09	343.4	3000	7.27

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>0920</u>	Sampling Date: <u>9/21/22</u>
Sample I.D.: <u>MW-303</u>	Laboratory: <u>TA</u>
Analyzed for:      TPH-G    BTEX    MTBE    TPH-D <u>Other</u> <u>Sec coc</u>	
Equipment Blank I.D.: <u>@</u> _____	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220919-501</u>	Client: <u>GHD Shell</u>
Sampler: <u>JD</u>	Gauging Date: <u>9/20/22</u>
Well I.D.: <u>MW-304</u>	Well Diameter (in.): <u>(2)</u> 3 4 6 8 <u>    </u>
Total Well Depth (ft.): <u>14.65</u>	Depth to Water (ft.): <u>7.03</u>
Depth to Free Product: <u>    </u>	Thickness of Free Product (feet): <u>    </u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-586</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other       
 Start Purge Time: 1340      Flow Rate: 200 ml/m      Pump Depth: 11 ft

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.)
1343	18.41	6.55	0.345	23	0.49	341.7	600	7.27
1346	18.25	6.42	0.345	15	0.20	344.1	1200	7.40
1349	18.16	6.33	0.345	13	0.13	346.7	1800	7.56
1352	18.12	6.31	0.345	12	0.12	348.0	2400	7.73
1355	18.11	6.28	0.345	12	0.11	349.1	3000	7.73

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000 ml</u>
Sampling Time: <u>1356</u>	Sampling Date: <u>9/20/22</u>
Sample I.D.: <u>MW-304</u>	Laboratory: <u>TA</u>
Analyzed for:      TPH-G    BTEX    MTBE    TPH-D      Other <u>see COC</u>	
Equipment Blank I.D.: <u>@</u>	Duplicate I.D.: <u>    </u>

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 220919-501	Client: GHD Shell
Sampler: JD	Gauging Date: 9/20/22
Well I.D.: MW-307	Well Diameter (in.): (2) 3 4 6 8
Total Well Depth (ft.): 17.43	Depth to Water (ft.): 9.17
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0825      Flow Rate: 200 ml/m      Pump Depth: 13.5 ft

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.)
0828	18.78	7.28	0.679	21	0.23	343.7	600	9.17
0831	18.65	7.10	0.688	17	0.20	340.6	1200	9.17
0834	18.43	7.11	0.685	15	0.20	339.4	1800	9.17
0837	18.40	7.11	0.685	14	0.19	340.4	2400	9.17
0840	18.41	7.13	0.685	13	0.18	341.8	3000	9.17

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

Sampling Time: 0841      Sampling Date: 9/20/22

Sample I.D.: MW-307      Laboratory: TA

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

Equipment Blank I.D.: @ \_\_\_\_\_      Duplicate I.D.: \_\_\_\_\_

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220919-JD</u>	Client: <u>BHD Shell</u>
Sampler: <u>JD</u>	Gauging Date: <u>9/20/22</u>
Well I.D.: <u>MW-308</u>	Well Diameter (in.): <u>(2)</u> 3 4 6 8
Total Well Depth (ft.): <u>17.29</u>	Depth to Water (ft.): <u>8.85</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0907      Flow Rate: 200ml/m      Pump Depth: 13 ft

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.)
0910	18.17	6.98	0.739	42	0.41	328.6	600	8.85
0913	17.94	7.07	0.733	38	0.37	333.5	1200	8.85
0916	17.71	7.11	0.727	31	0.33	335.2	1800	8.85
0919	17.75	7.08	0.726	29	0.31	337.0	2400	8.85
0922	17.72	7.08	0.723	28	0.29	337.8	3000	8.85

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>0923</u>	Sampling Date: <u>9/20/22</u>
Sample I.D.: <u>MW-308</u>	Laboratory: <u>TA</u>
Analyzed for:      TPH-G    BTEX    MTBE    TPH-D <u>(Other)</u> <u>see COC</u>	
Equipment Blank I.D.: <u>@</u> _____ Duplicate I.D.: _____	





## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220919-501</u>	Client: <u>GHO Shell</u>
Sampler: <u>JD</u>	Gauging Date: <u>9/20/22</u>
Well I.D.: <u>MW-311</u>	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): <u>15.02</u>	Depth to Water (ft.): <u>9.23</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>V51-550</u>

Purge Method: <u>2" Grundfos Pump</u>	<u>Peristaltic</u> Pump	Bladder Pump
Sampling Method: <u>Dedicated</u> Tubing	New Tubing	Other <u>—</u>
Start Purge Time: <u>1141</u>	Flow Rate: <u>200ml/min</u>	Pump Depth: <u>12ft</u>

Time	Temp. ( <u>C</u> or °F)	pH	Cond. ( <u>ms/cm</u> or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>ml</u> )	Depth to Water (ft.)
1144	20.07	6.57	0.770	12	0.15	370.8	600	9.23
1147	19.98	6.50	0.767	10	0.09	373.9	1200	9.23
1150	19.96	6.48	0.765	7	0.05	376.2	1800	9.23
1153	19.93	6.45	0.765	7	0.04	378.5	2400	9.23
1156	19.90	6.42	0.764	6	0.03	380.4	3000	9.23

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>1157</u>	Sampling Date: <u>9/20/22</u>
Sample I.D.: <u>MW-311</u>	Laboratory: <u>TA</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>see COC</u>
Equipment Blank I.D.: <u>@</u>	Duplicate I.D.: <u>—</u>

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>2204 19-501</u>	Client: <u>GHD Shell</u>
Sampler: <u>5D</u>	Gauging Date: <u>9/20/22</u>
Well I.D.: <u>MW-312</u>	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): <u>14.88</u>	Depth to Water (ft.): <u>7.11</u>
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 110      Flow Rate: 200 ml/m      Pump Depth: 11ft

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	20.11	6.96	0.722	17	0.58	354.1	600	7.17
1116	19.97	6.91	0.718	15	0.41	352.0	1200	7.35
1119	19.85	6.81	0.715	10	0.34	359.8	1800	7.62
1122	19.83	6.79	0.715	10	0.33	360.7	2400	7.81
1125	19.81	6.80	0.714	9	0.32	361.9	3000	7.81

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>1126</u>	Sampling Date: <u>9/20/22</u>
Sample I.D.: <u>MW-312</u>	Laboratory: <u>TA</u>
Analyzed for:      TPH-G    BTEX    MTBE    TPH-D      Other: <u>see COC</u>	
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <del>22092</del> 220914-501	Client: GHD Shell
Sampler: JD	Gauging Date: 9/20/22
Well I.D.: MW-313	Well Diameter (in.): (2) 3 4 6 8
Total Well Depth (ft.): 13.67	Depth to Water (ft.): 7.30
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: PVC Grade	Flow Cell Type: YS-556

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1040      Flow Rate: 200 ml/min      Pump Depth: \_\_\_\_\_

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.)
1043	20.65	7.21	0.591	36	0.14	368.4	600	7.38
1046	20.83	7.11	0.583	28	0.10	371.0	1200	7.60
1049	20.90	7.03	0.577	24	0.07	373.9	1800	7.60
1052	20.98	6.92	0.575	23	0.06	376.5	2400	7.60
1055	21.00	6.99	0.573	24	0.05	378.8	3000	7.60

Did well dewater? Yes  No       Amount actually evacuated: 3000 mL

Sampling Time: 1056      Sampling Date: 9/20/22

Sample I.D.: MW-313      Laboratory: TA

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

Equipment Blank I.D.: @ \_\_\_\_\_      Duplicate I.D.: \_\_\_\_\_

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220919-JD1</u>	Client: <u>GHD Shell</u>
Sampler: <u>JD</u>	Gauging Date: <u>9/20/22</u>
Well I.D.: <u>MW-314</u>	Well Diameter (in.): <u>(2)</u> 3 4 6 8
Total Well Depth (ft.): <u>14.75</u>	Depth to Water (ft.): <u>8.41</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1426      Flow Rate: 200ml/m      Pump Depth: 11.5ft

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.)
1429	14.47	6.67	0.648	21	0.20	347.1	600	8.41
1432	19.34	6.57	0.645	18	0.13	348.0	1200	8.41
1435	19.28	6.50	0.641	15	0.10	350.6	1800	8.41
1438	19.26	6.46	0.640	14	0.11	352.9	2400	8.41
1441	19.23	6.48	0.638	13	0.10	351.7	3000	8.41

Did well dewater? Yes <input type="checkbox"/> <u>No</u>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>1442</u>	Sampling Date: <u>9/20/22</u>
Sample I.D.: <u>MW-314</u>	Laboratory: <u>TA</u>
Analyzed for:      TPH-G    BTEX    MTBE    TPH-D <u>Other: see COC</u>	
Equipment Blank I.D.: <u>@</u> Time	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220919-501</u>	Client: <u>GHD Shell</u>
Sampler: <u>JD</u>	Gauging Date: <u>9/20/22</u>
Well I.D.: <u>MW-315</u>	Well Diameter (in.): <u>(2)</u> 3 4 6 8 <u>    </u>
Total Well Depth (ft.): <u>14.95</u>	Depth to Water (ft.): <u>9.08</u>
Depth to Free Product: <u>    </u>	Thickness of Free Product (feet): <u>    </u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: <u>2" Grundfos Pump</u>	<u>Peristaltic Pump</u>	Bladder Pump
Sampling Method: <u>Dedicated Tubing</u>	<u>New Tubing</u>	Other <u>    </u>
Start Purge Time: <u>1007</u>	Flow Rate: <u>200 ml/m</u>	Pump Depth: <u>12ft</u>

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.)
1010	18.02	7.47	0.635	10	0.32	348.7	600	9.08
1013	17.88	7.41	0.635	6	0.18	350.6	1200	9.08
1016	17.83	7.35	0.635	5	0.12	353.0	1800	9.08
1019	17.81	7.33	0.635	5	0.11	354.9	2400	9.08
1022	17.79	7.32	0.634	5	0.10	356.7	3000	9.08

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3600 ml</u>
Sampling Time: <u>1023</u>	Sampling Date: <u>9/20/22</u>
Sample I.D.: <u>MW-315</u>	Laboratory: <u>TA</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>SOC COC</u>
Equipment Blank I.D.: <u>@</u>	Duplicate I.D.: <u>    </u>

### LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>220919-J01</u>	Client: <u>GHO Shell</u>
Sampler: <u>JD</u>	Gauging Date: <u>9/21/22</u>
Well I.D.: <u>TX-03A</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 <u>    </u>
Total Well Depth (ft.): <u>14.78</u>	Depth to Water (ft.): <u>6.75</u>
Depth to Free Product: <u>    </u>	Thickness of Free Product (feet): <u>    </u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>VSI-556</u>

Purge Method:            2" Grundfos Pump                            Peristaltic Pump                            Bladder Pump  
 Sampling Method:        Dedicated Tubing    New Tubing    Other \_\_\_\_\_  
 Start Purge Time: 0810    Flow Rate: 200ml/m    Pump Depth: 11ft

Time	Temp. ( <u>C</u> or °F)	pH	Cond. (mS/cm or <u>µS/cm</u> )	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
0813	17.03	7.58	0.483	42	0.51	340.6	600	6.92
0816	16.97	7.42	0.479	37	0.47	344.9	1200	6.92
0819	16.90	7.33	0.475	32	0.44	347.0	1800	6.92
0820	16.88	7.30	0.475	30	0.42	348.2	2400	6.92
0823	16.84	7.29	0.473	29	0.41	348.7	3000	6.92

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>0824</u>	Sampling Date: <u>9/21/22</u>
Sample I.D.: <u>TX-03A</u>	Laboratory: <u>TA</u>
Analyzed for:            TPH-G    BTEX    MTBE    TPH-D    Other: <u>see COC</u>	
Equipment Blank I.D.: <u>    </u> @ <u>    </u> Time	Duplicate I.D.: <u>    </u>



# Shell Oil Products US Chain Of Custody Record

LAB (LOCATION)

- ACCUTEST ( )
- CALSCIENCE ( )
- TESTAMERICA ( )
- Other ( )

### Please Check Appropriate Box:

- 5GW FDG
- PIPELINE
- RETAIL
- CHEMICALS
- CONSULTANT
- LUBES
- TRANSPORTATION
- OTHER

Lab Vendor # \_\_\_\_\_ Dropdown

SAMPLING COMPANY:

Blaine Tech Services, Inc

ADDRESS:

1680 Rogers Ave, San Jose, CA, 95112

PROJECT CONTACT (Hardcopy or PDF Report to):

Jacquelyn England

PHONE:

(707)523-1010

FAX:

jacquelyn.england@ghd.com

TURNAROUND TIME (CALENDAR DAYS):

STANDARD (14 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS

RESULTS NEEDED ON WEEKEND

DELIVERABLES:  LEVEL 1  LEVEL 2  LEVEL 3  LEVEL 4  OTHER (SPECIFY) \_\_\_\_\_

LA - RWQCB REPORT FORMAT  UST AGENCY:

TEMPERATURE ON RECEIPT C° Cooler #1 \_\_\_\_\_ Cooler #2 \_\_\_\_\_ Cooler #3 \_\_\_\_\_

### SPECIAL INSTRUCTIONS OR NOTES :

- SHELL CONTRACT RATE APPLIES
- STATE REIMBURSEMENT RATE APPLIES
- EDD NOT NEEDED
- RECEIPT VERIFICATION REQUESTED
- PROVIDE LEDD DISK

Print Bill To Contact Name:

PO # \_\_\_\_\_

SITE ADDRESS: Street and City

2555 13th Avenue

State

WA

E-MAIL:

jacquelyn.england@ghd.com

GHD Project / Task Number:

11218519

REC'DM Other ID

LAB USE ONLY

LAB USE ONLY

Jacquelyn England, GHD, Santa Rosa  
SAMPLER NAME(S) (PRINT)  
*Jorah Davis*

### REQUESTED ANALYSIS

UNIT COST	NON-UNIT COST	FIELD NOTES:
8260C BTEX		
NMTPH-DX		
8270D SIM PAHs		
300.0 Sulfate		
6020A Total Lead		
353.2 Nitrate & Nitrite		
6020A Diss. Iron & Manganese (lab filter)		
300.0 Chloride		
2320B Alkalinity		

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification		SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE			NO. OF CONT.
	MW	WT				HCL	HNO3	H2SO4	
	MW-301	WT	9/14/22	0851		X			4
	MW-302		9/14/22	0753		X			4
	MW-303		9/14/22	0920		X			4
	MW-304		9/14/22	1356		X			4
	MW-307		9/14/22	0841		X			4
	MW-308		9/14/22	0923		X			4
	MW-310		9/14/22	1316		X			4
	MW-311		9/14/22	1157		X			4
	MW-312		9/14/22	1126		X			4
	MW-313		9/14/22	1056		X			6

Reimplied by (Signature)

*[Signature]*

Reimplied by (Signature)

Received by (Signature)

*Shipped Via Fed Ex*

Date:

9/21/22

Time:

1530

Date:

Time:

Date:

Time:





# Shell Oil Products US Chain Of Custody Record

LAB (LOCATION)

- ACCUEST ( )
- CALSCIENCE ( )
- TESTAMERICA ( )
- Other ( )

### Please Check Appropriate Box:

- SGW FDG
- PIPELINE
- RETAIL
- CHEMICALS
- CONSULTANT
- LUBES
- TRANSPORTATION
- OTHER

Lab Vendor # Dropdown

SAMPLING COMPANY:

Blaine Tech Services, Inc

ADDRESS:

1680 Rogers Ave, San Jose, CA, 95112

PROJECT CONTACT (Hardcopy or PDF Report to):

Jacquelyn England

TELEPHONE: (707)523-1010

FAX:

jacquelyn.england@ghd.com

TURNAROUND TIME (CALENDAR DAYS):

STANDARD (1-4 DAY)

5 DAYS

3 DAYS

2 DAYS

24 HOURS

RESULTS NEEDED ON WEEKEND

LA - RWQCB REPORT FORMAT

UST AGENCY:

LEVEL 1

LEVEL 2

LEVEL 3

LEVEL 4

OTHER (SPECIFY) \_\_\_\_\_

COOLER #1

COOLER #2

COOLER #3

### SPECIAL INSTRUCTIONS OR NOTES:

- SHELL CONTRACT RATE APPLIES
- STATE REIMBURSEMENT RATE APPLIES
- EDD NOT NEEDED
- RECEIPT VERIFICATION REQUESTED
- PROVIDE LEDD DISK

Print Bill To Contact Name:

PlaNNet Site or Project ID

CHECK IF NO INCIDENT # APPLIES

DATE: 9/21/22

PAGE: 2 of 2

PO #

GSAP Project ID

SITE ADDRESS: Street and City

2555 13th Avenue

State

WA

PHONE NO.:

(707)523-1010

GHD Project / Task Number:

11218519

REGON CHR# ID

E-MAIL:

jacquelyn.england@ghd.com

LAB USE ONLY

Jonah Davis

### REQUESTED ANALYSIS

UNIT COST

NON-UNIT COST

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

8280C BTEX

NWTPH-DX

870D SIM PAHs

300.0 Sulfide

6020A Total Lead

353.2 Nitrate & Nitrite

6020A Disc. Iron & Manganese (lab filter)

300.0 Chloride

2320B Alkalinity

### Field Sample Identification

LAB USE ONLY	DATE	TIME	MATRIX	PRESERVATIVE			NO. OF CONT.
				HCL	HNO3	H2SO4	
MW-314	9/20/22	1442	WT	X			6
MW-315	9/20/22	1023		X			6
TX-03A	9/21/22	0624		X			4
TB-1	9/20/22	0900	↓	X			2

Relinquished by (Signature)

*[Signature]*

Received by (Signature)

Shipped via Fed Ex

Date:

9/21/22

Time:

1530

Relinquished by (Signature)

Received by (Signature)

Date:

Time:

Relinquished by (Signature)

Received by (Signature)

Date:

Time:

ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

ADDRESS 2555 13th Ave SW

INCIDENT # 220919-501

CITY & STATE Seattle WA

DATE: 9/19/22

Well ID	Manway Cover, Type, Condition & Size			Observations Upon Arrival			Well Pad / Surface Condition	Well Lock Condition	Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	Photos of Well Condition	Repair Date and PM Initials	
	Standpipe	Flush	Size (inch)	Well Labeled / Painted Properly*	Well Cap (Gripper) Condition	Well Lock Condition						
MW-201	Standpipe	Flush	2	Y	G	R	G	NL		Y	N	
MW-202	Standpipe	Flush	2	Y	G	R	G	NL		Y	N	
MW-203	Standpipe	Flush	2	Y	G	R	G	NL		Y	N	
MW-204	Standpipe	Flush	2	Y	G	R	G	NL		Y	N	
MW-206A	Standpipe	Flush	2	Y	G	R	G	NL		Y	N	
MW-101	Standpipe	Flush	2	Y	G	R	G	NL		Y	N	
MW-102	Standpipe	Flush	2	Y	G	R	G	NL		Y	N	
MW-301	Standpipe	Flush	2	Y	G	R	G	NL		Y	N	
MW-302	Standpipe	Flush	2	Y	G	R	G	NL		Y	N	
MW-303	Standpipe	Flush	2	Y	G	R	G	NL		Y	N	
MW-304	Standpipe	Flush	2	Y	G	R	G	NL		Y	N	
TOTAL # CAPS REPLACED =							0					
TOTAL # OF LOCKS REPLACED							0					

Remediation Compound Type (Check boxes that apply)	Condition of Enclosure		Condition of Area Inside Enclosure		Compound Security		Emergency Contact Info Visible		Cleaning / Repairs Recommended and Conducted	Photos of Condition	Repair Date and PM Initials
	Condition of Enclosure	Condition of Area Inside Enclosure	Compound Security	Condition of Area Inside Enclosure	Emergency Contact Info Visible	Photos of Condition					
NA	G	P	N/A							Y	N
Building	G	P	N/A	G	P	N/A	Y	N		Y	N
Building w/ Fence Comp.	G	P	N/A	G	P	N/A	Y	N		Y	N
Fenced Compound	G	P	N/A	G	P	N/A	Y	N		Y	N
Trailer	G	P	N/A	G	P	N/A	Y	N		Y	N
Number of Drums On-site	Y	N	N/A	G	P	N/A	Y	N	Detailed Explanation of Any Issues Resolved	Photos of Drum Condition	Date Drums Removed from Site and PM Initials
0	Y	N	N/A	G	P	N/A	Y	N		Y	N

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Jonah Davis @ BLS

Print or type Name of Field Personnel & Consultant Company

G = Good (Acceptable) R = Replaced  
 P = Poor (needs attention) NL = No Lock Required  
 Note: All repairs other than locks and grippers require Shell PM approval prior to repair.  
 \* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.  
 Version 2.4, March 2008

ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

INCIDENT # 220919-501

ADDRESS 2555 13th Ave SW

CITY & STATE Seattle, WA

DATE: 4/19/22

Well ID	Observations Upon Arrival				Well Pad / Surface Condition		Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	Photos of Well Condition	Repair Date and PM Initials
	Manway Cover, Type, Condition & Size	Well Labeled / Painted Properly*	Well Cap (Gripper) Condition	Well Lock Condition	Well Pad / Surface Condition				
MW-307	Standpipe Flush G P 2	Y	G	R	G	P		Y	N
MW-308	Standpipe Flush G P 2	Y	G	R	G	P		Y	N
MW-309	Standpipe Flush G P 2	Y	G	R	G	P		Y	N
MW-310	Standpipe Flush G P 2	Y	G	R	G	P		Y	N
MW-311	Standpipe Flush G P 2	Y	G	R	G	P		Y	N
MW-312	Standpipe Flush G P 2	Y	G	R	G	P		Y	N
MW-313	Standpipe Flush G P 2	Y	G	R	G	P		Y	N
MW-314	Standpipe Flush G P 2	Y	G	R	G	P		Y	N
MW-315	Standpipe Flush G P 2	Y	G	R	G	P		Y	N
105-MW-1	Standpipe Flush G P 2	Y	G	R	G	P		Y	N
TX-03A	Standpipe Flush G P 2	Y	G	R	G	P		Y	N
TOTAL # CAPS REPLACED = 1								TOTAL # OF LOCKS REPLACED	

Remediation Compound Type (Check boxes that apply)	Condition of Enclosure		Condition of Area Inside Enclosure		Compound Security		Emergency Contact Info Visible		Cleaning / Repairs Recommended and Conducted	Photos of Condition	Repair Date and PM Initials
	Condition of Enclosure	Condition of Area Inside Enclosure	Compound Security	Emergency Contact Info Visible							
NA	G	P	G	P	P	N/A	Y	N		Y	N
Building	G	P	G	P	P	N/A	Y	N		Y	N
Building w/ Fence Comp.	G	P	G	P	P	N/A	Y	N		Y	N
Fenced Compound	G	P	G	P	P	N/A	Y	N		Y	N
Trailer	G	P	G	P	P	N/A	Y	N		Y	N
Detailed Explanation of Any Issues Resolved										Date Drums Removed from Site and PM Initials	

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Soach Davis & BS  
Print or type Name of Field Personnel & Consultant Company

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Note: All repairs other than locks and grippers require Shell PM approval prior to repair.  
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Version 2.4, March 2008

ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

INCIDENT # 220919-501  
DATE: 9/19/22  
ADDRESS 2555 13th Ave SW  
CITY & STATE Seattle, WA

Well ID	Observations Upon Arrival			Well Cap (Gripper) Condition		Well Lock Condition			Well Pad / Surface Condition	Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	Photos of Well Condition	Repair Date and PM Initials	
	Manway Cover, Type, Condition & Size	Well Labeled / Painted Properly*	Well Cap (Gripper) Condition	Well Lock Condition	Well Pad / Surface Condition	Well Lock Condition							
						Size (inch)	Size (inch)						
MW108	Standpipe Flush	Y	R	G	R	R	G	G	P		Y		
MW110	Standpipe Flush	Y	R	G	R	R	G	G	P	Abs sock replaced	Y		
MW111	Standpipe Flush	Y	R	G	R	R	G	G	P		Y		
MW112	Standpipe Flush	Y	R	G	R	R	G	G	P	Abs sock replaced	Y		
	Standpipe Flush	Y	R	G	R	R	G	G	P		Y		
	Standpipe Flush	Y	R	G	R	R	G	G	P		Y		
	Standpipe Flush	Y	R	G	R	R	G	G	P		Y		
	Standpipe Flush	Y	R	G	R	R	G	G	P		Y		
	Standpipe Flush	Y	R	G	R	R	G	G	P		Y		
	Standpipe Flush	Y	R	G	R	R	G	G	P		Y		
	Standpipe Flush	Y	R	G	R	R	G	G	P		Y		
	Standpipe Flush	Y	R	G	R	R	G	G	P		Y		
	Standpipe Flush	Y	R	G	R	R	G	G	P		Y		
TOTAL # CAPS REPLACED = 0													
TOTAL # OF LOCKS REPLACED = 0													
Condition of Self Boring Patches of Abandoned Monitoring Wells													
			G	P								Y	
Remediation Compound Type (Check boxes that apply)													
	NA												
	Building												
	Building w/ Fence Comp.												
	Fenced Compound												
	Trailer												
Number of Drums On-site				0				Y			Y		
Does the Label Reveal the Source of the Contents				Y	N	N/A						Y	
Labeled Correctly and Writing Legible				Y	N	N/A						Y	
Drum Condition				G	P	N/A						Y	
Confirm Drums Related to Environmental				Y	N	N/A						Y	
Drums Located to Min Business Interference				Y	N	N/A						Y	
Detailed Explanation of Any Issues Resolved													
Emergency Contact Info Visible													
				Y	N	N/A						Y	
Cleaning / Repairs Recommended and Conducted												Y	
Repair Date and PM Initials													

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Sam Davis @ BPS

Print or type Name of Field Personnel & Consultant Company

G = Good (Acceptable) R = Replaced  
P = Poor (needs attention) NL = No Lock Required  
Note: All repairs other than locks and grippers require Shell PM approval prior to repair.  
\* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.



WELL GAUGING DATA

Project # 221212-501 Date 12/12/22 Client GHD

Site 255 13th Ave SW Seattle, WA

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
MW-201	0851	2	-	-	-	-	13.90	21.60		
MW-202	0846	2	-	-	-	-	13.56	21.77		
MW-203	1203	2	-	-	-	-	7.04	14.13		? 12/14/22
MW-204	0845	2	-	-	-	-	10.88	12.74		
MW-206A	0823	2	-	-	-	-	9.31	16.52		
MW-101	0815	2	-	-	-	-	10.70	14.93		
MW-102	0828	2	-	-	-	-	7.25	17.43		
MW-301	0748	2	-	-	-	-	5.22	14.70		
MW-302	0752	1	-	-	-	-	5.88	14.15		
MW-303	0745	2	-	-	-	-	5.24	14.75		
MW-304	0830	2	-	-	-	-	5.28	14.71		
MW-307	0824	2	-	-	-	-	7.98	17.30		
MW-308	0820	2	-	-	-	-	7.94	17.45		
MW-310	0757	2	odor	-	-	-	6.20	14.53		
MW-311	0802	2	-	-	-	-	7.62	15.00		
MW-312	0805	2	-	-	-	-	7.08	14.70		
MW-313	0809	2	-	-	-	-	5.48	13.60		
MW-309	0741	2	-	-	-	-	5.41	14.65		

## WELL GAUGING DATA

Project # 22122-J01 Date 12/12/22 Client GHD

Site 2555 813+ AV SW Seattle, WA

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
MW-34				unable to access					TOC	Parked over
MW-315	1134	2	-	-	-	-	7.08	14.92		Parked over 12/13/22
FES-MW-1	0809	4	-	-	-	-	10.35	14.90		
Tx-03A	1455	2	-	-	-	-	5.05	14.71		Parked over 12/13/22
MW-05	0802	2	-	-	-	-	5.95	18.85		
MW-11	1058	2	-	-	-	-	4.75	14.75		Parked over 12/14/22
MW-11A	0730	2	-	-	-	-	5.88	14.62		
SH-04	0725	2	-	-	-	-	9.20	18.08		
MW-104	<del>0730</del> 0258	2	-	-	-	-	5.81	14.75		
MW-113	0750	2	-	-	-	-	4.82	14.88		
MW-114	0744	2	-	-	-	-	5.10	14.97		
MW-115	0740	2	-	-	-	-	4.60	14.92		
MW-105	0753	2	-	-	-	-	4.35	13.97		
Tx-04	0736	2	-	-	-	-	4.81	17.98		
Tx-06A	1240	2	-	-	-	-	7.46	14.90		
MW-213 MW-100	0931	2	-	-	-	-	4.35	38.75		
MW-214 MW-210	0935	2	-	-	-	-	4.38	39.61		

### Monitoring Well Gauging Field Log - Shoreline

Date:

Job No:

SAP:

Incident No 300036

Location: 2555 13th Ave SW, Seattle (Harbor Island Terminal)

Personnel:

Well ID	Time Gauged	Depth to Water	Depth to Product	Comments
MW-208	0919	4.21	—	—
MW-210	0915	5.15	—	Absorbant sock - <i>sock changed</i>
MW-211	0920	4.39	—	—
MW-212	0923	4.70	—	Absorbant sock - <i>sock replaced</i>



## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-J01	Client: GHD
Sampler: J0	Gauging Date: 12/12/22
Well I.D.: MW-201	Well Diameter (in.): <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8
Total Well Depth (ft.): 21.60	Depth to Water (ft.): 13.90
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <input checked="" type="radio"/> PVC <input type="radio"/> Grade	Flow Cell Type: 751-556

Purge Method: 2" Grundfos Pump                      Peristaltic Pump                      Bladder Pump  
 Sampling Method: Dedicated Tubing                      New Tubing                      Other \_\_\_\_\_  
 Start Purge Time: 1053                      Flow Rate: 200ml/m                      Pump Depth: 18ft

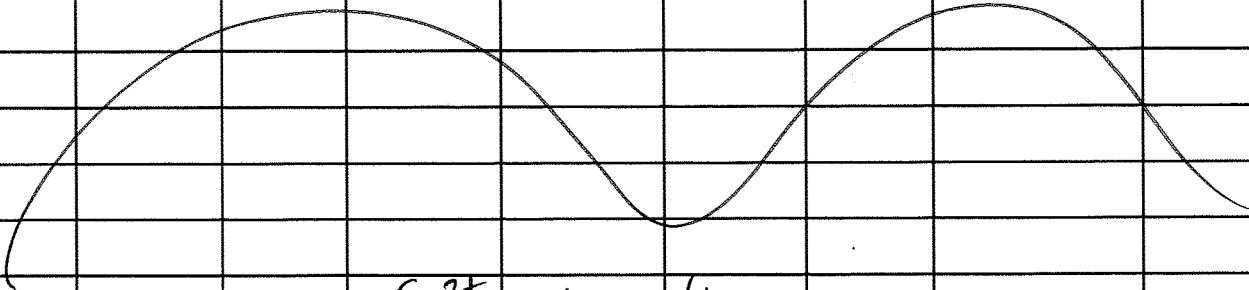
Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1056	10.86	7.43	0.643	28	0.49	157.2	600	14.02
1059	10.73	7.14	0.640	22	0.37	153.5	1200	14.26
1102	10.68	7.15	0.637	16	0.30	150.6	1800	14.32
1105	10.68	7.11	0.635	16	0.28	151.0	2400	14.32
1108	10.64	7.08	0.634	15	0.27	148.3	3000	14.32

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: 3000ml
Sampling Time: 1109	Sampling Date: 12/12/22
Sample I.D.: MW-201	Laboratory: TA
Analyzed for: TPH-G    BTEX    MTBE    TPH-D	Other: <input checked="" type="radio"/> see COC
Equipment Blank I.D.: @ _____	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>2212120-JM</u>	Client: <u>GHD</u>
Sampler: <u>JD</u>	Gauging Date: <u>12/12/22</u>
Well I.D.: <u>MW-202</u>	Well Diameter (in.): <u>(2)</u> 3 4 6 8
Total Well Depth (ft.): <u>21.77</u>	Depth to Water (ft.): <u>13.56</u>
Depth to Free Product:	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1124      Flow Rate: 200ml/m      Pump Depth: 17ft

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.)
1127	10.20	7.31	0.430	71	0.42	148.7	600	13.67
1130	10.39	7.27	0.430	60	0.26	150.6	1200	13.79
1133	10.50	7.23	0.430	55	0.19	152.9	1800	13.95
1136	10.52	7.20	0.430	54	0.20	153.6	2400	14.11
1139	10.49	7.21	0.430	52	0.20	154.0	3000	14.11
								
$Fe^{2+} - 1.0mg/L$								

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>1140</u>	Sampling Date: <u>12/12/22</u>
Sample I.D.: <u>MW-202</u>	Laboratory: <u>TA</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>see COE</u>
Equipment Blank I.D.: <u>@</u> Time	Duplicate I.D.: <u>—</u>

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-301	Client: GHD
Sampler: JD	Gauging Date: 12/14/22
Well I.D.: MW-203	Well Diameter (in.): ② 3 4 6 8
Total Well Depth (ft.): 14.13	Depth to Water (ft.): 7.04
Depth to Free Product: _____	Thickness of Free Product (feet): ✓
Referenced to: PVC Grade	Flow Cell Type: 151-555

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1215      Flow Rate: 200ml/min      Pump Depth: 10.5ft

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.)
1218	12.20	7.23	0.482	11	0.57	181.3	600	7.17
1221	11.93	7.07	0.474	8	0.36	178.4	1200	7.25
1224	11.80	6.99	0.470	5	0.24	176.9	1800	7.38
1227	11.77	6.95	0.467	5	0.24	175.3	2400	7.47
1230	11.74	6.93	0.469	5	0.23	174.7	3000	7.47
Fe <sup>2+</sup> — 1.4 mg/L								

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: 3000ml
Sampling Time: 1231	Sampling Date: 12/14/22
Sample I.D.: MW-203	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: see COC
Equipment Blank I.D.: @ _____ <small>Time</small>	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-JD1	Client: GHD
Sampler: Cm	Gauging Date: 12/12/22
Well I.D.: MW-204	Well Diameter (in.): $\varnothing$ 3 4 6 8 _____
Total Well Depth (ft.): 17.74	Depth to Water (ft.): 10.88
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: <u>PVC</u> Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump  
 Sampling Method: Dedicated Tubing New Tubing Other \_\_\_\_\_  
 Start Purge Time: 1050 Flow Rate: 200 mL/min Pump Depth: 14.25 ft

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.)
1053	11.49	6.54	0.286	32	1.00	-29.9	600	11.02
1056	11.83	6.52	0.259	27	0.89	-53.7	1200	11.02
1059	11.78	6.59	0.250	26	0.61	-66.9	1800	11.02
1102	11.71	6.55	0.248	25	0.59	-73.6	2400	11.02
1105	11.69	6.51	0.247	26	0.58	-76.1	3000	11.02

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: 3600 mL
Sampling Time: 1108	Sampling Date: 12/12/22
Sample I.D.: MW-204	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D <span style="margin-left: 50px;"><u>Other: see coc</u></span>	
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-JDI	Client: GHD
Sampler: cm	Gauging Date: 12/12/22
Well I.D.: MW-206A	Well Diameter (in.): $\odot$ 3 4 6 8 _____
Total Well Depth (ft.): 16.52	Depth to Water (ft.): 9.31
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: PVC Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump  
 Sampling Method: Dedicated Tubing New Tubing Other \_\_\_\_\_  
 Start Purge Time: 1126 Flow Rate: 200 mL/min Pump Depth: 12.8 ft

Time	Temp. ( $\odot$ or $^{\circ}$ F)	pH	Cond. ( $\odot$ mS/cm or $\mu$ S/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or $\odot$ mL)	Depth to Water (ft.)
1129	8.18	7.25	0.385	113	0.24	-34.9	600	9.39
1132	9.05	7.11	0.394	104	0.20	-47.7	1200	9.39
1135	9.44	7.09	0.400	100	0.18	-59.2	1800	9.39
1138	9.51	7.05	0.402	98	0.17	-65.1	2400	9.39
1141	9.59	7.02	0.404	96	0.17	-68.2	3000	9.39

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: 3000 mL
Sampling Time: 1144	Sampling Date: 12/12/22
Sample I.D.: MW-206A	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	<u>Other</u> see COC
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>2212012-J01</u>	Client: <u>GHD</u>
Sampler: <u>JD</u>	Gauging Date: <u>12/12/22</u>
Well I.D.: <u>MW-101</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 <u>   </u>
Total Well Depth (ft.): <u>14.93</u>	Depth to Water (ft.): <u>10.70</u>
Depth to Free Product: <u>   </u>	Thickness of Free Product (feet): <u>   </u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump                      Peristaltic Pump                      Bladder Pump  
 Sampling Method: Dedicated Tubing                      New Tubing                      Other      
 Start Purge Time: 1414                      Flow Rate: 200ml/min                      Pump Depth: 17.5ft

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.)
1417	12.14	6.97	0.304	7	0.68	134.3	600	10.70
1420	11.90	6.84	0.293	6	0.47	132.6	1200	10.70
1423	11.86	6.77	0.282	5	0.39	130.9	1800	10.70
1426	11.80	6.75	0.281	5	0.40	131.4	2400	10.70
1429	11.79	6.75	0.278	5	0.40	130.7	3000	10.70

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>1430</u>	Sampling Date: <u>12/12/22</u>
Sample I.D.: <u>MW-101</u>	Laboratory: <u>JA</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>See COC</u>
Equipment Blank I.D.: <u> </u>	Duplicate I.D.: <u> </u>

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-JD1	Client: GHD
Sampler: Cm	Gauging Date: 12/12/22
Well I.D.: MW-102	Well Diameter (in.): (2) 3 4 6 8
Total Well Depth (ft.): 17.43	Depth to Water (ft.): 7.25
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: (PVC) Grade	Flow Cell Type: YSI-SSC

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump  
 Sampling Method: Dedicated Tubing New Tubing Other  
 Start Purge Time: 1230 Flow Rate: 200 mL/min Pump Depth: 12.25 ft

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.)
1233	12.17	6.81	0.344	130	0.69	-31.5	600	7.30
1236	12.20	6.82	0.345	113	0.64	-38.6	1200	7.30
1239	12.22	6.83	0.345	89	0.59	-40.7	1800	7.30
1242	12.25	6.53	0.346	84	0.57	-42.6	2400	7.30
1245	12.27	6.54	0.346	83	0.55	-46.3	3000	7.30

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: 3000 mL
Sampling Time: 1240	Sampling Date: 12/12/22
Sample I.D.: MW-102	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See COC
Equipment Blank I.D.: @ <small>Time</small>	Duplicate I.D.:

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-JD1	Client: GHD
Sampler: cm	Gauging Date: 12/12/22
Well I.D.: mw-301	Well Diameter (in.): ② 3 4 6 8
Total Well Depth (ft.): 14.70	Depth to Water (ft.): 5.22
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1004      Flow Rate: 200 mL/min      Pump Depth: 10 ft

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.)
1007	11.71	6.36	0.532	81	0.14	4.0	600	5.24
1010	12.44	6.37	0.571	82	0.10	-16.6	1200	5.24
1013	12.69	6.37	0.581	81	0.10	-24.8	1800	5.24
1016	12.72	6.37	0.585	80	0.10	-28.1	2400	5.24
1019	12.78	6.39	0.587	80	0.09	-31.4	3000	5.24

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: 3000 mL
Sampling Time: 1022	Sampling Date: 12/13/22
Sample I.D.: mw-301	Laboratory: TA
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 #: 221212-3571	Client: GHD
Sampler: cm	Gauging Date: 12/12/22
Well I.D.: MW-302	Well Diameter (in.): <del>3</del> <sup>cm</sup> 3 4 6 8 <u>1</u>
Total Well Depth (ft.): 14.15	Depth to Water (ft.): 5.88
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: <u>PVC</u> Grade	Flow Cell Type: YS-556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump  
 Sampling Method: ~~Dedicated Tubing~~ cm New Tubing Other \_\_\_\_\_  
 Start Purge Time: 0802 Flow Rate: 200 mL/min Pump Depth: 10 ft.

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.)
0805	12.17	6.37	6200	61	0.25	-31.4	600	5.97
0808	12.31	6.38	0.210	35	0.21	-42.0	1200	5.97
0811	12.50	6.38	0.217	20	0.19	-43.1	1800	5.97
0814	12.57	6.40	0.219	20	0.18	-44.0	2400	5.97
0817	12.55	6.39	0.220	19	0.18	-43.9	3000	5.97

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amount actually evacuated: 3000 mL
Sampling Time: 0820	Sampling Date: 12/13/22
Sample I.D.: MW-302	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	<u>Other:</u> see COC
Equipment Blank I.D.: @ _____	Duplicate I.D.: _____

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Fe 2+: 7.0 mg/L

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-JD1	Client: GHD
Sampler: cm	Gauging Date: 12/12/22
Well I.D.: MW-303	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): 14.75	Depth to Water (ft.): 5.24
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <u>PVC</u> Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump  
 Sampling Method: ~~Dedicated Tubing~~ New Tubing Other  
 Start Purge Time: 0904 Flow Rate: 200 mL/min Pump Depth: 9.75 ft

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.)
0907	9.84	7.13	0.320	21	0.22	-0.3	600	5.28
0910	10.30	6.97	0.327	18	0.17	-6.1	1200	5.28
0913	10.78	6.50	0.341	17	0.17	-12.7	1800	5.28
0916	10.80	6.46	0.343	17	0.16	-16.2	2400	5.28
0919	10.75	6.44	0.345	16	0.16	-16.9	3000	5.28

Did well dewater? Yes <input checked="" type="radio"/> No <input type="radio"/>	Amount actually evacuated: 3000 mL
Sampling Time: 0922	Sampling Date: 12/13/22
Sample I.D.: MW-303	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	<u>Other:</u> see CGC
Equipment Blank I.D.: — @ Time	Duplicate I.D.: —

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-001	Client: GHD
Sampler: cm	Gauging Date: 12/12/22
Well I.D.: mw-304	Well Diameter (in.): <input checked="" type="radio"/> 3    4    6    8    _____
Total Well Depth (ft.): 14.71	Depth to Water (ft.): 5.28
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: <input checked="" type="radio"/> PVC    Grade	Flow Cell Type: 481556

Purge Method:  2" Grundfos Pump     Peristaltic Pump    Bladder Pump  
 Sampling Method:  Dedicated Tubing     New Tubing    Other \_\_\_\_\_  
 Start Purge Time: 0829    Flow Rate: 200 mL/min    Pump Depth: 9.75 ft

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.)
0832	9.96	6.59	0.298	22	0.52	-2.3	600	5.28
0835	10.88	6.41	0.313	18	0.28	-15.2	1200	5.28
0838	11.03	6.39	0.317	18	0.22	-20.1	1800	5.28
0841	11.04	6.38	0.319	18	0.21	-23.3	2400	5.28
0844	11.01	6.37	0.317	17	0.22	-24.1	3000	5.28

Did well dewater? Yes  No     Amount actually evacuated: 3000 mL

Sampling Time: 0847    Sampling Date: 12/13/22

Sample I.D.: mw-304    Laboratory: TA

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

Equipment Blank I.D.: \_\_\_\_\_ @ \_\_\_\_\_ Time    Duplicate I.D.: \_\_\_\_\_

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Fe<sup>2+</sup>: 2.0 mg/L

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-JD1	Client: GAD
Sampler: cm	Gauging Date: 12/12/22
Well I.D.: mw-307	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): 17.30	Depth to Water (ft.): 7.98
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: <u>PVC</u> Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: cm Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: ~~1300~~ 1402 Flow Rate: 200 mL/min      Pump Depth: 12.5 ft

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.)
1405	11.19	6.43	0.305	17	0.55	-2.4	600	8.02
1408	11.23	6.44	0.315	15	0.49	-8.7	1200	8.02
1411	11.24	6.43	0.319	13	0.46	-11.7	1800	8.02
1414	11.25	6.45	0.321	12	0.45	-14.0	2400	8.02
1417	11.27	6.45	0.322	12	0.43	-16.4	3000	8.02

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: 3000 mL
Sampling Time: 1420	Sampling Date: 12/12/22
Sample I.D.: mw-307	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	<u>Other:</u> see COC
Equipment Blank I.D.: — @ Time —	Duplicate I.D.: —

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Fe<sup>2+</sup>: 6.0 mg/L

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-JD1	Client: GHD
Sampler: <u>cm</u>	Gauging Date: 12/12/22
Well I.D.: <u>mw-308</u>	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): 17.45	Depth to Water (ft.): 7.94
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump ~~Peristaltic Pump~~ Bladder Pump  
 Sampling Method: Dedicated Tubing New Tubing Other \_\_\_\_\_  
 Start Purge Time: 1335 Flow Rate: 200 mL/min Pump Depth: 13A

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.)
1338	9.69	6.38	0.347	111	0.77	57.6	600	8.00
<del>1341</del> <sup>cm</sup> 1341	9.73	6.45	0.359	101	0.48	50.1	1200	8.02
1344	9.75	6.46	0.364	88	0.41	44.8	1800	8.02
1347	9.75	6.46	0.367	85	0.39	39.1	2400	8.02
1350	9.79	6.46	0.369	83	0.38	34.4	3000	8.02

Did well dewater? Yes <input type="radio"/> <u>No</u>	Amount actually evacuated: <u>3000 mL</u>
Sampling Time: <u>1353</u>	Sampling Date: <u>12/12/22</u>
Sample I.D.: <u>mw-308</u>	Laboratory: <u>TA</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	<u>Other: seecoc</u>
Equipment Blank I.D.: — @ Time	Duplicate I.D.: —

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Fez: 1.0 mg/L

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-001	Client: GHD
Sampler: LM	Gauging Date: 12/12/22
Well I.D.: MW-309	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): 14.65	Depth to Water (ft.): 5.41
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <u>PVC</u> Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0935      Flow Rate: 200 mL/min      Pump Depth: 10 ft

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	11.66	6.38	0.298	141	0.16	-4.6	600	5.44
0939	12.08	6.38	0.299	130	0.12	-16.9	1200	5.44
0942	12.35	6.39	0.297	127	0.12	-21.1	1800	5.44
0945	12.41	6.40	0.299	124	0.11	-26.7	2400	5.44
0948	12.43	6.40	0.298	120	0.11	-29.9	3000	5.44

Did well dewater? Yes  No       Amount actually evacuated: 3000 mL

Sampling Time: 0951      Sampling Date: 12/13/22

Sample I.D.: MW-309      Laboratory: TA

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 #: 221212-001	Client: GHD
Sampler: Cm	Gauging Date: 12/12/22
Well I.D.: MW-310	Well Diameter (in.): (2) 3 4 6 8
Total Well Depth (ft.): 14.53	Depth to Water (ft.): 6.20
Depth to Free Product: ~	Thickness of Free Product (feet): ~
Referenced to: (PVC) Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump      ~~Peristaltic Pump~~      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0731      Flow Rate: 200 mL/min      Pump Depth: 10.25 ft

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.)
0734	11.21	6.40	0.422	48	0.56	48.0	600	6.24
0737	10.49	6.40	0.409	46	0.39	-52.7	1200	6.24
0740	10.54	6.40	0.403	45	0.34	-53.4	1800	6.24
0743	10.56	6.39	0.400	45	0.31	-53.7	2400	6.24
0746	10.61	6.39	0.399	44	0.31	-54.3	3000	6.24

Did well dewater? Yes <input checked="" type="radio"/> No <input type="radio"/>	Amount actually evacuated: 3000 mL
Sampling Time: 0749	Sampling Date: 12/13/22
Sample I.D.: MW-310	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See COC
Equipment Blank I.D.: — @ Time —	Duplicate I.D.: —

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Fe<sup>2+</sup>: 2.0 mg/L

### LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-JD1	Client: GHD
Sampler: cm	Gauging Date: 12/12/22
Well I.D.: mw-311	Well Diameter (in.): <u>3</u> 4 6 8
Total Well Depth (ft.): 15.00	Depth to Water (ft.): 7.62
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: <u>PVC</u> Grade	Flow Cell Type: YSI-686

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1232      Flow Rate: 200 ml/min      Pump Depth: 11.5 ft

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.)
1235	13.58	6.40	0.603	9	0.14	-29.7	600	7.62
1238	13.83	6.40	0.610	7	0.12	-38.0	1200	7.62
1241	14.11	6.42	0.615	7	0.13	-44.6	1800	7.62
1244	14.15	6.42	0.617	7	0.14	-47.9	2400	7.62
1247	14.18	6.42	0.616	6	0.13	-48.6	3000	7.62

Did well dewater? Yes  No       Amount actually evacuated: 3000 mL  
 Sampling Time: 1250      Sampling Date: 12/13/22  
 Sample I.D.: mw-311      Laboratory: TA  
 Analyzed for: TPH-G BTEX MTBE TPH-D      Other: See COC  
 Equipment Blank I.D.: \_\_\_\_\_ @ \_\_\_\_\_ Time      Duplicate I.D.: \_\_\_\_\_

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Fe 2+: 2.0 mg/L



## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-001	Client: GHD
Sampler: cm	Gauging Date: 12/12/22
Well I.D.: mw-312	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): 14.70	Depth to Water (ft.): 7.08
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump                      Peristaltic Pump                      Bladder Pump  
 Sampling Method: Dedicated Tubing                      New Tubing                      Other \_\_\_\_\_  
 Start Purge Time: 1153                      Flow Rate: 200 mL/min                      Pump Depth: 10.5 ft

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.)
1156	13.51	6.50	0.440	24	0.36	-4.1	600	7.11
1159	13.36	6.50	0.440	21	0.36	-6.8	1200	7.11
1202	13.29	6.49	0.441	20	0.26	-8.8	1800	7.11
1205	13.24	6.48	0.441	20	0.25	-10.7	2400	7.11
1208	13.20	6.48	0.440	19	0.24	-12.9	3000	7.11

Did well dewater? Yes <input checked="" type="radio"/>	Amount actually evacuated: 3000 mL
Sampling Time: 1211	Sampling Date: 12/13/22
Sample I.D.: mw-312	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	<u>Other:</u> see COC
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

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Fe 2+ : 7.0 mg/L

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-001	Client: GHD
Sampler: Cm	Gauging Date: 12/12/22
Well I.D.: mw-313	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): 13.60	Depth to Water (ft.): 5.48
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <u>PVC</u> Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1051      Flow Rate: 200 mL/min      Pump Depth: 9.5 ft

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.)
1054	12.24	6.39	0.550	95	0.18	-15.8	600	<del>15.3</del> 5.48
1057	11.87	6.39	0.549	90	0.15	-25.6	1200	5.48
1100	11.76	6.39	0.549	87	0.14	-29.9	1800	5.48
1103	11.69	6.39	0.548	84	0.14	-31.6	2400	5.48
1106	11.68	6.38	0.548	81	0.15	-28.6	3000	5.48

Did well dewater? Yes <input checked="" type="radio"/> No <input type="radio"/>	Amount actually evacuated: 3000 mL
Sampling Time: 1109	Sampling Date: 12/13/22
Sample I.D.: mw-313	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	<u>Other:</u> see COC
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212 - JD1	Client: GHD
Sampler: JD	Gauging Date: 12/14/22
Well I.D.: MW-3/4	Well Diameter (in.): <del>2</del> <del>3</del> <del>4</del> <del>6</del> 8
Total Well Depth (ft.): —	Depth to Water (ft.): —
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	Flow Cell Type: Y51-556

Purge Method: 2" Grundfos Pump	Peristaltic Pump	Bladder Pump
Sampling Method: Dedicated Tubing	New Tubing	Other
Start Purge Time: —	Flow Rate: —	Pump Depth: —

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.)
			unable to access					
well is parked over								
No Sample Taken								

Did well dewater? Yes No	Amount actually evacuated:
Sampling Time:	Sampling Date:
Sample I.D.:	Laboratory:
Analyzed for: TPH-G BTEX MTBE TPH-D	Other:
Equipment Blank I.D.: @ Time	Duplicate I.D.:

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-JDI	Client: GHD
Sampler: cm	Gauging Date: 12/12/22
Well I.D.: mw-315	Well Diameter (in.): (2) 3 4 6 8
Total Well Depth (ft.): 14.92	Depth to Water (ft.): 7.08
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: YST-556

Purge Method: 2" Grundfos Pump (Peristaltic Pump) Bladder Pump  
 Sampling Method: (Dedicated Tubing) New Tubing Other \_\_\_\_\_  
 Start Purge Time: 1119 Flow Rate: 200 mL/min Pump Depth: 11 ft

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.)
1122	12.14	6.27	0.567	120	0.36	-8.6	600	7.19
1125	12.07	6.27	0.567	99	0.31	-10.9	1200	7.19
1128	12.01	6.28	0.568	93	0.27	-15.7	1800	7.19
1131	11.94	6.29	0.569	89	0.26	-19.6	2400	7.19
1134	11.90	6.29	0.570	87	0.25	-23.1	3000	7.19

Did well dewater? Yes  No  Amount actually evacuated: 3000 mL

Sampling Time: 1137 Sampling Date: 12/13/22

Sample I.D.: mw-315 Laboratory: TA

Analyzed for: TPH-G BTEX MTBE TPH-D (Other): See COL

Equipment Blank I.D.: \_\_\_\_\_ @ \_\_\_\_\_ Time \_\_\_\_\_ Duplicate I.D.: \_\_\_\_\_

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>221212-J01</u>	Client: <u>G+H</u>
Sampler: <u>JO</u>	Gauging Date: <u>12/12/22</u>
Well I.D.: <u>FES-MW-1</u>	Well Diameter (in.): 2 3 <u>(4)</u> 6 8
Total Well Depth (ft.): <u>14.90</u>	Depth to Water (ft.): <u>10.35</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: <u>2" Grundfos Pump</u>	<u>Peristaltic Pump</u>	Bladder Pump
Sampling Method: <u>Dedicated Tubing</u>	<u>New Tubing</u>	Other
Start Purge Time: <u>1342</u>	Flow Rate: <u>200ml/m</u>	Pump Depth: <u>12.5ft</u>

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.)
1345	11.38	7.11	0.447	1	0.90	140.3	600	10.35
1348	11.30	7.00	0.440	1	0.73	137.8	1200	10.35
1351	11.27	6.93	0.433	1	0.64	133.9	1800	10.35
1354	11.22	6.92	0.437	1	0.61	132.6	2400	10.35
1357	11.24	6.84	0.430	1	0.61	130.7	3000	10.35

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <del>1358</del> <u>1358</u>	Sampling Date: <u>12/12/22</u>
Sample I.D.: <u>FES-MW-1</u>	Laboratory: <u>TA</u>
Analyzed for: <u>TPH-G BTEX MTBE TPH-D</u>	Other: <u>see COC</u>
Equipment Blank I.D.: <u>@</u>	Duplicate I.D.: <u>—</u>

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 22122-JD1	Client: GHD
Sampler: cm	Gauging Date: 12/12/22
Well I.D.: TX-03A	Well Diameter (in.): 8 3 4 6 8
Total Well Depth (ft.): 14.71	Depth to Water (ft.): 5.05
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVO Grade	Flow Cell Type: Y81-SS6

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump  
 Sampling Method: Dedicated Tubing New Tubing Other  
 Start Purge Time: 1440 Flow Rate: 200 mL/min Pump Depth: 10 ft

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.)
1443	14.04	6.37	0.357	12	0.34	30.9	600	5.05
1446	14.30	6.40	0.362	10	0.28	-29.7	1200	5.05
1449	14.30	6.42	0.366	9	0.26	-40.9	1800	5.05
1452	14.27	6.42	0.367	9	0.26	-46.8	2400	5.05
1455	14.22	6.43	0.368	8	0.25	-49.9	3000	5.05

Did well dewater? Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: 3000 mL
Sampling Time: 1458	Sampling Date: 12/13/22
Sample I.D.: <del>TX-03A</del> TX-03A	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See COC
Equipment Blank I.D.: @	Duplicate I.D.:

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Fez: 7.0 mg/L

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>221212-J01</u>	Client: <u>GHD</u>
Sampler: <u>JD</u>	Gauging Date: <u>12/14/22</u>
Well I.D.: <u>MW-05</u>	Well Diameter (in.): <u>(2)</u> 3 4 6 8
Total Well Depth (ft.): <u>18.85</u>	Depth to Water (ft.): <u>5.95</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>51-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1002      Flow Rate: 200 ml/m      Pump Depth: 11.5ft

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.)
1005	13.42	7.64	0.384	8	0.63	224.6	600	6.13
1008	13.65	7.71	0.377	5	0.39	223.4	1200	6.13
1011	13.70	7.77	0.375	4	0.24	221.9	1800	6.13
1014	13.74	7.80	0.375	3	0.22	221.3	2400	6.13
1017	13.77	7.81	0.375	3	0.21	220.9	3000	6.13

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>1018</u>	Sampling Date: <u>12/14/22</u>
Sample I.D.: <u>MW-05</u>	Laboratory: <u>TA</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	<u>Other</u> <u>See COC</u>
Equipment Blank I.D.: <u>@</u> Time	Duplicate I.D.: <u>—</u>

### LOW FLOW WELL MONITORING DATA SHEET

Project #: 22/2/22 - JD1	Client: GHD
Sampler: JD	Gauging Date: 12/14/22
Well I.D.: MW-111	Well Diameter (in.): (2) 3 4 6 8
Total Well Depth (ft.): 14.75	Depth to Water (ft.): 4.75
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	Flow Cell Type: 51-355

Purge Method: 2" Grundfos Pump                      Peristaltic Pump                      Bladder Pump  
 Sampling Method: Dedicated Tubing                      New Tubing                      Other \_\_\_\_\_  
 Start Purge Time: 1103                      Flow Rate: 200ml/m                      Pump Depth: 10ft

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.)
1106	12.64	7.35	0.220	5	0.47	206.7	600	4.88
1109	12.77	7.38	0.220	4	0.23	185.6	1200	4.95
1112	12.95	7.37	0.220	3	0.16	192.0	1800	5.10
1115	12.98	7.40	0.220	3	0.14	191.4	2400	5.10
1118	12.94	7.43	0.220	3	0.15	190.3	3000	5.10

Did well dewater? Yes  No                       Amount actually evacuated: 3000m

Sampling Time: 1119                      Sampling Date: 12/14/22

Sample I.D.: MW-111                      Laboratory: IA

Analyzed for: TPH-G BTEX MTBE TPH-D                      Other: see cor

Equipment Blank I.D.: @ \_\_\_\_\_                      Duplicate I.D.: \_\_\_\_\_



## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>221212-JD1</u>	Client: <u>GHD</u>
Sampler: <u>cm</u>	Gauging Date: <u>12/12/22</u>
Well I.D.: <u>MW-112A</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 <u>    </u>
Total Well Depth (ft.): <u>14.62</u>	Depth to Water (ft.): <u>5.88</u>
Depth to Free Product: <u>-</u>	Thickness of Free Product (feet): <u>-</u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other       
 Start Purge Time: 1413      Flow Rate: 200 mL/min      Pump Depth: 10.25 ft

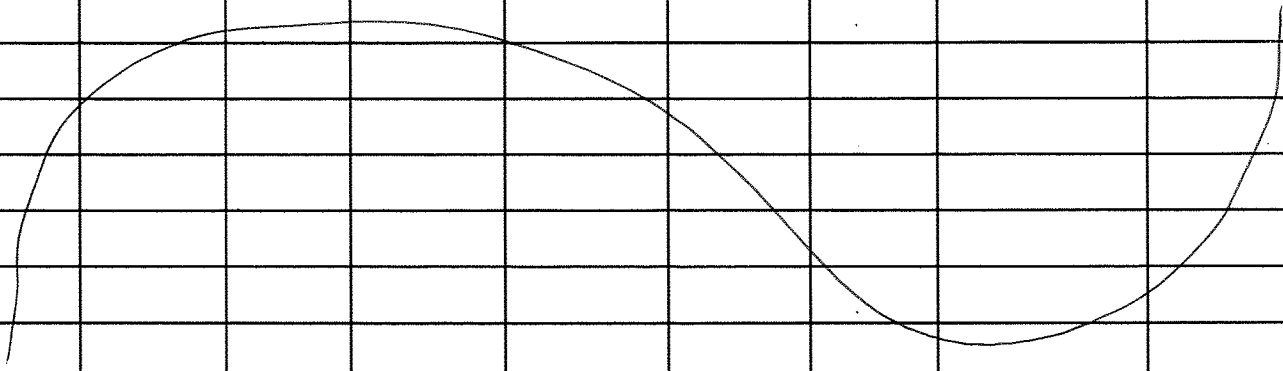
Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1416	12.64	6.37	0.248	33	0.11	-12.5	600	5.88
1419	12.87	6.38	0.252	29	0.09	-23.9	1200	5.88
1422	12.70	6.38	0.251	26	0.11	-30.5	1800	5.88
1425	12.78	6.38	0.252	25	0.11	-35.0	2400	5.88
1428	12.79	6.38	0.254	25	0.10	-36.0	3000	5.88

Did well dewater? Yes  No       Amount actually evacuated: 3000 mL  
 Sampling Time: 1431      Sampling Date: 12/13/22  
 Sample I.D.: MW-112A      Laboratory: TA  
 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 #: 221212-001	Client: GHD
Sampler: cm	Gauging Date: 12/12/22
Well I.D.: SH-04	Well Diameter (in.): <input checked="" type="radio"/> 2   3   4   6   8   ___
Total Well Depth (ft.): 18.08	Depth to Water (ft.): 9.20
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <input checked="" type="radio"/> PVO   Grade	Flow Cell Type: YSI-56b

Purge Method:      2" Grundfos Pump                       Peristaltic Pump                      Bladder Pump  
Sampling Method:       Dedicated Tubing                      New Tubing                      Other \_\_\_\_\_  
Start Purge Time: 1341      Flow Rate: 200 mL/min                      Pump Depth: 11.5 ft

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.)
1344	9.52	6.40	0.094	24	0.16	-16.3	600	9.24
1347	9.36	6.40	0.092	22	0.07	-25.1	1200	9.24
1350	9.58	6.40	0.090	21	0.08	-26.4	1800	9.24
1353	9.52	6.41	0.090	21	0.09	-26.1	2400	9.24
1356	9.50	6.41	0.090	20	0.08	-25.2	3000	9.24
								

Did well dewater?    Yes <input checked="" type="radio"/> No	Amount actually evacuated: 3000 mL
Sampling Time: 1359	Sampling Date: 12/13/22
Sample I.D.: SH-04	Laboratory: TA
Analyzed for:      TPH-G    BTEX    MTBE    TPH-D <input checked="" type="radio"/> Other: see COC	
Equipment Blank I.D.: @ <small>Time</small>	Duplicate I.D.:

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>221212-JD1</u>	Client: <u>GHD</u>
Sampler: <u>SD</u>	Gauging Date: <u>12/14/22</u>
Well I.D.: <u>MW-104</u>	Well Diameter (in.): <u>3</u> 4 6 8
Total Well Depth (ft.): <u>14.75</u>	Depth to Water (ft.): <u>5.81</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1031      Flow Rate: 200ml/min      Pump Depth: 10.5ft

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.)
1034	15.78	7.57	0.388	4	0.29	221.1	600	5.81
1037	15.60	7.68	0.375	2	0.20	218.3	1200	5.81
1040	15.48	7.75	0.371	2	0.15	216.1	1800	5.81
1043	15.43	7.77	0.369	2	0.14	215.5	2400	5.81
1046	15.42	7.78	0.368	2	0.13	216.3	3000	5.81

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: <u>3000 ml</u>
Sampling Time: <u>1047</u>	Sampling Date: <u>12/14/22</u>
Sample I.D.: <u>MW-104</u>	Laboratory: <u>TA</u>
Analyzed for:      TPH-G    BTEX    MTBE    TPH-D      Other: <u>See COC</u>	
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>221212 - J01</u>	Client: <u>GHD</u>
Sampler: <u>JD</u>	Gauging Date: <u>12/14/22</u>
Well I.D.: <u>MW-113</u>	Well Diameter (in.): <u>(2)</u> 3 4 6 8 <u>    </u>
Total Well Depth (ft.): <u>14.88</u>	Depth to Water (ft.): <u>4.82</u>
Depth to Free Product: <u>    </u>	Thickness of Free Product (feet): <u>    </u>
Referenced to: <input checked="" type="checkbox"/> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump                      Peristaltic Pump                      Bladder Pump  
 Sampling Method: Dedicated Tubing                      New Tubing                      Other \_\_\_\_\_  
 Start Purge Time: 0835                      Flow Rate: 200ml/m                      Pump Depth: 10ft

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.)
0838	12.10	7.82	0.265	13	0.46	215.7	600	4.82
0841	12.32	7.75	0.265	11	0.30	212.9	1200	4.82
0844	12.42	7.66	0.265	9	0.22	211.8	1800	4.82
0847	12.44	7.62	0.265	8	0.21	210.3	2400	4.82
0850	12.47	7.60	0.265	8	0.21	209.5	3000	4.82

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>0851</u>	Sampling Date: <u>12/14/22</u>
Sample I.D.: <u>MW-113</u>	Laboratory: <u>TA</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>See COC</u>
Equipment Blank I.D.: <u>@</u>	Duplicate I.D.: <u>    </u>

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>221212-JD1</u>	Client: <u>GHD</u>
Sampler: <u>JD</u>	Gauging Date: <u>12/14/22</u>
Well I.D.: <u>MW-114</u>	Well Diameter (in.): <u>(2)</u> 3 4 6 8
Total Well Depth (ft.): <u>14.97</u>	Depth to Water (ft.): <u>5.10</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>(VC)</u> Grade	Flow Cell Type: <u>451-556</u>

Purge Method: <u>2" Grundfos Pump</u>	<u>Peristaltic Pump</u>	Bladder Pump
Sampling Method: <u>Dedicated Tubing</u>	<u>New Tubing</u>	Other _____
Start Purge Time: <u>0736</u>	Flow Rate: <u>200ml/m</u>	Pump Depth: <u>10ft</u>

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.)
0739	11.92	8.03	0.224	47	0.69	230.3	600	5.23
0742	12.40	7.88	0.220	39	0.47	226.7	1200	5.37
0745	12.65	7.82	0.219	33	0.31	224.6	1800	5.46
0748	12.70	7.80	0.218	31	0.32	223.1	2400	5.59
0751	12.68	7.77	0.216	30	0.30	222.2	3000	5.59

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000ml</u>
Sampling Time: <u>0752</u>	Sampling Date: <u>12/14/22</u>
Sample I.D.: <u>MW-114</u>	Laboratory: <u>TA</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>see COC</u>
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-501	Client: GHD
Sampler: JD	Gauging Date: 12/14/22
Well I.D.: MW-115	Well Diameter (in.): <u>2</u> 3 4 6 8
Total Well Depth (ft.): 14.92	Depth to Water (ft.): 4.60
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <u>PVC</u> Grade	Flow Cell Type: 731-556

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0806      Flow Rate: 200ml/m      Pump Depth: 10ft

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.)
0809	13.14	7.44	0.213	10	0.39	226.7	600	4.75
0812	13.51	7.65	0.210	6	0.24	224.7	1200	4.93
0815	13.62	7.73	0.211	5	0.21	225.0	1800	5.11
0818	13.65	7.75	0.209	5	0.20	224.4	2400	5.22
0821	13.69	7.80	0.208	5	0.18	224.1	3000	5.30

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: 3000ml
Sampling Time: 0822	Sampling Date: 12/14/22
Sample I.D.: MW-115	Laboratory: IA
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>See COC</u>
Equipment Blank I.D.: @ _____	Duplicate I.D.: _____

## LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>221212-JD1</u>	Client: <u>GHD</u>
Sampler: <u>JD</u>	Gauging Date: <u>12/14/22</u>
Well I.D.: <u>MW-105</u>	Well Diameter (in.): <u>2</u> 3 4 6 8 _____
Total Well Depth (ft.): <u>13.97</u>	Depth to Water (ft.): <u>4.35</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 0905      Flow Rate: 200ml/m      Pump Depth: 10ft

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.)
0908	12.86	7.64	0.235	20	0.37	213.4	600	4.39
0911	13.02	7.77	0.236	18	0.26	217.4	1200	4.46
0914	13.15	7.80	0.235	16	0.21	218.9	1800	4.60
0917	13.17	7.82	0.235	16	0.20	220.4	2400	4.60
0920	13.20	7.80	0.234	15	0.18	221.3	3000	4.60

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000mL</u>
Sampling Time: <u>0921</u>	Sampling Date: <u>12/14/22</u>
Sample I.D.: <u>MW-105</u>	Laboratory: <u>TA</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>see COC</u>
Equipment Blank I.D.: <u>@</u> Time	Duplicate I.D.: <u>—</u>

### LOW FLOW WELL MONITORING DATA SHEET

Project #: 221212-001	Client: GHD
Sampler: cm	Gauging Date: 12/12/22
Well I.D.: TX-04	Well Diameter (in.): (2) 3 4 6 8 ____
Total Well Depth (ft.): 17.98	Depth to Water (ft.): 9.81
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: (PVC) Grade	Flow Cell Type: VSI-556

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: (Dedicated Tubing)      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1309      Flow Rate: 200 ml/min      Pump Depth: 14 ft

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.)
1312	12.14	6.40	0.195	89	0.12	-36.6	600	9.86
1315	12.41	6.40	0.196	86	0.09	-42.0	1200	9.87
1318	12.34	6.40	0.197	83	0.08	-45.3	1800	9.87
1321	12.42	6.40	0.199	79	0.07	-46.9	2400	9.87
1324	12.40	6.40	0.199	77	0.07	-47.2	3000	9.87

Did well dewater? Yes  No       Amount actually evacuated: 3000 ml  
 Sampling Time: 1327      Sampling Date: 12/13/22  
 Sample I.D.: TX-04      Laboratory: TA  
 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 #: <u>221212-J01</u>	Client: <u>GHD</u>
Sampler: <u>J0</u>	Gauging Date: <u>12/12/22</u>
Well I.D.: <u>MW-213</u>	Well Diameter (in.): <u>(2)</u> 3 4 6 8
Total Well Depth (ft.): <u>38.75</u>	Depth to Water (ft.): <u>4.35</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>751-556</u>

Purge Method: 2" Grundfos Pump      Peristaltic Pump      Bladder Pump  
 Sampling Method: Dedicated Tubing      New Tubing      Other \_\_\_\_\_  
 Start Purge Time: 1001      Flow Rate: 200 ml/m      Pump Depth: 30ft

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.)
1004	10.94	7.18	3.332	12	0.70	148.2	600	4.69
1007	11.10	7.04	3.306	7	0.36	144.6	1200	5.02
1010	11.22	6.90	3.300	6	0.29	142.3	1800	5.02
1013	11.25	6.88	3.300	5	0.29	141.8	2400	5.02
1016	11.24	6.83	3.297	5	0.26	140.2	3000	5.02

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

Sampling Time: 1017      Sampling Date: 12/12/22

Sample I.D.: MW-213      Laboratory: TA

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 #: 221212- <del>JD</del> 1	Client: GHD
Sampler: cm	Gauging Date: 12/12/22
Well I.D.: MW-214	Well Diameter (in.): <del>2</del> 3 4 6 8
Total Well Depth (ft.): 39.61	Depth to Water (ft.): 4.38
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <u>PVC</u> Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump  
 Sampling Method: Dedicated Tubing New Tubing Other \_\_\_\_\_  
 Start Purge Time: 1004 Flow Rate: 200 mL/min Pump Depth: 21 ft

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.)
1007	11.71	6.59	2.225	12	-0.26	-10.7	600	4.42
1010	12.19	6.60	7.674	11	0.19	-37.3	1200	4.42
1013	12.38	6.58	7.939	11	0.18	-40.4	1800	4.42
1016	12.41	6.55	7.980	11	0.17	-45.9	2400	4.42
1019	12.40	6.52	7.989	10	0.17	-50.0	3000	4.42

Did well dewater? Yes  No  Amount actually evacuated: 3000 mL

Sampling Time: 1022 Sampling Date: 12/12/22

Sample I.D.: MW-214 Laboratory: TA

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

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



# Shell Oil Products US Chain Of Custody Record

LAB (LOCATION)

- ACCUTEST ( )
- CALSCIENCE ( )
- TESTAMERICA ( )
- Other ( )

Lab Vendor #

Dropdown

### Please Check Appropriate Box:

- SGW FDG
- PIPELINE
- RETAIL
- CHEMICALS
- CONSULTANT
- LUBES
- TRANSPORTATION
- OTHER

Print Bill To Contact Name:

PlaNet Site or Project ID

CHECK IF NO INCIDENT # APPLIES

DATE: 12/14/22

PAGE: 1 of 4

GSAP Project ID

PO #

**SAMPLING COMPANY:** Blaine Tech Services, Inc  
**LOG CODE:** BTSS  
**ADDRESS:** 1880 Rogers Ave, San Jose, CA, 95112  
**PROJECT CONTACT (Necessary or PDF Request to):** Jacquelyn England  
**TELEPHONE:** (707)523-1010 **FAX:** jacquelyn\_england@gthd.com  
**TURNAROUND TIME (CALENDAR DAYS):**  STANDARD (14 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS  RESULTS NEEDED ON WEEKEND  
 LA - RWQCB REPORT FORMAT  UST AGENCY:  LEVEL 1  LEVEL 2  LEVEL 3  LEVEL 4  OTHER (SPECIFY) \_\_\_\_\_  
**DELIVERABLES:**  Cooler #1  Cooler #2  Cooler #3  
**TEMPERATURE ON RECEIPT C°:** \_\_\_\_\_  
**SPECIAL INSTRUCTIONS OR NOTES:** \_\_\_\_\_

**SITE ADDRESS: Street and City:** 2555 13th Avenue  
**STATE:** WA  
**PHONE NO.:** (707)523-1010  
**E-MAIL:** jacquelyn\_england@gthd.com  
**GHD Project / Task Number:** 11218519  
**LAB USE ONLY:** Sonah Davis, Christina Mroz

LAB USE ONLY	SAMPLING		MATRIX	PRESERVATIVE			NO. OF CONT.	REQUESTED ANALYSIS							NON-UNIT COST	FIELD NOTES:	
	DATE	TIME		HCL	HNO3	H2SO4		NONE	OTHER	6200C BTEX	NWTFH-Dx	6270D SIM PAHs	300.0 Sulfate	6020A Total Lead			352.2 Nitrate & Nitrite
	12/14/22	0960	LT	X				2	X								
		1130		X				6	X								
		1248		X				6	X								
		1109		X				6	X								
		1140		X			X	9	X				X				
		1108		X				6	X								
		1144		X				6	X								
		1017		X			X	8	X								
		1022		X			X	8	X								
		1420		X			X	9	X				X				

**TEMPERATURE ON RECEIPT C°:** \_\_\_\_\_

**Container PID Readings or Laboratory Notes:** \_\_\_\_\_

**Requested by (Signature):** *[Signature]* **Date:** 12/15/22

**Received by (Signature):** SHIPPED VIA FedEx **Date:** \_\_\_\_\_

**Relinquished by (Signature):** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Relinquished by (Signature):** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Relinquished by (Signature):** \_\_\_\_\_ **Date:** \_\_\_\_\_



# Shell Oil Products US Chain Of Custody Record

## LAB (LOCATION)

- ACCUTEST ( )
- CALSCIENCE ( )
- TESTAMERICA ( )
- Other ( )

Lab Vendor # Dropdown

### Please Check Appropriate Box:

- SGW FDG
- PIPELINE
- RETAIL
- CHEMICALS
- CONSULTANT
- LUBES
- TRANSPORTATION
- OTHER

### Print Bill To Contact Name:

PlaNNet Site or Project ID \_\_\_\_\_  
 PO # \_\_\_\_\_  
 GSAP Project ID \_\_\_\_\_

CHECK IF NO INCIDENT # APPLIES  
 DATE: 12/14/22  
 PAGE: 2 of 4

**SAMPLING COMPANY:**  
 Blaine Tech Services, Inc  
 ADDRESS: 1680 Rogers Ave, San Jose, CA, 95112  
 PROJECT CONTACT (Hardcopy or PDF Report to):  
 TELEPHONE: (707)523-1010 FAX: jacquelyn.england@gdhd.com  
 TURNAROUND TIME (CALENDAR DAYS):  
 STANDARD (14 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS  RESULTS NEEDED ON WEEKEND  
 LA - RWQCB REPORT FORMAT  UST AGENCY:  
 DELIVERABLES:  LEVEL 1  LEVEL 2  LEVEL 3  LEVEL 4  OTHER (SPECIFY) \_\_\_\_\_  
 TEMPERATURE ON RECEIPT C° Cooler #1 \_\_\_\_\_ Cooler #2 \_\_\_\_\_ Cooler #3 \_\_\_\_\_

**SITE ADDRESS: Street and City**  
 2555 13th Avenue  
**EDF DELIVERABLE TO (Name, Company, Office Location):**  
 Jacquelyn England, GHD, Santa Rosa  
**PHONE NO.:** (707)523-1010  
**E-MAIL:** jacquelyn.england@gdhd.com  
**LOG CODE:** BTSS  
**State:** WA  
**RECQM Other ID:** 11218519  
**GHD Project / Task Number:** \_\_\_\_\_  
**SAMPLER NAME(S) (Print):** Sonah Davis / Christina Mroz  
**LAB USE ONLY**

LAB USE ONLY	SAMPLING		MATRIX	PRESERVATIVE			NO. OF CONT.	REQUESTED ANALYSIS		UNIT COST	NON-UNIT COST		FIELD NOTES:
	DATE	TIME		HCL	HNO3	H2SO4		NONE	OTHER		6020A Total Lead	NWTFH-Gx	
	MW-308	12/14/22	WT	X	X	X	7	X	X	X	X	X	
	TES-MW-1	1358		X			6	X	X				
	TX-06A	1250		X			6	X	X				
	MW-112A	1431		X			6	X	X				
	MW-309	1012		X			4	X	X				
	MW-302	0810		X	X	X	9	X	X	X	X	X	
	MW-303	0912		X			6	X	X				
	MW-304	0817		X	X	X	9	X	X	X	X	X	
	MW-309	0951		X			6	X	X				
	MW-310	0719		X	X	X	9	X	X	X	X	X	

**SPECIAL INSTRUCTIONS OR NOTES:**  
 SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 EDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED  
 PROVIDE LEDD DISK

LAB USE ONLY	Field Sample Identification	DATE	TIME	MATRIX	HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	Received by (Signature)	Date
	MW-308	12/14/22	1353	WT	X	X	X	X	X	7		
	TES-MW-1		1358		X					6		
	TX-06A		1250		X					6		
	MW-112A	12/14/22	1431		X					6		
	MW-309		1012		X					4		
	MW-302		0810		X	X	X	X	X	9		
	MW-303		0912		X					6		
	MW-304		0817		X	X	X	X	X	9		
	MW-309		0951		X					6		
	MW-310		0719		X	X	X	X	X	9		
												12/15/22

Received by (Signature) \_\_\_\_\_ Date \_\_\_\_\_  
 Received by (Signature) \_\_\_\_\_ Date \_\_\_\_\_  
 Received by (Signature) \_\_\_\_\_ Date \_\_\_\_\_



# Shell Oil Products US Chain of Custody Record

LAB (LOCATION)  
 ACCUTEST ( )  
 CALSCIENCE ( )  
 TESTAMERICA ( )  
 Other ( )

Print Bill To Contact Name: **Blaine Tech Services, Inc**  
 PIaNet Site or Project ID  
 PO #  
 GSAP Project ID

CHECK IF NO INCIDENT # APPLIES  
 DATE: **12/14/22**  
 PAGE: **3** of **4**

Lab Vendor # **Dropdown**  
 SAMPLING COMPANY: **Blaine Tech Services, Inc**  
 ADDRESS: **1680 Rogers Ave, San Jose, CA, 95112**  
 PROJECT CONTACT (Inspecify or PDF Request to):  
 TELEPHONE: **(707)523-1010** FAX:  
 TURNAROUND TIME (CALENDAR DAYS):  
 STANDARD (14 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS  RESULTS NEEDED ON WEEKEND  
 LA - RV/QCB REPORT FORMAT  UST AGENCY:  
 DELIVERABLES:  LEVEL 1  LEVEL 2  LEVEL 3  LEVEL 4  OTHER (SPECIFY)  
 TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:  
 SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 EDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED  
 PROVIDE LEDD DISK

LAB USE ONLY	Field Sample Identification		SAMPLING		MATRIX	PRESERVATIVE			NO. OF CONT.	REQUESTED ANALYSIS							UNIT COST	NON-UNIT COST	FIELD NOTES:	
	DATE	TIME	DATE	TIME		HCL	HNO3	H2SO4		NONE	OTHER	8290C BTEX	NWTPH-Dx	8270D SIM PAHs	3000 Sulfate	6020A Total Lead				6020A Nitrate & Nitrite
	MW-311	17442	1750		WT	X	X	X		7	X	X	X	X	X	X	X	X		
	MW-312		1211			X	X	X		7	X	X	X	X	X	X	X	X		
	MW-313		1109			X	X	X		6	X	X	X	X	X	X	X	X		
	MW-315		1137			X	X	X		6	X	X	X	X	X	X	X	X		
	SH-04		1359			X	X	X		6	X	X	X	X	X	X	X	X		
	TX-03A		1458			X	X	X		9	X	X	X	X	X	X	X	X		
	TX-04		1327			X	X	X		6	X	X	X	X	X	X	X	X		
	MW-05		17442	1018		X	X	X		6	X	X	X	X	X	X	X	X		
	MW-104		1097			X	X	X		7	X	X	X	X	X	X	X	X		
	MW-105		0921			X	X	X		7	X	X	X	X	X	X	X	X		
Relinquished by (Signature)											Received by (Signature) <b>SKIPPED VIA FEDEX</b>							Date: <b>12/15/22</b>	Time:	
Relinquished by (Signature)											Received by (Signature)							Date:	Time:	
Relinquished by (Signature)											Received by (Signature)							Date:	Time:	

STATE: **WA** PHONE NO.: **(707)523-1010** E-MAIL: **jacquelyn.england@ghd.com**  
 SITE ADDRESS: Street and City **2555 13th Avenue** State **WA** GHD Project / Task Number: **11218519**  
 EDF DELIVERABLE TO (Name, Company, Office Location): **Jacquelyn England, GHD, Santa Rosa** PHONE NO.: **(707)523-1010** E-MAIL: **jacquelyn.england@ghd.com**  
 SAMPLER NAME(S) (Print):



# Shell Oil Products US Chain Of Custody Record

## LAB (LOCATION)

- ACCUTEST ( )
- CALSCIENCE ( )
- TESTAMERICA ( )
- Other ( )

Lab Vendor # Dropdown

### Please Check Appropriate Box:

- SGW FDG
- PIPELINE
- RETAIL
- CHEMICALS
- CONSULTANT
- LUBES
- TRANSPORTATION
- OTHER

### Print Bill To Contact Name:

PlaNat Site or Project ID  
 GSAP Project ID  
 PO #

CHECK IF NO INCIDENT # APPLIES  
 DATE: 12/14/22  
 PAGE: 4 of 4

SAMPLING COMPANY: Blaine Tech Services, Inc  
 ADDRESS: 1680 Rogers Ave, San Jose, CA, 95112  
 PROJECT CONTACT (Hardcopy or PDF Report to): Jacquelyn England  
 TELEPHONE: (707)523-1010 FAX: jacquelyn.england@ghd.com  
 TURNAROUND TIME (CALENDAR DAYS):  
 STANDARD (14 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS  RESULTS NEEDED ON WEEKEND  
 LA - RWQCB REPORT FORMAT  UST AGENCY:  
 DELIVERABLES:  LEVEL 1  LEVEL 2  LEVEL 3  LEVEL 4  OTHER (SPECIFY) \_\_\_\_\_  
 TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2

SITE ADDRESS: Street and City  
 2555 13th Avenue  
 EDP DELIVERABLE TO (Name, Company, Office Location): Jacquelyn England, GHD, Santa Rosa  
 PHONE NO.: (707)523-1010  
 STATE: WA  
 ZIP: 95404  
 GHD Project / Task Number: 11218519  
 E-MAIL: jacquelyn.england@ghd.com  
 LAB USE ONLY  
 Jonah Davis, Christina Noz

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE	NO. OF CONT.	UNIT COST	REQUESTED ANALYSIS	NON-UNIT COST	FIELD NOTES:							
	MW-111	12/14/22	1119	WT	X	6	8260C BTEX	NWTPH-Ox	82700 SIM PAHs	300 0 Sulfate	6020A Total Lead	353 2 Nitrate & Nitrite	6020A Dis. Iron & Manganese (lab filter)	300 0 Chloride	2220B Alkalinity	Container PID Readings or Laboratory Notes	
	MW-113		0851			6											
	MW-114		0752			6											
	MW-115		0822			6											
	MW-203		1231		X	9											

SPECIAL INSTRUCTIONS OR NOTES:  
 SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 EDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED  
 PROVIDE LEDD DISK

Relinquished by (Signature):

Relinquished by (Signature):

Relinquished by (Signature):

Received by (Signature):

Received by (Signature):

Received by (Signature):

Date: 12/15/22

Time:

SHIPPED VIA FEDEX

ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

INCIDENT # 22R12-JD1  
 DATE: 12/12/22

ADDRESS 2865 Bth Ave SW  
 CITY & STATE Seattle, WA

Well ID	Manway Cover, Type, Condition & Size			Observations Upon Arrival			Well Lock Condition			Well Pad / Surface Condition	Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	Photos of Well Condition	Repair Date and PM Initials			
	Manway Cover	Type	Condition & Size	Well Labeled / Painted Property*	Well Cap (Gripper) Condition	Well Lock Condition	Well Pad / Surface Condition									
MW-201	Standpipe	Flush	P	Y	G	R	N	G	R	G	NL	G	P	Y	N	
MW-202	Standpipe	Flush	P	Y	G	R	N	G	R	G	NL	G	P	Y	N	
MW-203	Standpipe	Flush	P	Y	G	R	N	G	R	G	NL	G	P	Y	N	
MW-204	Standpipe	Flush	P	Y	G	R	N	G	R	G	NL	G	P	Y	N	
MW-204A	Standpipe	Flush	P	Y	G	R	N	G	R	G	NL	G	P	Y	N	
MW-101	Standpipe	Flush	P	Y	G	R	N	G	R	G	NL	G	P	Y	N	
MW-102	Standpipe	Flush	P	Y	G	R	N	G	R	G	NL	G	P	Y	N	
MW-301	Standpipe	Flush	P	Y	G	R	N	G	R	G	NL	G	P	Y	N	
MW-302	Standpipe	Flush	P	Y	G	R	N	G	R	G	NL	G	P	Y	N	
MW-303	Standpipe	Flush	P	Y	G	R	N	G	R	G	NL	G	P	Y	N	
MW-304	Standpipe	Flush	P	Y	G	R	N	G	R	G	NL	G	P	Y	N	
TOTAL # CAPS REPLACED = 0											TOTAL # OF LOCKS REPLACED = 0					

1/2 Bolts missing

Remediation Compound Type (Check boxes that apply)	Condition of Enclosure	Condition of Area Inside Enclosure	Compound Security	Emergency Contact Info Visible	Cleaning / Repairs Recommended and Conducted	Photos of Condition	Repair Date and PM Initials
NA							
Building	G	G	G	Y		Y	N
Building w/ Fence Comp.	G	G	G	Y		Y	N
Fenced Compound	G	G	G	Y		Y	N
Trailer	G	G	G	Y		Y	N

Number of Drums On-site: 0  
 Does the Label Reveal the Source of the Contents: Y  
 Labeled Correctly and Writing Legible: N  
 Drum Condition: G  
 Confirm Drums Related to Environmental: Y  
 Drums Located to Min Business Interference: N  
 Detailed Explanation of Any Issues Resolved: N/A  
 Date Drums Removed from Site and PM Initials: N/A

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Jonah Davis / BTS  
 Print or type Name of Field Personnel & Consultant Company

G = Good (Acceptable) R = Replaced  
 P = Poor (needs attention) NL = No Lock Required  
 Note: All repairs other than locks and grippers require Shell PM approval prior to repair.  
 \* - Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.  
 Version 2.4, March 2008



ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

INCIDENT # 221212-001 ADDRESS 2555 13th Ave SW CITY & STATE Seattle, WA  
 DATE: 12/12/22

Well ID	Observations Upon Arrival				Well Pad / Surface Condition	Detailed Explanation of Maintenance Recommended and Performed	Photos of Well Condition	Repair Date and PM Initials
	Manway Cover, Type, Condition & Size	Well Labeled / Painted Properly*	Well Cap (Gripper) Condition	Well Lock Condition				
MM-307	Standpipe Flush G P 2	Y	R	G	G		Y	N
MM-308	Standpipe Flush G P 2	Y	R	G	G		Y	N
MM-309	Standpipe Flush G P 2	Y	R	G	G		Y	N
MM-310	Standpipe Flush G P 2	Y	R	G	G		Y	N
MM-311	Standpipe Flush G P 2	Y	R	G	G		Y	N
MM-312	Standpipe Flush G P 2	Y	R	G	G		Y	N
MM-313	Standpipe Flush G P 2	Y	R	G	G		Y	N
MM-314	Standpipe Flush G P	Y	R	G	G		Y	N
MM-315	Standpipe Flush G P 2	Y	R	G	G		Y	N
MM-316	Standpipe Flush G P 2	Y	R	G	G		Y	N
MM-317	Standpipe Flush G P 2	Y	R	G	G		Y	N
MM-318	Standpipe Flush G P	Y	R	G	G	unable to access Parked over	Y	N
MM-319	Standpipe Flush G P	Y	R	G	G		Y	N
MM-320	Standpipe Flush G P	Y	R	G	G		Y	N
MM-321	Standpipe Flush G P	Y	R	G	G		Y	N
MM-322	Standpipe Flush G P	Y	R	G	G		Y	N
MM-323	Standpipe Flush G P	Y	R	G	G		Y	N
MM-324	Standpipe Flush G P	Y	R	G	G		Y	N
MM-325	Standpipe Flush G P	Y	R	G	G		Y	N
MM-326	Standpipe Flush G P	Y	R	G	G		Y	N
MM-327	Standpipe Flush G P	Y	R	G	G		Y	N
MM-328	Standpipe Flush G P	Y	R	G	G		Y	N
MM-329	Standpipe Flush G P	Y	R	G	G		Y	N
MM-330	Standpipe Flush G P	Y	R	G	G		Y	N
MM-331	Standpipe Flush G P	Y	R	G	G		Y	N
MM-332	Standpipe Flush G P	Y	R	G	G		Y	N
MM-333	Standpipe Flush G P	Y	R	G	G		Y	N
MM-334	Standpipe Flush G P	Y	R	G	G		Y	N
MM-335	Standpipe Flush G P	Y	R	G	G		Y	N
MM-336	Standpipe Flush G P	Y	R	G	G		Y	N
MM-337	Standpipe Flush G P	Y	R	G	G		Y	N
MM-338	Standpipe Flush G P	Y	R	G	G		Y	N
MM-339	Standpipe Flush G P	Y	R	G	G		Y	N
MM-340	Standpipe Flush G P	Y	R	G	G		Y	N
MM-341	Standpipe Flush G P	Y	R	G	G		Y	N
MM-342	Standpipe Flush G P	Y	R	G	G		Y	N
MM-343	Standpipe Flush G P	Y	R	G	G		Y	N
MM-344	Standpipe Flush G P	Y	R	G	G		Y	N
MM-345	Standpipe Flush G P	Y	R	G	G		Y	N
MM-346	Standpipe Flush G P	Y	R	G	G		Y	N
MM-347	Standpipe Flush G P	Y	R	G	G		Y	N
MM-348	Standpipe Flush G P	Y	R	G	G		Y	N
MM-349	Standpipe Flush G P	Y	R	G	G		Y	N
MM-350	Standpipe Flush G P	Y	R	G	G		Y	N
MM-351	Standpipe Flush G P	Y	R	G	G		Y	N
MM-352	Standpipe Flush G P	Y	R	G	G		Y	N
MM-353	Standpipe Flush G P	Y	R	G	G		Y	N
MM-354	Standpipe Flush G P	Y	R	G	G		Y	N
MM-355	Standpipe Flush G P	Y	R	G	G		Y	N
MM-356	Standpipe Flush G P	Y	R	G	G		Y	N
MM-357	Standpipe Flush G P	Y	R	G	G		Y	N
MM-358	Standpipe Flush G P	Y	R	G	G		Y	N
MM-359	Standpipe Flush G P	Y	R	G	G		Y	N
MM-360	Standpipe Flush G P	Y	R	G	G		Y	N
MM-361	Standpipe Flush G P	Y	R	G	G		Y	N
MM-362	Standpipe Flush G P	Y	R	G	G		Y	N
MM-363	Standpipe Flush G P	Y	R	G	G		Y	N
MM-364	Standpipe Flush G P	Y	R	G	G		Y	N
MM-365	Standpipe Flush G P	Y	R	G	G		Y	N
MM-366	Standpipe Flush G P	Y	R	G	G		Y	N
MM-367	Standpipe Flush G P	Y	R	G	G		Y	N
MM-368	Standpipe Flush G P	Y	R	G	G		Y	N
MM-369	Standpipe Flush G P	Y	R	G	G		Y	N
MM-370	Standpipe Flush G P	Y	R	G	G		Y	N
MM-371	Standpipe Flush G P	Y	R	G	G		Y	N
MM-372	Standpipe Flush G P	Y	R	G	G		Y	N
MM-373	Standpipe Flush G P	Y	R	G	G		Y	N
MM-374	Standpipe Flush G P	Y	R	G	G		Y	N
MM-375	Standpipe Flush G P	Y	R	G	G		Y	N
MM-376	Standpipe Flush G P	Y	R	G	G		Y	N
MM-377	Standpipe Flush G P	Y	R	G	G		Y	N
MM-378	Standpipe Flush G P	Y	R	G	G		Y	N
MM-379	Standpipe Flush G P	Y	R	G	G		Y	N
MM-380	Standpipe Flush G P	Y	R	G	G		Y	N
MM-381	Standpipe Flush G P	Y	R	G	G		Y	N
MM-382	Standpipe Flush G P	Y	R	G	G		Y	N
MM-383	Standpipe Flush G P	Y	R	G	G		Y	N
MM-384	Standpipe Flush G P	Y	R	G	G		Y	N
MM-385	Standpipe Flush G P	Y	R	G	G		Y	N
MM-386	Standpipe Flush G P	Y	R	G	G		Y	N
MM-387	Standpipe Flush G P	Y	R	G	G		Y	N
MM-388	Standpipe Flush G P	Y	R	G	G		Y	N
MM-389	Standpipe Flush G P	Y	R	G	G		Y	N
MM-390	Standpipe Flush G P	Y	R	G	G		Y	N
MM-391	Standpipe Flush G P	Y	R	G	G		Y	N
MM-392	Standpipe Flush G P	Y	R	G	G		Y	N
MM-393	Standpipe Flush G P	Y	R	G	G		Y	N
MM-394	Standpipe Flush G P	Y	R	G	G		Y	N
MM-395	Standpipe Flush G P	Y	R	G	G		Y	N
MM-396	Standpipe Flush G P	Y	R	G	G		Y	N
MM-397	Standpipe Flush G P	Y	R	G	G		Y	N
MM-398	Standpipe Flush G P	Y	R	G	G		Y	N
MM-399	Standpipe Flush G P	Y	R	G	G		Y	N
MM-400	Standpipe Flush G P	Y	R	G	G		Y	N

TOTAL # OF CAPS REPLACED = 0

TOTAL # OF LOCKS REPLACED = 0

Remediation Compound Type (Check boxes that apply)	Condition of Enclosure		Condition of Area Inside Enclosure		Compound Security		Emergency Contact Info Visible		Cleaning / Repairs Recommended and Conducted	Photos of Condition	Repair Date and PM Initials
	G	P	G	P	G	P	G	P			
NA										Y	N
Building											
Building w/ Fence Comp.											
Fenced Compound											
Trailer											
Does the Label Reveal the Source of the Contents	Y	N	N/A	N	Y	N	N/A	N	Detailed Explanation of Any Issues Resolved	Y	N
Number of Drums On-site	Y	N	N/A	G	Y	N	N/A	N		Y	N
Date Drums Removed from Site and PM Initials											

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Tonah Davis / BTS

Print or type Name of Field Personnel & Consultant Company

G = Good (Acceptable) R = Replaced  
 P = Poor (needs attention) NIL = No Lock Required  
 Note: All repairs other than locks and grippers require Shell PM approval prior to repair.  
 \* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.  
 Version 2.4, March 2008



ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

INCIDENT # 2212-001

ADDRESS 2555 13th Ave SW

CITY & STATE Seattle, WA

DATE: 12/12/22

Well ID	Marway Cover, Type, Condition & Size			Observations Upon Arrival			Well Lock Condition			Well Pad / Surface Condition	Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	Photos of Well Condition	Repair Date and PM Initials
	Standpipe	Flush	Size (inch)	Well Labeled / Painted Properly*	Well Cap (Gripper) Condition	Well Lock Condition	Well Pad / Surface Condition	Well Lock Condition	Well Pad / Surface Condition				
MW-05	Standpipe	Flush	2	Y	G	R	G	R	G	P	1/3 bolts missing	Y N	
MW-111	Standpipe	Flush	2	Y	G	R	G	R	G	P	2/3 bolts missing	Y N	
MW-17A	Standpipe	Flush	2	Y	G	R	G	R	G	P		Y N	
SH-04	Standpipe	Flush	2	Y	G	R	G	R	G	P		Y N	
MW-04	Standpipe	Flush	2	Y	G	R	G	R	G	P	2/3 bolts missing	Y N	
MW-13	Standpipe	Flush	2	Y	G	R	G	R	G	P		Y N	
MW-14	Standpipe	Flush	2	Y	G	R	G	R	G	P		Y N	
MW-15	Standpipe	Flush	2	Y	G	R	G	R	G	P		Y N	
MW-105	Standpipe	Flush	2	Y	G	R	G	R	G	P	2/3 bolts missing	Y N	
TX-04	Standpipe	Flush	2	Y	G	R	G	R	G	P		Y N	
TX-06A	Standpipe	Flush	2	Y	G	R	G	R	G	P		Y N	
TOTAL # CAPS REPLACED = 0											TOTAL # OF LOCKS REPLACED = 0		

Remediation Compound Type (Check boxes that apply)	Condition of Enclosure		Condition of Area Inside Enclosure		Compound Security		Emergency Contact Info Visible		Clearing / Repairs Recommended and Conducted	Photos of Condition	Repair Date and PM Initials	
	Condition of Enclosure	Condition of Area Inside Enclosure	Compound Security	Emergency Contact Info Visible	Condition of Area Inside Enclosure	Compound Security	Emergency Contact Info Visible					
NA												
Building												
Building w/ Fence Comp.												
Fenced Compound												
Trailer												
TOTAL # OF LOCKS REPLACED = 0											TOTAL # OF LOCKS REPLACED = 0	

Number of Drums On-site	Does the Label Reveal the Source of the Contents		Labeled Correctly and Writing Legible		Drum Condition		Confirm Drums Related to Environmental		Drums Located to Min Business Interference		Detailed Explanation of Any Issues Resolved	Photos of Drum Condition	Date Drums Removed from Site and PM Initials
	Y	N	Y	N	G	P	Y	N	Y	N			
0	Y	N	Y	N	G	P	Y	N	Y	N		Y N	

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Jonah Davis / JDS

Print or type Name of Field Personnel & Consultant Company

G = Good (Acceptable) R = Replaced  
 P = Poor (needs attention) NL = No Lock Required  
 Note: All repairs other than locks and grippers require Shell PM approval prior to repair.  
 \* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.  
 Version 2.4, March 2008

ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

INCIDENT # 221212-001  
 DATE: 12/12/22

ADDRESS 2555 13th Ave SW  
 CITY & STATE Seattle, WA

Well ID	Manway Cover, Type, Condition & Size				Observations Upon Arrival			Well Pad / Surface Condition	Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	Photos of Well Condition	Repair Date and PM Initials
	Standpipe	Flush	Condition	Size (inch)	Well Labeled / Painted Properly*	Well Cap (Gripper) Condition	Well Lock Condition				
MW-213	Standpipe	Flush	G	2	Y	R	G	P		Y	N
MW-214	Standpipe	Flush	G	2	Y	R	G	P	2/3 bolts missing	Y	N
MW-208	Standpipe	Flush	G	2	Y	R	G	P		Y	N
MW-210	Standpipe	Flush	G	2	Y	R	G	P		Y	N
MW-211	Standpipe	Flush	G	4	Y	R	G	P		Y	N
MW-212	Standpipe	Flush	G	4	Y	R	G	P		Y	N
ASV-1	Standpipe	Flush	G	2	Y	R	G	P		Y	N
PSV-1	Standpipe	Flush	G	2	Y	R	G	P		Y	N
PSV-2	Standpipe	Flush	G	2	Y	R	G	P		Y	N
SVE-1	Standpipe	Flush	G	2	Y	R	G	P		Y	N
TW-D1	Standpipe	Flush	G	2	Y	R	G	P		Y	N

TOTAL # CAPS REPLACED = 0  
 TOTAL # OF LOCKS REPLACED = 0

Remediation Compound Type (Check boxes that apply)	Condition of Enclosure		Condition of Area Inside Enclosure		Compound Security		Emergency Contact Info Visible		Cleaning / Repairs Recommended and Conducted	Photos of Condition	Repair Date and PM Initials
	Building	Fenced Compound	Condition of Area Inside Enclosure	Compound Security	Compound Security	Emergency Contact Info Visible	Emergency Contact Info Visible	Photos of Condition			
NA										Y	N
Building											
Building w/ Fence Comp.											
Fenced Compound											
Trailer											
Number of Drums On-site	Does the Label Reveal the Source of the Contents	Labeled Correctly and Legible	Drum Condition	Confirm Drums Related to Environmental	Drums Located to Min Business Interference	Detailed Explanation of Any Issues Resolved		Date Drums Removed from Site and PM Initials		Y	N
0	Y N N/A	Y N N/A	G P N/A	Y N N/A	Y N N/A					Y	N

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Sonah Davis / BLS  
 Print or type Name of Field Personnel & Consultant Company

G = Good (Acceptable) R = Replaced  
 P = Poor (needs attention) NL = No Lock Required  
 Note: All repairs other than locks and grippers require Shell PM approval prior to repair.  
 \* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.  
 Version 2.4, March 2008

ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

INCIDENT # 221212-501  
 DATE: 12/12/22

ADDRESS 2555 13th Ave SW  
 CITY & STATE Seattle WA

Well ID	Manway Cover, Type, Condition & Size			Observations Upon Arrival			Well Pad / Surface Condition			Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	Photos of Well Condition	Repair Date and PM Initials
	Manway Cover	Type	Condition & Size	Well Labeled / Painted Property*	Well Cap (Gripper) Condition	Well Lock Condition	Well Pad / Surface Condition	Well Lock Condition	Well Pad / Surface Condition			
MR-06	Standpipe	Flush	P	Y	G	R	G	R	G		Y	
MLV-06	Standpipe	Flush	P	Y	G	R	G	R	G		Y	
MLV-103	Standpipe	Flush	P	Y	G	R	G	R	G		Y	
MLV-116	Standpipe	Flush	P	Y	G	R	G	R	G		Y	
MLV-107	Standpipe	Flush	P	Y	G	R	G	R	G		Y	
MLV-108	Standpipe	Flush	P	Y	G	R	G	R	G		Y	
MLV-109	Standpipe	Flush	P	Y	G	R	G	R	G		Y	
MLV-110	Standpipe	Flush	P	Y	G	R	G	R	G		Y	
MLV-105	Standpipe	Flush	P	Y	G	R	G	R	G		Y	
MLV-209	Standpipe	Flush	P	Y	G	R	G	R	G		Y	
MLV-300	Standpipe	Flush	P	Y	G	R	G	R	G		Y	
TOTAL # CAPS REPLACED = 0											TOTAL # OF LOCKS REPLACED = 0	

Remediation Compound Type (Check boxes that apply)	Condition of Enclosure		Condition of Area Inside Enclosure		Compound Security		Emergency Contact Info Visible		Cleaning / Repairs Recommended and Conducted	Photos of Condition	Repair Date and PM Initials	
	Building	Fenced Compound	Trailer	Condition of Area Inside Enclosure	Compound Security	Emergency Contact Info Visible	Emergency Contact Info Visible	Emergency Contact Info Visible				
NA												
Building												
Building w/ Fence Comp.												
Fenced Compound												
Trailer												
Number of Drums On-site	Y	N	N/A	Y	N	N/A	Y	N	N/A	Y		
Does the Label Reveal the Source of the Contents											Detailed Explanation of Any Issues Resolved	
Labeled Correctly and Writing Legible											Drums Located to Min Business Interference	
Condition of Enclosure											Confirm Drums Related to Environmental	
Condition of Area Inside Enclosure											Drums Located to Min Business Interference	
Compound Security											Detailed Explanation of Any Issues Resolved	
Emergency Contact Info Visible											Photos of Drum Condition	
Cleaning / Repairs Recommended and Conducted											Date Drums Removed from Site and PM Initials	

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Jonah Davis / B15  
 Print or type Name of Field Personnel & Consultant Company

G = Good (Acceptable) R = Replaced  
 P = Poor (needs attention) NL = No Lock Required  
 Note: All repairs other than locks and grippers require Shell P.M. approval prior to repair.  
 \* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.  
 Version 2.4, March 2008

ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

INCIDENT # 22/12/22-SD1

ADDRESS 2555 13th Ave SW

DATE: 2/18/22 - SD 12/12/22

CITY & STATE Seattle, WA

Well ID	Manway Cover, Type, Condition & Size		Observations Upon Arrival			Well Lock Condition		Well Pad / Surface Condition	Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	Photos of Well Condition	Repair Date and PM Initials
	Standpipe	Flush	Size (inch)	Well Labeled / Painted Properly*	Well Cap (Gripper) Condition	Well Lock	Well Pad / Surface				
ML-306	Flush	G	2	Y	N	R	G	NL	G	Y	N
AMV-8	Flush	G	4	Y	N	R	G	NL	G	Y	N
AMV-X	Flush	G	4	Y	N	R	G	NL	G	Y	N
	Flush	G		Y	N	R	G	NL	G	Y	N
	Flush	G		Y	N	R	G	NL	G	Y	N
	Flush	G		Y	N	R	G	NL	G	Y	N
	Flush	G		Y	N	R	G	NL	G	Y	N
	Flush	G		Y	N	R	G	NL	G	Y	N
	Flush	G		Y	N	R	G	NL	G	Y	N
	Flush	G		Y	N	R	G	NL	G	Y	N
	Flush	G		Y	N	R	G	NL	G	Y	N
	Flush	G		Y	N	R	G	NL	G	Y	N
	Flush	G		Y	N	R	G	NL	G	Y	N
		TOTAL # CAPS REPLACED =		0				TOTAL # OF LOCKS REPLACED =		0	

Condition of Soil Boring Patches or Abandoned Monitoring Wells		IF POOR, Borings/Well IDs or Location Description	
Remediation Compound Type (Check boxes that apply)	Condition of Enclosure	Condition of Area Inside Enclosure	Compound Security
NA	G	P	N/A
Building			
Building w/ Fence Comp.			
Fenced Compound			
Trailer			

Emergency Contact Info Visible	Cleaning / Repairs Recommended and Conducted	Photos of Condition	Repair Date and PM Initials
Y		Y	N

Drums Located to Min Business Interference	Detailed Explanation of Any Issues Resolved	Photos of Drum Condition	Date Drums Removed from Site and PM Initials
Y		Y	N

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Jonah Davis / BS

Print or type Name of Field Personnel & Consultant Company

G = Good (Acceptable) R = Replaced  
 P = Poor (needs attention) NL = No Lock Required  
 Note: All repairs other than locks and grippers require Shell PM approval prior to repair.  
 \* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.  
 Version 2.4, March 2008





# **Appendix B**

**Laboratory Analytical Results**



## ANALYTICAL REPORT

Eurofins Spokane  
11922 East 1st Ave  
Spokane, WA 99206  
Tel: (509)924-9200

Laboratory Job ID: 590-17195-1

Client Project/Site: 2555 13th Avenue SW, Seattle, WA

For:

GHD Services Inc.  
2235 Mercury Way  
Suite 150  
Santa Rosa, California 95407

Attn: Jacquelyn England

*Roxanne Cisneros*

Authorized for release by:  
4/7/2022 4:31:18 PM

Roxanne Cisneros, Senior Project Manager  
(615)301-5761  
[roxanne.cisneros@et.eurofinsus.com](mailto:roxanne.cisneros@et.eurofinsus.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

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

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





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# Case Narrative

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

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## Job ID: 590-17195-1

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### Laboratory: Eurofins Spokane

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#### Narrative

#### Job Narrative 590-17195-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 3/30/2022 1:15 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.3° C.

#### GC/MS VOA

Method 8260D: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with analytical batch 590-35587.

Method 8260D: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with analytical batch 590-35636.

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

#### GC Semi VOA

Method NWTPH-Dx: Detected hydrocarbons appear to be due to a weathered heavy gas/light diesel range components. MW-314 (590-17195-11)

Method NWTPH-Dx: Detected hydrocarbons appear to be due to heavy gas/light diesel range components. MW-314 (590-17195-11)

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

#### Organic Prep

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

#### VOA Prep

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

# Sample Summary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-17195-1	MW-301	Water	03/29/22 11:34	03/30/22 13:15
590-17195-2	MW-302	Water	03/28/22 13:06	03/30/22 13:15
590-17195-3	MW-303	Water	03/28/22 14:03	03/30/22 13:15
590-17195-4	MW-304	Water	03/28/22 14:32	03/30/22 13:15
590-17195-5	MW-307	Water	03/28/22 11:48	03/30/22 13:15
590-17195-6	MW-308	Water	03/28/22 12:18	03/30/22 13:15
590-17195-7	MW-310	Water	03/29/22 11:03	03/30/22 13:15
590-17195-8	MW-311	Water	03/29/22 09:57	03/30/22 13:15
590-17195-9	MW-312	Water	03/29/22 10:28	03/30/22 13:15
590-17195-10	MW-313	Water	03/29/22 08:50	03/30/22 13:15
590-17195-11	MW-314	Water	03/28/22 10:19	03/30/22 13:15
590-17195-12	MW-315	Water	03/29/22 09:22	03/30/22 13:15
590-17195-13	TX-03A	Water	03/28/22 13:34	03/30/22 13:15
590-17195-14	TB-1	Water	03/28/22 09:00	03/30/22 13:15

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# Definitions/Glossary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

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

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

**Client Sample ID: MW-301**

**Lab Sample ID: 590-17195-1**

Date Collected: 03/29/22 11:34

Matrix: Water

Date Received: 03/30/22 13:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	30.8		0.400	0.0930	ug/L			04/01/22 22:40	1
Ethylbenzene	2.48		1.00	0.198	ug/L			04/01/22 22:40	1
Toluene	0.663	J	1.00	0.312	ug/L			04/01/22 22:40	1
Xylenes, Total	1.13	J	3.00	0.442	ug/L			04/01/22 22:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		04/01/22 22:40	1
Dibromofluoromethane (Surr)	100		80 - 120		04/01/22 22:40	1
1,2-Dichloroethane-d4 (Surr)	101		80 - 120		04/01/22 22:40	1
Toluene-d8 (Surr)	104		80 - 120		04/01/22 22:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	572		150	30.5	ug/L			04/01/22 22:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		68.7 - 141		04/01/22 22:40	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

**Client Sample ID: MW-302**  
**Date Collected: 03/28/22 13:06**  
**Date Received: 03/30/22 13:15**

**Lab Sample ID: 590-17195-2**  
**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.16		0.400	0.0930	ug/L			04/01/22 23:23	1
Ethylbenzene	12.2		1.00	0.198	ug/L			04/01/22 23:23	1
Toluene	0.712	J	1.00	0.312	ug/L			04/01/22 23:23	1
Xylenes, Total	2.92	J	3.00	0.442	ug/L			04/01/22 23:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120		04/01/22 23:23	1
Dibromofluoromethane (Surr)	98		80 - 120		04/01/22 23:23	1
1,2-Dichloroethane-d4 (Surr)	98		80 - 120		04/01/22 23:23	1
Toluene-d8 (Surr)	105		80 - 120		04/01/22 23:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	1180		150	30.5	ug/L			04/01/22 23:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		68.7 - 141		04/01/22 23:23	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

**Client Sample ID: MW-303**  
**Date Collected: 03/28/22 14:03**  
**Date Received: 03/30/22 13:15**

**Lab Sample ID: 590-17195-3**  
**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	27.0		0.400	0.0930	ug/L			04/01/22 23:44	1
Ethylbenzene	63.8		1.00	0.198	ug/L			04/01/22 23:44	1
Toluene	1.96		1.00	0.312	ug/L			04/01/22 23:44	1
Xylenes, Total	8.92		3.00	0.442	ug/L			04/01/22 23:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		04/01/22 23:44	1
Dibromofluoromethane (Surr)	99		80 - 120		04/01/22 23:44	1
1,2-Dichloroethane-d4 (Surr)	100		80 - 120		04/01/22 23:44	1
Toluene-d8 (Surr)	104		80 - 120		04/01/22 23:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	2630		150	30.5	ug/L			04/01/22 23:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		68.7 - 141		04/01/22 23:44	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

**Client Sample ID: MW-304**

**Lab Sample ID: 590-17195-4**

Date Collected: 03/28/22 14:32

Matrix: Water

Date Received: 03/30/22 13:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	27.6		0.400	0.0930	ug/L			04/02/22 00:05	1
Ethylbenzene	1.25		1.00	0.198	ug/L			04/02/22 00:05	1
Toluene	0.750	J	1.00	0.312	ug/L			04/02/22 00:05	1
Xylenes, Total	0.843	J	3.00	0.442	ug/L			04/02/22 00:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		80 - 120		04/02/22 00:05	1
Dibromofluoromethane (Surr)	101		80 - 120		04/02/22 00:05	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		04/02/22 00:05	1
Toluene-d8 (Surr)	100		80 - 120		04/02/22 00:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	624		150	30.5	ug/L			04/02/22 00:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		68.7 - 141		04/02/22 00:05	1



# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

**Client Sample ID: MW-307**

**Lab Sample ID: 590-17195-5**

Date Collected: 03/28/22 11:48

Matrix: Water

Date Received: 03/30/22 13:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	98.2		0.400	0.0930	ug/L			04/02/22 00:26	1
Ethylbenzene	147		10.0	1.98	ug/L			04/04/22 15:02	10
Toluene	22.3		1.00	0.312	ug/L			04/02/22 00:26	1
Xylenes, Total	98.8		3.00	0.442	ug/L			04/02/22 00:26	1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		80 - 120			04/02/22 00:26	1
4-Bromofluorobenzene (Surr)	100		80 - 120			04/04/22 15:02	10
Dibromofluoromethane (Surr)	94		80 - 120			04/02/22 00:26	1
Dibromofluoromethane (Surr)	87		80 - 120			04/04/22 15:02	10
1,2-Dichloroethane-d4 (Surr)	99		80 - 120			04/02/22 00:26	1
1,2-Dichloroethane-d4 (Surr)	94		80 - 120			04/04/22 15:02	10
Toluene-d8 (Surr)	107		80 - 120			04/02/22 00:26	1
Toluene-d8 (Surr)	112		80 - 120			04/04/22 15:02	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	3690		150	30.5	ug/L			04/02/22 00:26	1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		68.7 - 141			04/02/22 00:26	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

**Client Sample ID: MW-308**  
**Date Collected: 03/28/22 12:18**  
**Date Received: 03/30/22 13:15**

**Lab Sample ID: 590-17195-6**  
**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4.76		0.400	0.0930	ug/L			04/02/22 00:48	1
Ethylbenzene	0.244	J	1.00	0.198	ug/L			04/02/22 00:48	1
Toluene	ND		1.00	0.312	ug/L			04/02/22 00:48	1
Xylenes, Total	ND		3.00	0.442	ug/L			04/02/22 00:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		80 - 120		04/02/22 00:48	1
Dibromofluoromethane (Surr)	98		80 - 120		04/02/22 00:48	1
1,2-Dichloroethane-d4 (Surr)	94		80 - 120		04/02/22 00:48	1
Toluene-d8 (Surr)	109		80 - 120		04/02/22 00:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	106	J	150	30.5	ug/L			04/02/22 00:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		68.7 - 141		04/02/22 00:48	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

**Client Sample ID: MW-310**

**Lab Sample ID: 590-17195-7**

Date Collected: 03/29/22 11:03

Matrix: Water

Date Received: 03/30/22 13:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	31.3		0.400	0.0930	ug/L			04/02/22 01:09	1
Ethylbenzene	9.48		1.00	0.198	ug/L			04/02/22 01:09	1
Toluene	0.978	J	1.00	0.312	ug/L			04/02/22 01:09	1
Xylenes, Total	2.96	J	3.00	0.442	ug/L			04/02/22 01:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		80 - 120		04/02/22 01:09	1
Dibromofluoromethane (Surr)	96		80 - 120		04/02/22 01:09	1
1,2-Dichloroethane-d4 (Surr)	96		80 - 120		04/02/22 01:09	1
Toluene-d8 (Surr)	104		80 - 120		04/02/22 01:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	1550		150	30.5	ug/L			04/02/22 01:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		68.7 - 141		04/02/22 01:09	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

**Client Sample ID: MW-311**

**Lab Sample ID: 590-17195-8**

Date Collected: 03/29/22 09:57

Matrix: Water

Date Received: 03/30/22 13:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.243	J	0.400	0.0930	ug/L			04/02/22 01:51	1
Ethylbenzene	0.302	J	1.00	0.198	ug/L			04/02/22 01:51	1
Toluene	0.909	J	1.00	0.312	ug/L			04/02/22 01:51	1
Xylenes, Total	0.828	J	3.00	0.442	ug/L			04/02/22 01:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120		04/02/22 01:51	1
Dibromofluoromethane (Surr)	98		80 - 120		04/02/22 01:51	1
1,2-Dichloroethane-d4 (Surr)	97		80 - 120		04/02/22 01:51	1
Toluene-d8 (Surr)	104		80 - 120		04/02/22 01:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	1660		150	30.5	ug/L			04/02/22 01:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		68.7 - 141		04/02/22 01:51	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

**Client Sample ID: MW-312**

**Lab Sample ID: 590-17195-9**

Date Collected: 03/29/22 10:28

Matrix: Water

Date Received: 03/30/22 13:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	13.6		0.400	0.0930	ug/L			04/02/22 02:13	1
Ethylbenzene	2.40		1.00	0.198	ug/L			04/02/22 02:13	1
Toluene	1.72		1.00	0.312	ug/L			04/02/22 02:13	1
Xylenes, Total	1.80	J	3.00	0.442	ug/L			04/02/22 02:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		80 - 120		04/02/22 02:13	1
Dibromofluoromethane (Surr)	98		80 - 120		04/02/22 02:13	1
1,2-Dichloroethane-d4 (Surr)	98		80 - 120		04/02/22 02:13	1
Toluene-d8 (Surr)	105		80 - 120		04/02/22 02:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	2770		150	30.5	ug/L			04/02/22 02:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		68.7 - 141		04/02/22 02:13	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

**Client Sample ID: MW-313**

**Lab Sample ID: 590-17195-10**

**Date Collected: 03/29/22 08:50**

**Matrix: Water**

**Date Received: 03/30/22 13:15**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			04/02/22 02:34	1
Ethylbenzene	ND		1.00	0.198	ug/L			04/02/22 02:34	1
Toluene	ND		1.00	0.312	ug/L			04/02/22 02:34	1
Xylenes, Total	ND		3.00	0.442	ug/L			04/02/22 02:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		04/02/22 02:34	1
Dibromofluoromethane (Surr)	96		80 - 120		04/02/22 02:34	1
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		04/02/22 02:34	1
Toluene-d8 (Surr)	106		80 - 120		04/02/22 02:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			04/02/22 02:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		68.7 - 141		04/02/22 02:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		237	109	ug/L		04/06/22 11:21	04/06/22 20:13	1
RRO (C25-C36)	ND		395	119	ug/L		04/06/22 11:21	04/06/22 20:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150	04/06/22 11:21	04/06/22 20:13	1
n-Triacontane-d62	98		50 - 150	04/06/22 11:21	04/06/22 20:13	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

**Client Sample ID: MW-314**

**Lab Sample ID: 590-17195-11**

Date Collected: 03/28/22 10:19

Matrix: Water

Date Received: 03/30/22 13:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>0.477</b>		0.400	0.0930	ug/L			04/04/22 15:25	1
Ethylbenzene	ND		1.00	0.198	ug/L			04/04/22 15:25	1
<b>Toluene</b>	<b>0.624</b>	<b>J</b>	1.00	0.312	ug/L			04/04/22 15:25	1
<b>Xylenes, Total</b>	<b>0.682</b>	<b>J</b>	3.00	0.442	ug/L			04/04/22 15:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		80 - 120		04/04/22 15:25	1
Dibromofluoromethane (Surr)	87		80 - 120		04/04/22 15:25	1
1,2-Dichloroethane-d4 (Surr)	94		80 - 120		04/04/22 15:25	1
Toluene-d8 (Surr)	107		80 - 120		04/04/22 15:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>TPH as Gasoline</b>	<b>253</b>		150	30.5	ug/L			04/04/22 15:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		68.7 - 141		04/04/22 15:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>682</b>		235	108	ug/L		04/06/22 11:21	04/06/22 20:33	1
RRO (C25-C36)	ND		391	117	ug/L		04/06/22 11:21	04/06/22 20:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	94		50 - 150	04/06/22 11:21	04/06/22 20:33	1
n-Triacontane-d62	95		50 - 150	04/06/22 11:21	04/06/22 20:33	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

**Client Sample ID: MW-315**

**Lab Sample ID: 590-17195-12**

Date Collected: 03/29/22 09:22

Matrix: Water

Date Received: 03/30/22 13:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	45.2		0.400	0.0930	ug/L			04/04/22 16:09	1
Ethylbenzene	0.890	J	1.00	0.198	ug/L			04/04/22 16:09	1
Toluene	4.20		1.00	0.312	ug/L			04/04/22 16:09	1
Xylenes, Total	2.52	J	3.00	0.442	ug/L			04/04/22 16:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		80 - 120		04/04/22 16:09	1
Dibromofluoromethane (Surr)	87		80 - 120		04/04/22 16:09	1
1,2-Dichloroethane-d4 (Surr)	97		80 - 120		04/04/22 16:09	1
Toluene-d8 (Surr)	106		80 - 120		04/04/22 16:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	2410		150	30.5	ug/L			04/04/22 16:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		68.7 - 141		04/04/22 16:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	2440		231	106	ug/L		04/06/22 11:21	04/06/22 20:53	1
RRO (C25-C36)	136	J	386	116	ug/L		04/06/22 11:21	04/06/22 20:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	98		50 - 150	04/06/22 11:21	04/06/22 20:53	1
n-Triacontane-d62	100		50 - 150	04/06/22 11:21	04/06/22 20:53	1



# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

**Client Sample ID: TX-03A**

**Lab Sample ID: 590-17195-13**

Date Collected: 03/28/22 13:34

Matrix: Water

Date Received: 03/30/22 13:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	121		4.00	0.930	ug/L			04/06/22 13:37	10
Ethylbenzene	12.0		1.00	0.198	ug/L			04/04/22 17:16	1
Toluene	2.55		1.00	0.312	ug/L			04/04/22 17:16	1
Xylenes, Total	1.63	J	3.00	0.442	ug/L			04/04/22 17:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		80 - 120		04/04/22 17:16	1
4-Bromofluorobenzene (Surr)	92		80 - 120		04/06/22 13:37	10
Dibromofluoromethane (Surr)	95		80 - 120		04/04/22 17:16	1
Dibromofluoromethane (Surr)	102		80 - 120		04/06/22 13:37	10
1,2-Dichloroethane-d4 (Surr)	95		80 - 120		04/04/22 17:16	1
1,2-Dichloroethane-d4 (Surr)	97		80 - 120		04/06/22 13:37	10
Toluene-d8 (Surr)	104		80 - 120		04/04/22 17:16	1
Toluene-d8 (Surr)	100		80 - 120		04/06/22 13:37	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	998		150	30.5	ug/L			04/04/22 17:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		68.7 - 141		04/04/22 17:16	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

**Client Sample ID: TB-1**

**Lab Sample ID: 590-17195-14**

**Date Collected: 03/28/22 09:00**

**Matrix: Water**

**Date Received: 03/30/22 13:15**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			04/04/22 17:38	1
Ethylbenzene	ND		1.00	0.198	ug/L			04/04/22 17:38	1
Toluene	ND		1.00	0.312	ug/L			04/04/22 17:38	1
Xylenes, Total	ND		3.00	0.442	ug/L			04/04/22 17:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		80 - 120		04/04/22 17:38	1
Dibromofluoromethane (Surr)	92		80 - 120		04/04/22 17:38	1
1,2-Dichloroethane-d4 (Surr)	97		80 - 120		04/04/22 17:38	1
Toluene-d8 (Surr)	108		80 - 120		04/04/22 17:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			04/04/22 17:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		68.7 - 141		04/04/22 17:38	1

# QC Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

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

**Lab Sample ID: MB 590-35587/5**  
**Matrix: Water**  
**Analysis Batch: 35587**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			04/01/22 18:01	1
Ethylbenzene	ND		1.00	0.198	ug/L			04/01/22 18:01	1
Toluene	ND		1.00	0.312	ug/L			04/01/22 18:01	1
Xylenes, Total	ND		3.00	0.442	ug/L			04/01/22 18:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		04/01/22 18:01	1
Dibromofluoromethane (Surr)	91		80 - 120		04/01/22 18:01	1
1,2-Dichloroethane-d4 (Surr)	98		80 - 120		04/01/22 18:01	1
Toluene-d8 (Surr)	109		80 - 120		04/01/22 18:01	1

**Lab Sample ID: LCS 590-35587/1002**  
**Matrix: Water**  
**Analysis Batch: 35587**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	10.0	8.569		ug/L		86	80 - 126
Ethylbenzene	10.0	9.064		ug/L		91	80 - 128
m-Xylene & p-Xylene	10.0	8.767		ug/L		88	80 - 127
o-Xylene	10.0	8.823		ug/L		88	80 - 126
Toluene	10.0	9.270		ug/L		93	80 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	92		80 - 120
1,2-Dichloroethane-d4 (Surr)	99		80 - 120
Toluene-d8 (Surr)	107		80 - 120

**Lab Sample ID: LCSD 590-35587/3**  
**Matrix: Water**  
**Analysis Batch: 35587**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	10.0	8.384		ug/L		84	80 - 126	2	18
Ethylbenzene	10.0	8.826		ug/L		88	80 - 128	3	18
m-Xylene & p-Xylene	10.0	9.017		ug/L		90	80 - 127	3	18
o-Xylene	10.0	8.836		ug/L		88	80 - 126	0	17
Toluene	10.0	9.464		ug/L		95	80 - 129	2	18

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	94		80 - 120
1,2-Dichloroethane-d4 (Surr)	102		80 - 120
Toluene-d8 (Surr)	107		80 - 120

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

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

**Lab Sample ID: 590-17195-1 DU**  
**Matrix: Water**  
**Analysis Batch: 35587**

**Client Sample ID: MW-301**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Benzene	30.8		29.03		ug/L		6	18
Ethylbenzene	2.48		2.182		ug/L		13	18
Toluene	0.663	J	0.5824	J	ug/L		13	18
Xylenes, Total	1.13	J	0.7605	J F5	ug/L		39	18

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
1,2-Dichloroethane-d4 (Surr)	99		80 - 120
Toluene-d8 (Surr)	101		80 - 120

**Lab Sample ID: MB 590-35600/7**  
**Matrix: Water**  
**Analysis Batch: 35600**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.400	0.0930	ug/L		04/04/22 14:18	14:18	1
Ethylbenzene	ND		1.00	0.198	ug/L		04/04/22 14:18	14:18	1
Toluene	ND		1.00	0.312	ug/L		04/04/22 14:18	14:18	1
Xylenes, Total	ND		3.00	0.442	ug/L		04/04/22 14:18	14:18	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	99		80 - 120		04/04/22 14:18	1
Dibromofluoromethane (Surr)	98		80 - 120		04/04/22 14:18	1
1,2-Dichloroethane-d4 (Surr)	97		80 - 120		04/04/22 14:18	1
Toluene-d8 (Surr)	104		80 - 120		04/04/22 14:18	1

**Lab Sample ID: LCS 590-35600/1004**  
**Matrix: Water**  
**Analysis Batch: 35600**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	10.0	9.253		ug/L		93	80 - 128
m-Xylene & p-Xylene	10.0	9.409		ug/L		94	80 - 127
o-Xylene	10.0	9.373		ug/L		94	80 - 126
Toluene	10.0	9.068		ug/L		91	80 - 129

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	94		80 - 120
1,2-Dichloroethane-d4 (Surr)	99		80 - 120
Toluene-d8 (Surr)	102		80 - 120

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

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

**Lab Sample ID: LCSD 590-35600/5**  
**Matrix: Water**  
**Analysis Batch: 35600**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	10.0	8.093		ug/L		81	80 - 126	6	18
Ethylbenzene	10.0	9.170		ug/L		92	80 - 128	1	18
m-Xylene & p-Xylene	10.0	9.148		ug/L		91	80 - 127	3	18
o-Xylene	10.0	9.157		ug/L		92	80 - 126	2	17
Toluene	10.0	9.195		ug/L		92	80 - 129	1	18

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	96		80 - 120
1,2-Dichloroethane-d4 (Surr)	97		80 - 120
Toluene-d8 (Surr)	105		80 - 120

**Lab Sample ID: 590-17195-12 MS**  
**Matrix: Water**  
**Analysis Batch: 35600**

**Client Sample ID: MW-315**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	45.2		10.0	55.35	4	ug/L		102	80 - 126
Ethylbenzene	0.890	J	10.0	9.960		ug/L		91	80 - 128
m-Xylene & p-Xylene	2.10		10.0	10.62		ug/L		85	80 - 127
o-Xylene	0.414	J F1	10.0	9.092		ug/L		87	80 - 126
Toluene	4.20		10.0	14.24		ug/L		100	80 - 129

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		80 - 120
Dibromofluoromethane (Surr)	87		80 - 120
1,2-Dichloroethane-d4 (Surr)	97		80 - 120
Toluene-d8 (Surr)	107		80 - 120

**Lab Sample ID: 590-17195-12 MSD**  
**Matrix: Water**  
**Analysis Batch: 35600**

**Client Sample ID: MW-315**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	45.2		10.0	52.26	4	ug/L		71	80 - 126	6	18
Ethylbenzene	0.890	J	10.0	9.360		ug/L		85	80 - 128	6	18
m-Xylene & p-Xylene	2.10		10.0	10.13		ug/L		80	80 - 127	5	18
o-Xylene	0.414	J F1	10.0	8.241	F1	ug/L		78	80 - 126	10	17
Toluene	4.20		10.0	13.17		ug/L		90	80 - 129	8	18

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	86		80 - 120
1,2-Dichloroethane-d4 (Surr)	93		80 - 120
Toluene-d8 (Surr)	105		80 - 120

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

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

**Lab Sample ID: 590-17195-11 DU**  
**Matrix: Water**  
**Analysis Batch: 35600**

**Client Sample ID: MW-314**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Benzene	0.477		0.5111		ug/L		7	18
Ethylbenzene	ND		ND		ug/L		NC	18
Toluene	0.624	J	0.6452	J	ug/L		3	18
Xylenes, Total	0.682	J	0.6333	J	ug/L		7	18

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	89		80 - 120
1,2-Dichloroethane-d4 (Surr)	93		80 - 120
Toluene-d8 (Surr)	107		80 - 120

**Lab Sample ID: MB 590-35636/7**  
**Matrix: Water**  
**Analysis Batch: 35636**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.400	0.0930	ug/L		04/06/22 13:16	1	
Ethylbenzene	ND		1.00	0.198	ug/L		04/06/22 13:16	1	
Toluene	ND		1.00	0.312	ug/L		04/06/22 13:16	1	
Xylenes, Total	ND		3.00	0.442	ug/L		04/06/22 13:16	1	

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	94		80 - 120		04/06/22 13:16	1
Dibromofluoromethane (Surr)	98		80 - 120		04/06/22 13:16	1
1,2-Dichloroethane-d4 (Surr)	96		80 - 120		04/06/22 13:16	1
Toluene-d8 (Surr)	103		80 - 120		04/06/22 13:16	1

**Lab Sample ID: LCS 590-35636/1004**  
**Matrix: Water**  
**Analysis Batch: 35636**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	10.0	10.07		ug/L		101	80 - 128
m-Xylene & p-Xylene	10.0	10.07		ug/L		101	80 - 127
o-Xylene	10.0	10.10		ug/L		101	80 - 126
Toluene	10.0	9.520		ug/L		95	80 - 129

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
1,2-Dichloroethane-d4 (Surr)	94		80 - 120
Toluene-d8 (Surr)	103		80 - 120

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

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

**Lab Sample ID: LCSD 590-35636/5**  
**Matrix: Water**  
**Analysis Batch: 35636**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	10.0	9.135		ug/L		91	80 - 126	2	18
Ethylbenzene	10.0	9.602		ug/L		96	80 - 128	5	18
m-Xylene & p-Xylene	10.0	9.100		ug/L		91	80 - 127	10	18
o-Xylene	10.0	9.832		ug/L		98	80 - 126	3	17
Toluene	10.0	9.307		ug/L		93	80 - 129	2	18

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	97		80 - 120
Toluene-d8 (Surr)	103		80 - 120

**Lab Sample ID: 590-17197-G-1 DU**  
**Matrix: Water**  
**Analysis Batch: 35636**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Benzene	ND		ND		ug/L		NC	18
Ethylbenzene	ND		ND		ug/L		NC	18
Toluene	ND		ND		ug/L		NC	18
Xylenes, Total	ND		ND		ug/L		NC	18

Surrogate	DU %Recovery	DU Qualifier	DU Limits
4-Bromofluorobenzene (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
1,2-Dichloroethane-d4 (Surr)	95		80 - 120
Toluene-d8 (Surr)	106		80 - 120

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

**Lab Sample ID: MB 590-35588/5**  
**Matrix: Water**  
**Analysis Batch: 35588**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			04/01/22 18:01	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		68.7 - 141		04/01/22 18:01	1

**Lab Sample ID: LCS 590-35588/1004**  
**Matrix: Water**  
**Analysis Batch: 35588**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
TPH as Gasoline	1000	1023		ug/L		102	80 - 120

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# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

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

**Lab Sample ID: LCS 590-35588/1004**  
**Matrix: Water**  
**Analysis Batch: 35588**

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

	LCS	LCS	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	99		68.7 - 141

**Lab Sample ID: LCSD 590-35588/1015**  
**Matrix: Water**  
**Analysis Batch: 35588**

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

	Spike	LCSD	LCSD						
<i>Analyte</i>	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>	<i>RPD</i>	<i>Limit</i>
TPH as Gasoline	1000	1000		ug/L		100	80 - 120	2	20

	LCSD	LCSD	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	102		68.7 - 141

**Lab Sample ID: 590-17195-1 DU**  
**Matrix: Water**  
**Analysis Batch: 35588**

**Client Sample ID: MW-301**  
**Prep Type: Total/NA**

	Sample	Sample							
<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>DU</i>	<i>DU</i>	<i>Unit</i>	<i>D</i>	<i>RPD</i>	<i>Limit</i>	
TPH as Gasoline	572		617.6		ug/L		8	35	

	DU	DU	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	99		68.7 - 141

**Lab Sample ID: MB 590-35601/7**  
**Matrix: Water**  
**Analysis Batch: 35601**

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

	MB	MB							
<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
TPH as Gasoline	ND		150	30.5	ug/L			04/04/22 14:18	1

	MB	MB	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	99		68.7 - 141

**Lab Sample ID: LCS 590-35601/1006**  
**Matrix: Water**  
**Analysis Batch: 35601**

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

	Spike	LCS	LCS					
<i>Analyte</i>	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>	
TPH as Gasoline	1000	1013		ug/L		101	80 - 120	

	LCS	LCS	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	100		68.7 - 141



# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

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

**Lab Sample ID: LCSD 590-35601/1017**  
**Matrix: Water**  
**Analysis Batch: 35601**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Gasoline	1000	940.2		ug/L		94	80 - 120	7	20
<b>Surrogate</b>									
	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
4-Bromofluorobenzene (Surr)	105		68.7 - 141						

**Lab Sample ID: 590-17195-11 DU**  
**Matrix: Water**  
**Analysis Batch: 35601**

**Client Sample ID: MW-314**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
TPH as Gasoline	253		246.9		ug/L		2	35
<b>Surrogate</b>								
	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
4-Bromofluorobenzene (Surr)	105		68.7 - 141					

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

**Lab Sample ID: MB 590-35634/1-A**  
**Matrix: Water**  
**Analysis Batch: 35628**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 35634**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		240	110	ug/L		04/06/22 11:21	04/06/22 19:14	1
RRO (C25-C36)	ND		400	120	ug/L		04/06/22 11:21	04/06/22 19:14	1
<b>Surrogate</b>									
	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
o-Terphenyl	88		50 - 150				04/06/22 11:21	04/06/22 19:14	1
n-Triacontane-d62	91		50 - 150				04/06/22 11:21	04/06/22 19:14	1

**Lab Sample ID: LCS 590-35634/2-A**  
**Matrix: Water**  
**Analysis Batch: 35628**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 35634**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DRO (C10-C25)	1600	1292		ug/L		81	50 - 150
RRO (C25-C36)	1600	1630		ug/L		102	50 - 150
<b>Surrogate</b>							
	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
o-Terphenyl	92		50 - 150				
n-Triacontane-d62	96		50 - 150				

**Lab Sample ID: LCSD 590-35634/3-A**  
**Matrix: Water**  
**Analysis Batch: 35628**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 35634**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
DRO (C10-C25)	1600	1302		ug/L		81	50 - 150	1	25
RRO (C25-C36)	1600	1705		ug/L		107	50 - 150	4	25

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# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

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

<i>Surrogate</i>	<i>LCS D LCS D</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
<i>o-Terphenyl</i>	97		50 - 150
<i>n-Triacontane-d62</i>	99		50 - 150

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# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

## Client Sample ID: MW-301

Date Collected: 03/29/22 11:34

Date Received: 03/30/22 13:15

## Lab Sample ID: 590-17195-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35587	04/01/22 22:40	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35588	04/01/22 22:40	JSP	TAL SPK

## Client Sample ID: MW-302

Date Collected: 03/28/22 13:06

Date Received: 03/30/22 13:15

## Lab Sample ID: 590-17195-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35587	04/01/22 23:23	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35588	04/01/22 23:23	JSP	TAL SPK

## Client Sample ID: MW-303

Date Collected: 03/28/22 14:03

Date Received: 03/30/22 13:15

## Lab Sample ID: 590-17195-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35587	04/01/22 23:44	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35588	04/01/22 23:44	JSP	TAL SPK

## Client Sample ID: MW-304

Date Collected: 03/28/22 14:32

Date Received: 03/30/22 13:15

## Lab Sample ID: 590-17195-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35587	04/02/22 00:05	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35588	04/02/22 00:05	JSP	TAL SPK

## Client Sample ID: MW-307

Date Collected: 03/28/22 11:48

Date Received: 03/30/22 13:15

## Lab Sample ID: 590-17195-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35587	04/02/22 00:26	JSP	TAL SPK
Total/NA	Analysis	8260D		10	43 mL	43 mL	35600	04/04/22 15:02	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35588	04/02/22 00:26	JSP	TAL SPK

## Client Sample ID: MW-308

Date Collected: 03/28/22 12:18

Date Received: 03/30/22 13:15

## Lab Sample ID: 590-17195-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35587	04/02/22 00:48	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35588	04/02/22 00:48	JSP	TAL SPK

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

## Client Sample ID: MW-310

Lab Sample ID: 590-17195-7

Date Collected: 03/29/22 11:03

Matrix: Water

Date Received: 03/30/22 13:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35587	04/02/22 01:09	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35588	04/02/22 01:09	JSP	TAL SPK

## Client Sample ID: MW-311

Lab Sample ID: 590-17195-8

Date Collected: 03/29/22 09:57

Matrix: Water

Date Received: 03/30/22 13:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35587	04/02/22 01:51	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35588	04/02/22 01:51	JSP	TAL SPK

## Client Sample ID: MW-312

Lab Sample ID: 590-17195-9

Date Collected: 03/29/22 10:28

Matrix: Water

Date Received: 03/30/22 13:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35587	04/02/22 02:13	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35588	04/02/22 02:13	JSP	TAL SPK

## Client Sample ID: MW-313

Lab Sample ID: 590-17195-10

Date Collected: 03/29/22 08:50

Matrix: Water

Date Received: 03/30/22 13:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35587	04/02/22 02:34	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35588	04/02/22 02:34	JSP	TAL SPK
Total/NA	Prep	3510C			252.9 mL	2 mL	35634	04/06/22 11:21	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			35628	04/06/22 20:13	NMI	TAL SPK

## Client Sample ID: MW-314

Lab Sample ID: 590-17195-11

Date Collected: 03/28/22 10:19

Matrix: Water

Date Received: 03/30/22 13:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35600	04/04/22 15:25	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35601	04/04/22 15:25	JSP	TAL SPK
Total/NA	Prep	3510C			255.7 mL	2 mL	35634	04/06/22 11:21	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			35628	04/06/22 20:33	NMI	TAL SPK

## Client Sample ID: MW-315

Lab Sample ID: 590-17195-12

Date Collected: 03/29/22 09:22

Matrix: Water

Date Received: 03/30/22 13:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35600	04/04/22 16:09	JSP	TAL SPK

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# Lab Chronicle

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

## Client Sample ID: MW-315

## Lab Sample ID: 590-17195-12

Date Collected: 03/29/22 09:22

Matrix: Water

Date Received: 03/30/22 13:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35601	04/04/22 16:09	JSP	TAL SPK
Total/NA	Prep	3510C			259.4 mL	2 mL	35634	04/06/22 11:21	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			35628	04/06/22 20:53	NMI	TAL SPK

## Client Sample ID: TX-03A

## Lab Sample ID: 590-17195-13

Date Collected: 03/28/22 13:34

Matrix: Water

Date Received: 03/30/22 13:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35600	04/04/22 17:16	JSP	TAL SPK
Total/NA	Analysis	8260D		10	43 mL	43 mL	35636	04/06/22 13:37	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35601	04/04/22 17:16	JSP	TAL SPK

## Client Sample ID: TB-1

## Lab Sample ID: 590-17195-14

Date Collected: 03/28/22 09:00

Matrix: Water

Date Received: 03/30/22 13:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35600	04/04/22 17:38	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35601	04/04/22 17:38	JSP	TAL SPK

**Laboratory References:**

TAL SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

# Accreditation/Certification Summary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

## Laboratory: Eurofins Spokane

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4137	12-08-22
Washington	State	C569	01-06-23

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# Method Summary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue SW, Seattle, WA

Job ID: 590-17195-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL SPK
5030C	Purge and Trap	SW846	TAL SPK

**Protocol References:**

NWTPH = Northwest Total Petroleum Hydrocarbon

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

**Laboratory References:**

TAL SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200



LAB (LOCATION)

ACCUEST ( \_\_\_\_\_ )  
 CALSCIENCE ( \_\_\_\_\_ )  
 TESTAMERICA ( \_\_\_\_\_ )  
 Other ( \_\_\_\_\_ )

Lab Vendor # \_\_\_\_\_ Dropdown



Shell Oil Products US Chain Of Custody Record

Please Check Appropriate Box:

<input type="checkbox"/> SGW FDG	<input type="checkbox"/> PIPELINE	<input type="checkbox"/> RETAIL
<input type="checkbox"/> CHEMICALS	<input type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES
<input type="checkbox"/> TRANSPORTATION	<input type="checkbox"/> OTHER _____	

Print Bill To Contact Name: \_\_\_\_\_  
 Plan of Site or Project ID: \_\_\_\_\_  
 PO: # \_\_\_\_\_  
 GSAP Project ID: \_\_\_\_\_

CHECK IF NO INCIDENT # APPLIES  
 DATE: 03/29/22  
 PAGE: 1 of 2

SAMPLING COMPANY: **Blaine Tech Services Inc** LOG CODE: **BTSS** SITE ADDRESS: Street and City: **2555 13th Avenue** State: **WA** GHD Project / Task Number: **11218519**

ADDRESS: **1880 Rogers Ave, San Jose, CA, 95112** EDI DELIVERABLE TO (Name, Company, Office Location): \_\_\_\_\_ PHONE NO.: \_\_\_\_\_ E-MAIL: \_\_\_\_\_ AECOM Other ID: \_\_\_\_\_

PROJECT CONTACT (Hardcopy or PDF Report to): **Jacquelyn England** **Jacquelyn England, GHD, Santa Rosa** (707)523-1010 **jacquelyn.england@ghd.com**

TELEPHONE: (707)523-1010 FAX: \_\_\_\_\_ EMail To Contact E-MAIL: **jacquelyn.england@ghd.com** SAMPLER NAME(S) (Print): **Jonah Davis** LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):  
 STANDARD (14 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS  RESULTS NEEDED ON WEEKEND

LA RWQCB REPORT FORMAT  UST AGENCY

DELIVERABLES:  LEVEL 1  LEVEL 2  LEVEL 3  LEVEL 4  OTHER (SPECIFY) \_\_\_\_\_

TEMPERATURE ON RECEIPT C\* Cooler #1 **230C** Cooler #2 \_\_\_\_\_ Cooler #3 \_\_\_\_\_

SPECIAL INSTRUCTIONS OR NOTES **For 3005**

SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 EDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED  
 PROVIDE LEDD DISK

UNIT COST		NON-UNIT COST		FIELD NOTES
8290C BTEX		8020A Total Lead		Container PID Readings or Laboratory Notes
NWTPH-Dx		553.2 Nitrate & Nitrite		
8270D SIM PAHs		6020A Dis. Iron & Manganese (Lab Filter)		
300.0 Sulfide		300.0 Chloride		
		3320B Alkalinity		

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT	
		DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER		
	MW-301	03/29/22	1134	WT	X					4	X
	MW-302	03/29/22	1306	WT	X					4	X
	MW-303	03/18/22	1403	WT	X					4	X
	MW-304	03/29/22	1432	WT	X					4	X
	MW-307	03/29/22	1148	WT	X					4	X
	MW-308	03/18/22	1218	WT	X					4	X
	MW-310	03/19/22	1103	WT	X					4	X
	MW-311	03/18/22	0957	WT	X					4	X
	MW-312	03/19/22	1028	WT	X					4	X
	MW-313	03/18/22	0850	WT	X					6	X



590-17195 Chain of Custody

Reinquished by (Signature): <b>[Signature]</b>	Received by (Signature): <b>Shipped Via UPS</b>	Date: <b>03/29/22</b>	Time: <b>1300</b>
Reinquished by (Signature): _____	Received by (Signature): <b>[Signature]</b>	Date: <b>3/30/22</b>	Time: <b>1315</b>
Reinquished by (Signature): _____	Received by (Signature): _____	Date: _____	Time: _____

Version: 14Dec15





LAB (LOCATION)

ACCUTEST ( )  
 CALSCIENCE ( )  
 TESTAMERICA ( )  
 Other ( )

Lab Vendor #      Dropdown



Shell Oil Products US Chain Of Custody Record

Please Check Appropriate Box:

<input type="checkbox"/> SGW FDG	<input type="checkbox"/> PIPELINE	<input type="checkbox"/> RETAIL
<input type="checkbox"/> CHEMICALS	<input type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES
<input type="checkbox"/> TRANSPORTATION	<input type="checkbox"/> OTHER	

Print Bill To Contact Name: \_\_\_\_\_  
 Plan of Site or Project ID: \_\_\_\_\_

PO #: \_\_\_\_\_      GSAP Project ID: \_\_\_\_\_

DATE: 03/29/22  
 PAGE: 2 of 2

SAMPLING COMPANY: Blaine Tech Services, Inc      LCO CODE: BTSS

ADDRESS: 1680 Rogers Ave, San Jose, CA, 95112

PROJECT CONTACT (Hardcopy or PDF Report to): Jacquelyn England

TELEPHONE: (707)523-1010      FAX: \_\_\_\_\_      Bill To Contact E-MAIL: jacquelyn.england@ghd.com

TURNAROUND TIME (CALENDAR DAYS):  
 STANDARD (14 DAY)     5 DAYS     3 DAYS     2 DAYS     24 HOURS     RESULTS NEEDED ON WEEKEND

DELIVERABLES:  LEVEL 1     LEVEL 2     LEVEL 3     LEVEL 4     OTHER (SPECIFY) \_\_\_\_\_

TEMPERATURE ON RECEIPT °C    Cooler #1: 23°C    Cooler #2: \_\_\_\_\_    Cooler #3: \_\_\_\_\_

SPECIAL INSTRUCTIONS OR NOTES: *copy 2005*

REQUESTED ANALYSIS: *Jonah Davis*

UNIT COST		NON-UNIT COST		FIELD NOTES
8260C BTEX	8270D SIM PAHs	8020A Total Lead	353.2 Nitrate & Nitrite	
				TEMPERATURE ON RECEIPT °C
				Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification		SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	8260C BTEX	8270D SIM PAHs	8020A Total Lead	353.2 Nitrate & Nitrite	8020A Diss. Iron & Manganese (lab filter)	300.0 Chloride	2320B Alkalinity	
	DATE	TIME	HCL	HNO3		H2SO4	NONE	OTHER											
	MW 314	03/29/22	10A	WT		X													
MW-315	03/29/22	0922	WT	X						6	X	X							
TX-03A	03/29/22	1334	WT	X						4	X								
TB-1	03/29/22	0900	WT	X						2	X								

Reinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>Shipped via UPS</i>	Date: 03/29/22	Time: 1300
Reinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>Jonah Davis</i>	Date: 3/30/22	Time: 1315

Version: 14Dec15

# Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 590-17195-1

**Login Number: 17195**

**List Source: Eurofins Spokane**

**List Number: 1**

**Creator: Vaughan, Madison 1**

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



## ANALYTICAL REPORT

Eurofins Spokane  
11922 East 1st Ave  
Spokane, WA 99206  
Tel: (509)924-9200

Laboratory Job ID: 590-17328-1

Client Project/Site: 2555 13th Avenue, Seattle, WA

**For:**

GHD Services Inc.  
2235 Mercury Way  
Suite 150  
Santa Rosa, California 95407

Attn: Jacquelyn England

*Roxanne Cisneros*

Authorized for release by:  
4/29/2022 5:44:00 PM

Roxanne Cisneros, Senior Project Manager  
(615)301-5761  
[roxanne.cisneros@et.eurofinsus.com](mailto:roxanne.cisneros@et.eurofinsus.com)

### LINKS

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results through  
**TotalAccess**

Have a Question?

 **Ask  
The  
Expert**

Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

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

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



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# Case Narrative

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

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**Job ID: 590-17328-1**

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**Laboratory: Eurofins Spokane**

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**Narrative**

**Job Narrative  
590-17328-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 4/19/2022 11:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.6° C.

**GC/MS VOA**

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

**GC Semi VOA**

Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to heavy gas/light diesel range components. MW-112A (590-17328-3), SH-04 (590-17328-4) and MW-104 (590-17328-5)

Method NWTPH-Dx: The method blank for preparation batch 590-35943 and analytical batch 590-35940 contained targets above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

**Metals**

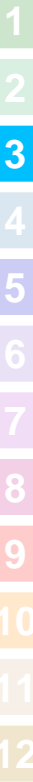
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**

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

**VOA Prep**

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



# Sample Summary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-17328-1	MW-05	Water	04/18/22 09:42	04/19/22 11:30
590-17328-2	MW-111	Water	04/18/22 10:45	04/19/22 11:30
590-17328-3	MW-112A	Water	04/18/22 11:50	04/19/22 11:30
590-17328-4	SH-04	Water	04/18/22 11:21	04/19/22 11:30
590-17328-5	MW-104	Water	04/18/22 10:11	04/19/22 11:30
590-17328-6	TB-1	Water	04/18/22 08:00	04/19/22 11:30

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# Definitions/Glossary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

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

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

**Client Sample ID: MW-05**

**Lab Sample ID: 590-17328-1**

**Date Collected: 04/18/22 09:42**

**Matrix: Water**

**Date Received: 04/19/22 11:30**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			04/20/22 13:38	1
Ethylbenzene	ND		1.00	0.198	ug/L			04/20/22 13:38	1
Toluene	ND		1.00	0.312	ug/L			04/20/22 13:38	1
Xylenes, Total	ND		3.00	0.442	ug/L			04/20/22 13:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		80 - 120		04/20/22 13:38	1
Dibromofluoromethane (Surr)	106		80 - 120		04/20/22 13:38	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		04/20/22 13:38	1
Toluene-d8 (Surr)	99		80 - 120		04/20/22 13:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			04/20/22 13:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		68.7 - 141		04/20/22 13:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		235	108	ug/L		04/29/22 08:21	04/29/22 10:43	1
RRO (C25-C36)	ND		392	118	ug/L		04/29/22 08:21	04/29/22 10:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150	04/29/22 08:21	04/29/22 10:43	1
n-Triacontane-d62	88		50 - 150	04/29/22 08:21	04/29/22 10:43	1



# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

**Client Sample ID: MW-111**

**Lab Sample ID: 590-17328-2**

**Date Collected: 04/18/22 10:45**

**Matrix: Water**

**Date Received: 04/19/22 11:30**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			04/20/22 14:21	1
Ethylbenzene	ND		1.00	0.198	ug/L			04/20/22 14:21	1
Toluene	ND		1.00	0.312	ug/L			04/20/22 14:21	1
Xylenes, Total	ND		3.00	0.442	ug/L			04/20/22 14:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		80 - 120		04/20/22 14:21	1
Dibromofluoromethane (Surr)	107		80 - 120		04/20/22 14:21	1
1,2-Dichloroethane-d4 (Surr)	104		80 - 120		04/20/22 14:21	1
Toluene-d8 (Surr)	102		80 - 120		04/20/22 14:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			04/20/22 14:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		68.7 - 141		04/20/22 14:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>125</b>	<b>J B</b>	229	105	ug/L		04/29/22 08:21	04/29/22 11:04	1
<b>RRO (C25-C36)</b>	<b>141</b>	<b>J B</b>	381	114	ug/L		04/29/22 08:21	04/29/22 11:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	82		50 - 150	04/29/22 08:21	04/29/22 11:04	1
<i>n</i> -Triacotane-d62	84		50 - 150	04/29/22 08:21	04/29/22 11:04	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

**Client Sample ID: MW-112A**

**Lab Sample ID: 590-17328-3**

Date Collected: 04/18/22 11:50

Matrix: Water

Date Received: 04/19/22 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.02		0.400	0.0930	ug/L			04/20/22 15:27	1
Ethylbenzene	27.9		1.00	0.198	ug/L			04/20/22 15:27	1
Toluene	0.759	J	1.00	0.312	ug/L			04/20/22 15:27	1
Xylenes, Total	2.69	J	3.00	0.442	ug/L			04/20/22 15:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120		04/20/22 15:27	1
Dibromofluoromethane (Surr)	99		80 - 120		04/20/22 15:27	1
1,2-Dichloroethane-d4 (Surr)	101		80 - 120		04/20/22 15:27	1
Toluene-d8 (Surr)	99		80 - 120		04/20/22 15:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	1870		150	30.5	ug/L			04/20/22 15:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		68.7 - 141		04/20/22 15:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	1390	B	234	107	ug/L		04/29/22 08:21	04/29/22 11:24	1
RRO (C25-C36)	211	J B	389	117	ug/L		04/29/22 08:21	04/29/22 11:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	83		50 - 150	04/29/22 08:21	04/29/22 11:24	1
n-Triacontane-d62	86		50 - 150	04/29/22 08:21	04/29/22 11:24	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

**Client Sample ID: SH-04**  
Date Collected: 04/18/22 11:21  
Date Received: 04/19/22 11:30

**Lab Sample ID: 590-17328-4**  
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	6.26		0.400	0.0930	ug/L			04/20/22 16:10	1
Ethylbenzene	3.84		1.00	0.198	ug/L			04/20/22 16:10	1
Toluene	1.05		1.00	0.312	ug/L			04/20/22 16:10	1
Xylenes, Total	4.57		3.00	0.442	ug/L			04/20/22 16:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		04/20/22 16:10	1
Dibromofluoromethane (Surr)	92		80 - 120		04/20/22 16:10	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		04/20/22 16:10	1
Toluene-d8 (Surr)	101		80 - 120		04/20/22 16:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	1170		150	30.5	ug/L			04/20/22 16:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		68.7 - 141		04/20/22 16:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	549	B	235	108	ug/L		04/29/22 08:21	04/29/22 11:45	1
RRO (C25-C36)	227	J B	392	117	ug/L		04/29/22 08:21	04/29/22 11:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	68		50 - 150	04/29/22 08:21	04/29/22 11:45	1
n-Triacontane-d62	71		50 - 150	04/29/22 08:21	04/29/22 11:45	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

**Client Sample ID: MW-104**  
 Date Collected: 04/18/22 10:11  
 Date Received: 04/19/22 11:30

**Lab Sample ID: 590-17328-5**  
 Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	896		150	30.5	ug/L			04/20/22 16:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		68.7 - 141					04/20/22 16:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	503	B	236	108	ug/L		04/29/22 08:21	04/29/22 12:05	1
RRO (C25-C36)	135	J B	393	118	ug/L		04/29/22 08:21	04/29/22 12:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	86		50 - 150				04/29/22 08:21	04/29/22 12:05	1
n-Triacontane-d62	90		50 - 150				04/29/22 08:21	04/29/22 12:05	1

**Method: 6010D - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		60.0	5.10	ug/L		04/20/22 09:26	04/22/22 13:27	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

**Client Sample ID: TB-1**

**Lab Sample ID: 590-17328-6**

**Date Collected: 04/18/22 08:00**

**Matrix: Water**

**Date Received: 04/19/22 11:30**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			04/20/22 16:53	1
Ethylbenzene	ND		1.00	0.198	ug/L			04/20/22 16:53	1
Toluene	ND		1.00	0.312	ug/L			04/20/22 16:53	1
Xylenes, Total	ND		3.00	0.442	ug/L			04/20/22 16:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		80 - 120		04/20/22 16:53	1
Dibromofluoromethane (Surr)	102		80 - 120		04/20/22 16:53	1
1,2-Dichloroethane-d4 (Surr)	100		80 - 120		04/20/22 16:53	1
Toluene-d8 (Surr)	100		80 - 120		04/20/22 16:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			04/20/22 16:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		68.7 - 141		04/20/22 16:53	1

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

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

**Lab Sample ID: MB 590-35828/6**  
**Matrix: Water**  
**Analysis Batch: 35828**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.400	0.0930	ug/L			04/20/22 11:58	1
Ethylbenzene	ND		1.00	0.198	ug/L			04/20/22 11:58	1
Toluene	ND		1.00	0.312	ug/L			04/20/22 11:58	1
Xylenes, Total	ND		3.00	0.442	ug/L			04/20/22 11:58	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	98		80 - 120		04/20/22 11:58	1
Dibromofluoromethane (Surr)	103		80 - 120		04/20/22 11:58	1
1,2-Dichloroethane-d4 (Surr)	102		80 - 120		04/20/22 11:58	1
Toluene-d8 (Surr)	103		80 - 120		04/20/22 11:58	1

**Lab Sample ID: LCS 590-35828/1004**  
**Matrix: Water**  
**Analysis Batch: 35828**

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzene	10.0	10.10		ug/L		101	80 - 126
Ethylbenzene	10.0	10.12		ug/L		101	80 - 128
m-Xylene & p-Xylene	10.0	10.06		ug/L		101	80 - 127
o-Xylene	10.0	9.751		ug/L		98	80 - 126
Toluene	10.0	9.811		ug/L		98	80 - 129

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	103		80 - 120
Toluene-d8 (Surr)	100		80 - 120

**Lab Sample ID: 590-17328-2 MS**  
**Matrix: Water**  
**Analysis Batch: 35828**

**Client Sample ID: MW-111**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Benzene	ND		10.0	10.09		ug/L		101	80 - 126
Ethylbenzene	ND		10.0	9.946		ug/L		99	80 - 128
m-Xylene & p-Xylene	ND		10.0	8.962		ug/L		90	80 - 127
o-Xylene	ND		10.0	8.983		ug/L		90	80 - 126
Toluene	ND		10.0	9.779		ug/L		98	80 - 129

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	105		80 - 120
Toluene-d8 (Surr)	98		80 - 120

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

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

**Lab Sample ID: 590-17328-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 35828**

**Client Sample ID: MW-111**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		10.0	9.948		ug/L		99	80 - 126	1	18
Ethylbenzene	ND		10.0	9.702		ug/L		97	80 - 128	2	18
m-Xylene & p-Xylene	ND		10.0	9.388		ug/L		94	80 - 127	5	18
o-Xylene	ND		10.0	8.911		ug/L		89	80 - 126	1	17
Toluene	ND		10.0	9.806		ug/L		98	80 - 129	0	18

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
1,2-Dichloroethane-d4 (Surr)	101		80 - 120
Toluene-d8 (Surr)	100		80 - 120

**Lab Sample ID: 590-17328-1 DU**  
**Matrix: Water**  
**Analysis Batch: 35828**

**Client Sample ID: MW-05**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Benzene	ND		ND		ug/L		NC	18
Ethylbenzene	ND		ND		ug/L		NC	18
Toluene	ND		ND		ug/L		NC	18
Xylenes, Total	ND		ND		ug/L		NC	18

Surrogate	DU %Recovery	DU Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	100		80 - 120
Toluene-d8 (Surr)	101		80 - 120

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

**Lab Sample ID: MB 590-35829/6**  
**Matrix: Water**  
**Analysis Batch: 35829**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			04/20/22 11:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		68.7 - 141		04/20/22 11:58	1

**Lab Sample ID: LCS 590-35829/1005**  
**Matrix: Water**  
**Analysis Batch: 35829**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
TPH as Gasoline	1000	1018		ug/L		101	80 - 120

Eurofins Spokane

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

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

**Lab Sample ID: LCS 590-35829/1005**  
**Matrix: Water**  
**Analysis Batch: 35829**

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		68.7 - 141

**Lab Sample ID: LCSD 590-35829/1047**  
**Matrix: Water**  
**Analysis Batch: 35829**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Gasoline	1000	1052		ug/L		105	80 - 120	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		68.7 - 141

**Lab Sample ID: 590-17328-1 DU**  
**Matrix: Water**  
**Analysis Batch: 35829**

**Client Sample ID: MW-05**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
TPH as Gasoline	ND		ND		ug/L		NC	35

Surrogate	DU %Recovery	DU Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		68.7 - 141

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

**Lab Sample ID: MB 590-35943/1-A**  
**Matrix: Water**  
**Analysis Batch: 35940**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 35943**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	131.9	J	240	110	ug/L		04/29/22 08:21	04/29/22 09:01	1
RRO (C25-C36)	151.7	J	400	120	ug/L		04/29/22 08:21	04/29/22 09:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	72		50 - 150	04/29/22 08:21	04/29/22 09:01	1
n-Triacontane-d62	75		50 - 150	04/29/22 08:21	04/29/22 09:01	1

**Lab Sample ID: LCS 590-35943/2-A**  
**Matrix: Water**  
**Analysis Batch: 35940**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 35943**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DRO (C10-C25)	1600	1323		ug/L		83	50 - 150
RRO (C25-C36)	1600	1595		ug/L		100	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	86		50 - 150
n-Triacontane-d62	88		50 - 150

Eurofins Spokane



# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

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

**Lab Sample ID: LCSD 590-35943/3-A**  
**Matrix: Water**  
**Analysis Batch: 35940**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 35943**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit	
							Limits	RPD			
DRO (C10-C25)	1600	1361		ug/L		85	50 - 150	3		25	
RRO (C25-C36)	1600	1619		ug/L		101	50 - 150	2		25	
<b>LCSD LCSD</b>											
Surrogate	%Recovery	Qualifier	Limits								
<i>o</i> -Terphenyl	89		50 - 150								
<i>n</i> -Triacontane-d62	93		50 - 150								

## Method: 6010D - Metals (ICP)

**Lab Sample ID: MB 590-35813/2-A**  
**Matrix: Water**  
**Analysis Batch: 35869**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 35813**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lead	ND		60.0	5.10	ug/L		04/20/22 09:26	04/22/22 13:10	1

**Lab Sample ID: LCS 590-35813/1-A**  
**Matrix: Water**  
**Analysis Batch: 35869**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 35813**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	RPD
Lead	1000	1080		ug/L		108	80 - 120	

**Lab Sample ID: 590-17344-A-1-C MS**  
**Matrix: Water**  
**Analysis Batch: 35869**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 35813**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec	
									Limits	RPD
Lead	ND		1000	1060		ug/L		106	75 - 125	

**Lab Sample ID: 590-17344-A-1-D MSD**  
**Matrix: Water**  
**Analysis Batch: 35869**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 35813**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
									Limits	RPD		
Lead	ND		1000	1049		ug/L		105	75 - 125	1		20

**Lab Sample ID: 590-17344-A-1-B DU**  
**Matrix: Water**  
**Analysis Batch: 35869**

**Client Sample ID: Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 35813**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	%Rec		Limit
								Limits	RPD	
Lead	ND		ND		ug/L			NC		20

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

## Client Sample ID: MW-05

Lab Sample ID: 590-17328-1

Date Collected: 04/18/22 09:42

Matrix: Water

Date Received: 04/19/22 11:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35828	04/20/22 13:38	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35829	04/20/22 13:38	JSP	TAL SPK
Total/NA	Prep	3510C			255.3 mL	2 mL	35943	04/29/22 08:21	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			35940	04/29/22 10:43	NMI	TAL SPK

## Client Sample ID: MW-111

Lab Sample ID: 590-17328-2

Date Collected: 04/18/22 10:45

Matrix: Water

Date Received: 04/19/22 11:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35828	04/20/22 14:21	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35829	04/20/22 14:21	JSP	TAL SPK
Total/NA	Prep	3510C			262.3 mL	2 mL	35943	04/29/22 08:21	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			35940	04/29/22 11:04	NMI	TAL SPK

## Client Sample ID: MW-112A

Lab Sample ID: 590-17328-3

Date Collected: 04/18/22 11:50

Matrix: Water

Date Received: 04/19/22 11:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35828	04/20/22 15:27	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35829	04/20/22 15:27	JSP	TAL SPK
Total/NA	Prep	3510C			256.9 mL	2 mL	35943	04/29/22 08:21	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			35940	04/29/22 11:24	NMI	TAL SPK

## Client Sample ID: SH-04

Lab Sample ID: 590-17328-4

Date Collected: 04/18/22 11:21

Matrix: Water

Date Received: 04/19/22 11:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35828	04/20/22 16:10	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35829	04/20/22 16:10	JSP	TAL SPK
Total/NA	Prep	3510C			255.4 mL	2 mL	35943	04/29/22 08:21	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			35940	04/29/22 11:45	NMI	TAL SPK

## Client Sample ID: MW-104

Lab Sample ID: 590-17328-5

Date Collected: 04/18/22 10:11

Matrix: Water

Date Received: 04/19/22 11:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35829	04/20/22 16:32	JSP	TAL SPK
Total/NA	Prep	3510C			254.7 mL	2 mL	35943	04/29/22 08:21	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			35940	04/29/22 12:05	NMI	TAL SPK
Total Recoverable	Prep	3005A			50 mL	50 mL	35813	04/20/22 09:26	AMB	TAL SPK
Total Recoverable	Analysis	6010D		1			35869	04/22/22 13:27	AMB	TAL SPK

Eurofins Spokane

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

**Client Sample ID: TB-1**

**Lab Sample ID: 590-17328-6**

**Date Collected: 04/18/22 08:00**

**Matrix: Water**

**Date Received: 04/19/22 11:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	35828	04/20/22 16:53	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	35829	04/20/22 16:53	JSP	TAL SPK

**Laboratory References:**

TAL SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

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# Accreditation/Certification Summary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

## Laboratory: Eurofins Spokane

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4137	12-08-22
Washington	State	C569	01-06-23

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# Method Summary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle, WA

Job ID: 590-17328-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
6010D	Metals (ICP)	SW846	TAL SPK
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SPK
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL SPK
5030C	Purge and Trap	SW846	TAL SPK

#### Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

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

#### Laboratory References:

TAL SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

LAB (LOCATION)

ACCUTEST ( )

CALSCIENCE ( )

TESTAMERICA ( )

Other ( )



Shell Oil Products US Chain Of Custody Record

Please Check Appropriate Box:

<input type="checkbox"/> SGW FDG	<input type="checkbox"/> PIPELINE	<input type="checkbox"/> RETAIL
<input type="checkbox"/> CHEMICALS	<input type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES
<input type="checkbox"/> TRANSPORTATION	<input type="checkbox"/> OTHER _____	

Print Bill To Contact Name: \_\_\_\_\_ Planer Site or Project ID: \_\_\_\_\_

PO #: \_\_\_\_\_ GSAP Project ID: \_\_\_\_\_

DATE: 4/8/22  
PAGE 1 of 1

SAMPLING COMPANY: Blaine Tech Services Inc

LOG CODE: BTSS

ADDRESS: 1680 Rogers Ave, San Jose, CA, 95112

PROJECT CONTACT (Hardcopy or PDF Report to): Jacquelyn England

TELEPHONE: (707)523-1010

BILL TO CONTACT E-MAIL: jacquelyn.england@ghd.com

TURNAROUND TIME (CALENDAR DAYS):

STANDARD (14 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS

RESULTS NEEDED ON WEEKEND

LA RWQCB REPORT FORMAT  UST AGENCY

DELIVERABLES:  LEVEL 1  LEVEL 2  LEVEL 3  LEVEL 4  OTHER (SPECIFY): \_\_\_\_\_

TEMPERATURE ON RECEIPT C° Cooler #1 \_\_\_\_\_ Cooler #2 \_\_\_\_\_ Cooler #3 \_\_\_\_\_

SPECIAL INSTRUCTIONS OR NOTES

SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 LEDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED  
 PROVIDE LEDD DISK

SITE ADDRESS: Street and City: 2555 13th Avenue

State: WA

EDF DELIVERABLE TO (Name, Company, Office Location): Jacquelyn England, GHD, Santa Rosa

PHONE NO: (707)523-1010

E-MAIL: jacquelyn.england@ghd.com

AECCOM Other ID: 11218519

SAMPLER NAME(S) (Print): Christina Mroz

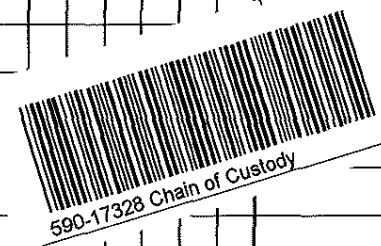
UNIT COST	NON-UNIT COST	FIELD NOTES
		26°C Cont'd 1800's
		Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	B2B0C BTEX	MWTTPH-DX	B2700 SIM PAHs	300.0 Sulfate	MWTTPH-Gx	B020A Total Lead	353.2 Nitrate & Nitrite	B020A Dis. Iron & Manganese (lab filter)	300.0 Chloride	2320B Alkalinity			
		DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER														
	MW-05	4/18/22	0942	WT	X					6	X	X											
	MW-111	4/18/22	1045	WT	X					6	X	X											
	MW-112A	4/18/22	1150	WT	X					6	X	X											
	SH04	4/18/22	1121	WT	X					6	X	X											
	MW-104	4/8/22	1011	WT	X	X				7		X				X	X						
	TB-1	4/8/22	0800	WT	X					2	X					X							

Relinquished by: (Signature)

Received by: (Signature) Shipped via UPS

Date: 4/18/22	Time: 1330
Date: 4/19/22	Time: 1130



# Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 590-17328-1

**Login Number: 17328**

**List Source: Eurofins Spokane**

**List Number: 1**

**Creator: Vaughan, Madison 1**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## ANALYTICAL REPORT

Eurofins Spokane  
11922 East 1st Ave  
Spokane, WA 99206  
Tel: (509)924-9200

Laboratory Job ID: 590-17941-1

Client Project/Site: 2555 13th Avenue, Seattle WA

For:

GHD Services Inc.  
2235 Mercury Way  
Suite 150  
Santa Rosa, California 95407

Attn: Jacquelyn England

*Roxanne Cisneros*

Authorized for release by:

7/19/2022 8:44:38 AM

Roxanne Cisneros, Senior Project Manager  
(615)301-5761

[roxanne.cisneros@et.eurofinsus.com](mailto:roxanne.cisneros@et.eurofinsus.com)

Designee for

Tracy Dutton, Client Relations Manager  
(253)248-4970

[Tracy.Dutton@et.eurofinsus.com](mailto:Tracy.Dutton@et.eurofinsus.com)

### LINKS

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

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





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# Case Narrative

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

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## Job ID: 590-17941-1

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### Laboratory: Eurofins Spokane

#### Narrative

#### Job Narrative 590-17941-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 7/5/2022 2:53 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.1° C and 3.3° C.

#### GC/MS VOA

Method NWTPH-Gx: The continuing calibration verification (CCV) associated with batch 590-36945 recovered above the upper control limit for TPH as Gasoline. The samples associated with this CCV were either non-detects or detected below the reporting limit for the affected analytes; therefore, the data have been reported.

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

#### GC/MS Semi VOA

Method 8270E SIM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 590-36918 and analytical batch 590-36915 recovered outside control limits for the following analytes: Benzo[b]fluoranthene.

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

#### GC Semi VOA

Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to gasoline overlap. MW-104 (590-17941-2) and MW-112A (590-17941-4)

Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to weathered diesel. MW-113 (590-17941-5), MW-114 (590-17941-6), MW-115 (590-17941-7) and SH-04 (590-17941-25)

Method NWTPH-Dx: Detected hydrocarbons appear to be due to a complex mixture of gasoline, weathered diesel and possible biogenic interference. MW-202 (590-17941-8)

Method NWTPH-Dx: Detected hydrocarbons appear to be due to oil as well as possible biogenic interference. MW-203 (590-17941-9)

Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to heavily weathered diesel and/or possible biogenic interference. SH-04 (590-17941-25)

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

#### Metals

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

#### Organic Prep

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

#### VOA Prep

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

# Sample Summary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-17941-1	MW-05	Water	06/29/22 08:21	07/05/22 14:53
590-17941-2	MW-104	Water	06/29/22 07:42	07/05/22 14:53
590-17941-3	MW-111	Water	06/27/22 13:46	07/05/22 14:53
590-17941-4	MW-112A	Water	06/28/22 14:26	07/05/22 14:53
590-17941-5	MW-113	Water	06/27/22 12:37	07/05/22 14:53
590-17941-6	MW-114	Water	06/27/22 12:00	07/05/22 14:53
590-17941-7	MW-115	Water	06/27/22 11:24	07/05/22 14:53
590-17941-8	MW-202	Water	06/29/22 10:38	07/05/22 14:53
590-17941-9	MW-203	Water	06/28/22 11:31	07/05/22 14:53
590-17941-10	MW-213	Water	06/29/22 09:08	07/05/22 14:53
590-17941-11	MW-214	Water	06/29/22 09:45	07/05/22 14:53
590-17941-12	MW-301	Water	06/28/22 10:27	07/05/22 14:53
590-17941-13	MW-302	Water	06/28/22 09:14	07/05/22 14:53
590-17941-14	MW-303	Water	06/28/22 08:11	07/05/22 14:53
590-17941-15	MW-304	Water	06/28/22 08:45	07/05/22 14:53
590-17941-16	MW-307	Water	06/29/22 11:48	07/05/22 14:53
590-17941-17	MW-308	Water	06/29/22 12:21	07/05/22 14:53
590-17941-18	MW-309	Water	06/28/22 10:55	07/05/22 14:53
590-17941-19	MW-310	Water	06/28/22 09:45	07/05/22 14:53
590-17941-20	MW-311	Water	06/28/22 15:02	07/05/22 14:53
590-17941-21	MW-312	Water	06/29/22 11:15	07/05/22 14:53
590-17941-22	MW-313	Water	06/28/22 12:35	07/05/22 14:53
590-17941-23	MW-314	Water	06/28/22 15:26	07/05/22 14:53
590-17941-24	MW-315	Water	06/28/22 12:03	07/05/22 14:53
590-17941-25	SH-04	Water	06/28/22 13:55	07/05/22 14:53
590-17941-26	TX-03A	Water	06/28/22 15:54	07/05/22 14:53
590-17941-27	TB-1	Water	06/27/22 08:00	07/05/22 14:53

# Definitions/Glossary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC/MS Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

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

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-05**

**Lab Sample ID: 590-17941-1**

**Date Collected: 06/29/22 08:21**

**Matrix: Water**

**Date Received: 07/05/22 14:53**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			07/07/22 15:52	1
Ethylbenzene	ND		1.00	0.198	ug/L			07/07/22 15:52	1
Toluene	ND		1.00	0.312	ug/L			07/07/22 15:52	1
Xylenes, Total	ND		3.00	0.442	ug/L			07/07/22 15:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		80 - 120		07/07/22 15:52	1
Dibromofluoromethane (Surr)	110		80 - 120		07/07/22 15:52	1
1,2-Dichloroethane-d4 (Surr)	102		80 - 120		07/07/22 15:52	1
Toluene-d8 (Surr)	98		80 - 120		07/07/22 15:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			07/07/22 15:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		68.7 - 141		07/07/22 15:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		243	111	ug/L		07/08/22 11:15	07/08/22 14:46	1
RRO (C25-C36)	ND		405	121	ug/L		07/08/22 11:15	07/08/22 14:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	74		50 - 150	07/08/22 11:15	07/08/22 14:46	1
n-Triacontane-d62	87		50 - 150	07/08/22 11:15	07/08/22 14:46	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-104**

**Lab Sample ID: 590-17941-2**

Date Collected: 06/29/22 07:42

Matrix: Water

Date Received: 07/05/22 14:53

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			07/07/22 16:36	1
<b>Ethylbenzene</b>	<b>1.06</b>		1.00	0.198	ug/L			07/07/22 16:36	1
Toluene	ND		1.00	0.312	ug/L			07/07/22 16:36	1
Xylenes, Total	ND		3.00	0.442	ug/L			07/07/22 16:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		80 - 120		07/07/22 16:36	1
Dibromofluoromethane (Surr)	109		80 - 120		07/07/22 16:36	1
1,2-Dichloroethane-d4 (Surr)	104		80 - 120		07/07/22 16:36	1
Toluene-d8 (Surr)	99		80 - 120		07/07/22 16:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>TPH as Gasoline</b>	<b>648</b>		150	30.5	ug/L			07/07/22 16:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		68.7 - 141		07/07/22 16:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>381</b>		248	114	ug/L		07/08/22 11:15	07/08/22 15:06	1
RRO (C25-C36)	ND		413	124	ug/L		07/08/22 11:15	07/08/22 15:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	74		50 - 150	07/08/22 11:15	07/08/22 15:06	1
n-Triacontane-d62	85		50 - 150	07/08/22 11:15	07/08/22 15:06	1

## Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		60.0	5.10	ug/L		07/12/22 18:34	07/18/22 13:20	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-111**

**Lab Sample ID: 590-17941-3**

**Date Collected: 06/27/22 13:46**

**Matrix: Water**

**Date Received: 07/05/22 14:53**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>2.74</b>		0.400	0.0930	ug/L			07/07/22 18:02	1
Ethylbenzene	ND		1.00	0.198	ug/L			07/07/22 18:02	1
Toluene	ND		1.00	0.312	ug/L			07/07/22 18:02	1
Xylenes, Total	ND		3.00	0.442	ug/L			07/07/22 18:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		80 - 120		07/07/22 18:02	1
Dibromofluoromethane (Surr)	106		80 - 120		07/07/22 18:02	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		07/07/22 18:02	1
Toluene-d8 (Surr)	99		80 - 120		07/07/22 18:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>TPH as Gasoline</b>	<b>110</b>	<b>J</b>	150	30.5	ug/L			07/08/22 12:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		68.7 - 141		07/08/22 12:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>118</b>	<b>J</b>	241	111	ug/L		07/08/22 11:15	07/08/22 15:27	1
RRO (C25-C36)	ND		402	121	ug/L		07/08/22 11:15	07/08/22 15:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	80		50 - 150	07/08/22 11:15	07/08/22 15:27	1
n-Triacontane-d62	91		50 - 150	07/08/22 11:15	07/08/22 15:27	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-112A**

**Lab Sample ID: 590-17941-4**

Date Collected: 06/28/22 14:26

Matrix: Water

Date Received: 07/05/22 14:53

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.39		0.400	0.0930	ug/L			07/07/22 18:23	1
Ethylbenzene	10.6		1.00	0.198	ug/L			07/07/22 18:23	1
Toluene	0.935	J	1.00	0.312	ug/L			07/07/22 18:23	1
Xylenes, Total	2.63	J	3.00	0.442	ug/L			07/07/22 18:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		80 - 120		07/07/22 18:23	1
Dibromofluoromethane (Surr)	105		80 - 120		07/07/22 18:23	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		07/07/22 18:23	1
Toluene-d8 (Surr)	93		80 - 120		07/07/22 18:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	1260		150	30.5	ug/L			07/08/22 12:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		68.7 - 141		07/08/22 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	675		244	112	ug/L		07/08/22 11:15	07/08/22 15:47	1
RRO (C25-C36)	ND		407	122	ug/L		07/08/22 11:15	07/08/22 15:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	86		50 - 150	07/08/22 11:15	07/08/22 15:47	1
n-Triacontane-d62	101		50 - 150	07/08/22 11:15	07/08/22 15:47	1



# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-113**

**Lab Sample ID: 590-17941-5**

Date Collected: 06/27/22 12:37

Matrix: Water

Date Received: 07/05/22 14:53

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	156		40.0	9.30	ug/L			07/08/22 13:00	100
Ethylbenzene	4.05		1.00	0.198	ug/L			07/07/22 18:45	1
Toluene	5.22		1.00	0.312	ug/L			07/07/22 18:45	1
Xylenes, Total	5.40		3.00	0.442	ug/L			07/07/22 18:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		80 - 120		07/07/22 18:45	1
4-Bromofluorobenzene (Surr)	94		80 - 120		07/08/22 13:00	100
Dibromofluoromethane (Surr)	109		80 - 120		07/07/22 18:45	1
Dibromofluoromethane (Surr)	112		80 - 120		07/08/22 13:00	100
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		07/07/22 18:45	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		07/08/22 13:00	100
Toluene-d8 (Surr)	100		80 - 120		07/07/22 18:45	1
Toluene-d8 (Surr)	97		80 - 120		07/08/22 13:00	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		15000	3050	ug/L			07/08/22 13:00	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		68.7 - 141		07/08/22 13:00	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	933		241	110	ug/L		07/08/22 11:15	07/08/22 16:07	1
RRO (C25-C36)	156	J	402	121	ug/L		07/08/22 11:15	07/08/22 16:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	77		50 - 150	07/08/22 11:15	07/08/22 16:07	1
n-Triacontane-d62	85		50 - 150	07/08/22 11:15	07/08/22 16:07	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-114**

**Lab Sample ID: 590-17941-6**

**Date Collected: 06/27/22 12:00**

**Matrix: Water**

**Date Received: 07/05/22 14:53**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			07/07/22 19:06	1
Ethylbenzene	ND		1.00	0.198	ug/L			07/07/22 19:06	1
Toluene	ND		1.00	0.312	ug/L			07/07/22 19:06	1
Xylenes, Total	ND		3.00	0.442	ug/L			07/07/22 19:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		80 - 120		07/07/22 19:06	1
Dibromofluoromethane (Surr)	110		80 - 120		07/07/22 19:06	1
1,2-Dichloroethane-d4 (Surr)	108		80 - 120		07/07/22 19:06	1
Toluene-d8 (Surr)	100		80 - 120		07/07/22 19:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			07/07/22 19:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		68.7 - 141		07/07/22 19:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>413</b>		247	113	ug/L		07/08/22 11:15	07/08/22 16:27	1
<b>RRO (C25-C36)</b>	<b>160</b>	<b>J</b>	412	123	ug/L		07/08/22 11:15	07/08/22 16:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	78		50 - 150	07/08/22 11:15	07/08/22 16:27	1
n-Triacontane-d62	90		50 - 150	07/08/22 11:15	07/08/22 16:27	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-115**

**Lab Sample ID: 590-17941-7**

**Date Collected: 06/27/22 11:24**

**Matrix: Water**

**Date Received: 07/05/22 14:53**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			07/07/22 19:27	1
Ethylbenzene	ND		1.00	0.198	ug/L			07/07/22 19:27	1
Toluene	ND		1.00	0.312	ug/L			07/07/22 19:27	1
Xylenes, Total	ND		3.00	0.442	ug/L			07/07/22 19:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		80 - 120		07/07/22 19:27	1
Dibromofluoromethane (Surr)	110		80 - 120		07/07/22 19:27	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		07/07/22 19:27	1
Toluene-d8 (Surr)	97		80 - 120		07/07/22 19:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>TPH as Gasoline</b>	<b>372</b>		150	30.5	ug/L			07/08/22 13:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		68.7 - 141		07/08/22 13:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>4930</b>		246	113	ug/L		07/08/22 11:15	07/08/22 17:07	1
<b>RRO (C25-C36)</b>	<b>240</b>	<b>J</b>	410	123	ug/L		07/08/22 11:15	07/08/22 17:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	101		50 - 150	07/08/22 11:15	07/08/22 17:07	1
<i>n</i> -Triacontane-d62	102		50 - 150	07/08/22 11:15	07/08/22 17:07	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-202**  
**Date Collected: 06/29/22 10:38**  
**Date Received: 07/05/22 14:53**

**Lab Sample ID: 590-17941-8**  
**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>TPH as Gasoline</b>	<b>3330</b>		150	30.5	ug/L			07/08/22 13:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		68.7 - 141					07/08/22 13:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>2840</b>		241	111	ug/L		07/08/22 11:15	07/08/22 17:27	1
<b>RRO (C25-C36)</b>	<b>1090</b>		402	121	ug/L		07/08/22 11:15	07/08/22 17:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	77		50 - 150				07/08/22 11:15	07/08/22 17:27	1
n-Triacontane-d62	88		50 - 150				07/08/22 11:15	07/08/22 17:27	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-203**

**Lab Sample ID: 590-17941-9**

Date Collected: 06/28/22 11:31

Matrix: Water

Date Received: 07/05/22 14:53

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	34.3	J	150	30.5	ug/L			07/07/22 20:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		68.7 - 141					07/07/22 20:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	645		245	113	ug/L		07/08/22 11:15	07/08/22 17:47	1
RRO (C25-C36)	1560		409	123	ug/L		07/08/22 11:15	07/08/22 17:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150				07/08/22 11:15	07/08/22 17:47	1
n-Triacontane-d62	104		50 - 150				07/08/22 11:15	07/08/22 17:47	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-213**

**Lab Sample ID: 590-17941-10**

**Date Collected: 06/29/22 09:08**

**Matrix: Water**

**Date Received: 07/05/22 14:53**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			07/07/22 20:31	1
Ethylbenzene	ND		1.00	0.198	ug/L			07/07/22 20:31	1
Toluene	ND		1.00	0.312	ug/L			07/07/22 20:31	1
Xylenes, Total	ND		3.00	0.442	ug/L			07/07/22 20:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		80 - 120		07/07/22 20:31	1
Dibromofluoromethane (Surr)	111		80 - 120		07/07/22 20:31	1
1,2-Dichloroethane-d4 (Surr)	101		80 - 120		07/07/22 20:31	1
Toluene-d8 (Surr)	98		80 - 120		07/07/22 20:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			07/07/22 20:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		68.7 - 141		07/07/22 20:31	1

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.0905	0.0121	ug/L		07/06/22 11:22	07/06/22 14:21	1
Benzo[a]pyrene	ND		0.0905	0.0121	ug/L		07/06/22 11:22	07/06/22 14:21	1
Benzo[b]fluoranthene	ND	*1	0.0905	0.0252	ug/L		07/06/22 11:22	07/06/22 14:21	1
Benzo[k]fluoranthene	ND	*1	0.0905	0.0151	ug/L		07/06/22 11:22	07/06/22 14:21	1
Chrysene	ND		0.0905	0.0101	ug/L		07/06/22 11:22	07/06/22 14:21	1
Dibenz(a,h)anthracene	ND		0.0905	0.0131	ug/L		07/06/22 11:22	07/06/22 14:21	1
Indeno[1,2,3-cd]pyrene	ND		0.0905	0.0221	ug/L		07/06/22 11:22	07/06/22 14:21	1
<b>1-Methylnaphthalene</b>	<b>0.0494</b>	<b>J</b>	0.0905	0.0231	ug/L		07/06/22 11:22	07/06/22 14:21	1
2-Methylnaphthalene	ND		0.0905	0.0443	ug/L		07/06/22 11:22	07/06/22 14:21	1
Naphthalene	ND		0.0905	0.0533	ug/L		07/06/22 11:22	07/06/22 14:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	57		50 - 120	07/06/22 11:22	07/06/22 14:21	1
p-Terphenyl-d14	71		51 - 121	07/06/22 11:22	07/06/22 14:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>163</b>	<b>J</b>	285	131	ug/L		07/08/22 11:15	07/08/22 18:07	1
RRO (C25-C36)	ND		475	143	ug/L		07/08/22 11:15	07/08/22 18:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	86		50 - 150	07/08/22 11:15	07/08/22 18:07	1
n-Triacontane-d62	98		50 - 150	07/08/22 11:15	07/08/22 18:07	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-214**

**Lab Sample ID: 590-17941-11**

**Date Collected: 06/29/22 09:45**

**Matrix: Water**

**Date Received: 07/05/22 14:53**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			07/07/22 21:13	1
Ethylbenzene	ND		1.00	0.198	ug/L			07/07/22 21:13	1
Toluene	ND		1.00	0.312	ug/L			07/07/22 21:13	1
Xylenes, Total	ND		3.00	0.442	ug/L			07/07/22 21:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		80 - 120		07/07/22 21:13	1
Dibromofluoromethane (Surr)	107		80 - 120		07/07/22 21:13	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		07/07/22 21:13	1
Toluene-d8 (Surr)	104		80 - 120		07/07/22 21:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			07/07/22 21:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		68.7 - 141		07/07/22 21:13	1

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.0910	0.0121	ug/L		07/06/22 11:22	07/06/22 14:44	1
<b>Benzo[a]pyrene</b>	<b>0.0123</b>	<b>J</b>	0.0910	0.0121	ug/L		07/06/22 11:22	07/06/22 14:44	1
Benzo[b]fluoranthene	ND	*1	0.0910	0.0253	ug/L		07/06/22 11:22	07/06/22 14:44	1
Benzo[k]fluoranthene	ND	*1	0.0910	0.0152	ug/L		07/06/22 11:22	07/06/22 14:44	1
<b>Chrysene</b>	<b>0.0148</b>	<b>J</b>	0.0910	0.0101	ug/L		07/06/22 11:22	07/06/22 14:44	1
Dibenz(a,h)anthracene	ND		0.0910	0.0131	ug/L		07/06/22 11:22	07/06/22 14:44	1
Indeno[1,2,3-cd]pyrene	ND		0.0910	0.0222	ug/L		07/06/22 11:22	07/06/22 14:44	1
<b>1-Methylnaphthalene</b>	<b>0.0272</b>	<b>J</b>	0.0910	0.0233	ug/L		07/06/22 11:22	07/06/22 14:44	1
2-Methylnaphthalene	ND		0.0910	0.0445	ug/L		07/06/22 11:22	07/06/22 14:44	1
Naphthalene	ND		0.0910	0.0536	ug/L		07/06/22 11:22	07/06/22 14:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	63		50 - 120	07/06/22 11:22	07/06/22 14:44	1
p-Terphenyl-d14	81		51 - 121	07/06/22 11:22	07/06/22 14:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>181</b>	<b>J</b>	244	112	ug/L		07/08/22 11:15	07/08/22 18:27	1
<b>RRO (C25-C36)</b>	<b>135</b>	<b>J</b>	407	122	ug/L		07/08/22 11:15	07/08/22 18:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	80		50 - 150	07/08/22 11:15	07/08/22 18:27	1
n-Triacontane-d62	92		50 - 150	07/08/22 11:15	07/08/22 18:27	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-301**

**Lab Sample ID: 590-17941-12**

Date Collected: 06/28/22 10:27

Matrix: Water

Date Received: 07/05/22 14:53

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	21.5		0.400	0.0930	ug/L			07/07/22 21:35	1
Ethylbenzene	3.16		1.00	0.198	ug/L			07/07/22 21:35	1
Toluene	0.854	J	1.00	0.312	ug/L			07/07/22 21:35	1
Xylenes, Total	0.735	J	3.00	0.442	ug/L			07/07/22 21:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		80 - 120		07/07/22 21:35	1
Dibromofluoromethane (Surr)	106		80 - 120		07/07/22 21:35	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		07/07/22 21:35	1
Toluene-d8 (Surr)	98		80 - 120		07/07/22 21:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	478		150	30.5	ug/L			07/08/22 14:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		68.7 - 141		07/08/22 14:06	1



# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-302**

**Lab Sample ID: 590-17941-13**

Date Collected: 06/28/22 09:14

Matrix: Water

Date Received: 07/05/22 14:53

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.82		0.400	0.0930	ug/L			07/07/22 21:56	1
Ethylbenzene	21.4		1.00	0.198	ug/L			07/07/22 21:56	1
Toluene	0.505	J	1.00	0.312	ug/L			07/07/22 21:56	1
Xylenes, Total	4.56		3.00	0.442	ug/L			07/07/22 21:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		80 - 120		07/07/22 21:56	1
Dibromofluoromethane (Surr)	107		80 - 120		07/07/22 21:56	1
1,2-Dichloroethane-d4 (Surr)	100		80 - 120		07/07/22 21:56	1
Toluene-d8 (Surr)	97		80 - 120		07/07/22 21:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	414		150	30.5	ug/L			07/08/22 14:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		68.7 - 141		07/08/22 14:28	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-303**

**Lab Sample ID: 590-17941-14**

Date Collected: 06/28/22 08:11

Matrix: Water

Date Received: 07/05/22 14:53

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	107		4.00	0.930	ug/L			07/08/22 14:50	10
Ethylbenzene	27.2		1.00	0.198	ug/L			07/07/22 22:17	1
Toluene	3.03		1.00	0.312	ug/L			07/07/22 22:17	1
Xylenes, Total	9.22		3.00	0.442	ug/L			07/07/22 22:17	1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120			07/07/22 22:17	1
4-Bromofluorobenzene (Surr)	93		80 - 120			07/08/22 14:50	10
Dibromofluoromethane (Surr)	107		80 - 120			07/07/22 22:17	1
Dibromofluoromethane (Surr)	105		80 - 120			07/08/22 14:50	10
1,2-Dichloroethane-d4 (Surr)	102		80 - 120			07/07/22 22:17	1
1,2-Dichloroethane-d4 (Surr)	102		80 - 120			07/08/22 14:50	10
Toluene-d8 (Surr)	98		80 - 120			07/07/22 22:17	1
Toluene-d8 (Surr)	102		80 - 120			07/08/22 14:50	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	2250		1500	305	ug/L			07/08/22 14:50	10

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		68.7 - 141			07/08/22 14:50	10

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-304**

**Lab Sample ID: 590-17941-15**

Date Collected: 06/28/22 08:45

Matrix: Water

Date Received: 07/05/22 14:53

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	16.9		0.400	0.0930	ug/L			07/07/22 22:38	1
Ethylbenzene	3.18		1.00	0.198	ug/L			07/07/22 22:38	1
Toluene	0.903	J	1.00	0.312	ug/L			07/07/22 22:38	1
Xylenes, Total	1.12	J	3.00	0.442	ug/L			07/07/22 22:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		80 - 120		07/07/22 22:38	1
Dibromofluoromethane (Surr)	100		80 - 120		07/07/22 22:38	1
1,2-Dichloroethane-d4 (Surr)	101		80 - 120		07/07/22 22:38	1
Toluene-d8 (Surr)	101		80 - 120		07/07/22 22:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	549		150	30.5	ug/L			07/08/22 15:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		68.7 - 141		07/08/22 15:55	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-307**

**Lab Sample ID: 590-17941-16**

Date Collected: 06/29/22 11:48

Matrix: Water

Date Received: 07/05/22 14:53

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	149		40.0	9.30	ug/L			07/12/22 13:45	100
Ethylbenzene	176		100	19.8	ug/L			07/12/22 13:45	100
Toluene	31.8		1.00	0.312	ug/L			07/08/22 16:17	1
Xylenes, Total	158	J	300	44.2	ug/L			07/12/22 13:45	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		80 - 120		07/08/22 16:17	1
4-Bromofluorobenzene (Surr)	101		80 - 120		07/12/22 13:45	100
Dibromofluoromethane (Surr)	94		80 - 120		07/08/22 16:17	1
Dibromofluoromethane (Surr)	94		80 - 120		07/12/22 13:45	100
1,2-Dichloroethane-d4 (Surr)	95		80 - 120		07/08/22 16:17	1
1,2-Dichloroethane-d4 (Surr)	94		80 - 120		07/12/22 13:45	100
Toluene-d8 (Surr)	102		80 - 120		07/08/22 16:17	1
Toluene-d8 (Surr)	107		80 - 120		07/12/22 13:45	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	2870		150	30.5	ug/L			07/08/22 16:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		68.7 - 141		07/08/22 16:17	1
4-Bromofluorobenzene (Surr)	101		68.7 - 141		07/12/22 13:45	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	4020		246	113	ug/L		07/08/22 11:15	07/08/22 18:48	1
RRO (C25-C36)	330	J	411	123	ug/L		07/08/22 11:15	07/08/22 18:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	78		50 - 150	07/08/22 11:15	07/08/22 18:48	1
n-Triacontane-d62	89		50 - 150	07/08/22 11:15	07/08/22 18:48	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-308**

**Lab Sample ID: 590-17941-17**

Date Collected: 06/29/22 12:21

Matrix: Water

Date Received: 07/05/22 14:53

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			07/08/22 17:01	1
<b>Ethylbenzene</b>	<b>0.281</b>	<b>J</b>	1.00	0.198	ug/L			07/08/22 17:01	1
Toluene	ND		1.00	0.312	ug/L			07/08/22 17:01	1
<b>Xylenes, Total</b>	<b>0.485</b>	<b>J</b>	3.00	0.442	ug/L			07/08/22 17:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		80 - 120		07/08/22 17:01	1
Dibromofluoromethane (Surr)	105		80 - 120		07/08/22 17:01	1
1,2-Dichloroethane-d4 (Surr)	101		80 - 120		07/08/22 17:01	1
Toluene-d8 (Surr)	98		80 - 120		07/08/22 17:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>TPH as Gasoline</b>	<b>54.5</b>	<b>J</b>	150	30.5	ug/L			07/08/22 17:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		68.7 - 141		07/08/22 17:01	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-309**  
**Date Collected: 06/28/22 10:55**  
**Date Received: 07/05/22 14:53**

**Lab Sample ID: 590-17941-18**  
**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			07/08/22 17:23	1
Ethylbenzene	ND		1.00	0.198	ug/L			07/08/22 17:23	1
Toluene	ND		1.00	0.312	ug/L			07/08/22 17:23	1
Xylenes, Total	ND		3.00	0.442	ug/L			07/08/22 17:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		80 - 120		07/08/22 17:23	1
Dibromofluoromethane (Surr)	106		80 - 120		07/08/22 17:23	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		07/08/22 17:23	1
Toluene-d8 (Surr)	96		80 - 120		07/08/22 17:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>TPH as Gasoline</b>	<b>108</b>	<b>J</b>	150	30.5	ug/L			07/08/22 17:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		68.7 - 141		07/08/22 17:23	1

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-310**  
 Date Collected: 06/28/22 09:45  
 Date Received: 07/05/22 14:53

**Lab Sample ID: 590-17941-19**  
 Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	39.2		0.400	0.0930	ug/L			07/08/22 18:28	1
Ethylbenzene	17.9		1.00	0.198	ug/L			07/08/22 18:28	1
Toluene	0.966	J	1.00	0.312	ug/L			07/08/22 18:28	1
Xylenes, Total	5.50		3.00	0.442	ug/L			07/08/22 18:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		80 - 120		07/08/22 18:28	1
Dibromofluoromethane (Surr)	104		80 - 120		07/08/22 18:28	1
1,2-Dichloroethane-d4 (Surr)	101		80 - 120		07/08/22 18:28	1
Toluene-d8 (Surr)	103		80 - 120		07/08/22 18:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	924		150	30.5	ug/L			07/08/22 18:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		68.7 - 141		07/08/22 18:28	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-311**  
Date Collected: 06/28/22 15:02  
Date Received: 07/05/22 14:53

**Lab Sample ID: 590-17941-20**  
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.53		0.400	0.0930	ug/L			07/08/22 18:50	1
Ethylbenzene	0.596	J	1.00	0.198	ug/L			07/08/22 18:50	1
Toluene	3.49		1.00	0.312	ug/L			07/08/22 18:50	1
Xylenes, Total	0.644	J	3.00	0.442	ug/L			07/08/22 18:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		80 - 120		07/08/22 18:50	1
Dibromofluoromethane (Surr)	100		80 - 120		07/08/22 18:50	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		07/08/22 18:50	1
Toluene-d8 (Surr)	98		80 - 120		07/08/22 18:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	2050		150	30.5	ug/L			07/08/22 18:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		68.7 - 141		07/08/22 18:50	1



# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-312**

**Lab Sample ID: 590-17941-21**

Date Collected: 06/29/22 11:15

Matrix: Water

Date Received: 07/05/22 14:53

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	35.8		0.400	0.0930	ug/L			07/08/22 19:12	1
Ethylbenzene	2.30		1.00	0.198	ug/L			07/08/22 19:12	1
Toluene	2.69		1.00	0.312	ug/L			07/08/22 19:12	1
Xylenes, Total	2.05	J	3.00	0.442	ug/L			07/08/22 19:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		07/08/22 19:12	1
Dibromofluoromethane (Surr)	100		80 - 120		07/08/22 19:12	1
1,2-Dichloroethane-d4 (Surr)	104		80 - 120		07/08/22 19:12	1
Toluene-d8 (Surr)	101		80 - 120		07/08/22 19:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	2280		150	30.5	ug/L			07/08/22 19:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		68.7 - 141		07/08/22 19:12	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-313**

**Lab Sample ID: 590-17941-22**

**Date Collected: 06/28/22 12:35**

**Matrix: Water**

**Date Received: 07/05/22 14:53**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			07/08/22 19:55	1
Ethylbenzene	ND		1.00	0.198	ug/L			07/08/22 19:55	1
Toluene	ND		1.00	0.312	ug/L			07/08/22 19:55	1
Xylenes, Total	ND		3.00	0.442	ug/L			07/08/22 19:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		80 - 120		07/08/22 19:55	1
Dibromofluoromethane (Surr)	106		80 - 120		07/08/22 19:55	1
1,2-Dichloroethane-d4 (Surr)	102		80 - 120		07/08/22 19:55	1
Toluene-d8 (Surr)	101		80 - 120		07/08/22 19:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			07/08/22 19:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		68.7 - 141		07/08/22 19:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>177</b>	<b>J</b>	247	113	ug/L		07/08/22 11:15	07/08/22 19:08	1
<b>RRO (C25-C36)</b>	<b>140</b>	<b>J</b>	411	123	ug/L		07/08/22 11:15	07/08/22 19:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	84		50 - 150	07/08/22 11:15	07/08/22 19:08	1
<i>n</i> -Triacontane-d62	99		50 - 150	07/08/22 11:15	07/08/22 19:08	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-314**

**Lab Sample ID: 590-17941-23**

**Date Collected: 06/28/22 15:26**

**Matrix: Water**

**Date Received: 07/05/22 14:53**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			07/08/22 20:17	1
Ethylbenzene	ND		1.00	0.198	ug/L			07/08/22 20:17	1
<b>Toluene</b>	<b>0.346</b>	<b>J</b>	1.00	0.312	ug/L			07/08/22 20:17	1
Xylenes, Total	ND		3.00	0.442	ug/L			07/08/22 20:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		80 - 120		07/08/22 20:17	1
Dibromofluoromethane (Surr)	106		80 - 120		07/08/22 20:17	1
1,2-Dichloroethane-d4 (Surr)	104		80 - 120		07/08/22 20:17	1
Toluene-d8 (Surr)	93		80 - 120		07/08/22 20:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>TPH as Gasoline</b>	<b>253</b>		150	30.5	ug/L			07/08/22 20:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		68.7 - 141		07/08/22 20:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>936</b>		242	111	ug/L		07/08/22 11:15	07/08/22 19:28	1
<b>RRO (C25-C36)</b>	<b>166</b>	<b>J</b>	404	121	ug/L		07/08/22 11:15	07/08/22 19:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	82		50 - 150	07/08/22 11:15	07/08/22 19:28	1
n-Triacontane-d62	95		50 - 150	07/08/22 11:15	07/08/22 19:28	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: MW-315**

**Lab Sample ID: 590-17941-24**

Date Collected: 06/28/22 12:03

Matrix: Water

Date Received: 07/05/22 14:53

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	17.7		0.400	0.0930	ug/L			07/08/22 20:38	1
Ethylbenzene	0.548	J	1.00	0.198	ug/L			07/08/22 20:38	1
Toluene	3.82		1.00	0.312	ug/L			07/08/22 20:38	1
Xylenes, Total	2.84	J	3.00	0.442	ug/L			07/08/22 20:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120		07/08/22 20:38	1
Dibromofluoromethane (Surr)	104		80 - 120		07/08/22 20:38	1
1,2-Dichloroethane-d4 (Surr)	104		80 - 120		07/08/22 20:38	1
Toluene-d8 (Surr)	93		80 - 120		07/08/22 20:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	2370		150	30.5	ug/L			07/08/22 20:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		68.7 - 141		07/08/22 20:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	2310		244	112	ug/L		07/08/22 11:15	07/08/22 19:49	1
RRO (C25-C36)	207	J	407	122	ug/L		07/08/22 11:15	07/08/22 19:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	82		50 - 150	07/08/22 11:15	07/08/22 19:49	1
n-Triacontane-d62	93		50 - 150	07/08/22 11:15	07/08/22 19:49	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: SH-04**  
Date Collected: 06/28/22 13:55  
Date Received: 07/05/22 14:53

**Lab Sample ID: 590-17941-25**  
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	11.7		0.400	0.0930	ug/L			07/08/22 21:00	1
Ethylbenzene	2.63		1.00	0.198	ug/L			07/08/22 21:00	1
Toluene	1.10		1.00	0.312	ug/L			07/08/22 21:00	1
Xylenes, Total	2.26	J	3.00	0.442	ug/L			07/08/22 21:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		80 - 120		07/08/22 21:00	1
Dibromofluoromethane (Surr)	103		80 - 120		07/08/22 21:00	1
1,2-Dichloroethane-d4 (Surr)	102		80 - 120		07/08/22 21:00	1
Toluene-d8 (Surr)	94		80 - 120		07/08/22 21:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	813		150	30.5	ug/L			07/08/22 21:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		68.7 - 141		07/08/22 21:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	380		243	111	ug/L		07/08/22 11:15	07/08/22 20:09	1
RRO (C25-C36)	140	J	405	121	ug/L		07/08/22 11:15	07/08/22 20:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	79		50 - 150	07/08/22 11:15	07/08/22 20:09	1
n-Triacontane-d62	89		50 - 150	07/08/22 11:15	07/08/22 20:09	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: TX-03A**

**Lab Sample ID: 590-17941-26**

Date Collected: 06/28/22 15:54

Matrix: Water

Date Received: 07/05/22 14:53

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	114		40.0	9.30	ug/L			07/12/22 14:07	100
Ethylbenzene	13.2		1.00	0.198	ug/L			07/08/22 21:21	1
Toluene	6.32		1.00	0.312	ug/L			07/08/22 21:21	1
Xylenes, Total	3.56		3.00	0.442	ug/L			07/08/22 21:21	1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		80 - 120			07/08/22 21:21	1
4-Bromofluorobenzene (Surr)	102		80 - 120			07/12/22 14:07	100
Dibromofluoromethane (Surr)	102		80 - 120			07/08/22 21:21	1
Dibromofluoromethane (Surr)	95		80 - 120			07/12/22 14:07	100
1,2-Dichloroethane-d4 (Surr)	95		80 - 120			07/08/22 21:21	1
1,2-Dichloroethane-d4 (Surr)	95		80 - 120			07/12/22 14:07	100
Toluene-d8 (Surr)	96		80 - 120			07/08/22 21:21	1
Toluene-d8 (Surr)	106		80 - 120			07/12/22 14:07	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	1390		150	30.5	ug/L			07/08/22 21:21	1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		68.7 - 141			07/08/22 21:21	1
4-Bromofluorobenzene (Surr)	102		68.7 - 141			07/12/22 14:07	100

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

**Client Sample ID: TB-1**

**Lab Sample ID: 590-17941-27**

**Date Collected: 06/27/22 08:00**

**Matrix: Water**

**Date Received: 07/05/22 14:53**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			07/08/22 21:43	1
Ethylbenzene	ND		1.00	0.198	ug/L			07/08/22 21:43	1
Toluene	ND		1.00	0.312	ug/L			07/08/22 21:43	1
Xylenes, Total	ND		3.00	0.442	ug/L			07/08/22 21:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		80 - 120		07/08/22 21:43	1
Dibromofluoromethane (Surr)	108		80 - 120		07/08/22 21:43	1
1,2-Dichloroethane-d4 (Surr)	107		80 - 120		07/08/22 21:43	1
Toluene-d8 (Surr)	100		80 - 120		07/08/22 21:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			07/08/22 21:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		68.7 - 141		07/08/22 21:43	1

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

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

**Lab Sample ID: MB 590-36944/6**  
**Matrix: Water**  
**Analysis Batch: 36944**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			07/07/22 13:19	1
Ethylbenzene	ND		1.00	0.198	ug/L			07/07/22 13:19	1
Toluene	ND		1.00	0.312	ug/L			07/07/22 13:19	1
Xylenes, Total	ND		3.00	0.442	ug/L			07/07/22 13:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		80 - 120		07/07/22 13:19	1
Dibromofluoromethane (Surr)	106		80 - 120		07/07/22 13:19	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		07/07/22 13:19	1
Toluene-d8 (Surr)	102		80 - 120		07/07/22 13:19	1

**Lab Sample ID: LCS 590-36944/1003**  
**Matrix: Water**  
**Analysis Batch: 36944**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	10.0	9.768		ug/L		98	80 - 126
Ethylbenzene	10.0	9.622		ug/L		96	80 - 128
m-Xylene & p-Xylene	10.0	10.55		ug/L		106	80 - 127
o-Xylene	10.0	10.34		ug/L		103	80 - 126
Toluene	10.0	10.07		ug/L		101	80 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
1,2-Dichloroethane-d4 (Surr)	106		80 - 120
Toluene-d8 (Surr)	103		80 - 120

**Lab Sample ID: LCSD 590-36944/4**  
**Matrix: Water**  
**Analysis Batch: 36944**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	10.0	9.503		ug/L		95	80 - 126	3	18
Ethylbenzene	10.0	9.801		ug/L		98	80 - 128	2	18
m-Xylene & p-Xylene	10.0	10.34		ug/L		103	80 - 127	2	18
o-Xylene	10.0	10.34		ug/L		103	80 - 126	0	17
Toluene	10.0	10.05		ug/L		100	80 - 129	0	18

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120
1,2-Dichloroethane-d4 (Surr)	105		80 - 120
Toluene-d8 (Surr)	105		80 - 120



# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

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

**Lab Sample ID: 590-17941-1 DU**  
**Matrix: Water**  
**Analysis Batch: 36944**

**Client Sample ID: MW-05**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Benzene	ND		ND		ug/L		NC	18
Ethylbenzene	ND		ND		ug/L		NC	18
Toluene	ND		ND		ug/L		NC	18
Xylenes, Total	ND		ND		ug/L		NC	18

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	110		80 - 120
1,2-Dichloroethane-d4 (Surr)	106		80 - 120
Toluene-d8 (Surr)	101		80 - 120

**Lab Sample ID: MB 590-36967/6**  
**Matrix: Water**  
**Analysis Batch: 36967**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.400	0.0930	ug/L		07/08/22 11:55	11:55	1
Ethylbenzene	ND		1.00	0.198	ug/L		07/08/22 11:55	11:55	1
Toluene	ND		1.00	0.312	ug/L		07/08/22 11:55	11:55	1
Xylenes, Total	ND		3.00	0.442	ug/L		07/08/22 11:55	11:55	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	95		80 - 120		07/08/22 11:55	1
Dibromofluoromethane (Surr)	106		80 - 120		07/08/22 11:55	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		07/08/22 11:55	1
Toluene-d8 (Surr)	96		80 - 120		07/08/22 11:55	1

**Lab Sample ID: LCS 590-36967/1003**  
**Matrix: Water**  
**Analysis Batch: 36967**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	10.0	9.916		ug/L		99	80 - 128
m-Xylene & p-Xylene	10.0	10.73		ug/L		107	80 - 127
o-Xylene	10.0	10.44		ug/L		104	80 - 126
Toluene	10.0	9.987		ug/L		100	80 - 129

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
1,2-Dichloroethane-d4 (Surr)	102		80 - 120
Toluene-d8 (Surr)	97		80 - 120

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

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

**Lab Sample ID: LCSD 590-36967/4**  
**Matrix: Water**  
**Analysis Batch: 36967**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	10.0	9.312		ug/L		93	80 - 126	11	18
Ethylbenzene	10.0	9.551		ug/L		96	80 - 128	4	18
m-Xylene & p-Xylene	10.0	10.23		ug/L		102	80 - 127	5	18
o-Xylene	10.0	10.12		ug/L		101	80 - 126	3	17
Toluene	10.0	9.827		ug/L		98	80 - 129	2	18

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
1,2-Dichloroethane-d4 (Surr)	102		80 - 120
Toluene-d8 (Surr)	104		80 - 120

**Lab Sample ID: 590-17941-18 MS**  
**Matrix: Water**  
**Analysis Batch: 36967**

**Client Sample ID: MW-309**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		10.0	11.71		ug/L		117	80 - 126
Ethylbenzene	ND		10.0	10.22		ug/L		102	80 - 128
m-Xylene & p-Xylene	ND		10.0	9.012		ug/L		90	80 - 127
o-Xylene	ND		10.0	8.988		ug/L		90	80 - 126
Toluene	ND		10.0	10.39		ug/L		104	80 - 129

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
1,2-Dichloroethane-d4 (Surr)	102		80 - 120
Toluene-d8 (Surr)	94		80 - 120

**Lab Sample ID: 590-17941-18 MSD**  
**Matrix: Water**  
**Analysis Batch: 36967**

**Client Sample ID: MW-309**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		10.0	10.34		ug/L		103	80 - 126	12	18
Ethylbenzene	ND		10.0	9.303		ug/L		93	80 - 128	9	18
m-Xylene & p-Xylene	ND		10.0	8.183		ug/L		82	80 - 127	10	18
o-Xylene	ND		10.0	8.416		ug/L		84	80 - 126	7	17
Toluene	ND		10.0	9.641		ug/L		96	80 - 129	8	18

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120
1,2-Dichloroethane-d4 (Surr)	104		80 - 120
Toluene-d8 (Surr)	97		80 - 120

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

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

**Lab Sample ID: 590-17941-16 DU**  
**Matrix: Water**  
**Analysis Batch: 36967**

**Client Sample ID: MW-307**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Toluene	31.8		35.47		ug/L		11	18
<b>DU DU</b>								
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
4-Bromofluorobenzene (Surr)	98		80 - 120					
Dibromofluoromethane (Surr)	94		80 - 120					
1,2-Dichloroethane-d4 (Surr)	92		80 - 120					
Toluene-d8 (Surr)	99		80 - 120					

**Lab Sample ID: MB 590-37004/7**  
**Matrix: Water**  
**Analysis Batch: 37004**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			07/12/22 13:23	1
Ethylbenzene	ND		1.00	0.198	ug/L			07/12/22 13:23	1
Toluene	ND		1.00	0.312	ug/L			07/12/22 13:23	1
Xylenes, Total	ND		3.00	0.442	ug/L			07/12/22 13:23	1
<b>MB MB</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	99		80 - 120					07/12/22 13:23	1
Dibromofluoromethane (Surr)	95		80 - 120					07/12/22 13:23	1
1,2-Dichloroethane-d4 (Surr)	93		80 - 120					07/12/22 13:23	1
Toluene-d8 (Surr)	105		80 - 120					07/12/22 13:23	1

**Lab Sample ID: LCS 590-37004/1003**  
**Matrix: Water**  
**Analysis Batch: 37004**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	10.0	10.57		ug/L		106	80 - 126
Ethylbenzene	10.0	10.64		ug/L		106	80 - 128
m-Xylene & p-Xylene	10.0	10.54		ug/L		105	80 - 127
o-Xylene	10.0	10.30		ug/L		103	80 - 126
Toluene	10.0	10.55		ug/L		106	80 - 129
<b>LCS LCS</b>							
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
4-Bromofluorobenzene (Surr)	95		80 - 120				
Dibromofluoromethane (Surr)	92		80 - 120				
1,2-Dichloroethane-d4 (Surr)	93		80 - 120				
Toluene-d8 (Surr)	105		80 - 120				

**Lab Sample ID: LCSD 590-37004/4**  
**Matrix: Water**  
**Analysis Batch: 37004**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	10.0	10.96		ug/L		110	80 - 126	4	18
Ethylbenzene	10.0	10.89		ug/L		109	80 - 128	2	18

Eurofins Spokane

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

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

**Lab Sample ID: LCSD 590-37004/4**  
**Matrix: Water**  
**Analysis Batch: 37004**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
m-Xylene & p-Xylene	10.0	10.73		ug/L		107	80 - 127	2	18
o-Xylene	10.0	10.57		ug/L		106	80 - 126	3	17
Toluene	10.0	10.99		ug/L		110	80 - 129	4	18

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	93		80 - 120
1,2-Dichloroethane-d4 (Surr)	94		80 - 120
Toluene-d8 (Surr)	102		80 - 120

**Lab Sample ID: 590-17973-A-1 DU**  
**Matrix: Water**  
**Analysis Batch: 37004**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Benzene	0.191	J	0.1893	J	ug/L		1	18
Ethylbenzene	ND		ND		ug/L		NC	18
Toluene	0.343	J	ND		ug/L		NC	18
Xylenes, Total			0.4671	J	ug/L			18

Surrogate	DU %Recovery	DU Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	90		80 - 120
1,2-Dichloroethane-d4 (Surr)	95		80 - 120
Toluene-d8 (Surr)	104		80 - 120

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

**Lab Sample ID: MB 590-36945/6**  
**Matrix: Water**  
**Analysis Batch: 36945**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			07/07/22 13:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		68.7 - 141		07/07/22 13:19	1

**Lab Sample ID: LCS 590-36945/1005**  
**Matrix: Water**  
**Analysis Batch: 36945**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
TPH as Gasoline	1000	984.0		ug/L		98	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		68.7 - 141

Eurofins Spokane

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

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

**Lab Sample ID: LCSD 590-36945/1016**  
**Matrix: Water**  
**Analysis Batch: 36945**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Gasoline	1000	1147		ug/L		114	80 - 120	15	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
4-Bromofluorobenzene (Surr)	94		68.7 - 141						

**Lab Sample ID: MB 590-36968/6**  
**Matrix: Water**  
**Analysis Batch: 36968**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			07/08/22 11:55	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
4-Bromofluorobenzene (Surr)	95		68.7 - 141						
							<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
								07/08/22 11:55	1

**Lab Sample ID: LCS 590-36968/1005**  
**Matrix: Water**  
**Analysis Batch: 36968**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Gasoline	1000	1136		ug/L		113	80 - 120		
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
4-Bromofluorobenzene (Surr)	90		68.7 - 141						

**Lab Sample ID: LCSD 590-36968/1016**  
**Matrix: Water**  
**Analysis Batch: 36968**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Gasoline	1000	1121		ug/L		112	80 - 120	1	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
4-Bromofluorobenzene (Surr)	95		68.7 - 141						

**Lab Sample ID: 590-17941-16 DU**  
**Matrix: Water**  
**Analysis Batch: 36968**

**Client Sample ID: MW-307**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
TPH as Gasoline	2870		3556		ug/L		21	35
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
4-Bromofluorobenzene (Surr)	98		68.7 - 141					

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

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

**Lab Sample ID: MB 590-37005/7**  
**Matrix: Water**  
**Analysis Batch: 37005**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			07/12/22 13:23	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		68.7 - 141					07/12/22 13:23	1

**Lab Sample ID: LCS 590-37005/1005**  
**Matrix: Water**  
**Analysis Batch: 37005**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
TPH as Gasoline	1000	979.8		ug/L		98	80 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	102		68.7 - 141				

**Lab Sample ID: LCSD 590-37005/1016**  
**Matrix: Water**  
**Analysis Batch: 37005**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
TPH as Gasoline	1000	1032		ug/L		103	80 - 120	5	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	104		68.7 - 141						

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID: MB 590-36918/1-A**  
**Matrix: Water**  
**Analysis Batch: 36915**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 36918**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.0900	0.0120	ug/L		07/06/22 11:22	07/06/22 12:25	1
Benzo[a]pyrene	ND		0.0900	0.0120	ug/L		07/06/22 11:22	07/06/22 12:25	1
Benzo[b]fluoranthene	ND		0.0900	0.0250	ug/L		07/06/22 11:22	07/06/22 12:25	1
Benzo[k]fluoranthene	ND		0.0900	0.0150	ug/L		07/06/22 11:22	07/06/22 12:25	1
Chrysene	ND		0.0900	0.0100	ug/L		07/06/22 11:22	07/06/22 12:25	1
Dibenz(a,h)anthracene	ND		0.0900	0.0130	ug/L		07/06/22 11:22	07/06/22 12:25	1
Indeno[1,2,3-cd]pyrene	ND		0.0900	0.0220	ug/L		07/06/22 11:22	07/06/22 12:25	1
1-Methylnaphthalene	ND		0.0900	0.0230	ug/L		07/06/22 11:22	07/06/22 12:25	1
2-Methylnaphthalene	ND		0.0900	0.0440	ug/L		07/06/22 11:22	07/06/22 12:25	1
Naphthalene	ND		0.0900	0.0530	ug/L		07/06/22 11:22	07/06/22 12:25	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	66		50 - 120				07/06/22 11:22	07/06/22 12:25	1
p-Terphenyl-d14	77		51 - 121				07/06/22 11:22	07/06/22 12:25	1

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# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 590-36918/2-A**  
**Matrix: Water**  
**Analysis Batch: 36915**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 36918**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[a]anthracene	1.60	1.478		ug/L		92	60 - 120
Benzo[a]pyrene	1.60	1.486		ug/L		93	54 - 120
Benzo[b]fluoranthene	1.60	1.367		ug/L		85	51 - 125
Benzo[k]fluoranthene	1.60	1.435		ug/L		90	58 - 120
Chrysene	1.60	1.451		ug/L		91	58 - 126
Dibenz(a,h)anthracene	1.60	1.350		ug/L		84	62 - 120
Indeno[1,2,3-cd]pyrene	1.60	1.422		ug/L		89	59 - 120
1-Methylnaphthalene	1.60	1.190		ug/L		74	49 - 120
2-Methylnaphthalene	1.60	1.169		ug/L		73	44 - 120
Naphthalene	1.60	1.193		ug/L		75	52 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	60		50 - 120
p-Terphenyl-d14	75		51 - 121

**Lab Sample ID: LCSD 590-36918/3-A**  
**Matrix: Water**  
**Analysis Batch: 36915**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 36918**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzo[a]anthracene	1.60	1.503		ug/L		94	60 - 120	2	15
Benzo[a]pyrene	1.60	1.522		ug/L		95	54 - 120	2	15
Benzo[b]fluoranthene	1.60	1.644	*1	ug/L		103	51 - 125	18	15
Benzo[k]fluoranthene	1.60	1.203	*1	ug/L		75	58 - 120	18	15
Chrysene	1.60	1.494		ug/L		93	58 - 126	3	15
Dibenz(a,h)anthracene	1.60	1.401		ug/L		88	62 - 120	4	18
Indeno[1,2,3-cd]pyrene	1.60	1.464		ug/L		92	59 - 120	3	18
1-Methylnaphthalene	1.60	1.193		ug/L		75	49 - 120	0	15
2-Methylnaphthalene	1.60	1.179		ug/L		74	44 - 120	1	16
Naphthalene	1.60	1.182		ug/L		74	52 - 120	1	21

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	58		50 - 120
p-Terphenyl-d14	76		51 - 121

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

**Lab Sample ID: MB 590-36970/1-A**  
**Matrix: Water**  
**Analysis Batch: 36973**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 36970**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		240	110	ug/L		07/08/22 11:15	07/08/22 13:28	1
RRO (C25-C36)	ND		400	120	ug/L		07/08/22 11:15	07/08/22 13:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	72		50 - 150	07/08/22 11:15	07/08/22 13:28	1
n-Triacontane-d62	84		50 - 150	07/08/22 11:15	07/08/22 13:28	1

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# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

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

**Lab Sample ID: LCS 590-36970/2-A**  
**Matrix: Water**  
**Analysis Batch: 36973**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 36970**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DRO (C10-C25)	1600	1151		ug/L		72	50 - 150
RRO (C25-C36)	1600	1531		ug/L		96	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl	82		50 - 150
<i>n</i> -Triacontane-d62	94		50 - 150

**Lab Sample ID: LCSD 590-36970/3-A**  
**Matrix: Water**  
**Analysis Batch: 36973**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 36970**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
DRO (C10-C25)	1600	1245		ug/L		78	50 - 150	8	25
RRO (C25-C36)	1600	1627		ug/L		102	50 - 150	6	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
<i>o</i> -Terphenyl	85		50 - 150
<i>n</i> -Triacontane-d62	97		50 - 150

## Method: 6010D - Metals (ICP)

**Lab Sample ID: MB 590-37008/2-A**  
**Matrix: Water**  
**Analysis Batch: 37040**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 37008**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		60.0	5.10	ug/L		07/12/22 12:22	07/13/22 15:04	1

**Lab Sample ID: LCS 590-37008/1-A**  
**Matrix: Water**  
**Analysis Batch: 37040**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 37008**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	1000	1062		ug/L		106	80 - 120

**Lab Sample ID: 590-17926-C-1-C MS**  
**Matrix: Water**  
**Analysis Batch: 37040**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 37008**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	6.00	J	1000	1054		ug/L		105	75 - 125

**Lab Sample ID: 590-17926-C-1-D MSD**  
**Matrix: Water**  
**Analysis Batch: 37040**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 37008**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lead	6.00	J	1000	1061		ug/L		106	75 - 125	1	20

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# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

## Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: 590-17926-C-1-B DU  
Matrix: Water  
Analysis Batch: 37040

Client Sample ID: Duplicate  
Prep Type: Total Recoverable  
Prep Batch: 37008

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead	6.00	J	5.900	J	ug/L		2	20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

## Client Sample ID: MW-05

Lab Sample ID: 590-17941-1

Date Collected: 06/29/22 08:21

Matrix: Water

Date Received: 07/05/22 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36944	07/07/22 15:52	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36945	07/07/22 15:52	JSP	TAL SPK
Total/NA	Prep	3510C			247.1 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 14:46	NMI	TAL SPK

## Client Sample ID: MW-104

Lab Sample ID: 590-17941-2

Date Collected: 06/29/22 07:42

Matrix: Water

Date Received: 07/05/22 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36944	07/07/22 16:36	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36945	07/07/22 16:36	JSP	TAL SPK
Total/NA	Prep	3510C			242.1 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 15:06	NMI	TAL SPK
Total Recoverable	Prep	3005A			50 mL	50 mL	37008	07/12/22 18:34	AMB	TAL SPK
Total Recoverable	Analysis	6010D		1			37112	07/18/22 13:20	AMB	TAL SPK

## Client Sample ID: MW-111

Lab Sample ID: 590-17941-3

Date Collected: 06/27/22 13:46

Matrix: Water

Date Received: 07/05/22 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36944	07/07/22 18:02	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 12:16	JSP	TAL SPK
Total/NA	Prep	3510C			248.5 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 15:27	NMI	TAL SPK

## Client Sample ID: MW-112A

Lab Sample ID: 590-17941-4

Date Collected: 06/28/22 14:26

Matrix: Water

Date Received: 07/05/22 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36944	07/07/22 18:23	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 12:38	JSP	TAL SPK
Total/NA	Prep	3510C			246 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 15:47	NMI	TAL SPK

## Client Sample ID: MW-113

Lab Sample ID: 590-17941-5

Date Collected: 06/27/22 12:37

Matrix: Water

Date Received: 07/05/22 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36944	07/07/22 18:45	JSP	TAL SPK
Total/NA	Analysis	8260D		100	43 mL	43 mL	36967	07/08/22 13:00	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		100	43 mL	43 mL	36968	07/08/22 13:00	JSP	TAL SPK

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# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

## Client Sample ID: MW-113

Date Collected: 06/27/22 12:37

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			248.9 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 16:07	NMI	TAL SPK

## Client Sample ID: MW-114

Date Collected: 06/27/22 12:00

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36944	07/07/22 19:06	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36945	07/07/22 19:06	JSP	TAL SPK
Total/NA	Prep	3510C			243 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 16:27	NMI	TAL SPK

## Client Sample ID: MW-115

Date Collected: 06/27/22 11:24

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36944	07/07/22 19:27	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 13:22	JSP	TAL SPK
Total/NA	Prep	3510C			243.9 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 17:07	NMI	TAL SPK

## Client Sample ID: MW-202

Date Collected: 06/29/22 10:38

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 13:44	JSP	TAL SPK
Total/NA	Prep	3510C			248.5 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 17:27	NMI	TAL SPK

## Client Sample ID: MW-203

Date Collected: 06/28/22 11:31

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36945	07/07/22 20:10	JSP	TAL SPK
Total/NA	Prep	3510C			244.4 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 17:47	NMI	TAL SPK

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

## Client Sample ID: MW-213

Date Collected: 06/29/22 09:08

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36944	07/07/22 20:31	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36945	07/07/22 20:31	JSP	TAL SPK
Total/NA	Prep	3510C			248.5 mL	2 mL	36918	07/06/22 11:22	NMI	TAL SPK
Total/NA	Analysis	8270E SIM		1			36915	07/06/22 14:21	NMI	TAL SPK
Total/NA	Prep	3510C			210.5 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 18:07	NMI	TAL SPK

## Client Sample ID: MW-214

Date Collected: 06/29/22 09:45

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36944	07/07/22 21:13	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36945	07/07/22 21:13	JSP	TAL SPK
Total/NA	Prep	3510C			247.2 mL	2 mL	36918	07/06/22 11:22	NMI	TAL SPK
Total/NA	Analysis	8270E SIM		1			36915	07/06/22 14:44	NMI	TAL SPK
Total/NA	Prep	3510C			245.7 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 18:27	NMI	TAL SPK

## Client Sample ID: MW-301

Date Collected: 06/28/22 10:27

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36944	07/07/22 21:35	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 14:06	JSP	TAL SPK

## Client Sample ID: MW-302

Date Collected: 06/28/22 09:14

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36944	07/07/22 21:56	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 14:28	JSP	TAL SPK

## Client Sample ID: MW-303

Date Collected: 06/28/22 08:11

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36944	07/07/22 22:17	JSP	TAL SPK
Total/NA	Analysis	8260D		10	43 mL	43 mL	36967	07/08/22 14:50	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		10	43 mL	43 mL	36968	07/08/22 14:50	JSP	TAL SPK

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# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

## Client Sample ID: MW-304

Date Collected: 06/28/22 08:45

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36944	07/07/22 22:38	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 15:55	JSP	TAL SPK

## Client Sample ID: MW-307

Date Collected: 06/29/22 11:48

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		100	43 mL	43 mL	37004	07/12/22 13:45	JSP	TAL SPK
Total/NA	Analysis	8260D		1	43 mL	43 mL	36967	07/08/22 16:17	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		100	43 mL	43 mL	37005	07/12/22 13:45	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 16:17	JSP	TAL SPK
Total/NA	Prep	3510C			243.6 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 18:48	NMI	TAL SPK

## Client Sample ID: MW-308

Date Collected: 06/29/22 12:21

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36967	07/08/22 17:01	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 17:01	JSP	TAL SPK

## Client Sample ID: MW-309

Date Collected: 06/28/22 10:55

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36967	07/08/22 17:23	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 17:23	JSP	TAL SPK

## Client Sample ID: MW-310

Date Collected: 06/28/22 09:45

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36967	07/08/22 18:28	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 18:28	JSP	TAL SPK

## Client Sample ID: MW-311

Date Collected: 06/28/22 15:02

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36967	07/08/22 18:50	JSP	TAL SPK

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# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

## Client Sample ID: MW-311

Date Collected: 06/28/22 15:02

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 18:50	JSP	TAL SPK

## Client Sample ID: MW-312

Date Collected: 06/29/22 11:15

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-21

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36967	07/08/22 19:12	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 19:12	JSP	TAL SPK

## Client Sample ID: MW-313

Date Collected: 06/28/22 12:35

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-22

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36967	07/08/22 19:55	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 19:55	JSP	TAL SPK
Total/NA	Prep	3510C			243.3 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 19:08	NMI	TAL SPK

## Client Sample ID: MW-314

Date Collected: 06/28/22 15:26

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-23

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36967	07/08/22 20:17	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 20:17	JSP	TAL SPK
Total/NA	Prep	3510C			247.6 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 19:28	NMI	TAL SPK

## Client Sample ID: MW-315

Date Collected: 06/28/22 12:03

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-24

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36967	07/08/22 20:38	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 20:38	JSP	TAL SPK
Total/NA	Prep	3510C			245.6 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 19:49	NMI	TAL SPK

Eurofins Spokane

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

## Client Sample ID: SH-04

Date Collected: 06/28/22 13:55

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-25

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36967	07/08/22 21:00	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 21:00	JSP	TAL SPK
Total/NA	Prep	3510C			247.1 mL	2 mL	36970	07/08/22 11:15	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			36973	07/08/22 20:09	NMI	TAL SPK

## Client Sample ID: TX-03A

Date Collected: 06/28/22 15:54

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-26

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		100	43 mL	43 mL	37004	07/12/22 14:07	JSP	TAL SPK
Total/NA	Analysis	8260D		1	43 mL	43 mL	36967	07/08/22 21:21	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		100	43 mL	43 mL	37005	07/12/22 14:07	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 21:21	JSP	TAL SPK

## Client Sample ID: TB-1

Date Collected: 06/27/22 08:00

Date Received: 07/05/22 14:53

## Lab Sample ID: 590-17941-27

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	36967	07/08/22 21:43	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	36968	07/08/22 21:43	JSP	TAL SPK

### Laboratory References:

TAL SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

# Accreditation/Certification Summary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

## Laboratory: Eurofins Spokane

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4137	12-08-22
Washington	State	C569	01-06-23

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# Method Summary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue, Seattle WA

Job ID: 590-17941-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270E SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
6010D	Metals (ICP)	SW846	TAL SPK
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SPK
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL SPK
5030C	Purge and Trap	SW846	TAL SPK

#### Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

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

#### Laboratory References:

TAL SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

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LAB (LOCATION)

ACCUTEST ( )  
 CALSCIENCE ( )  
 TESTAMERICA ( )  
 Other ( )



Shell Oil Products US Chain Of Custody Record

Please Check Appropriate Box  
 SGW FDG  PIPELINE  RETAIL  
 CHEMICALS  CONSULTANT  LUBES  
 TRANSPORTATION  OTHER

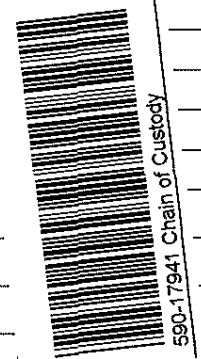
Print Bill To Contact Name:   
PlaNNet Site or Project ID  
CHECK IF NO INCIDENT # APPLIES  
DATE: 6/29/22  
PAGE: 1 of 3

SAMPLING COMPANY: Blaine Tech Services Inc  
LOG CODE: BTSS  
ADDRESS: 1680 Rogers Ave San Jose CA, 95112  
PROJECT CONTACT (if hardcopy or PDF Report to): Jacquelyn England  
TELEPHONE: (707)523-1010  
TURNAROUND TIME: STANDARD (14 DAY)  
SPECIAL INSTRUCTIONS OR NOTES

SITE ADDRESS: 2555 13th Avenue  
State: WA  
GHD Project / Task Number: 11218519  
E-MAIL: jacquelyn\_england@ghd.com  
SAMPLER NAME(S) (Print): L Bures  
REQUESTED ANALYSIS

Table with columns for Field Sample Identification, SAMPLING (DATE, TIME, MATRIX), PRESERVATIVE, NO. OF CONT, and various analytes like BTEX, PAHs, etc.

FIELD NOTES:  
TEMPERATURE ON RECEIPT C°  
31° 3 33°  
Container PID Readings or Laboratory Notes



Relinquished by (Signature): [Signature]  
Received by (Signature): [Signature]  
Date: 7/5/22  
Time: 14:50

[Handwritten signature]

Date: 7/5/22  
Time: 14:53

Version: 14Dec15

LAB (LOCATION)

- ACCUTEST ( \_\_\_\_\_ )
- CALSCIENCE ( \_\_\_\_\_ )
- TESTAMERICA ( \_\_\_\_\_ )
- Other ( \_\_\_\_\_ )

Lab Vendor #      Dropdown



# Shell Oil Products US Chain Of Custody Record

**Please Check Appropriate Box.**

<input type="checkbox"/> SGW FDG	<input type="checkbox"/> PIPELINE	<input type="checkbox"/> RETAIL
<input type="checkbox"/> CHEMICALS	<input type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES
<input type="checkbox"/> TRANSPORTATION	<input type="checkbox"/> OTHER _____	

**Print Bill To Contact Name**

PO # \_\_\_\_\_

**PlaNet Site or Project ID**

GSAP Project ID \_\_\_\_\_

CHECK IF NO INCIDENT # APPLIES

DATE: 6/29/22

PAGE: 2 of 3

SAMPLING COMPANY: **Blaine Tech Services, Inc**

LOG CODE: **BTSS**

ADDRESS: **1680 Rogers Ave, San Jose, CA, 95112**

SITE ADDRESS: Street and City **2555 13th Avenue**

State **WA**

GHD Project / Task Number: **11218519**

PROJECT CONTACT (Hardcopy or PDF Report to): **Jacquelyn England**

TELEPHONE: **(707)523-1010**      FAX: \_\_\_\_\_      E-MAIL: **jacquelyn.england@ghd.com**

EDF DELIVERABLE TO (Name, Company, Office Location): **Jacquelyn England, GHD, Santa Rosa**

PHONE NO: **(707)523-1010**      E-MAIL: **jacquelyn.england@ghd.com**

SAMPLER NAME(S) (Print): **L BUBES**

TURNAROUND TIME (CALENDAR DAYS):

STANDARD (14 DAY)     5 DAYS     3 DAYS     2 DAYS     24 HOURS

RESULTS NEEDED ON WEEKEND

**REQUESTED ANALYSIS**

UNIT COST				NON-UNIT COST				FIELD NOTES	

DELIVERABLES:  LEVEL 1     LEVEL 2     LEVEL 3     LEVEL 4     OTHER (SPECIFY) \_\_\_\_\_

TEMPERATURE ON RECEIPT C°    Cooler #1: \_\_\_\_\_    Cooler #2: \_\_\_\_\_    Cooler #3: \_\_\_\_\_

**SPECIAL INSTRUCTIONS OR NOTES**

SHELL CONTRACT RATE APPLIES

STATE REIMBURSEMENT RATE APPLIES

EDD NOT NEEDED

RECEIPT VERIFICATION REQUESTED

PROVIDE LEDD DISK

8260C BTEX	NWTPH-GX	8270D SIX PAHs	300.0 Sulfate					NWTPH-GX	8020A Total Lead	353.2 Nitrate & Nitrite	8020A Disa. Iron & Manganese (lab filter)	300.0 Chloride	2220B Alkalinity				
------------	----------	----------------	---------------	--	--	--	--	----------	------------------	-------------------------	---	----------------	------------------	--	--	--	--

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT	REQUESTED ANALYSIS														TEMPERATURE ON RECEIPT C°			
		DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER																			
	MW 214	6/29/22	0945	WG	6			2		8	X	X	X						X									
	MW 301	6/29/22	1027	WG	4					4	X								X									
	MW 302	6/29/22	0914	WG	4					4	X								X									
	MW 303	6/29/22	0811	WG	4					4	X								X									
	MW-304	6/29/22	0845	WG	4					4	X								X									
	MW 307	6/29/22	1142	WG	6					6	X	X							X									
	MW 308	6/29/22	1221	WG	4					4	X								X									
	MW 309	6/29/22	1055	WG	4					4	X								X									
	MW 310	6/29/22	0945	WG	4					4	X								X									
	MW 311	6/29/22	1507	WG	4					4	X								X									

Relinquished by: (Signature)	Received by: (Signature) _____	Date: <u>7/5/22</u>	Time: <u>1450</u>
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Version: 14Dec15

LAB (LOCATION)

- ACCUTEST ( )
- CALSCIENCE ( )
- TESTAMERICA ( )
- Other ( )



# Shell Oil Products US Chain Of Custody Record

**Please Check Appropriate Box**

<input type="checkbox"/> SGW FDG	<input type="checkbox"/> PIPELINE	<input type="checkbox"/> RETAIL
<input type="checkbox"/> CHEMICALS	<input type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES
<input type="checkbox"/> TRANSPORTATION	<input type="checkbox"/> OTHER _____	

<b>Print Bill To Contact Name</b>	<b>PlaNet Site or Project ID</b>	<input type="checkbox"/> CHECK IF NO INCIDENT # APPLIES
		DATE: <u>6/29/22</u>
<b>PO #</b>	<b>GSAP Project ID</b>	PAGE: <u>3</u> of <u>3</u>

<b>SAMPLING COMPANY:</b> Blaine Tech Services, Inc	<b>LOG CODE:</b> BTSS	<b>SITE ADDRESS: Street and City</b> 2555 13th Avenue	<b>State</b> WA	<b>GHD Project / Task Number</b> 11218519
<b>ADDRESS:</b> 1680 Rogers Ave, San Jose, CA, 95112	<b>EOP DELIVERABLE TO (Name, Company, Office Location)</b> Jacquelyn England, GHD, Santa Rosa	<b>PHONE NO.</b> (707)523-1010	<b>E-MAIL</b> jacquelyn_england@ghd.com	<b>AECOM Other ID</b>
<b>PROJECT CONTACT (Hardcopy or PDF Report to)</b> Jacquelyn England	<b>SAMPLER NAME(S) (Print)</b> L. BORES			<b>LAB USE ONLY</b>

**TELEPHONE:** (707)523-1010    **FAX:**    **Bill To Contact E-MAIL:** jacquelyn\_england@ghd.com

**TURNAROUND TIME (CALENDAR DAYS):**  
 STANDARD (14 DAY)     5 DAYS     3 DAYS     2 DAYS     24 HOURS     RESULTS NEEDED ON WEEKEND

LA RWQCB REPORT FORMAT     UST AGENCY

**DELIVERABLES:**     LEVEL 1     LEVEL 2     LEVEL 3     LEVEL 4     OTHER (SPECIFY) \_\_\_\_\_

**TEMPERATURE ON RECEIPT C°**    Cooler #1    Cooler #2    Cooler #3

**SPECIAL INSTRUCTIONS OR NOTES**

- SHELL CONTRACT RATE APPLIES
- STATE REIMBURSEMENT RATE APPLIES
- EDD NOT NEEDED
- RECEIPT VERIFICATION REQUESTED
- PROVIDE LEDD DISK

REQUESTED ANALYSIS												FIELD NOTES
UNIT COST						NON-UNIT COST						
0286C BTEX	0286C CHX	0270D SIM PAHs	030 C Sulfate			020A Total Lead	020A Nitrate & Nitrite	020A Diss. Iron & Manganese (no filter)	300.0 Chloride	220B Alkalinity		TEMPERATURE ON RECEIPT C°
												Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT	REQUESTED ANALYSIS											FIELD NOTES		
		DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER		UNIT COST						NON-UNIT COST							
											0286C BTEX	0286C CHX	0270D SIM PAHs	030 C Sulfate			020A Total Lead	020A Nitrate & Nitrite	020A Diss. Iron & Manganese (no filter)	300.0 Chloride	220B Alkalinity			
	MW 312	6/29/22	1115	WG	4					4	X													
	MW 313	6/29/22	1235	WG	6					6	X	X												
	MW 314	6/29/22	1526	WG	6					6	X	X												
	MW 315	6/29/22	1203	WG	6					6	X	X												
	SH 04	6/29/22	1355	WG	6					6	X	X												
	TX 03A	6/29/22	1534	WG	4					4	X													
	TB-1	6/29/22	0800	WG	2					2	X													

Relinquished by: (Signature) 	Received by: (Signature)	Date: 7/5/22	Time: 1450
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

# Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 590-17941-1

**Login Number: 17941**

**List Source: Eurofins Spokane**

**List Number: 1**

**Creator: Vaughan, Madison 1**

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



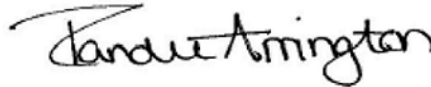
## ANALYTICAL REPORT

Eurofins Spokane  
11922 East 1st Ave  
Spokane, WA 99206  
Tel: (509)924-9200

Laboratory Job ID: 590-18699-1  
Client Project/Site: 2555 13th Avenue

For:  
GHD Services Inc.  
2235 Mercury Way  
Suite 150  
Santa Rosa, California 95407

Attn: Jacquelyn England



*Authorized for release by:*  
10/6/2022 3:27:11 PM

Randee Arrington, Lab Director  
(509)924-9200  
[Randee.Arrington@et.eurofinsus.com](mailto:Randee.Arrington@et.eurofinsus.com)

### LINKS

Review your project  
results through



Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

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

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



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# Case Narrative

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

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**Job ID: 590-18699-1**

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**Laboratory: Eurofins Spokane**

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## Narrative

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### Receipt

The samples were received on 9/22/2022 1:57 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.9° C.

### GC/MS VOA

Method 8260D: Surrogate recovery for the following sample was outside control limits: MW-304 (590-18699-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method NWTPH-Gx: Surrogate recovery for the following sample was outside control limits: (CCV 590-38364/15). CCV recovery within limits.

Method NWTPH-Gx: Surrogate recovery for the following sample was outside control limits: (590-18778-D-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

### GC Semi VOA

Method NWTPH-Dx: Detected hydrocarbons appear to be due to a weathered heavy gas/ lightweight diesel in the following sample: MW-314 (590-18699-11) and MW-315 (590-18699-12).

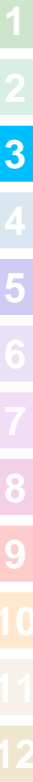
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### Organic Prep

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

### VOA Prep

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





# Sample Summary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-18699-1	MW-301	Water	09/21/22 08:51	09/22/22 13:57
590-18699-2	MW-302	Water	09/21/22 07:53	09/22/22 13:57
590-18699-3	MW-303	Water	09/21/22 09:20	09/22/22 13:57
590-18699-4	MW-304	Water	09/20/22 13:56	09/22/22 13:57
590-18699-5	MW-307	Water	09/20/22 08:41	09/22/22 13:57
590-18699-6	MW-308	Water	09/20/22 09:23	09/22/22 13:57
590-18699-7	MW-310	Water	09/20/22 13:16	09/22/22 13:57
590-18699-8	MW-311	Water	09/20/22 11:57	09/22/22 13:57
590-18699-9	MW-312	Water	09/20/22 11:26	09/22/22 13:57
590-18699-10	MW-313	Water	09/20/22 10:56	09/22/22 13:57
590-18699-11	MW-314	Water	09/20/22 14:42	09/22/22 13:57
590-18699-12	MW-315	Water	09/20/22 10:23	09/22/22 13:57
590-18699-13	TX-03A	Water	09/21/22 08:24	09/22/22 13:57
590-18699-14	TB-1	Water	09/20/22 09:00	09/22/22 13:57

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# Definitions/Glossary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

### GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

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

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

**Client Sample ID: MW-301**  
**Date Collected: 09/21/22 08:51**  
**Date Received: 09/22/22 13:57**

**Lab Sample ID: 590-18699-1**  
**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	9.32		0.400	0.0930	ug/L			10/01/22 00:06	1
Ethylbenzene	1.72		1.00	0.198	ug/L			10/01/22 00:06	1
Toluene	0.952	J	1.00	0.312	ug/L			10/01/22 00:06	1
Xylenes, Total	0.953	J	3.00	0.442	ug/L			10/01/22 00:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		80 - 120		10/01/22 00:06	1
Dibromofluoromethane (Surr)	107		80 - 120		10/01/22 00:06	1
1,2-Dichloroethane-d4 (Surr)	100		80 - 120		10/01/22 00:06	1
Toluene-d8 (Surr)	105		80 - 120		10/01/22 00:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	245		150	30.5	ug/L			10/01/22 00:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		68.7 - 141		10/01/22 00:06	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

**Client Sample ID: MW-302**  
Date Collected: 09/21/22 07:53  
Date Received: 09/22/22 13:57

**Lab Sample ID: 590-18699-2**  
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.27		0.400	0.0930	ug/L			10/01/22 00:49	1
Ethylbenzene	29.6		1.00	0.198	ug/L			10/01/22 00:49	1
Toluene	1.90		1.00	0.312	ug/L			10/01/22 00:49	1
Xylenes, Total	6.93		3.00	0.442	ug/L			10/01/22 00:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		80 - 120		10/01/22 00:49	1
Dibromofluoromethane (Surr)	104		80 - 120		10/01/22 00:49	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		10/01/22 00:49	1
Toluene-d8 (Surr)	107		80 - 120		10/01/22 00:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	540		150	30.5	ug/L			10/01/22 00:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		68.7 - 141		10/01/22 00:49	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

**Client Sample ID: MW-303**

**Lab Sample ID: 590-18699-3**

**Date Collected: 09/21/22 09:20**

**Matrix: Water**

**Date Received: 09/22/22 13:57**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	216		40.0	9.30	ug/L			10/03/22 13:56	100
Ethylbenzene	55.8		1.00	0.198	ug/L			10/01/22 02:17	1
Toluene	7.10		1.00	0.312	ug/L			10/01/22 02:17	1
Xylenes, Total	12.1		3.00	0.442	ug/L			10/01/22 02:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		80 - 120		10/01/22 02:17	1
4-Bromofluorobenzene (Surr)	91		80 - 120		10/03/22 13:56	100
Dibromofluoromethane (Surr)	102		80 - 120		10/01/22 02:17	1
Dibromofluoromethane (Surr)	103		80 - 120		10/03/22 13:56	100
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		10/01/22 02:17	1
1,2-Dichloroethane-d4 (Surr)	95		80 - 120		10/03/22 13:56	100
Toluene-d8 (Surr)	104		80 - 120		10/01/22 02:17	1
Toluene-d8 (Surr)	106		80 - 120		10/03/22 13:56	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	1990		150	30.5	ug/L			10/01/22 02:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		68.7 - 141		10/01/22 02:17	1
4-Bromofluorobenzene (Surr)	91		68.7 - 141		10/03/22 13:56	100

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

**Client Sample ID: MW-304**

**Lab Sample ID: 590-18699-4**

**Date Collected: 09/20/22 13:56**

**Matrix: Water**

**Date Received: 09/22/22 13:57**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	133		4.00	0.930	ug/L			10/03/22 14:18	10
Ethylbenzene	1.81		1.00	0.198	ug/L			10/01/22 02:38	1
Toluene	0.434	J	1.00	0.312	ug/L			10/01/22 02:38	1
Xylenes, Total	1.34	J	3.00	0.442	ug/L			10/01/22 02:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76	S1-	80 - 120		10/01/22 02:38	1
4-Bromofluorobenzene (Surr)	102		80 - 120		10/03/22 14:18	10
Dibromofluoromethane (Surr)	108		80 - 120		10/01/22 02:38	1
Dibromofluoromethane (Surr)	105		80 - 120		10/03/22 14:18	10
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		10/01/22 02:38	1
1,2-Dichloroethane-d4 (Surr)	94		80 - 120		10/03/22 14:18	10
Toluene-d8 (Surr)	104		80 - 120		10/01/22 02:38	1
Toluene-d8 (Surr)	108		80 - 120		10/03/22 14:18	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	594		150	30.5	ug/L			10/01/22 02:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		68.7 - 141		10/01/22 02:38	1
4-Bromofluorobenzene (Surr)	102		68.7 - 141		10/03/22 14:18	10

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

**Client Sample ID: MW-307**

**Lab Sample ID: 590-18699-5**

**Date Collected: 09/20/22 08:41**

**Matrix: Water**

**Date Received: 09/22/22 13:57**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	160		4.00	0.930	ug/L			10/03/22 14:40	10
Ethylbenzene	117		10.0	1.98	ug/L			10/03/22 14:40	10
Toluene	19.9		1.00	0.312	ug/L			10/01/22 03:00	1
Xylenes, Total	108		30.0	4.42	ug/L			10/03/22 14:40	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		80 - 120		10/01/22 03:00	1
4-Bromofluorobenzene (Surr)	91		80 - 120		10/03/22 14:40	10
Dibromofluoromethane (Surr)	98		80 - 120		10/01/22 03:00	1
Dibromofluoromethane (Surr)	105		80 - 120		10/03/22 14:40	10
1,2-Dichloroethane-d4 (Surr)	91		80 - 120		10/01/22 03:00	1
1,2-Dichloroethane-d4 (Surr)	95		80 - 120		10/03/22 14:40	10
Toluene-d8 (Surr)	106		80 - 120		10/01/22 03:00	1
Toluene-d8 (Surr)	101		80 - 120		10/03/22 14:40	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	2490		150	30.5	ug/L			10/01/22 03:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		68.7 - 141		10/01/22 03:00	1
4-Bromofluorobenzene (Surr)	91		68.7 - 141		10/03/22 14:40	10

# Client Sample Results

Client: GHD Services Inc.  
 Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

**Client Sample ID: MW-308**  
**Date Collected: 09/20/22 09:23**  
**Date Received: 09/22/22 13:57**

**Lab Sample ID: 590-18699-6**  
**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	46.1		0.400	0.0930	ug/L			10/01/22 03:22	1
Ethylbenzene	0.888	J	1.00	0.198	ug/L			10/01/22 03:22	1
Toluene	3.55		1.00	0.312	ug/L			10/01/22 03:22	1
Xylenes, Total	1.71	J	3.00	0.442	ug/L			10/01/22 03:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		80 - 120		10/01/22 03:22	1
Dibromofluoromethane (Surr)	106		80 - 120		10/01/22 03:22	1
1,2-Dichloroethane-d4 (Surr)	88		80 - 120		10/01/22 03:22	1
Toluene-d8 (Surr)	111		80 - 120		10/01/22 03:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	696		150	30.5	ug/L			10/01/22 03:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		68.7 - 141		10/01/22 03:22	1



# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

**Client Sample ID: MW-310**

**Lab Sample ID: 590-18699-7**

**Date Collected: 09/20/22 13:16**

**Matrix: Water**

**Date Received: 09/22/22 13:57**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	24.4		0.400	0.0930	ug/L			10/01/22 03:43	1
Ethylbenzene	1.62		1.00	0.198	ug/L			10/01/22 03:43	1
Toluene	1.29		1.00	0.312	ug/L			10/01/22 03:43	1
Xylenes, Total	2.06	J	3.00	0.442	ug/L			10/01/22 03:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		80 - 120		10/01/22 03:43	1
Dibromofluoromethane (Surr)	105		80 - 120		10/01/22 03:43	1
1,2-Dichloroethane-d4 (Surr)	87		80 - 120		10/01/22 03:43	1
Toluene-d8 (Surr)	105		80 - 120		10/01/22 03:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	770		150	30.5	ug/L			10/01/22 03:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		68.7 - 141		10/01/22 03:43	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

**Client Sample ID: MW-311**  
**Date Collected: 09/20/22 11:57**  
**Date Received: 09/22/22 13:57**

**Lab Sample ID: 590-18699-8**  
**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.23		0.400	0.0930	ug/L			10/01/22 04:05	1
Ethylbenzene	0.472	J	1.00	0.198	ug/L			10/01/22 04:05	1
Toluene	3.39		1.00	0.312	ug/L			10/01/22 04:05	1
Xylenes, Total	1.13	J	3.00	0.442	ug/L			10/01/22 04:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		80 - 120		10/01/22 04:05	1
Dibromofluoromethane (Surr)	104		80 - 120		10/01/22 04:05	1
1,2-Dichloroethane-d4 (Surr)	95		80 - 120		10/01/22 04:05	1
Toluene-d8 (Surr)	103		80 - 120		10/01/22 04:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	1570		150	30.5	ug/L			10/01/22 04:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		68.7 - 141		10/01/22 04:05	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

**Client Sample ID: MW-312**  
**Date Collected: 09/20/22 11:26**  
**Date Received: 09/22/22 13:57**

**Lab Sample ID: 590-18699-9**  
**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	20.3		0.400	0.0930	ug/L			10/01/22 04:27	1
Ethylbenzene	2.07		1.00	0.198	ug/L			10/01/22 04:27	1
Toluene	2.40		1.00	0.312	ug/L			10/01/22 04:27	1
Xylenes, Total	2.31	J	3.00	0.442	ug/L			10/01/22 04:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		10/01/22 04:27	1
Dibromofluoromethane (Surr)	106		80 - 120		10/01/22 04:27	1
1,2-Dichloroethane-d4 (Surr)	82		80 - 120		10/01/22 04:27	1
Toluene-d8 (Surr)	97		80 - 120		10/01/22 04:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	1900		150	30.5	ug/L			10/01/22 04:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		68.7 - 141		10/01/22 04:27	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

**Client Sample ID: MW-313**

**Lab Sample ID: 590-18699-10**

**Date Collected: 09/20/22 10:56**

**Matrix: Water**

**Date Received: 09/22/22 13:57**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			10/01/22 04:48	1
Ethylbenzene	ND		1.00	0.198	ug/L			10/01/22 04:48	1
Toluene	ND		1.00	0.312	ug/L			10/01/22 04:48	1
Xylenes, Total	ND		3.00	0.442	ug/L			10/01/22 04:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		80 - 120		10/01/22 04:48	1
Dibromofluoromethane (Surr)	104		80 - 120		10/01/22 04:48	1
1,2-Dichloroethane-d4 (Surr)	86		80 - 120		10/01/22 04:48	1
Toluene-d8 (Surr)	113		80 - 120		10/01/22 04:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	40.7	J	150	30.5	ug/L			10/01/22 04:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		68.7 - 141		10/01/22 04:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		230	105	ug/L		09/28/22 14:03	09/28/22 23:31	1
RRO (C25-C36)	ND		383	115	ug/L		09/28/22 14:03	09/28/22 23:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	94		50 - 150	09/28/22 14:03	09/28/22 23:31	1
n-Triacontane-d62	98		50 - 150	09/28/22 14:03	09/28/22 23:31	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

**Client Sample ID: MW-314**

**Lab Sample ID: 590-18699-11**

**Date Collected: 09/20/22 14:42**

**Matrix: Water**

**Date Received: 09/22/22 13:57**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.23		0.400	0.0930	ug/L			10/01/22 05:10	1
Ethylbenzene	29.4		1.00	0.198	ug/L			10/01/22 05:10	1
Toluene	1.87		1.00	0.312	ug/L			10/01/22 05:10	1
Xylenes, Total	7.95		3.00	0.442	ug/L			10/01/22 05:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		80 - 120		10/01/22 05:10	1
Dibromofluoromethane (Surr)	108		80 - 120		10/01/22 05:10	1
1,2-Dichloroethane-d4 (Surr)	95		80 - 120		10/01/22 05:10	1
Toluene-d8 (Surr)	96		80 - 120		10/01/22 05:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	634		150	30.5	ug/L			10/01/22 05:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		68.7 - 141		10/01/22 05:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	2630		224	103	ug/L		09/28/22 14:03	09/28/22 23:52	1
RRO (C25-C36)	237	J	373	112	ug/L		09/28/22 14:03	09/28/22 23:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	99		50 - 150	09/28/22 14:03	09/28/22 23:52	1
n-Triacontane-d62	106		50 - 150	09/28/22 14:03	09/28/22 23:52	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

**Client Sample ID: MW-315**

**Lab Sample ID: 590-18699-12**

Date Collected: 09/20/22 10:23

Matrix: Water

Date Received: 09/22/22 13:57

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	6.10		0.400	0.0930	ug/L			10/01/22 05:32	1
Ethylbenzene	0.566	J	1.00	0.198	ug/L			10/01/22 05:32	1
Toluene	3.79		1.00	0.312	ug/L			10/01/22 05:32	1
Xylenes, Total	2.30	J	3.00	0.442	ug/L			10/01/22 05:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		80 - 120		10/01/22 05:32	1
Dibromofluoromethane (Surr)	102		80 - 120		10/01/22 05:32	1
1,2-Dichloroethane-d4 (Surr)	91		80 - 120		10/01/22 05:32	1
Toluene-d8 (Surr)	102		80 - 120		10/01/22 05:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	2210		150	30.5	ug/L			10/01/22 05:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		68.7 - 141		10/01/22 05:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	2980		231	106	ug/L		09/28/22 14:03	09/29/22 00:14	1
RRO (C25-C36)	194	J	386	116	ug/L		09/28/22 14:03	09/29/22 00:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150	09/28/22 14:03	09/29/22 00:14	1
n-Triacontane-d62	98		50 - 150	09/28/22 14:03	09/29/22 00:14	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

**Client Sample ID: TX-03A**  
**Date Collected: 09/21/22 08:24**  
**Date Received: 09/22/22 13:57**

**Lab Sample ID: 590-18699-13**  
**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	8.95		0.400	0.0930	ug/L			10/01/22 06:15	1
Ethylbenzene	1.81		1.00	0.198	ug/L			10/01/22 06:15	1
Toluene	0.999	J	1.00	0.312	ug/L			10/01/22 06:15	1
Xylenes, Total	1.11	J	3.00	0.442	ug/L			10/01/22 06:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		80 - 120		10/01/22 06:15	1
Dibromofluoromethane (Surr)	109		80 - 120		10/01/22 06:15	1
1,2-Dichloroethane-d4 (Surr)	92		80 - 120		10/01/22 06:15	1
Toluene-d8 (Surr)	108		80 - 120		10/01/22 06:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	294		150	30.5	ug/L			10/01/22 06:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		68.7 - 141		10/01/22 06:15	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

**Client Sample ID: TB-1**

**Lab Sample ID: 590-18699-14**

**Date Collected: 09/20/22 09:00**

**Matrix: Water**

**Date Received: 09/22/22 13:57**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			10/01/22 06:37	1
Ethylbenzene	ND		1.00	0.198	ug/L			10/01/22 06:37	1
Toluene	ND		1.00	0.312	ug/L			10/01/22 06:37	1
Xylenes, Total	ND		3.00	0.442	ug/L			10/01/22 06:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		80 - 120		10/01/22 06:37	1
Dibromofluoromethane (Surr)	108		80 - 120		10/01/22 06:37	1
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		10/01/22 06:37	1
Toluene-d8 (Surr)	110		80 - 120		10/01/22 06:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			10/01/22 06:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		68.7 - 141		10/01/22 06:37	1



# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

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

**Lab Sample ID: MB 590-38363/6**  
**Matrix: Water**  
**Analysis Batch: 38363**

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.400	0.0930	ug/L			09/30/22 22:39	1
Ethylbenzene	ND		1.00	0.198	ug/L			09/30/22 22:39	1
Toluene	ND		1.00	0.312	ug/L			09/30/22 22:39	1
Xylenes, Total	ND		3.00	0.442	ug/L			09/30/22 22:39	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	91		80 - 120		09/30/22 22:39	1
Dibromofluoromethane (Surr)	108		80 - 120		09/30/22 22:39	1
1,2-Dichloroethane-d4 (Surr)	104		80 - 120		09/30/22 22:39	1
Toluene-d8 (Surr)	97		80 - 120		09/30/22 22:39	1

**Lab Sample ID: LCS 590-38363/1003**  
**Matrix: Water**  
**Analysis Batch: 38363**

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

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzene	10.0	10.11		ug/L		101	80 - 126
Ethylbenzene	10.0	9.341		ug/L		93	80 - 128
m-Xylene & p-Xylene	10.0	8.901		ug/L		89	80 - 127
o-Xylene	10.0	8.435		ug/L		84	80 - 126
Toluene	10.0	11.97		ug/L		120	80 - 129

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
1,2-Dichloroethane-d4 (Surr)	101		80 - 120
Toluene-d8 (Surr)	118		80 - 120

**Lab Sample ID: 590-18699-1 DU**  
**Matrix: Water**  
**Analysis Batch: 38363**

**Client Sample ID: MW-301**  
**Prep Type: Total/NA**

Analyte	Sample Sample		DU DU		Unit	D	RPD	RPD Limit
	Result	Qualifier	Result	Qualifier				
Benzene	9.32		9.198		ug/L		1	18
Ethylbenzene	1.72		1.665		ug/L		3	18
Toluene	0.952	J	0.7920	J	ug/L		18	18
Xylenes, Total	0.953	J	0.9494	J	ug/L		0.4	18

Surrogate	DU DU		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	106		80 - 120
1,2-Dichloroethane-d4 (Surr)	101		80 - 120
Toluene-d8 (Surr)	90		80 - 120

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

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

**Lab Sample ID: MB 590-38372/6**  
**Matrix: Water**  
**Analysis Batch: 38372**

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.400	0.0930	ug/L			10/03/22 13:34	1
Ethylbenzene	ND		1.00	0.198	ug/L			10/03/22 13:34	1
Toluene	ND		1.00	0.312	ug/L			10/03/22 13:34	1
Xylenes, Total	ND		3.00	0.442	ug/L			10/03/22 13:34	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	94		80 - 120		10/03/22 13:34	1
Dibromofluoromethane (Surr)	107		80 - 120		10/03/22 13:34	1
1,2-Dichloroethane-d4 (Surr)	91		80 - 120		10/03/22 13:34	1
Toluene-d8 (Surr)	109		80 - 120		10/03/22 13:34	1

**Lab Sample ID: LCS 590-38372/1003**  
**Matrix: Water**  
**Analysis Batch: 38372**

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

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzene	10.0	9.878		ug/L		99	80 - 126
Ethylbenzene	10.0	9.756		ug/L		98	80 - 128
m-Xylene & p-Xylene	10.0	10.15		ug/L		102	80 - 127
o-Xylene	10.0	10.62		ug/L		106	80 - 126
Toluene	10.0	9.306		ug/L		93	80 - 129

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	89		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
1,2-Dichloroethane-d4 (Surr)	90		80 - 120
Toluene-d8 (Surr)	94		80 - 120

**Lab Sample ID: 590-18778-D-6 MS**  
**Matrix: Water**  
**Analysis Batch: 38372**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
Benzene	ND		10.0	10.43		ug/L		104	80 - 126
Ethylbenzene	ND		10.0	9.607		ug/L		96	80 - 128
m-Xylene & p-Xylene	ND	F2	10.0	11.40		ug/L		114	80 - 127
o-Xylene	ND	F2	10.0	11.50		ug/L		115	80 - 126
Toluene	ND		10.0	9.994		ug/L		100	80 - 129

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	134	S1+	80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	103		80 - 120
Toluene-d8 (Surr)	97		80 - 120

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

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

**Lab Sample ID: 590-18778-E-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 38372**

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

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Benzene	ND		10.0	10.88		ug/L		109	80 - 126	4	18
Ethylbenzene	ND		10.0	10.14		ug/L		101	80 - 128	5	18
m-Xylene & p-Xylene	ND	F2	10.0	9.010	F2	ug/L		90	80 - 127	23	18
o-Xylene	ND	F2	10.0	9.116	F2	ug/L		91	80 - 126	23	17
Toluene	ND		10.0	10.09		ug/L		101	80 - 129	1	18
<b>MSD MSD</b>											
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
4-Bromofluorobenzene (Surr)	102		80 - 120								
Dibromofluoromethane (Surr)	99		80 - 120								
1,2-Dichloroethane-d4 (Surr)	97		80 - 120								
Toluene-d8 (Surr)	98		80 - 120								

**Lab Sample ID: 590-18778-E-1 DU**  
**Matrix: Water**  
**Analysis Batch: 38372**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Benzene	0.890		0.8964		ug/L		0.7	18
Ethylbenzene	ND		ND		ug/L		NC	18
Toluene	1.62		1.472		ug/L		10	18
Xylenes, Total	6.26		5.661		ug/L		10	18
<b>DU DU</b>								
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
4-Bromofluorobenzene (Surr)	99		80 - 120					
Dibromofluoromethane (Surr)	92		80 - 120					
1,2-Dichloroethane-d4 (Surr)	99		80 - 120					
Toluene-d8 (Surr)	100		80 - 120					

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

**Lab Sample ID: MB 590-38364/6**  
**Matrix: Water**  
**Analysis Batch: 38364**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
TPH as Gasoline	ND		150	30.5	ug/L			09/30/22 22:39	1
<b>MB MB</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>	
4-Bromofluorobenzene (Surr)	91		68.7 - 141				09/30/22 22:39	1	

**Lab Sample ID: LCS 590-38364/1005**  
**Matrix: Water**  
**Analysis Batch: 38364**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec
							Limits
TPH as Gasoline	1000	853.6		ug/L		85	80 - 120

Eurofins Spokane

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

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

**Lab Sample ID: LCS 590-38364/1005**  
**Matrix: Water**  
**Analysis Batch: 38364**

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

	LCS	LCS	
<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>
4-Bromofluorobenzene (Surr)	95		68.7 - 141

**Lab Sample ID: 590-18699-1 DU**  
**Matrix: Water**  
**Analysis Batch: 38364**

**Client Sample ID: MW-301**  
**Prep Type: Total/NA**

	Sample	Sample		DU	DU				RPD	
<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	RL	<u>Result</u>	<u>Qualifier</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
TPH as Gasoline	245		150	283.1		ug/L	-		14	35
<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>							
4-Bromofluorobenzene (Surr)	96		68.7 - 141							

**Lab Sample ID: MB 590-38373/6**  
**Matrix: Water**  
**Analysis Batch: 38373**

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

	MB	MB		MDL						
<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	RL	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>	
TPH as Gasoline	ND		150	30.5	ug/L	-		10/03/22 13:34	1	
<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>				
4-Bromofluorobenzene (Surr)	94		68.7 - 141	10/03/22 13:34	10/03/22 13:34	1				

**Lab Sample ID: LCS 590-38373/1005**  
**Matrix: Water**  
**Analysis Batch: 38373**

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

	Spike	LCS	LCS						
<u>Analyte</u>	<u>Added</u>	<u>Result</u>	<u>Qualifier</u>	<u>Unit</u>	<u>D</u>	<u>%Rec</u>	<u>Limits</u>	<u>RPD</u>	<u>Limit</u>
TPH as Gasoline	1000	1038		ug/L	-	103	80 - 120		
<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>						
4-Bromofluorobenzene (Surr)	90		68.7 - 141						

**Lab Sample ID: LCSD 590-38373/1016**  
**Matrix: Water**  
**Analysis Batch: 38373**

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

	Spike	LCSD	LCSD						
<u>Analyte</u>	<u>Added</u>	<u>Result</u>	<u>Qualifier</u>	<u>Unit</u>	<u>D</u>	<u>%Rec</u>	<u>Limits</u>	<u>RPD</u>	<u>Limit</u>
TPH as Gasoline	1000	1101		ug/L	-	110	80 - 120	6	20
<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>						
4-Bromofluorobenzene (Surr)	98		68.7 - 141						

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

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

**Lab Sample ID: 590-18778-E-1 DU**  
**Matrix: Water**  
**Analysis Batch: 38373**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
TPH as Gasoline	501		470.5		ug/L		6	35
<b>Surrogate</b>								
	DU %Recovery	DU Qualifier			Limits			
4-Bromofluorobenzene (Surr)	99				68.7 - 141			

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

**Lab Sample ID: MB 590-38300/1-A**  
**Matrix: Water**  
**Analysis Batch: 38302**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 38300**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		240	110	ug/L		09/28/22 14:03	09/28/22 15:41	1
RRO (C25-C36)	ND		400	120	ug/L		09/28/22 14:03	09/28/22 15:41	1
<b>Surrogate</b>									
	MB %Recovery	MB Qualifier			Limits		Prepared	Analyzed	Dil Fac
o-Terphenyl	86				50 - 150		09/28/22 14:03	09/28/22 15:41	1
n-Triacontane-d62	89				50 - 150		09/28/22 14:03	09/28/22 15:41	1

**Lab Sample ID: LCS 590-38300/2-A**  
**Matrix: Water**  
**Analysis Batch: 38302**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 38300**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DRO (C10-C25)	1600	1354		ug/L		85	50 - 150
RRO (C25-C36)	1600	1601		ug/L		100	50 - 150
<b>Surrogate</b>							
	LCS %Recovery	LCS Qualifier			Limits		
o-Terphenyl	91				50 - 150		
n-Triacontane-d62	91				50 - 150		

**Lab Sample ID: LCSD 590-38300/3-A**  
**Matrix: Water**  
**Analysis Batch: 38302**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 38300**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
DRO (C10-C25)	1600	1393		ug/L		87	50 - 150	3	25
RRO (C25-C36)	1600	1765		ug/L		110	50 - 150	10	25
<b>Surrogate</b>									
	LCSD %Recovery	LCSD Qualifier			Limits				
o-Terphenyl	95				50 - 150				
n-Triacontane-d62	102				50 - 150				

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

## Client Sample ID: MW-301

Date Collected: 09/21/22 08:51

Date Received: 09/22/22 13:57

## Lab Sample ID: 590-18699-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	38363	10/01/22 00:06	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	38364	10/01/22 00:06	JSP	EET SPK

## Client Sample ID: MW-302

Date Collected: 09/21/22 07:53

Date Received: 09/22/22 13:57

## Lab Sample ID: 590-18699-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	38363	10/01/22 00:49	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	38364	10/01/22 00:49	JSP	EET SPK

## Client Sample ID: MW-303

Date Collected: 09/21/22 09:20

Date Received: 09/22/22 13:57

## Lab Sample ID: 590-18699-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	38363	10/01/22 02:17	JSP	EET SPK
Total/NA	Analysis	8260D		100	43 mL	43 mL	38372	10/03/22 13:56	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	38364	10/01/22 02:17	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		100	43 mL	43 mL	38373	10/03/22 13:56	JSP	EET SPK

## Client Sample ID: MW-304

Date Collected: 09/20/22 13:56

Date Received: 09/22/22 13:57

## Lab Sample ID: 590-18699-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	38363	10/01/22 02:38	JSP	EET SPK
Total/NA	Analysis	8260D		10	43 mL	43 mL	38372	10/03/22 14:18	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	38364	10/01/22 02:38	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		10	43 mL	43 mL	38373	10/03/22 14:18	JSP	EET SPK

## Client Sample ID: MW-307

Date Collected: 09/20/22 08:41

Date Received: 09/22/22 13:57

## Lab Sample ID: 590-18699-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	38363	10/01/22 03:00	JSP	EET SPK
Total/NA	Analysis	8260D		10	43 mL	43 mL	38372	10/03/22 14:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	38364	10/01/22 03:00	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		10	43 mL	43 mL	38373	10/03/22 14:40	JSP	EET SPK

Eurofins Spokane

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

**Client Sample ID: MW-308**

**Lab Sample ID: 590-18699-6**

Date Collected: 09/20/22 09:23

Matrix: Water

Date Received: 09/22/22 13:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	38363	10/01/22 03:22	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	38364	10/01/22 03:22	JSP	EET SPK

**Client Sample ID: MW-310**

**Lab Sample ID: 590-18699-7**

Date Collected: 09/20/22 13:16

Matrix: Water

Date Received: 09/22/22 13:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	38363	10/01/22 03:43	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	38364	10/01/22 03:43	JSP	EET SPK

**Client Sample ID: MW-311**

**Lab Sample ID: 590-18699-8**

Date Collected: 09/20/22 11:57

Matrix: Water

Date Received: 09/22/22 13:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	38363	10/01/22 04:05	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	38364	10/01/22 04:05	JSP	EET SPK

**Client Sample ID: MW-312**

**Lab Sample ID: 590-18699-9**

Date Collected: 09/20/22 11:26

Matrix: Water

Date Received: 09/22/22 13:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	38363	10/01/22 04:27	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	38364	10/01/22 04:27	JSP	EET SPK

**Client Sample ID: MW-313**

**Lab Sample ID: 590-18699-10**

Date Collected: 09/20/22 10:56

Matrix: Water

Date Received: 09/22/22 13:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	38363	10/01/22 04:48	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	38364	10/01/22 04:48	JSP	EET SPK
Total/NA	Prep	3510C			260.9 mL	2 mL	38300	09/28/22 14:03	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	38302	09/28/22 23:31	NMI	EET SPK

**Client Sample ID: MW-314**

**Lab Sample ID: 590-18699-11**

Date Collected: 09/20/22 14:42

Matrix: Water

Date Received: 09/22/22 13:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	38363	10/01/22 05:10	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	38364	10/01/22 05:10	JSP	EET SPK

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

## Client Sample ID: MW-314

Lab Sample ID: 590-18699-11

Date Collected: 09/20/22 14:42

Matrix: Water

Date Received: 09/22/22 13:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			268.2 mL	2 mL	38300	09/28/22 14:03	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	38302	09/28/22 23:52	NMI	EET SPK

## Client Sample ID: MW-315

Lab Sample ID: 590-18699-12

Date Collected: 09/20/22 10:23

Matrix: Water

Date Received: 09/22/22 13:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	38363	10/01/22 05:32	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	38364	10/01/22 05:32	JSP	EET SPK
Total/NA	Prep	3510C			259.3 mL	2 mL	38300	09/28/22 14:03	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	38302	09/29/22 00:14	NMI	EET SPK

## Client Sample ID: TX-03A

Lab Sample ID: 590-18699-13

Date Collected: 09/21/22 08:24

Matrix: Water

Date Received: 09/22/22 13:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	38363	10/01/22 06:15	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	38364	10/01/22 06:15	JSP	EET SPK

## Client Sample ID: TB-1

Lab Sample ID: 590-18699-14

Date Collected: 09/20/22 09:00

Matrix: Water

Date Received: 09/22/22 13:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	38363	10/01/22 06:37	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	38364	10/01/22 06:37	JSP	EET SPK

**Laboratory References:**

EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200



# Accreditation/Certification Summary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

## Laboratory: Eurofins Spokane

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4137	12-08-22
Washington	State	C569	01-06-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

# Method Summary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-18699-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	EET SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	EET SPK
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET SPK
5030C	Purge and Trap	SW846	EET SPK

**Protocol References:**

NWTPH = Northwest Total Petroleum Hydrocarbon

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

**Laboratory References:**

EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200



LAB (LOCATION)

- ACCUTEST (\_\_\_\_\_)
- CALSCIENCE (\_\_\_\_\_)
- TESTAMERICA (\_\_\_\_\_)
- Other (\_\_\_\_\_)

Lab Vendor # \_\_\_\_\_ Dropdown



# Shell Oil Products US Chain Of Custody Record

**Please Check Appropriate Box**

<input type="checkbox"/> SGW FDG	<input type="checkbox"/> PIPELINE	<input type="checkbox"/> RETAIL
<input type="checkbox"/> CHEMICALS	<input type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES
<input type="checkbox"/> TRANSPORTATION	<input type="checkbox"/> OTHER _____	

<b>Print Bill To Contact Name*</b>	<b>PlaNet Site or Project ID</b>	<input type="checkbox"/> CHECK IF NO INCIDENT # APPLIES
<b>PO #</b>	<b>GSAP Project ID</b>	DATE <u>9/21/22</u>
		PAGE: <u>1</u> of <u>2</u>

<b>SAMPLING COMPANY:</b> Blaine Tech Services Inc		<b>LOG CODE:</b> BTSS	<b>SITE ADDRESS: Street and City</b> 2555 13th Avenue	<b>State</b> WA	<b>GHD Project / Task Number*</b> 11218519
<b>ADDRESS:</b> 1680 Rogers Ave, San Jose, CA, 95112			<b>EDF DELIVERABLE TO (Name, Company, Office Location):</b> Jacquelyn England, GHD, Santa Rosa	<b>PHONE NO.:</b> (707)523-1010	<b>E-MAIL:</b> jacquelyn.england@ghd.com
<b>PROJECT CONTACT (Hardcopy or PDF Report to):</b> Jacquelyn England			<b>SAMPLER NAME(S) (Print):</b> Jonah Davis		<b>LAB USE ONLY</b>
<b>TELEPHONE:</b> (707)523-1010	<b>FAX:</b>	<b>Bill To Contact E-MAIL:</b> jacquelyn.england@ghd.com			
<b>TURNAROUND TIME (CALENDAR DAYS):</b> <input checked="" type="checkbox"/> STANDARD (14 DAY) <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 3 DAYS <input type="checkbox"/> 2 DAYS <input type="checkbox"/> 24 HOURS <input type="checkbox"/> RESULTS NEEDED ON WEEKEND			<b>REQUESTED ANALYSIS</b>		
<input type="checkbox"/> LA RWQCB REPORT FORMAT <input type="checkbox"/> UST AGENCY*			<b>UNIT COST</b>		
<b>DELIVERABLES:</b> <input type="checkbox"/> LEVEL 1 <input type="checkbox"/> LEVEL 2 <input type="checkbox"/> LEVEL 3 <input type="checkbox"/> LEVEL 4 <input type="checkbox"/> OTHER (SPECIFY) _____			<b>NON-UNIT COST</b>		
<b>TEMPERATURE ON RECEIPT C°</b> Cooler #1 _____    Cooler #2 _____    Cooler #3 _____			<b>FIELD NOTES:</b>		
<b>SPECIAL INSTRUCTIONS OR NOTES</b>			<b>TEMPERATURE ON RECEIPT C°</b> 1.9°C cont 1/2005		
			<b>Container PID Readings or Laboratory Notes</b>		

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT	REQUESTED ANALYSIS										FIELD NOTES			
		DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER		UNIT COST					NON-UNIT COST								
											8269C BTEX	NWTFH-GX	8270D SIM PAHs	300.0 Sulfate	NWTFH-GX	8020A Total Lead	353.2 Nitrate & Nitrite	8020A Dis. Iron & Manganese (lab filter)	300.0 Chloride	2200B Alkalinity				
	MW-301	9/14/22	0851	WT	X					4	X													
	MW-302	9/14/22	0753		X					4	X													
	MW-303	9/21/22	0920		X					4	X													
	MW-304	9/20/22	1356		X					4	X													
	MW-307	9/20/22	0841		X					4	X													
	MW-308	9/20/22	0923		X					4	X													
	MW-310	9/20/22	1316		X					4	X													
	MW-311	9/20/22	1157		X					4	X													
	MW-312	9/20/22	1126		X					4	X													
	MW-313	9/20/22	1056		X					6	X	X												



Relinquished by (Signature):	Received by (Signature): <i>Shipped Via Fed Ex</i>	Date: 9/21/22	Time: 1530
Relinquished by (Signature): _____	Received by (Signature): _____	Date: _____	Time: _____
Relinquished by (Signature): _____	Received by (Signature):	Date: 9/22/22	Time: 13:57

Version: 14Dec15



# Shell Oil Products US Chain Of Custody Record

### LAB (LOCATION)

ACCUTEST ( )  
 CALSCIENCE ( )  
 TESTAMERICA ( )  
 Other ( )

Lab Vendor # \_\_\_\_\_ Dropdown

**Please Check Appropriate Box:**

SGW FDG     PIPELINE     RETAIL  
 CHEMICALS     CONSULTANT     LUBES  
 TRANSPORTATION     OTHER \_\_\_\_\_

**Print Bill To Contact Name:** \_\_\_\_\_

**PlaNNet Site or Project ID:** \_\_\_\_\_

CHECK IF NO INCIDENT # APPLIES  
 DATE: 9/21/22  
 PAGE: 2 of 2

**PO #:** \_\_\_\_\_

**GSAP Project ID:** \_\_\_\_\_

**SAMPLING COMPANY:** Blaine Tech Services, Inc    **LOG CODE:** BTSS

**ADDRESS:** 1880 Rogers Ave, San Jose, CA, 95112

**PROJECT CONTACT (Hardcopy or PDF Report to):** Jacquelyn England

**TELEPHONE:** (707)523-1010    **FAX:** \_\_\_\_\_    **Bill To Contact E-MAIL:** jacquelyn.england@ghd.com

**TURNAROUND TIME (CALENDAR DAYS):**  
 STANDARD (14 DAY)     5 DAYS     3 DAYS     2 DAYS     24 HOURS     RESULTS NEEDED ON WEEKEND

LA RWQCB REPORT FORMAT     UST AGENCY

**DELIVERABLES:**  LEVEL 1     LEVEL 2     LEVEL 3     LEVEL 4     OTHER (SPECIFY) \_\_\_\_\_

**TEMPERATURE ON RECEIPT C°:** Cooler #1 \_\_\_\_\_ Cooler #2 \_\_\_\_\_ Cooler #3 \_\_\_\_\_

**SPECIAL INSTRUCTIONS OR NOTES**

SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 EDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED  
 PROVIDE LEDD DISK

**SITE ADDRESS: Street and City:** 2555 13th Avenue    **State:** WA

**EDP DELIVERABLE TO (Name, Company, Office Location):** Jacquelyn England, GHD, Santa Rosa    **PHONE NO.:** (707)523-1010    **E-MAIL:** jacquelyn.england@ghd.com    **AECOM Other ID:** 11218519

**SAMPLER NAME(S) (PWT):** Jonah Davis    **LAB USE ONLY**

**REQUESTED ANALYSIS**

UNIT COST		NON-UNIT COST		FIELD NOTES
8080C DTEX				TEMPERATURE ON RECEIPT C°  Container PID Readings or Laboratory Notes
NWTPH-Gx				
8270D SIM PANs				
300.0 Sulfate				
NWTPH-Gx				
6020A Total Lead				
353.2 Nitrate & Nitrite				
6020A Disc. Iron & Manganese (lab filter)				
300.0 Chloride				
2220B Alkalinity				

LAB USE ONLY	Field Sample Identification		SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	REQUESTED ANALYSIS										FIELD NOTES				
			DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER		8080C DTEX	NWTPH-Gx	8270D SIM PANs	300.0 Sulfate	NWTPH-Gx	6020A Total Lead	353.2 Nitrate & Nitrite	6020A Disc. Iron & Manganese (lab filter)	300.0 Chloride	2220B Alkalinity					
			MW-314	9/20/22		1442	WT	X							6	X	X									
MW-315	9/20/22	1073	↓	X						6	X	X														
TX-03A	9/21/22	0824	↓	X						4	X															
TB-1	9/20/22	0900	↓	X						2	X															

Relinquished by: (Signature) <u>[Signature]</u>	Received by: (Signature) <u>Shipped via Fed Ex</u>	Date: <u>9/21/22</u>	Time: <u>1530</u>
Relinquished by: (Signature) _____	Received by: (Signature) _____	Date: _____	Time: _____
Relinquished by: (Signature) _____	Received by: (Signature) <u>[Signature]</u>	Date: <u>9.22.22</u>	Time: <u>13:57</u>

Version: 14Dec15

# Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 590-18699-1

**Login Number: 18699**

**List Number: 1**

**Creator: Fettig, Riley**

**List Source: Eurofins Spokane**

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



 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Jacquelyn England  
GHD Services Inc.  
2235 Mercury Way  
Suite 150

Santa Rosa, California 95407

Generated 1/19/2023 2:51:08 PM Revision 1

**JOB DESCRIPTION**

2555 13th Avenue

**JOB NUMBER**

590-19465-1

# Eurofins Spokane

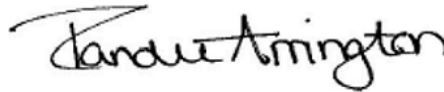
## Job Notes

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

## Authorization



Generated  
1/19/2023 2:51:08 PM  
Revision 1

Authorized for release by  
Randee Arrington, Business Unit Manager  
[Randee.Arrington@et.eurofinsus.com](mailto:Randee.Arrington@et.eurofinsus.com)  
(509)924-9200



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# Case Narrative

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

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## Job ID: 590-19465-1

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### Laboratory: Eurofins Spokane

#### Narrative

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#### Revision

The report being provided is a revision of the original report sent on 1/12/2023. The report (revision 1) is being revised due to: The 353.2 data from the original run (within holding time with low failing QC) has been reported in the revised report.

#### Receipt

The samples were received on 12/16/2022 12:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.9° C.

#### Receipt Exceptions

One or more containers for the following samples were received broken or leaking: TX-06A (590-19465-13), MW-112A (590-19465-14). There was enough remaining volume to proceed with analysis.

Insufficient sample volume was provided for the following sample for NWTPH-Dx analysis: MW-301 (590-19465-15). Only 4 hydrochloric vials were received for this sample. The method requires a 250ml hydrochloric amber; therefore, the analysis is canceled.

#### GC/MS VOA

Method 8260D: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with analytical batch 590-39572.

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

#### GC/MS Semi VOA

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

#### GC Semi VOA

Method NWTPH-Dx: Detected hydrocarbons appear to be due to heavily weathered diesel and/or possible biogenic interference in the following samples: MW-204 (590-19465-6), MW-206A (590-19465-7), MW-213 (590-19465-8), MW-214 (590-19465-9), TX-06A (590-19465-13), MW-302 (590-19465-16), MW-309 (590-19465-19), MW-313 (590-19465-23), MW-315 (590-19465-24), MW-05 (590-19465-28), MW-113 (590-19465-32), MW-114 (590-19465-33), MW-115 (590-19465-34) and MW-203 (590-19465-35).

Method NWTPH-Dx: Detected hydrocarbons appear to be due to heavily weathered diesel in the following samples: MW-201 (590-19465-4), MW-104 (590-19465-29) and MW-105 (590-19465-30).

Method NWTPH-Dx: Detected hydrocarbons appear to be due to heavily weathered gasoline and/or possible biogenic interference in the following sample: MW-202 (590-19465-5).

Method NWTPH-Dx: Detected hydrocarbons appear to be due to weathered diesel in the following samples: MW-307 (590-19465-10), MW-303 (590-19465-17), MW-304 (590-19465-18), MW-310 (590-19465-20) and TX-03A (590-19465-26)

Method NWTPH-Dx: Detected hydrocarbons appear to be due to weathered diesel as well as possible biogenic interference in the following sample: MW-112A (590-19465-14).

Method NWTPH-Dx: Detected hydrocarbons appear to be due to heavily weathered gasoline as well as heavily weathered diesel in the following samples: SH-04 (590-19465-25) and MW-111 (590-19465-31).

Method NWTPH-Dx: The continuing calibration verification (CCV) associated with batch 590-39522 recovered above the upper control limit for n-Triacontane-d62. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 590-39522/51).

Method NWTPH-Dx: The continuing calibration verification (CCV) associated with batch 590-39522 recovered above the upper control limit for n-Triacontane-d62. The samples associated with this CCV were within acceptance limits for the affected surrogate and the analytes associated with the surrogate passed in the CCV; therefore, the data have been flagged and reported. The associated samples are impacted: MW-202 (590-19465-5), MW-204 (590-19465-6), MW-206A (590-19465-7), MW-213 (590-19465-8), MW-214 (590-19465-9),

# Case Narrative

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Job ID: 590-19465-1 (Continued)

### Laboratory: Eurofins Spokane (Continued)

MW-307 (590-19465-10), TES-MW-1 (590-19465-12), TX-06A (590-19465-13), MW-112A (590-19465-14), MW-302 (590-19465-16), MW-303 (590-19465-17), MW-304 (590-19465-18), MW-309 (590-19465-19), MW-310 (590-19465-20), MW-313 (590-19465-23), MW-315 (590-19465-24), SH-04 (590-19465-25), TX-03A (590-19465-26), TX-04 (590-19465-27), MW-05 (590-19465-28), MW-104 (590-19465-29), MW-105 (590-19465-30), MW-111 (590-19465-31), MW-113 (590-19465-32), MW-114 (590-19465-33), MW-115 (590-19465-34), MW-203 (590-19465-35), (CCV 590-39522/29), (CCV 590-39522/51), (LCS 590-39524/2-A), (LCSD 590-39524/3-A) and (MB 590-39524/1-A).

Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to gasoline range overlap in the following samples: MW-202 (590-19465-5) and MW-104 (590-19465-29).

Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to a heavy gas/light diesel range hydrocarbon in the following samples: MW-307 (590-19465-10), MW-112A (590-19465-14), MW-303 (590-19465-17), MW-304 (590-19465-18), MW-310 (590-19465-20) and TX-03A (590-19465-26).

Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to a weathered heavy gas/light diesel range hydrocarbon as well as heavily weathered diesel in the following sample: SH-04 (590-19465-25).

Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to weathered diesel in the following samples: MW-113 (590-19465-32) and MW-115 (590-19465-34).

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

### Metals

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

### General Chemistry

Method 353.2: The CCV and CCVL failed below the lower control limit. The samples were analyzed outside of holding time and yielded the same result. The initial results have been reported and qualified. The following samples are affected: MW-202 (590-19465-5), MW-307 (590-19465-10), MW-308 (590-19465-11), MW-302 (590-19465-16), MW-304 (590-19465-18), MW-310 (590-19465-20), MW-311 (590-19465-21), MW-312 (590-19465-22), (CCV 280-598896/99) and (CCVL 280-598896/100).

Method 353.2: The CCV and CCVL failed below the lower control limit. The samples were analyzed outside of holding time and yielded the same result. The results have been reported and qualified. The following samples are affected: TX-03A (590-19465-26), MW-203 (590-19465-35), (CCV 280-598896/117), (CCV 280-598896/99), (CCVL 280-598896/100), (CCVL 280-598896/118), (590-19465-E-26 MS) and (590-19465-E-26 MSD).

Method 353.2: The laboratory control sample (LCS) for analytical batch 280-598896 recovered outside control limits for the following analyte: Nitrate Nitrite as N. The analyte was biased low in the LCS. The samples were re-analyzed outside the holding time and yielded the same results. The initial results have been reported and qualified. The following samples are affected: TX-03A (590-19465-26), MW-203 (590-19465-35), (LCS 280-598896/103), (590-19465-E-26 MS) and (590-19465-E-26 MSD).

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

### Organic Prep

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

### VOA Prep

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

# Sample Summary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-19465-1	TB-1	Water	12/12/22 09:00	12/16/22 12:30
590-19465-2	MW-101	Water	12/12/22 14:30	12/16/22 12:30
590-19465-3	MW-102	Water	12/12/22 12:48	12/16/22 12:30
590-19465-4	MW-201	Water	12/12/22 11:09	12/16/22 12:30
590-19465-5	MW-202	Water	12/12/22 11:40	12/16/22 12:30
590-19465-6	MW-204	Water	12/12/22 11:08	12/16/22 12:30
590-19465-7	MW-206A	Water	12/12/22 11:44	12/16/22 12:30
590-19465-8	MW-213	Water	12/12/22 10:17	12/16/22 12:30
590-19465-9	MW-214	Water	12/12/22 10:22	12/16/22 12:30
590-19465-10	MW-307	Water	12/12/22 14:20	12/16/22 12:30
590-19465-11	MW-308	Water	12/12/22 13:53	12/16/22 12:30
590-19465-12	TES-MW-1	Water	12/12/22 13:58	12/16/22 12:30
590-19465-13	TX-06A	Water	12/12/22 12:50	12/16/22 12:30
590-19465-14	MW-112A	Water	12/13/22 14:31	12/16/22 12:30
590-19465-15	MW-301	Water	12/13/22 10:22	12/16/22 12:30
590-19465-16	MW-302	Water	12/13/22 08:20	12/16/22 12:30
590-19465-17	MW-303	Water	12/13/22 09:22	12/16/22 12:30
590-19465-18	MW-304	Water	12/13/22 08:47	12/16/22 12:30
590-19465-19	MW-309	Water	12/13/22 09:51	12/16/22 12:30
590-19465-20	MW-310	Water	12/13/22 07:49	12/16/22 12:30
590-19465-21	MW-311	Water	12/13/22 12:50	12/16/22 12:30
590-19465-22	MW-312	Water	12/13/22 12:11	12/16/22 12:30
590-19465-23	MW-313	Water	12/13/22 11:09	12/16/22 12:30
590-19465-24	MW-315	Water	12/13/22 11:37	12/16/22 12:30
590-19465-25	SH-04	Water	12/13/22 13:59	12/16/22 12:30
590-19465-26	TX-03A	Water	12/13/22 14:58	12/16/22 12:30
590-19465-27	TX-04	Water	12/13/22 13:27	12/16/22 12:30
590-19465-28	MW-05	Water	12/14/22 10:18	12/16/22 12:30
590-19465-29	MW-104	Water	12/14/22 10:47	12/16/22 12:30
590-19465-30	MW-105	Water	12/14/22 09:21	12/16/22 12:30
590-19465-31	MW-111	Water	12/14/22 11:19	12/16/22 12:30
590-19465-32	MW-113	Water	12/14/22 08:51	12/16/22 12:30
590-19465-33	MW-114	Water	12/14/22 07:52	12/16/22 12:30
590-19465-34	MW-115	Water	12/14/22 08:22	12/16/22 12:30
590-19465-35	MW-203	Water	12/14/22 12:31	12/16/22 12:30

# Definitions/Glossary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### General Chemistry

Qualifier	Qualifier Description
*	LCS and/or LCSD is outside acceptance limits, low biased.
^	Continuing Calibration Verification (CCV) is outside acceptance limits, low biased.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

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

Eurofins Spokane

# Definitions/Glossary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: TB-1**

**Lab Sample ID: 590-19465-1**

**Date Collected: 12/12/22 09:00**

**Matrix: Water**

**Date Received: 12/16/22 12:30**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/20/22 17:26	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/20/22 17:26	1
Toluene	ND		1.00	0.312	ug/L			12/20/22 17:26	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/20/22 17:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		80 - 120		12/20/22 17:26	1
Dibromofluoromethane (Surr)	106		80 - 120		12/20/22 17:26	1
1,2-Dichloroethane-d4 (Surr)	106		80 - 120		12/20/22 17:26	1
Toluene-d8 (Surr)	94		80 - 120		12/20/22 17:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	78.3	J	150	30.5	ug/L			12/20/22 17:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		68.7 - 141		12/20/22 17:26	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-101**

**Lab Sample ID: 590-19465-2**

**Date Collected: 12/12/22 14:30**

**Matrix: Water**

**Date Received: 12/16/22 12:30**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/20/22 17:47	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/20/22 17:47	1
Toluene	ND		1.00	0.312	ug/L			12/20/22 17:47	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/20/22 17:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		80 - 120		12/20/22 17:47	1
Dibromofluoromethane (Surr)	107		80 - 120		12/20/22 17:47	1
1,2-Dichloroethane-d4 (Surr)	108		80 - 120		12/20/22 17:47	1
Toluene-d8 (Surr)	94		80 - 120		12/20/22 17:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			12/20/22 17:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		68.7 - 141		12/20/22 17:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		247	113	ug/L		12/19/22 12:35	12/20/22 14:38	1
RRO (C25-C36)	ND		411	123	ug/L		12/19/22 12:35	12/20/22 14:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	81		50 - 150	12/19/22 12:35	12/20/22 14:38	1
n-Triacontane-d62	87		50 - 150	12/19/22 12:35	12/20/22 14:38	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-102**

**Lab Sample ID: 590-19465-3**

Date Collected: 12/12/22 12:48

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/20/22 18:31	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/20/22 18:31	1
Toluene	ND		1.00	0.312	ug/L			12/20/22 18:31	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/20/22 18:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		80 - 120		12/20/22 18:31	1
Dibromofluoromethane (Surr)	107		80 - 120		12/20/22 18:31	1
1,2-Dichloroethane-d4 (Surr)	109		80 - 120		12/20/22 18:31	1
Toluene-d8 (Surr)	94		80 - 120		12/20/22 18:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			12/20/22 18:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		68.7 - 141		12/20/22 18:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		226	104	ug/L		12/19/22 12:35	12/20/22 14:59	1
<b>RRO (C25-C36)</b>	<b>143</b>	<b>J</b>	377	113	ug/L		12/19/22 12:35	12/20/22 14:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	89		50 - 150	12/19/22 12:35	12/20/22 14:59	1
n-Triacontane-d62	98		50 - 150	12/19/22 12:35	12/20/22 14:59	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		226	104	ug/L		12/19/22 12:35	12/21/22 23:52	1
RRO (C25-C36)	ND		377	113	ug/L		12/19/22 12:35	12/21/22 23:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	75		50 - 150	12/19/22 12:35	12/21/22 23:52	1
n-Triacontane-d62	87		50 - 150	12/19/22 12:35	12/21/22 23:52	1



# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-201**

**Lab Sample ID: 590-19465-4**

**Date Collected: 12/12/22 11:09**

**Matrix: Water**

**Date Received: 12/16/22 12:30**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/20/22 19:36	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/20/22 19:36	1
Toluene	ND		1.00	0.312	ug/L			12/20/22 19:36	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/20/22 19:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		80 - 120		12/20/22 19:36	1
Dibromofluoromethane (Surr)	110		80 - 120		12/20/22 19:36	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 120		12/20/22 19:36	1
Toluene-d8 (Surr)	88		80 - 120		12/20/22 19:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			12/20/22 19:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		68.7 - 141		12/20/22 19:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	556		249	114	ug/L		12/19/22 12:35	12/20/22 15:21	1
RRO (C25-C36)	163	J	416	125	ug/L		12/19/22 12:35	12/20/22 15:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	77		50 - 150	12/19/22 12:35	12/20/22 15:21	1
n-Triacontane-d62	83		50 - 150	12/19/22 12:35	12/20/22 15:21	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		249	114	ug/L		12/19/22 12:35	12/22/22 00:13	1
RRO (C25-C36)	ND		416	125	ug/L		12/19/22 12:35	12/22/22 00:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	74		50 - 150	12/19/22 12:35	12/22/22 00:13	1
n-Triacontane-d62	82		50 - 150	12/19/22 12:35	12/22/22 00:13	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-202**

**Lab Sample ID: 590-19465-5**

Date Collected: 12/12/22 11:40

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	3.14		0.400	0.0930	ug/L			12/20/22 20:19	1
Ethylbenzene	1.93		1.00	0.198	ug/L			12/20/22 20:19	1
Toluene	1.11		1.00	0.312	ug/L			12/20/22 20:19	1
Xylenes, Total	1.55	J	3.00	0.442	ug/L			12/20/22 20:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		80 - 120		12/20/22 20:19	1
Dibromofluoromethane (Surr)	107		80 - 120		12/20/22 20:19	1
1,2-Dichloroethane-d4 (Surr)	113		80 - 120		12/20/22 20:19	1
Toluene-d8 (Surr)	97		80 - 120		12/20/22 20:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	2980		150	30.5	ug/L			12/20/22 20:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		68.7 - 141		12/20/22 20:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	22100		263	120	ug/L		12/19/22 12:35	12/20/22 16:03	1
RRO (C25-C36)	505		438	131	ug/L		12/19/22 12:35	12/20/22 16:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	61		50 - 150	12/19/22 12:35	12/20/22 16:03	1
n-Triacontane-d62	65		50 - 150	12/19/22 12:35	12/20/22 16:03	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	4160		263	120	ug/L		12/19/22 12:35	12/22/22 00:33	1
RRO (C25-C36)	ND		438	131	ug/L		12/19/22 12:35	12/22/22 00:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	55		50 - 150	12/19/22 12:35	12/22/22 00:33	1
n-Triacontane-d62	62		50 - 150	12/19/22 12:35	12/22/22 00:33	1

## Method: MCAWW 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	100		5.00	1.28	mg/L			12/19/22 11:25	10

## Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	122	J	500	66.7	ug/L		12/27/22 17:04	12/28/22 17:42	5
Manganese	868		10.0	2.30	ug/L		12/27/22 17:04	12/28/22 17:42	5

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2)	ND	^	0.100	0.0440	mg/L			01/09/23 14:02	1

Eurofins Spokane

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-204**

**Lab Sample ID: 590-19465-6**

Date Collected: 12/12/22 11:08

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/20/22 20:41	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/20/22 20:41	1
Toluene	ND		1.00	0.312	ug/L			12/20/22 20:41	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/20/22 20:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		80 - 120		12/20/22 20:41	1
Dibromofluoromethane (Surr)	102		80 - 120		12/20/22 20:41	1
1,2-Dichloroethane-d4 (Surr)	104		80 - 120		12/20/22 20:41	1
Toluene-d8 (Surr)	92		80 - 120		12/20/22 20:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	91.4	J	150	30.5	ug/L			12/20/22 20:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		68.7 - 141		12/20/22 20:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	351		232	106	ug/L		12/19/22 12:35	12/20/22 16:24	1
RRO (C25-C36)	458		386	116	ug/L		12/19/22 12:35	12/20/22 16:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	78		50 - 150	12/19/22 12:35	12/20/22 16:24	1
n-Triacontane-d62	85		50 - 150	12/19/22 12:35	12/20/22 16:24	1

### Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		232	106	ug/L		12/19/22 12:35	12/22/22 00:53	1
RRO (C25-C36)	ND		386	116	ug/L		12/19/22 12:35	12/22/22 00:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	77		50 - 150	12/19/22 12:35	12/22/22 00:53	1
n-Triacontane-d62	87		50 - 150	12/19/22 12:35	12/22/22 00:53	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-206A**

**Lab Sample ID: 590-19465-7**

**Date Collected: 12/12/22 11:44**

**Matrix: Water**

**Date Received: 12/16/22 12:30**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/20/22 21:02	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/20/22 21:02	1
Toluene	ND		1.00	0.312	ug/L			12/20/22 21:02	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/20/22 21:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		80 - 120		12/20/22 21:02	1
Dibromofluoromethane (Surr)	104		80 - 120		12/20/22 21:02	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		12/20/22 21:02	1
Toluene-d8 (Surr)	93		80 - 120		12/20/22 21:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			12/20/22 21:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		68.7 - 141		12/20/22 21:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>264</b>		234	107	ug/L		12/19/22 12:35	12/20/22 16:46	1
<b>RRO (C25-C36)</b>	<b>575</b>		390	117	ug/L		12/19/22 12:35	12/20/22 16:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	84		50 - 150	12/19/22 12:35	12/20/22 16:46	1
<i>n</i> -Triacotane-d62	90		50 - 150	12/19/22 12:35	12/20/22 16:46	1

### Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		234	107	ug/L		12/19/22 12:35	12/22/22 01:13	1
<b>RRO (C25-C36)</b>	<b>164</b>	<b>J</b>	390	117	ug/L		12/19/22 12:35	12/22/22 01:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	83		50 - 150	12/19/22 12:35	12/22/22 01:13	1
<i>n</i> -Triacotane-d62	93		50 - 150	12/19/22 12:35	12/22/22 01:13	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-213**

**Lab Sample ID: 590-19465-8**

**Date Collected: 12/12/22 10:17**

**Matrix: Water**

**Date Received: 12/16/22 12:30**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/20/22 21:24	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/20/22 21:24	1
Toluene	ND		1.00	0.312	ug/L			12/20/22 21:24	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/20/22 21:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		80 - 120		12/20/22 21:24	1
Dibromofluoromethane (Surr)	103		80 - 120		12/20/22 21:24	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		12/20/22 21:24	1
Toluene-d8 (Surr)	93		80 - 120		12/20/22 21:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			12/20/22 21:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		68.7 - 141		12/20/22 21:24	1

## Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.0905	0.0121	ug/L		12/19/22 10:35	12/20/22 11:37	1
Benzo[a]pyrene	ND		0.0905	0.0121	ug/L		12/19/22 10:35	12/20/22 11:37	1
Benzo[b]fluoranthene	ND		0.0905	0.0252	ug/L		12/19/22 10:35	12/20/22 11:37	1
Benzo[k]fluoranthene	ND		0.0905	0.0151	ug/L		12/19/22 10:35	12/20/22 11:37	1
Chrysene	ND		0.0905	0.0101	ug/L		12/19/22 10:35	12/20/22 11:37	1
Dibenz(a,h)anthracene	ND		0.0905	0.0131	ug/L		12/19/22 10:35	12/20/22 11:37	1
Indeno[1,2,3-cd]pyrene	ND		0.0905	0.0221	ug/L		12/19/22 10:35	12/20/22 11:37	1
<b>1-Methylnaphthalene</b>	<b>0.0476</b>	<b>J</b>	0.0905	0.0231	ug/L		12/19/22 10:35	12/20/22 11:37	1
2-Methylnaphthalene	ND		0.0905	0.0443	ug/L		12/19/22 10:35	12/20/22 11:37	1
Naphthalene	ND		0.0905	0.0533	ug/L		12/19/22 10:35	12/20/22 11:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	68		50 - 120	12/19/22 10:35	12/20/22 11:37	1
p-Terphenyl-d14	79		51 - 121	12/19/22 10:35	12/20/22 11:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>270</b>		228	104	ug/L		12/19/22 12:35	12/20/22 17:07	1
<b>RRO (C25-C36)</b>	<b>268</b>	<b>J</b>	380	114	ug/L		12/19/22 12:35	12/20/22 17:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150	12/19/22 12:35	12/20/22 17:07	1
n-Triacontane-d62	92		50 - 150	12/19/22 12:35	12/20/22 17:07	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		228	104	ug/L		12/19/22 12:35	12/22/22 01:34	1
RRO (C25-C36)	ND		380	114	ug/L		12/19/22 12:35	12/22/22 01:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	75		50 - 150	12/19/22 12:35	12/22/22 01:34	1
n-Triacontane-d62	85		50 - 150	12/19/22 12:35	12/22/22 01:34	1

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# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-214**

**Lab Sample ID: 590-19465-9**

**Date Collected: 12/12/22 10:22**

**Matrix: Water**

**Date Received: 12/16/22 12:30**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/20/22 21:46	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/20/22 21:46	1
Toluene	ND		1.00	0.312	ug/L			12/20/22 21:46	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/20/22 21:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		80 - 120		12/20/22 21:46	1
Dibromofluoromethane (Surr)	108		80 - 120		12/20/22 21:46	1
1,2-Dichloroethane-d4 (Surr)	106		80 - 120		12/20/22 21:46	1
Toluene-d8 (Surr)	95		80 - 120		12/20/22 21:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			12/20/22 21:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		68.7 - 141		12/20/22 21:46	1

## Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.0904	0.0120	ug/L		12/19/22 10:35	12/20/22 12:00	1
Benzo[a]pyrene	ND		0.0904	0.0120	ug/L		12/19/22 10:35	12/20/22 12:00	1
Benzo[b]fluoranthene	ND		0.0904	0.0251	ug/L		12/19/22 10:35	12/20/22 12:00	1
Benzo[k]fluoranthene	ND		0.0904	0.0151	ug/L		12/19/22 10:35	12/20/22 12:00	1
Chrysene	ND		0.0904	0.0100	ug/L		12/19/22 10:35	12/20/22 12:00	1
Dibenz(a,h)anthracene	ND		0.0904	0.0131	ug/L		12/19/22 10:35	12/20/22 12:00	1
Indeno[1,2,3-cd]pyrene	ND		0.0904	0.0221	ug/L		12/19/22 10:35	12/20/22 12:00	1
1-Methylnaphthalene	ND		0.0904	0.0231	ug/L		12/19/22 10:35	12/20/22 12:00	1
2-Methylnaphthalene	ND		0.0904	0.0442	ug/L		12/19/22 10:35	12/20/22 12:00	1
Naphthalene	ND		0.0904	0.0532	ug/L		12/19/22 10:35	12/20/22 12:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	70		50 - 120	12/19/22 10:35	12/20/22 12:00	1
p-Terphenyl-d14	79		51 - 121	12/19/22 10:35	12/20/22 12:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>367</b>		222	102	ug/L		12/19/22 12:35	12/20/22 17:28	1
<b>RRO (C25-C36)</b>	<b>275 J</b>		371	111	ug/L		12/19/22 12:35	12/20/22 17:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	83		50 - 150	12/19/22 12:35	12/20/22 17:28	1
n-Triacontane-d62	90		50 - 150	12/19/22 12:35	12/20/22 17:28	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		222	102	ug/L		12/19/22 12:35	12/22/22 01:54	1
RRO (C25-C36)	ND		371	111	ug/L		12/19/22 12:35	12/22/22 01:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150	12/19/22 12:35	12/22/22 01:54	1
n-Triacontane-d62	92		50 - 150	12/19/22 12:35	12/22/22 01:54	1

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# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-307**

**Lab Sample ID: 590-19465-10**

Date Collected: 12/12/22 14:20

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	82.0		0.400	0.0930	ug/L			12/20/22 22:07	1
Ethylbenzene	74.0		1.00	0.198	ug/L			12/20/22 22:07	1
Toluene	19.0		1.00	0.312	ug/L			12/20/22 22:07	1
Xylenes, Total	79.3		3.00	0.442	ug/L			12/20/22 22:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		80 - 120		12/20/22 22:07	1
Dibromofluoromethane (Surr)	102		80 - 120		12/20/22 22:07	1
1,2-Dichloroethane-d4 (Surr)	101		80 - 120		12/20/22 22:07	1
Toluene-d8 (Surr)	95		80 - 120		12/20/22 22:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	2000		150	30.5	ug/L			12/20/22 22:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		68.7 - 141		12/20/22 22:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	5930		240	110	ug/L		12/19/22 12:35	12/20/22 17:49	1
RRO (C25-C36)	699		400	120	ug/L		12/19/22 12:35	12/20/22 17:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150	12/19/22 12:35	12/20/22 17:49	1
n-Triacontane-d62	84		50 - 150	12/19/22 12:35	12/20/22 17:49	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	924		240	110	ug/L		12/19/22 12:35	12/22/22 02:34	1
RRO (C25-C36)	ND		400	120	ug/L		12/19/22 12:35	12/22/22 02:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	77		50 - 150	12/19/22 12:35	12/22/22 02:34	1
n-Triacontane-d62	85		50 - 150	12/19/22 12:35	12/22/22 02:34	1

## Method: MCAWW 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.43	J	5.00	1.28	mg/L			12/19/22 12:21	10

## Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	366	J	500	66.7	ug/L		12/27/22 17:04	12/28/22 18:01	5
Manganese	678		10.0	2.30	ug/L		12/27/22 17:04	12/28/22 18:01	5

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2)	ND	^	0.100	0.0440	mg/L			01/09/23 14:04	1

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# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-308**

**Lab Sample ID: 590-19465-11**

Date Collected: 12/12/22 13:53

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>1.43</b>		0.400	0.0930	ug/L			12/20/22 22:29	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/20/22 22:29	1
Toluene	ND		1.00	0.312	ug/L			12/20/22 22:29	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/20/22 22:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		80 - 120		12/20/22 22:29	1
Dibromofluoromethane (Surr)	107		80 - 120		12/20/22 22:29	1
1,2-Dichloroethane-d4 (Surr)	106		80 - 120		12/20/22 22:29	1
Toluene-d8 (Surr)	91		80 - 120		12/20/22 22:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>TPH as Gasoline</b>	<b>51.5</b>	<b>J</b>	150	30.5	ug/L			12/20/22 22:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		68.7 - 141		12/20/22 22:29	1

## Method: MCAWW 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>48.0</b>		2.00	0.512	mg/L			12/19/22 12:34	4

## Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Iron</b>	<b>162</b>	<b>J</b>	500	66.7	ug/L		12/27/22 17:04	12/28/22 18:05	5
<b>Manganese</b>	<b>2.54</b>	<b>J</b>	10.0	2.30	ug/L		12/27/22 17:04	12/28/22 18:05	5

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2)	ND	^	0.100	0.0440	mg/L			01/09/23 14:06	1



# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: TES-MW-1**

**Lab Sample ID: 590-19465-12**

Date Collected: 12/12/22 13:58

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/20/22 22:50	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/20/22 22:50	1
Toluene	ND		1.00	0.312	ug/L			12/20/22 22:50	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/20/22 22:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		80 - 120		12/20/22 22:50	1
Dibromofluoromethane (Surr)	108		80 - 120		12/20/22 22:50	1
1,2-Dichloroethane-d4 (Surr)	107		80 - 120		12/20/22 22:50	1
Toluene-d8 (Surr)	95		80 - 120		12/20/22 22:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			12/20/22 22:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		68.7 - 141		12/20/22 22:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		256	118	ug/L		12/19/22 12:35	12/20/22 18:10	1
RRO (C25-C36)	ND		427	128	ug/L		12/19/22 12:35	12/20/22 18:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	81		50 - 150	12/19/22 12:35	12/20/22 18:10	1
n-Triacontane-d62	88		50 - 150	12/19/22 12:35	12/20/22 18:10	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: TX-06A**

**Lab Sample ID: 590-19465-13**

**Date Collected: 12/12/22 12:50**

**Matrix: Water**

**Date Received: 12/16/22 12:30**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/20/22 23:12	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/20/22 23:12	1
Toluene	ND		1.00	0.312	ug/L			12/20/22 23:12	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/20/22 23:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		80 - 120		12/20/22 23:12	1
Dibromofluoromethane (Surr)	105		80 - 120		12/20/22 23:12	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		12/20/22 23:12	1
Toluene-d8 (Surr)	85		80 - 120		12/20/22 23:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			12/20/22 23:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		68.7 - 141		12/20/22 23:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	659		235	108	ug/L		12/19/22 12:35	12/20/22 18:31	1
RRO (C25-C36)	210	J	391	117	ug/L		12/19/22 12:35	12/20/22 18:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	88		50 - 150	12/19/22 12:35	12/20/22 18:31	1
n-Triacontane-d62	94		50 - 150	12/19/22 12:35	12/20/22 18:31	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		235	108	ug/L		12/19/22 12:35	12/22/22 02:55	1
RRO (C25-C36)	ND		391	117	ug/L		12/19/22 12:35	12/22/22 02:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	83		50 - 150	12/19/22 12:35	12/22/22 02:55	1
n-Triacontane-d62	92		50 - 150	12/19/22 12:35	12/22/22 02:55	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-112A**

**Lab Sample ID: 590-19465-14**

Date Collected: 12/13/22 14:31

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.63		0.400	0.0930	ug/L			12/20/22 23:34	1
Ethylbenzene	0.729	J	1.00	0.198	ug/L			12/20/22 23:34	1
Toluene	1.59		1.00	0.312	ug/L			12/20/22 23:34	1
Xylenes, Total	2.25	J	3.00	0.442	ug/L			12/20/22 23:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		80 - 120		12/20/22 23:34	1
Dibromofluoromethane (Surr)	102		80 - 120		12/20/22 23:34	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		12/20/22 23:34	1
Toluene-d8 (Surr)	90		80 - 120		12/20/22 23:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	1060		150	30.5	ug/L			12/20/22 23:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		68.7 - 141		12/20/22 23:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	2670		221	101	ug/L		12/19/22 12:35	12/20/22 18:52	1
RRO (C25-C36)	686		368	110	ug/L		12/19/22 12:35	12/20/22 18:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	87		50 - 150	12/19/22 12:35	12/20/22 18:52	1
n-Triacontane-d62	92		50 - 150	12/19/22 12:35	12/20/22 18:52	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	508		221	101	ug/L		12/19/22 12:35	12/22/22 03:15	1
RRO (C25-C36)	ND		368	110	ug/L		12/19/22 12:35	12/22/22 03:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	72		50 - 150	12/19/22 12:35	12/22/22 03:15	1
n-Triacontane-d62	81		50 - 150	12/19/22 12:35	12/22/22 03:15	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-301**  
Date Collected: 12/13/22 10:22  
Date Received: 12/16/22 12:30

**Lab Sample ID: 590-19465-15**  
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	24.2		0.400	0.0930	ug/L			12/21/22 14:26	1
Ethylbenzene	0.703	J	1.00	0.198	ug/L			12/21/22 14:26	1
Toluene	1.51		1.00	0.312	ug/L			12/21/22 14:26	1
Xylenes, Total	1.48	J	3.00	0.442	ug/L			12/21/22 14:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		80 - 120		12/21/22 14:26	1
Dibromofluoromethane (Surr)	102		80 - 120		12/21/22 14:26	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		12/21/22 14:26	1
Toluene-d8 (Surr)	99		80 - 120		12/21/22 14:26	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-302**

**Lab Sample ID: 590-19465-16**

Date Collected: 12/13/22 08:20

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/21/22 15:10	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/21/22 15:10	1
Toluene	ND		1.00	0.312	ug/L			12/21/22 15:10	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/21/22 15:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		80 - 120		12/21/22 15:10	1
Dibromofluoromethane (Surr)	104		80 - 120		12/21/22 15:10	1
1,2-Dichloroethane-d4 (Surr)	108		80 - 120		12/21/22 15:10	1
Toluene-d8 (Surr)	93		80 - 120		12/21/22 15:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	198		150	30.5	ug/L			12/21/22 15:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		68.7 - 141		12/21/22 15:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	387		236	108	ug/L		12/19/22 12:35	12/20/22 19:13	1
RRO (C25-C36)	145	J	393	118	ug/L		12/19/22 12:35	12/20/22 19:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	80		50 - 150	12/19/22 12:35	12/20/22 19:13	1
n-Triacontane-d62	85		50 - 150	12/19/22 12:35	12/20/22 19:13	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		236	108	ug/L		12/19/22 12:35	12/22/22 03:35	1
RRO (C25-C36)	ND		393	118	ug/L		12/19/22 12:35	12/22/22 03:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	80		50 - 150	12/19/22 12:35	12/22/22 03:35	1
n-Triacontane-d62	88		50 - 150	12/19/22 12:35	12/22/22 03:35	1

## Method: MCAWW 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	39.1		5.00	1.28	mg/L			12/19/22 12:48	10

## Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	31800		500	66.7	ug/L		12/27/22 17:04	12/28/22 18:08	5
Manganese	607		10.0	2.30	ug/L		12/27/22 17:04	12/28/22 18:08	5

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2)	ND	^	0.100	0.0440	mg/L			01/09/23 14:08	1

Eurofins Spokane

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-303**

**Lab Sample ID: 590-19465-17**

Date Collected: 12/13/22 09:22

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	139		4.00	0.930	ug/L			12/22/22 18:09	10
Ethylbenzene	58.0		1.00	0.198	ug/L			12/21/22 16:16	1
Toluene	4.83		1.00	0.312	ug/L			12/21/22 16:16	1
Xylenes, Total	9.82		3.00	0.442	ug/L			12/21/22 16:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		80 - 120		12/21/22 16:16	1
4-Bromofluorobenzene (Surr)	94		80 - 120		12/22/22 18:09	10
Dibromofluoromethane (Surr)	108		80 - 120		12/21/22 16:16	1
Dibromofluoromethane (Surr)	104		80 - 120		12/22/22 18:09	10
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		12/21/22 16:16	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		12/22/22 18:09	10
Toluene-d8 (Surr)	99		80 - 120		12/21/22 16:16	1
Toluene-d8 (Surr)	97		80 - 120		12/22/22 18:09	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	1180		150	30.5	ug/L			12/21/22 16:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		68.7 - 141		12/21/22 16:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	3730		222	102	ug/L		12/19/22 12:35	12/20/22 19:55	1
RRO (C25-C36)	321	J	371	111	ug/L		12/19/22 12:35	12/20/22 19:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	89		50 - 150	12/19/22 12:35	12/20/22 19:55	1
n-Triacontane-d62	98		50 - 150	12/19/22 12:35	12/20/22 19:55	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	1020		222	102	ug/L		12/19/22 12:35	12/22/22 03:55	1
RRO (C25-C36)	ND		371	111	ug/L		12/19/22 12:35	12/22/22 03:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	83		50 - 150	12/19/22 12:35	12/22/22 03:55	1
n-Triacontane-d62	90		50 - 150	12/19/22 12:35	12/22/22 03:55	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-304**

**Lab Sample ID: 590-19465-18**

Date Collected: 12/13/22 08:47

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4.66		0.400	0.0930	ug/L			12/21/22 16:38	1
Ethylbenzene	0.588	J	1.00	0.198	ug/L			12/21/22 16:38	1
Toluene	ND		1.00	0.312	ug/L			12/21/22 16:38	1
<b>Xylenes, Total</b>	<b>0.748</b>	<b>J</b>	<b>3.00</b>	<b>0.442</b>	<b>ug/L</b>			<b>12/21/22 16:38</b>	<b>1</b>

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		80 - 120		12/21/22 16:38	1
Dibromofluoromethane (Surr)	101		80 - 120		12/21/22 16:38	1
1,2-Dichloroethane-d4 (Surr)	102		80 - 120		12/21/22 16:38	1
Toluene-d8 (Surr)	95		80 - 120		12/21/22 16:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	364		150	30.5	ug/L			12/21/22 16:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		68.7 - 141		12/21/22 16:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	2150		234	107	ug/L		12/19/22 12:35	12/20/22 20:16	1
RRO (C25-C36)	674		390	117	ug/L		12/19/22 12:35	12/20/22 20:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	89		50 - 150	12/19/22 12:35	12/20/22 20:16	1
n-Triacontane-d62	96		50 - 150	12/19/22 12:35	12/20/22 20:16	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	367		234	107	ug/L		12/19/22 12:35	12/22/22 04:16	1
RRO (C25-C36)	ND		390	117	ug/L		12/19/22 12:35	12/22/22 04:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	81		50 - 150	12/19/22 12:35	12/22/22 04:16	1
n-Triacontane-d62	93		50 - 150	12/19/22 12:35	12/22/22 04:16	1

## Method: MCAWW 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	51.6		5.00	1.28	mg/L			12/19/22 13:02	10

## Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	8800		500	66.7	ug/L		12/27/22 17:04	12/28/22 17:58	5
Manganese	462		10.0	2.30	ug/L		12/27/22 17:04	12/28/22 17:58	5

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2)	ND	^	0.100	0.0440	mg/L			01/09/23 14:10	1

Eurofins Spokane

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-309**

**Lab Sample ID: 590-19465-19**

**Date Collected: 12/13/22 09:51**

**Matrix: Water**

**Date Received: 12/16/22 12:30**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/21/22 17:01	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/21/22 17:01	1
Toluene	ND		1.00	0.312	ug/L			12/21/22 17:01	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/21/22 17:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		80 - 120		12/21/22 17:01	1
Dibromofluoromethane (Surr)	102		80 - 120		12/21/22 17:01	1
1,2-Dichloroethane-d4 (Surr)	104		80 - 120		12/21/22 17:01	1
Toluene-d8 (Surr)	91		80 - 120		12/21/22 17:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>TPH as Gasoline</b>	<b>51.1</b>	<b>J</b>	150	30.5	ug/L			12/21/22 17:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		68.7 - 141		12/21/22 17:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>249</b>		235	108	ug/L		12/20/22 10:14	12/20/22 21:40	1
RRO (C25-C36)	ND		391	117	ug/L		12/20/22 10:14	12/20/22 21:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	82		50 - 150	12/20/22 10:14	12/20/22 21:40	1
<i>n</i> -Triacontane-d62	89		50 - 150	12/20/22 10:14	12/20/22 21:40	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		235	108	ug/L		12/20/22 10:14	12/22/22 05:36	1
RRO (C25-C36)	ND		391	117	ug/L		12/20/22 10:14	12/22/22 05:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	85		50 - 150	12/20/22 10:14	12/22/22 05:36	1
<i>n</i> -Triacontane-d62	94		50 - 150	12/20/22 10:14	12/22/22 05:36	1



# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-310**

**Lab Sample ID: 590-19465-20**

Date Collected: 12/13/22 07:49

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	16.3		0.400	0.0930	ug/L			12/21/22 17:23	1
Ethylbenzene	0.555	J	1.00	0.198	ug/L			12/21/22 17:23	1
Toluene	1.03		1.00	0.312	ug/L			12/21/22 17:23	1
Xylenes, Total	1.44	J	3.00	0.442	ug/L			12/21/22 17:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		80 - 120		12/21/22 17:23	1
Dibromofluoromethane (Surr)	105		80 - 120		12/21/22 17:23	1
1,2-Dichloroethane-d4 (Surr)	107		80 - 120		12/21/22 17:23	1
Toluene-d8 (Surr)	97		80 - 120		12/21/22 17:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	463		150	30.5	ug/L			12/21/22 17:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		68.7 - 141		12/21/22 17:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	4640		236	108	ug/L		12/20/22 10:14	12/20/22 22:00	1
RRO (C25-C36)	743		393	118	ug/L		12/20/22 10:14	12/20/22 22:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	109		50 - 150	12/20/22 10:14	12/20/22 22:00	1
n-Triacontane-d62	98		50 - 150	12/20/22 10:14	12/20/22 22:00	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	709		236	108	ug/L		12/20/22 10:14	12/22/22 06:17	1
RRO (C25-C36)	ND		393	118	ug/L		12/20/22 10:14	12/22/22 06:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	92		50 - 150	12/20/22 10:14	12/22/22 06:17	1
n-Triacontane-d62	101		50 - 150	12/20/22 10:14	12/22/22 06:17	1

## Method: MCAWW 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	22.2		5.00	1.28	mg/L			12/19/22 13:15	10

## Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	7740		500	66.7	ug/L		12/27/22 17:04	12/28/22 18:10	5
Manganese	857		10.0	2.30	ug/L		12/27/22 17:04	12/28/22 18:10	5

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2)	ND	^	0.100	0.0440	mg/L			01/09/23 14:12	1

Eurofins Spokane

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-311**

**Lab Sample ID: 590-19465-21**

Date Collected: 12/13/22 12:50

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	3.74		0.400	0.0930	ug/L			12/21/22 18:06	1
Ethylbenzene	0.542	J	1.00	0.198	ug/L			12/21/22 18:06	1
Toluene	2.60		1.00	0.312	ug/L			12/21/22 18:06	1
Xylenes, Total	1.00	J	3.00	0.442	ug/L			12/21/22 18:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		80 - 120		12/21/22 18:06	1
Dibromofluoromethane (Surr)	101		80 - 120		12/21/22 18:06	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		12/21/22 18:06	1
Toluene-d8 (Surr)	93		80 - 120		12/21/22 18:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	1320		150	30.5	ug/L			12/21/22 18:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		68.7 - 141		12/21/22 18:06	1

## Method: MCAWW 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.429	J	0.500	0.128	mg/L			12/19/22 13:29	1

## Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	6140		500	66.7	ug/L		12/27/22 17:04	12/28/22 17:47	5
Manganese	1890		10.0	2.30	ug/L		12/27/22 17:04	12/28/22 17:47	5

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2)	ND	^	0.100	0.0440	mg/L			01/09/23 14:14	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-312**

**Lab Sample ID: 590-19465-22**

Date Collected: 12/13/22 12:11

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	3.92		0.400	0.0930	ug/L			12/21/22 18:27	1
Ethylbenzene	1.26		1.00	0.198	ug/L			12/21/22 18:27	1
Toluene	2.14		1.00	0.312	ug/L			12/21/22 18:27	1
Xylenes, Total	1.98	J	3.00	0.442	ug/L			12/21/22 18:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		80 - 120		12/21/22 18:27	1
Dibromofluoromethane (Surr)	97		80 - 120		12/21/22 18:27	1
1,2-Dichloroethane-d4 (Surr)	94		80 - 120		12/21/22 18:27	1
Toluene-d8 (Surr)	90		80 - 120		12/21/22 18:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	1720		150	30.5	ug/L			12/21/22 18:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		68.7 - 141		12/21/22 18:27	1

**Method: MCAWW 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	4.73		0.500	0.128	mg/L			12/19/22 14:12	1

**Method: SW846 6020B - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	399	J	500	66.7	ug/L		12/27/22 17:04	12/28/22 17:44	5
Manganese	903		10.0	2.30	ug/L		12/27/22 17:04	12/28/22 17:44	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2)	ND	^	0.100	0.0440	mg/L			01/09/23 14:16	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-313**

**Lab Sample ID: 590-19465-23**

Date Collected: 12/13/22 11:09

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/21/22 18:49	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/21/22 18:49	1
Toluene	ND		1.00	0.312	ug/L			12/21/22 18:49	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/21/22 18:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		80 - 120		12/21/22 18:49	1
Dibromofluoromethane (Surr)	101		80 - 120		12/21/22 18:49	1
1,2-Dichloroethane-d4 (Surr)	97		80 - 120		12/21/22 18:49	1
Toluene-d8 (Surr)	96		80 - 120		12/21/22 18:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	48.5	J	150	30.5	ug/L			12/21/22 18:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		68.7 - 141		12/21/22 18:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	523		229	105	ug/L		12/20/22 10:14	12/20/22 22:21	1
RRO (C25-C36)	333	J	382	115	ug/L		12/20/22 10:14	12/20/22 22:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	90		50 - 150	12/20/22 10:14	12/20/22 22:21	1
n-Triacontane-d62	98		50 - 150	12/20/22 10:14	12/20/22 22:21	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		229	105	ug/L		12/20/22 10:14	12/22/22 06:37	1
RRO (C25-C36)	ND		382	115	ug/L		12/20/22 10:14	12/22/22 06:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	90		50 - 150	12/20/22 10:14	12/22/22 06:37	1
n-Triacontane-d62	99		50 - 150	12/20/22 10:14	12/22/22 06:37	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-315**

**Lab Sample ID: 590-19465-24**

Date Collected: 12/13/22 11:37

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/21/22 19:10	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/21/22 19:10	1
Toluene	ND		1.00	0.312	ug/L			12/21/22 19:10	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/21/22 19:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		80 - 120		12/21/22 19:10	1
Dibromofluoromethane (Surr)	104		80 - 120		12/21/22 19:10	1
1,2-Dichloroethane-d4 (Surr)	98		80 - 120		12/21/22 19:10	1
Toluene-d8 (Surr)	96		80 - 120		12/21/22 19:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			12/21/22 19:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		68.7 - 141		12/21/22 19:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	470		234	107	ug/L		12/20/22 10:14	12/20/22 22:42	1
RRO (C25-C36)	323	J	389	117	ug/L		12/20/22 10:14	12/20/22 22:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	87		50 - 150	12/20/22 10:14	12/20/22 22:42	1
n-Triacontane-d62	95		50 - 150	12/20/22 10:14	12/20/22 22:42	1

### Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		234	107	ug/L		12/20/22 10:14	12/22/22 06:58	1
RRO (C25-C36)	ND		389	117	ug/L		12/20/22 10:14	12/22/22 06:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	93		50 - 150	12/20/22 10:14	12/22/22 06:58	1
n-Triacontane-d62	101		50 - 150	12/20/22 10:14	12/22/22 06:58	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: SH-04**  
Date Collected: 12/13/22 13:59  
Date Received: 12/16/22 12:30

**Lab Sample ID: 590-19465-25**  
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	6.97		0.400	0.0930	ug/L			12/21/22 19:32	1
Ethylbenzene	3.27		1.00	0.198	ug/L			12/21/22 19:32	1
Toluene	1.07		1.00	0.312	ug/L			12/21/22 19:32	1
Xylenes, Total	2.83	J	3.00	0.442	ug/L			12/21/22 19:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		80 - 120		12/21/22 19:32	1
Dibromofluoromethane (Surr)	99		80 - 120		12/21/22 19:32	1
1,2-Dichloroethane-d4 (Surr)	97		80 - 120		12/21/22 19:32	1
Toluene-d8 (Surr)	93		80 - 120		12/21/22 19:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	369		150	30.5	ug/L			12/21/22 19:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		68.7 - 141		12/21/22 19:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	1820		221	102	ug/L		12/20/22 10:14	12/20/22 23:03	1
RRO (C25-C36)	417		369	111	ug/L		12/20/22 10:14	12/20/22 23:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	106		50 - 150	12/20/22 10:14	12/20/22 23:03	1
n-Triacontane-d62	111		50 - 150	12/20/22 10:14	12/20/22 23:03	1

### Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	934		221	102	ug/L		12/20/22 10:14	12/22/22 07:18	1
RRO (C25-C36)	306	J	369	111	ug/L		12/20/22 10:14	12/22/22 07:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	103		50 - 150	12/20/22 10:14	12/22/22 07:18	1
n-Triacontane-d62	110		50 - 150	12/20/22 10:14	12/22/22 07:18	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: TX-03A**

**Lab Sample ID: 590-19465-26**

Date Collected: 12/13/22 14:58

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	122		4.00	0.930	ug/L			12/22/22 18:30	10
Ethylbenzene	1.40		1.00	0.198	ug/L			12/21/22 19:53	1
Toluene	7.01		1.00	0.312	ug/L			12/21/22 19:53	1
Xylenes, Total	6.82		3.00	0.442	ug/L			12/21/22 19:53	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		80 - 120					12/21/22 19:53	1
4-Bromofluorobenzene (Surr)	93		80 - 120					12/22/22 18:30	10
Dibromofluoromethane (Surr)	101		80 - 120					12/21/22 19:53	1
Dibromofluoromethane (Surr)	103		80 - 120					12/22/22 18:30	10
1,2-Dichloroethane-d4 (Surr)	96		80 - 120					12/21/22 19:53	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120					12/22/22 18:30	10
Toluene-d8 (Surr)	91		80 - 120					12/21/22 19:53	1
Toluene-d8 (Surr)	94		80 - 120					12/22/22 18:30	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	1050		150	30.5	ug/L			12/21/22 19:53	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		68.7 - 141					12/21/22 19:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	1510		221	101	ug/L		12/20/22 10:14	12/20/22 23:44	1
RRO (C25-C36)	598		368	110	ug/L		12/20/22 10:14	12/20/22 23:44	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				12/20/22 10:14	12/20/22 23:44	1
n-Triacontane-d62	93		50 - 150				12/20/22 10:14	12/20/22 23:44	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	625		221	101	ug/L		12/20/22 10:14	12/22/22 07:38	1
RRO (C25-C36)	325	J	368	110	ug/L		12/20/22 10:14	12/22/22 07:38	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	83		50 - 150				12/20/22 10:14	12/22/22 07:38	1
n-Triacontane-d62	96		50 - 150				12/20/22 10:14	12/22/22 07:38	1

## Method: MCAWW 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	8.86		0.500	0.128	mg/L			12/19/22 14:26	1

## Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	109	J	500	66.7	ug/L		12/27/22 17:04	12/28/22 17:40	5
Manganese	927		10.0	2.30	ug/L		12/27/22 17:04	12/28/22 17:40	5

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2)	ND	F1 ^- *-	0.100	0.0440	mg/L			01/09/23 14:34	1

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# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: TX-04**

**Lab Sample ID: 590-19465-27**

**Date Collected: 12/13/22 13:27**

**Matrix: Water**

**Date Received: 12/16/22 12:30**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/21/22 20:15	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/21/22 20:15	1
Toluene	ND		1.00	0.312	ug/L			12/21/22 20:15	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/21/22 20:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		80 - 120		12/21/22 20:15	1
Dibromofluoromethane (Surr)	101		80 - 120		12/21/22 20:15	1
1,2-Dichloroethane-d4 (Surr)	98		80 - 120		12/21/22 20:15	1
Toluene-d8 (Surr)	92		80 - 120		12/21/22 20:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	34.1	J	150	30.5	ug/L			12/21/22 20:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		68.7 - 141		12/21/22 20:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		232	106	ug/L		12/20/22 10:14	12/21/22 00:05	1
RRO (C25-C36)	ND		386	116	ug/L		12/20/22 10:14	12/21/22 00:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	86		50 - 150	12/20/22 10:14	12/21/22 00:05	1
n-Triacontane-d62	92		50 - 150	12/20/22 10:14	12/21/22 00:05	1



# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-05**

**Lab Sample ID: 590-19465-28**

**Date Collected: 12/14/22 10:18**

**Matrix: Water**

**Date Received: 12/16/22 12:30**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/21/22 20:36	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/21/22 20:36	1
Toluene	ND		1.00	0.312	ug/L			12/21/22 20:36	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/21/22 20:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		80 - 120		12/21/22 20:36	1
Dibromofluoromethane (Surr)	101		80 - 120		12/21/22 20:36	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		12/21/22 20:36	1
Toluene-d8 (Surr)	95		80 - 120		12/21/22 20:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			12/21/22 20:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		68.7 - 141		12/21/22 20:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	387		245	112	ug/L		12/20/22 10:14	12/21/22 00:26	1
RRO (C25-C36)	191	J	409	123	ug/L		12/20/22 10:14	12/21/22 00:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	89		50 - 150	12/20/22 10:14	12/21/22 00:26	1
n-Triacontane-d62	99		50 - 150	12/20/22 10:14	12/21/22 00:26	1

### Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		245	112	ug/L		12/20/22 10:14	12/22/22 07:59	1
RRO (C25-C36)	ND		409	123	ug/L		12/20/22 10:14	12/22/22 07:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	87		50 - 150	12/20/22 10:14	12/22/22 07:59	1
n-Triacontane-d62	98		50 - 150	12/20/22 10:14	12/22/22 07:59	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-104**

**Lab Sample ID: 590-19465-29**

Date Collected: 12/14/22 10:47

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	153		150	30.5	ug/L			12/21/22 20:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		68.7 - 141		12/21/22 20:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	2570		245	112	ug/L		12/20/22 10:14	12/21/22 00:46	1
RRO (C25-C36)	1010		409	123	ug/L		12/20/22 10:14	12/21/22 00:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150	12/20/22 10:14	12/21/22 00:46	1
n-Triacontane-d62	87		50 - 150	12/20/22 10:14	12/21/22 00:46	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	159	J	245	112	ug/L		12/20/22 10:14	12/22/22 08:20	1
RRO (C25-C36)	ND		409	123	ug/L		12/20/22 10:14	12/22/22 08:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150	12/20/22 10:14	12/22/22 08:20	1
n-Triacontane-d62	89		50 - 150	12/20/22 10:14	12/22/22 08:20	1

## Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		60.0	5.10	ug/L		12/28/22 09:08	12/28/22 14:03	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-105**

**Lab Sample ID: 590-19465-30**

Date Collected: 12/14/22 09:21

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/21/22 21:19	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/21/22 21:19	1
Toluene	ND		1.00	0.312	ug/L			12/21/22 21:19	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/21/22 21:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		80 - 120		12/21/22 21:19	1
Dibromofluoromethane (Surr)	103		80 - 120		12/21/22 21:19	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		12/21/22 21:19	1
Toluene-d8 (Surr)	95		80 - 120		12/21/22 21:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			12/21/22 21:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		68.7 - 141		12/21/22 21:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	1250		223	102	ug/L		12/20/22 10:14	12/21/22 01:07	1
RRO (C25-C36)	679		372	112	ug/L		12/20/22 10:14	12/21/22 01:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150	12/20/22 10:14	12/21/22 01:07	1
n-Triacontane-d62	90		50 - 150	12/20/22 10:14	12/21/22 01:07	1

### Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		223	102	ug/L		12/20/22 10:14	12/22/22 08:40	1
RRO (C25-C36)	292	J	372	112	ug/L		12/20/22 10:14	12/22/22 08:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	85		50 - 150	12/20/22 10:14	12/22/22 08:40	1
n-Triacontane-d62	93		50 - 150	12/20/22 10:14	12/22/22 08:40	1

### Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	14.3	J	60.0	5.10	ug/L		12/28/22 09:08	12/28/22 14:27	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-111**

**Lab Sample ID: 590-19465-31**

Date Collected: 12/14/22 11:19

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	53.8		0.400	0.0930	ug/L			12/21/22 22:02	1
Ethylbenzene	0.527	J	1.00	0.198	ug/L			12/21/22 22:02	1
Toluene	3.33		1.00	0.312	ug/L			12/21/22 22:02	1
Xylenes, Total	2.59	J	3.00	0.442	ug/L			12/21/22 22:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		80 - 120		12/21/22 22:02	1
Dibromofluoromethane (Surr)	100		80 - 120		12/21/22 22:02	1
1,2-Dichloroethane-d4 (Surr)	96		80 - 120		12/21/22 22:02	1
Toluene-d8 (Surr)	92		80 - 120		12/21/22 22:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	490		150	30.5	ug/L			12/21/22 22:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		68.7 - 141		12/21/22 22:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	1310		236	108	ug/L		12/20/22 10:14	12/21/22 01:28	1
RRO (C25-C36)	326	J	393	118	ug/L		12/20/22 10:14	12/21/22 01:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	94		50 - 150	12/20/22 10:14	12/21/22 01:28	1
n-Triacontane-d62	101		50 - 150	12/20/22 10:14	12/21/22 01:28	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		236	108	ug/L		12/20/22 10:14	12/22/22 09:01	1
RRO (C25-C36)	ND		393	118	ug/L		12/20/22 10:14	12/22/22 09:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	86		50 - 150	12/20/22 10:14	12/22/22 09:01	1
n-Triacontane-d62	96		50 - 150	12/20/22 10:14	12/22/22 09:01	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-113**

**Lab Sample ID: 590-19465-32**

Date Collected: 12/14/22 08:51

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>65.0</b>		0.400	0.0930	ug/L			12/21/22 22:23	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/21/22 22:23	1
<b>Toluene</b>	<b>4.66</b>		1.00	0.312	ug/L			12/21/22 22:23	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/21/22 22:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		80 - 120		12/21/22 22:23	1
Dibromofluoromethane (Surr)	104		80 - 120		12/21/22 22:23	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		12/21/22 22:23	1
Toluene-d8 (Surr)	93		80 - 120		12/21/22 22:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>TPH as Gasoline</b>	<b>177</b>		150	30.5	ug/L			12/21/22 22:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		68.7 - 141		12/21/22 22:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>1240</b>		241	110	ug/L		12/20/22 10:14	12/21/22 01:49	1
<b>RRO (C25-C36)</b>	<b>440</b>		402	120	ug/L		12/20/22 10:14	12/21/22 01:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	87		50 - 150	12/20/22 10:14	12/21/22 01:49	1
n-Triacontane-d62	97		50 - 150	12/20/22 10:14	12/21/22 01:49	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (C10-C25)</b>	<b>397</b>		241	110	ug/L		12/20/22 10:14	12/22/22 09:21	1
RRO (C25-C36)	ND		402	120	ug/L		12/20/22 10:14	12/22/22 09:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	86		50 - 150	12/20/22 10:14	12/22/22 09:21	1
n-Triacontane-d62	97		50 - 150	12/20/22 10:14	12/22/22 09:21	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-114**

**Lab Sample ID: 590-19465-33**

**Date Collected: 12/14/22 07:52**

**Matrix: Water**

**Date Received: 12/16/22 12:30**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/21/22 22:45	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/21/22 22:45	1
Toluene	ND		1.00	0.312	ug/L			12/21/22 22:45	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/21/22 22:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		80 - 120		12/21/22 22:45	1
Dibromofluoromethane (Surr)	106		80 - 120		12/21/22 22:45	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		12/21/22 22:45	1
Toluene-d8 (Surr)	96		80 - 120		12/21/22 22:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			12/21/22 22:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		68.7 - 141		12/21/22 22:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	339		222	102	ug/L		12/20/22 10:14	12/21/22 02:09	1
RRO (C25-C36)	523		371	111	ug/L		12/20/22 10:14	12/21/22 02:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	93		50 - 150	12/20/22 10:14	12/21/22 02:09	1
n-Triacontane-d62	102		50 - 150	12/20/22 10:14	12/21/22 02:09	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		222	102	ug/L		12/20/22 10:14	12/22/22 10:04	1
RRO (C25-C36)	ND		371	111	ug/L		12/20/22 10:14	12/22/22 10:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	86		50 - 150	12/20/22 10:14	12/22/22 10:04	1
n-Triacontane-d62	93		50 - 150	12/20/22 10:14	12/22/22 10:04	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-115**

**Lab Sample ID: 590-19465-34**

Date Collected: 12/14/22 08:22

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/21/22 23:06	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/21/22 23:06	1
Toluene	ND		1.00	0.312	ug/L			12/21/22 23:06	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/21/22 23:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		80 - 120		12/21/22 23:06	1
Dibromofluoromethane (Surr)	102		80 - 120		12/21/22 23:06	1
1,2-Dichloroethane-d4 (Surr)	101		80 - 120		12/21/22 23:06	1
Toluene-d8 (Surr)	94		80 - 120		12/21/22 23:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	59.6	J	150	30.5	ug/L			12/21/22 23:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		68.7 - 141		12/21/22 23:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	1240		259	119	ug/L		12/20/22 10:14	12/21/22 02:30	1
RRO (C25-C36)	420	J	432	130	ug/L		12/20/22 10:14	12/21/22 02:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	86		50 - 150	12/20/22 10:14	12/21/22 02:30	1
n-Triacontane-d62	94		50 - 150	12/20/22 10:14	12/21/22 02:30	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	713		259	119	ug/L		12/20/22 10:14	12/22/22 10:25	1
RRO (C25-C36)	ND		432	130	ug/L		12/20/22 10:14	12/22/22 10:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	88		50 - 150	12/20/22 10:14	12/22/22 10:25	1
n-Triacontane-d62	98		50 - 150	12/20/22 10:14	12/22/22 10:25	1

# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-203**

**Lab Sample ID: 590-19465-35**

Date Collected: 12/14/22 12:31

Matrix: Water

Date Received: 12/16/22 12:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	227		150	30.5	ug/L			12/22/22 18:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		68.7 - 141					12/22/22 18:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	993		246	113	ug/L		12/20/22 10:14	12/21/22 02:51	1
RRO (C25-C36)	350	J	409	123	ug/L		12/20/22 10:14	12/21/22 02:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	94		50 - 150				12/20/22 10:14	12/21/22 02:51	1
n-Triacontane-d62	101		50 - 150				12/20/22 10:14	12/21/22 02:51	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		246	113	ug/L		12/20/22 10:14	12/22/22 10:47	1
RRO (C25-C36)	ND		409	123	ug/L		12/20/22 10:14	12/22/22 10:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	90		50 - 150				12/20/22 10:14	12/22/22 10:47	1
n-Triacontane-d62	98		50 - 150				12/20/22 10:14	12/22/22 10:47	1

## Method: MCAWW 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	7.94		0.500	0.128	mg/L			12/19/22 14:39	1

## Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	8340		500	66.7	ug/L		12/27/22 17:04	12/28/22 18:03	5
Manganese	693		10.0	2.30	ug/L		12/27/22 17:04	12/28/22 18:03	5

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2	0.0480	J ^- *-	0.100	0.0440	mg/L			01/09/23 14:40	1



# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

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

**Lab Sample ID: MB 590-39528/6**  
**Matrix: Water**  
**Analysis Batch: 39528**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/20/22 16:17	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/20/22 16:17	1
Toluene	ND		1.00	0.312	ug/L			12/20/22 16:17	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/20/22 16:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		80 - 120		12/20/22 16:17	1
Dibromofluoromethane (Surr)	106		80 - 120		12/20/22 16:17	1
1,2-Dichloroethane-d4 (Surr)	107		80 - 120		12/20/22 16:17	1
Toluene-d8 (Surr)	98		80 - 120		12/20/22 16:17	1

**Lab Sample ID: LCS 590-39528/1003**  
**Matrix: Water**  
**Analysis Batch: 39528**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	10.0	10.91		ug/L		109	80 - 126
Ethylbenzene	10.0	10.65		ug/L		107	80 - 128
m-Xylene & p-Xylene	10.0	10.41		ug/L		104	80 - 127
o-Xylene	10.0	10.39		ug/L		104	80 - 126
Toluene	10.0	10.81		ug/L		108	80 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
1,2-Dichloroethane-d4 (Surr)	105		80 - 120
Toluene-d8 (Surr)	98		80 - 120

**Lab Sample ID: LCSD 590-39528/4**  
**Matrix: Water**  
**Analysis Batch: 39528**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	10.0	10.67		ug/L		107	80 - 126	2	18
Ethylbenzene	10.0	10.56		ug/L		106	80 - 128	1	18
m-Xylene & p-Xylene	10.0	10.78		ug/L		108	80 - 127	4	18
o-Xylene	10.0	10.62		ug/L		106	80 - 126	2	17
Toluene	10.0	10.79		ug/L		108	80 - 129	0	18

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	107		80 - 120
Toluene-d8 (Surr)	102		80 - 120

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

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

**Lab Sample ID: 590-19465-3 MS**  
**Matrix: Water**  
**Analysis Batch: 39528**

**Client Sample ID: MW-102**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
Benzene	ND		10.0	11.27		ug/L		113		80 - 126
Ethylbenzene	ND		10.0	10.04		ug/L		100		80 - 128
m-Xylene & p-Xylene	ND	F2	10.0	8.535		ug/L		85		80 - 127
o-Xylene	ND	F2	10.0	8.442		ug/L		84		80 - 126
Toluene	ND		10.0	9.876		ug/L		99		80 - 129

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
1,2-Dichloroethane-d4 (Surr)	109		80 - 120
Toluene-d8 (Surr)	90		80 - 120

**Lab Sample ID: 590-19465-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 39528**

**Client Sample ID: MW-102**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	Limits	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						Limit	
Benzene	ND		10.0	11.31		ug/L		113		80 - 126	0	18
Ethylbenzene	ND		10.0	11.18		ug/L		112		80 - 128	11	18
m-Xylene & p-Xylene	ND	F2	10.0	10.55	F2	ug/L		106		80 - 127	21	18
o-Xylene	ND	F2	10.0	10.39	F2	ug/L		104		80 - 126	21	17
Toluene	ND		10.0	10.46		ug/L		105		80 - 129	6	18

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	106		80 - 120
1,2-Dichloroethane-d4 (Surr)	108		80 - 120
Toluene-d8 (Surr)	94		80 - 120

**Lab Sample ID: MB 590-39543/6**  
**Matrix: Water**  
**Analysis Batch: 39543**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.400	0.0930	ug/L			12/21/22 14:03	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/21/22 14:03	1
Toluene	ND		1.00	0.312	ug/L			12/21/22 14:03	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/21/22 14:03	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	97		80 - 120		12/21/22 14:03	1
Dibromofluoromethane (Surr)	108		80 - 120		12/21/22 14:03	1
1,2-Dichloroethane-d4 (Surr)	108		80 - 120		12/21/22 14:03	1
Toluene-d8 (Surr)	101		80 - 120		12/21/22 14:03	1

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# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

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

**Lab Sample ID: LCS 590-39543/1003**  
**Matrix: Water**  
**Analysis Batch: 39543**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	10.0	10.24		ug/L		102	80 - 126
Ethylbenzene	10.0	10.40		ug/L		104	80 - 128
m-Xylene & p-Xylene	10.0	10.47		ug/L		105	80 - 127
o-Xylene	10.0	10.04		ug/L		100	80 - 126
Toluene	10.0	10.24		ug/L		102	80 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	113		80 - 120
Toluene-d8 (Surr)	96		80 - 120

**Lab Sample ID: LCSD 590-39543/4**  
**Matrix: Water**  
**Analysis Batch: 39543**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	10.0	9.902		ug/L		99	80 - 126	3	18
Ethylbenzene	10.0	10.34		ug/L		103	80 - 128	1	18
m-Xylene & p-Xylene	10.0	10.38		ug/L		104	80 - 127	1	18
o-Xylene	10.0	10.05		ug/L		100	80 - 126	0	17
Toluene	10.0	10.28		ug/L		103	80 - 129	0	18

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
1,2-Dichloroethane-d4 (Surr)	113		80 - 120
Toluene-d8 (Surr)	100		80 - 120

**Lab Sample ID: 590-19465-16 MS**  
**Matrix: Water**  
**Analysis Batch: 39543**

**Client Sample ID: MW-302**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		10.0	10.73		ug/L		107	80 - 126
Ethylbenzene	ND		10.0	10.34		ug/L		103	80 - 128
m-Xylene & p-Xylene	ND		10.0	9.547		ug/L		95	80 - 127
o-Xylene	ND		10.0	9.108		ug/L		91	80 - 126
Toluene	ND		10.0	10.18		ug/L		102	80 - 129

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	104		80 - 120
Toluene-d8 (Surr)	93		80 - 120

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

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

**Lab Sample ID: 590-19465-16 MSD**  
**Matrix: Water**  
**Analysis Batch: 39543**

**Client Sample ID: MW-302**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		10.0	10.89		ug/L		109	80 - 126	1	18
Ethylbenzene	ND		10.0	10.13		ug/L		101	80 - 128	2	18
m-Xylene & p-Xylene	ND		10.0	8.922		ug/L		89	80 - 127	7	18
o-Xylene	ND		10.0	8.636		ug/L		86	80 - 126	5	17
Toluene	ND		10.0	9.669		ug/L		97	80 - 129	5	18

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	106		80 - 120
1,2-Dichloroethane-d4 (Surr)	111		80 - 120
Toluene-d8 (Surr)	95		80 - 120

**Lab Sample ID: 590-19465-15 DU**  
**Matrix: Water**  
**Analysis Batch: 39543**

**Client Sample ID: MW-301**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Benzene	24.2		24.30		ug/L		0.3	18
Ethylbenzene	0.703	J	0.6824	J	ug/L		3	18
Toluene	1.51		1.448		ug/L		4	18
Xylenes, Total	1.48	J	1.266	J	ug/L		16	18

Surrogate	DU %Recovery	DU Qualifier	DU Limits
4-Bromofluorobenzene (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
1,2-Dichloroethane-d4 (Surr)	109		80 - 120
Toluene-d8 (Surr)	96		80 - 120

**Lab Sample ID: MB 590-39572/6**  
**Matrix: Water**  
**Analysis Batch: 39572**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.400	0.0930	ug/L			12/22/22 17:47	1
Ethylbenzene	ND		1.00	0.198	ug/L			12/22/22 17:47	1
Toluene	ND		1.00	0.312	ug/L			12/22/22 17:47	1
Xylenes, Total	ND		3.00	0.442	ug/L			12/22/22 17:47	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		80 - 120		12/22/22 17:47	1
Dibromofluoromethane (Surr)	104		80 - 120		12/22/22 17:47	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		12/22/22 17:47	1
Toluene-d8 (Surr)	89		80 - 120		12/22/22 17:47	1

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# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

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

**Lab Sample ID: LCS 590-39572/1003**  
**Matrix: Water**  
**Analysis Batch: 39572**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	10.0	10.34		ug/L		103	80 - 126
Ethylbenzene	10.0	10.45		ug/L		104	80 - 128
m-Xylene & p-Xylene	10.0	10.91		ug/L		109	80 - 127
o-Xylene	10.0	10.41		ug/L		104	80 - 126
Toluene	10.0	10.08		ug/L		101	80 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
1,2-Dichloroethane-d4 (Surr)	106		80 - 120
Toluene-d8 (Surr)	97		80 - 120

**Lab Sample ID: LCSD 590-39572/4**  
**Matrix: Water**  
**Analysis Batch: 39572**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	10.0	9.599		ug/L		96	80 - 126	7	18
Ethylbenzene	10.0	10.00		ug/L		100	80 - 128	4	18
m-Xylene & p-Xylene	10.0	10.08		ug/L		101	80 - 127	8	18
o-Xylene	10.0	10.02		ug/L		100	80 - 126	4	17
Toluene	10.0	9.466		ug/L		95	80 - 129	6	18

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
1,2-Dichloroethane-d4 (Surr)	105		80 - 120
Toluene-d8 (Surr)	93		80 - 120

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

**Lab Sample ID: MB 590-39529/6**  
**Matrix: Water**  
**Analysis Batch: 39529**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			12/20/22 16:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		68.7 - 141		12/20/22 16:17	1

**Lab Sample ID: LCS 590-39529/1005**  
**Matrix: Water**  
**Analysis Batch: 39529**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
TPH as Gasoline	1000	862.5		ug/L		86	80 - 120

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# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

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

**Lab Sample ID: LCS 590-39529/1005**  
**Matrix: Water**  
**Analysis Batch: 39529**

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

	LCS	LCS	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	96		68.7 - 141

**Lab Sample ID: LCSD 590-39529/1016**  
**Matrix: Water**  
**Analysis Batch: 39529**

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

	Spike	LCSD	LCSD						
<i>Analyte</i>	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>	<i>RPD</i>	<i>Limit</i>
TPH as Gasoline	1000	940.4		ug/L	-	94	80 - 120	9	20

	LCSD	LCSD	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	94		68.7 - 141

**Lab Sample ID: 590-19465-2 DU**  
**Matrix: Water**  
**Analysis Batch: 39529**

**Client Sample ID: MW-101**  
**Prep Type: Total/NA**

	Sample	Sample							
<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>DU</i>	<i>DU</i>	<i>Unit</i>	<i>D</i>	<i>RPD</i>	<i>Limit</i>	
TPH as Gasoline	ND		ND		ug/L	-	NC	35	

	DU	DU	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	95		68.7 - 141

**Lab Sample ID: MB 590-39544/6**  
**Matrix: Water**  
**Analysis Batch: 39544**

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

	MB	MB							
<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
TPH as Gasoline	ND		150	30.5	ug/L	-		12/21/22 14:03	1

	MB	MB	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	97		68.7 - 141

**Lab Sample ID: LCS 590-39544/1005**  
**Matrix: Water**  
**Analysis Batch: 39544**

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

	Spike	LCS	LCS					
<i>Analyte</i>	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>	
TPH as Gasoline	1000	846.2		ug/L	-	85	80 - 120	

	LCS	LCS	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	95		68.7 - 141

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

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

**Lab Sample ID: LCSD 590-39544/1016**  
**Matrix: Water**  
**Analysis Batch: 39544**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Gasoline	1000	837.3		ug/L		84	80 - 120	1	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCSD Qualifier</b>	<b>Limits</b>						
4-Bromofluorobenzene (Surr)	95		68.7 - 141						

**Lab Sample ID: 590-19465-B-15 DU**  
**Matrix: Water**  
**Analysis Batch: 39544**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
TPH as Gasoline	295		300.3		ug/L		2	35
<b>Surrogate</b>	<b>%Recovery</b>	<b>DU Qualifier</b>	<b>Limits</b>					
4-Bromofluorobenzene (Surr)	93		68.7 - 141					

**Lab Sample ID: MB 590-39573/6**  
**Matrix: Water**  
**Analysis Batch: 39573**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline	ND		150	30.5	ug/L			12/22/22 17:47	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>MB Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	93		68.7 - 141					12/22/22 17:47	1

**Lab Sample ID: LCS 590-39573/1005**  
**Matrix: Water**  
**Analysis Batch: 39573**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Gasoline	1000	914.6		ug/L		91	80 - 120		
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCS Qualifier</b>	<b>Limits</b>						
4-Bromofluorobenzene (Surr)	96		68.7 - 141						

**Lab Sample ID: LCSD 590-39573/1016**  
**Matrix: Water**  
**Analysis Batch: 39573**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Gasoline	1000	911.3		ug/L		91	80 - 120	0	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCSD Qualifier</b>	<b>Limits</b>						
4-Bromofluorobenzene (Surr)	91		68.7 - 141						

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID: MB 590-39510/1-A**  
**Matrix: Water**  
**Analysis Batch: 39521**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 39510**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzo[a]anthracene	ND		0.0900	0.0120	ug/L		12/19/22 10:35	12/20/22 10:28	1
Benzo[a]pyrene	ND		0.0900	0.0120	ug/L		12/19/22 10:35	12/20/22 10:28	1
Benzo[b]fluoranthene	ND		0.0900	0.0250	ug/L		12/19/22 10:35	12/20/22 10:28	1
Benzo[k]fluoranthene	ND		0.0900	0.0150	ug/L		12/19/22 10:35	12/20/22 10:28	1
Chrysene	ND		0.0900	0.0100	ug/L		12/19/22 10:35	12/20/22 10:28	1
Dibenz(a,h)anthracene	ND		0.0900	0.0130	ug/L		12/19/22 10:35	12/20/22 10:28	1
Indeno[1,2,3-cd]pyrene	ND		0.0900	0.0220	ug/L		12/19/22 10:35	12/20/22 10:28	1
1-Methylnaphthalene	ND		0.0900	0.0230	ug/L		12/19/22 10:35	12/20/22 10:28	1
2-Methylnaphthalene	ND		0.0900	0.0440	ug/L		12/19/22 10:35	12/20/22 10:28	1
Naphthalene	ND		0.0900	0.0530	ug/L		12/19/22 10:35	12/20/22 10:28	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl (Surr)	68		50 - 120	12/19/22 10:35	12/20/22 10:28	1
p-Terphenyl-d14	80		51 - 121	12/19/22 10:35	12/20/22 10:28	1

**Lab Sample ID: LCS 590-39510/2-A**  
**Matrix: Water**  
**Analysis Batch: 39521**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 39510**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzo[a]anthracene	1.60	1.377		ug/L		86	60 - 120
Benzo[a]pyrene	1.60	1.415		ug/L		88	54 - 120
Benzo[b]fluoranthene	1.60	1.285		ug/L		80	51 - 125
Benzo[k]fluoranthene	1.60	1.652		ug/L		103	58 - 120
Chrysene	1.60	1.549		ug/L		97	58 - 126
Dibenz(a,h)anthracene	1.60	1.444		ug/L		90	62 - 120
Indeno[1,2,3-cd]pyrene	1.60	1.431		ug/L		89	59 - 120
1-Methylnaphthalene	1.60	1.162		ug/L		73	49 - 120
2-Methylnaphthalene	1.60	1.130		ug/L		71	44 - 120
Naphthalene	1.60	1.185		ug/L		74	52 - 120

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	67		50 - 120
p-Terphenyl-d14	75		51 - 121

**Lab Sample ID: LCSD 590-39510/3-A**  
**Matrix: Water**  
**Analysis Batch: 39521**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 39510**

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
		Result	Qualifier						
Benzo[a]anthracene	1.60	1.377		ug/L		86	60 - 120	0	15
Benzo[a]pyrene	1.60	1.424		ug/L		89	54 - 120	1	15
Benzo[b]fluoranthene	1.60	1.210		ug/L		76	51 - 125	6	15
Benzo[k]fluoranthene	1.60	1.626		ug/L		102	58 - 120	2	15
Chrysene	1.60	1.586		ug/L		99	58 - 126	2	15
Dibenz(a,h)anthracene	1.60	1.419		ug/L		89	62 - 120	2	18
Indeno[1,2,3-cd]pyrene	1.60	1.406		ug/L		88	59 - 120	2	18
1-Methylnaphthalene	1.60	1.192		ug/L		75	49 - 120	3	15

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# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCSD 590-39510/3-A**  
**Matrix: Water**  
**Analysis Batch: 39521**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 39510**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Methylnaphthalene	1.60	1.168		ug/L		73	44 - 120	3	16
Naphthalene	1.60	1.206		ug/L		75	52 - 120	2	21

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Fluorobiphenyl (Surr)	69		50 - 120
p-Terphenyl-d14	77		51 - 121

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

**Lab Sample ID: MB 590-39514/1-A**  
**Matrix: Water**  
**Analysis Batch: 39522**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 39514**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		240	110	ug/L		12/19/22 12:35	12/20/22 12:08	1
RRO (C25-C36)	ND		400	120	ug/L		12/19/22 12:35	12/20/22 12:08	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	94		50 - 150	12/19/22 12:35	12/20/22 12:08	1
n-Triacontane-d62	103		50 - 150	12/19/22 12:35	12/20/22 12:08	1

**Lab Sample ID: LCS 590-39514/2-A**  
**Matrix: Water**  
**Analysis Batch: 39522**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 39514**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DRO (C10-C25)	1600	1387		ug/L		87	50 - 150
RRO (C25-C36)	1600	1773		ug/L		111	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
o-Terphenyl	101		50 - 150
n-Triacontane-d62	111		50 - 150

**Lab Sample ID: LCSD 590-39514/3-A**  
**Matrix: Water**  
**Analysis Batch: 39522**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 39514**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
DRO (C10-C25)	1600	1460		ug/L		91	50 - 150	5	25
RRO (C25-C36)	1600	1896		ug/L		118	50 - 150	7	25

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
o-Terphenyl	110		50 - 150
n-Triacontane-d62	118		50 - 150

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

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

**Lab Sample ID: MB 590-39524/1-A**  
**Matrix: Water**  
**Analysis Batch: 39522**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 39524**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
DRO (C10-C25)	ND		240	110	ug/L		12/20/22 10:14	12/20/22 20:37	1
RRO (C25-C36)	ND		400	120	ug/L		12/20/22 10:14	12/20/22 20:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	88		50 - 150				12/20/22 10:14	12/20/22 20:37	1
<i>n</i> -Triacontane-d62	96		50 - 150				12/20/22 10:14	12/20/22 20:37	1

**Lab Sample ID: LCS 590-39524/2-A**  
**Matrix: Water**  
**Analysis Batch: 39522**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 39524**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
RRO (C25-C36)	1600	1851		ug/L		116	50 - 150
Surrogate	%Recovery	Qualifier	Limits				
<i>o</i> -Terphenyl	97		50 - 150				
<i>n</i> -Triacontane-d62	101		50 - 150				

**Lab Sample ID: LCSD 590-39524/3-A**  
**Matrix: Water**  
**Analysis Batch: 39522**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 39524**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	
								RPD	Limit
DRO (C10-C25)	1600	1445		ug/L		90	50 - 150	1	25
RRO (C25-C36)	1600	1930		ug/L		121	50 - 150	4	25
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl	101		50 - 150						
<i>n</i> -Triacontane-d62	107		50 - 150						

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

**Lab Sample ID: MB 590-39514/1-B**  
**Matrix: Water**  
**Analysis Batch: 39542**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 39514**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
DRO (C10-C25)	ND		240	110	ug/L		12/19/22 12:35	12/21/22 22:51	1
RRO (C25-C36)	ND		400	120	ug/L		12/19/22 12:35	12/21/22 22:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	97		50 - 150				12/19/22 12:35	12/21/22 22:51	1
<i>n</i> -Triacontane-d62	106		50 - 150				12/19/22 12:35	12/21/22 22:51	1

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# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup (Continued)

**Lab Sample ID: LCS 590-39514/2-B**  
**Matrix: Water**  
**Analysis Batch: 39542**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 39514**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DRO (C10-C25)	1600	1472		ug/L		92	50 - 150
RRO (C25-C36)	1600	1900		ug/L		119	50 - 150
Surrogate		LCS %Recovery	LCS Qualifier	Limits			
o-Terphenyl		108		50 - 150			
n-Triacontane-d62		121		50 - 150			

**Lab Sample ID: LCSD 590-39514/3-B**  
**Matrix: Water**  
**Analysis Batch: 39542**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 39514**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
DRO (C10-C25)	1600	1420		ug/L		89	50 - 150	4	25
RRO (C25-C36)	1600	1813		ug/L		113	50 - 150	5	25
Surrogate		LCSD %Recovery	LCSD Qualifier	Limits					
o-Terphenyl		106		50 - 150					
n-Triacontane-d62		113		50 - 150					

**Lab Sample ID: MB 590-39524/1-B**  
**Matrix: Water**  
**Analysis Batch: 39542**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 39524**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		240	110	ug/L		12/20/22 10:14	12/22/22 04:36	1
RRO (C25-C36)	ND		400	120	ug/L		12/20/22 10:14	12/22/22 04:36	1
Surrogate		MB %Recovery	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac	
o-Terphenyl		97		50 - 150		12/20/22 10:14	12/22/22 04:36	1	
n-Triacontane-d62		101		50 - 150		12/20/22 10:14	12/22/22 04:36	1	

**Lab Sample ID: LCS 590-39524/2-B**  
**Matrix: Water**  
**Analysis Batch: 39542**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 39524**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DRO (C10-C25)	1600	1612		ug/L		101	50 - 150
RRO (C25-C36)	1600	1983		ug/L		124	50 - 150
Surrogate		LCS %Recovery	LCS Qualifier	Limits			
o-Terphenyl		107		50 - 150			
n-Triacontane-d62		114		50 - 150			

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup (Continued)

Lab Sample ID: LCSD 590-39524/3-B

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 39542

Prep Batch: 39524

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
DRO (C10-C25)	1600	1346		ug/L		84	50 - 150	18	25
RRO (C25-C36)	1600	1758		ug/L		110	50 - 150	12	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
<i>o</i> -Terphenyl	95		50 - 150
<i>n</i> -Triacontane-d62	101		50 - 150

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-39506/1003

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 39506

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		0.500	0.128	mg/L			12/19/22 10:57	1

Lab Sample ID: LCS 590-39506/1004

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 39506

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	12.5	12.71		mg/L		102	90 - 110

Lab Sample ID: 590-19465-5 MS

Client Sample ID: MW-202

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 39506

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	100		114	213.2		mg/L		99	80 - 120

Lab Sample ID: 590-19465-5 MSD

Client Sample ID: MW-202

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 39506

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	100		114	213.9		mg/L		100	80 - 120	0	10

Lab Sample ID: 590-19465-5 DU

Client Sample ID: MW-202

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 39506

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	100		114	99.60		mg/L				0.7	15.7

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# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Method: 6010D - Metals (ICP)

**Lab Sample ID: MB 590-39594/2-A**  
**Matrix: Water**  
**Analysis Batch: 39609**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 39594**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		60.0	5.10	ug/L		12/28/22 09:08	12/28/22 13:59	1

**Lab Sample ID: LCS 590-39594/1-A**  
**Matrix: Water**  
**Analysis Batch: 39609**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 39594**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	1000	1040		ug/L		104	80 - 120

**Lab Sample ID: 590-19465-29 MS**  
**Matrix: Water**  
**Analysis Batch: 39609**

**Client Sample ID: MW-104**  
**Prep Type: Total Recoverable**  
**Prep Batch: 39594**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	ND		1000	1032		ug/L		103	75 - 125

**Lab Sample ID: 590-19465-29 MSD**  
**Matrix: Water**  
**Analysis Batch: 39609**

**Client Sample ID: MW-104**  
**Prep Type: Total Recoverable**  
**Prep Batch: 39594**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lead	ND		1000	1030		ug/L		103	75 - 125	0	20

**Lab Sample ID: 590-19465-29 DU**  
**Matrix: Water**  
**Analysis Batch: 39609**

**Client Sample ID: MW-104**  
**Prep Type: Total Recoverable**  
**Prep Batch: 39594**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead	ND		ND		ug/L		NC	20

## Method: 6020B - Metals (ICP/MS)

**Lab Sample ID: MB 580-413678/19-C**  
**Matrix: Water**  
**Analysis Batch: 414038**

**Client Sample ID: Method Blank**  
**Prep Type: Dissolved**  
**Prep Batch: 413891**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		100	13.3	ug/L		12/27/22 17:04	12/28/22 16:58	1
Manganese	ND		2.00	0.459	ug/L		12/27/22 17:04	12/28/22 16:58	1

**Lab Sample ID: LCS 580-413678/20-C**  
**Matrix: Water**  
**Analysis Batch: 414038**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Dissolved**  
**Prep Batch: 413891**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	20000	20600		ug/L		103	80 - 120
Manganese	1000	989.4		ug/L		99	80 - 120

# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Method: 6020B - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCSD 580-413678/21-C**  
**Matrix: Water**  
**Analysis Batch: 414038**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Dissolved**  
**Prep Batch: 413891**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Iron	20000	19840		ug/L		99	80 - 120	4	20
Manganese	1000	975.2		ug/L		98	80 - 120	1	20

**Lab Sample ID: 580-121379-A-2-C MS**  
**Matrix: Water**  
**Analysis Batch: 414038**

**Client Sample ID: Matrix Spike**  
**Prep Type: Dissolved**  
**Prep Batch: 413891**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Iron	42.9	J	20000	23680		ug/L		118	80 - 120		
Manganese	2.70		1000	1010		ug/L		101	80 - 120		

**Lab Sample ID: 580-121379-A-2-D MSD**  
**Matrix: Water**  
**Analysis Batch: 414038**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Dissolved**  
**Prep Batch: 413891**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Iron	42.9	J	20000	20820		ug/L		104	80 - 120	13	20
Manganese	2.70		1000	1012		ug/L		101	80 - 120	0	20

**Lab Sample ID: 580-121493-J-1-C DU**  
**Matrix: Water**  
**Analysis Batch: 414038**

**Client Sample ID: Duplicate**  
**Prep Type: Dissolved**  
**Prep Batch: 413891**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Iron	223	J	188.0	J	ug/L		17	20
Manganese	327		297.7		ug/L		9	20

## Method: 353.2 - Nitrogen, Nitrate-Nitrite

**Lab Sample ID: MB 280-598896/104**  
**Matrix: Water**  
**Analysis Batch: 598896**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND	^	0.100	0.0440	mg/L			01/09/23 14:32	1

**Lab Sample ID: MB 280-598896/22**  
**Matrix: Water**  
**Analysis Batch: 598896**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.100	0.0440	mg/L			01/09/23 11:48	1

**Lab Sample ID: MB 280-598896/60**  
**Matrix: Water**  
**Analysis Batch: 598896**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.100	0.0440	mg/L			01/09/23 13:04	1

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# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

**Lab Sample ID: LCS 280-598896/103**  
**Matrix: Water**  
**Analysis Batch: 598896**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	5.00	4.451	^- *-	mg/L		89	90 - 110

**Lab Sample ID: LCS 280-598896/59**  
**Matrix: Water**  
**Analysis Batch: 598896**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	5.00	4.680		mg/L		94	90 - 110

**Lab Sample ID: 590-19465-26 MS**  
**Matrix: Water**  
**Analysis Batch: 598896**

**Client Sample ID: TX-03A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	ND	F1 ^- *-	4.00	2.896	F1 ^-	mg/L		72	90 - 110

**Lab Sample ID: 590-19465-26 MSD**  
**Matrix: Water**  
**Analysis Batch: 598896**

**Client Sample ID: TX-03A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	ND	F1 ^- *-	4.00	2.899	^- F1	mg/L		72	90 - 110	0	10

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Client Sample ID: TB-1

Date Collected: 12/12/22 09:00

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39528	12/20/22 17:26	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39529	12/20/22 17:26	JSP	EET SPK

## Client Sample ID: MW-101

Date Collected: 12/12/22 14:30

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39528	12/20/22 17:47	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39529	12/20/22 17:47	JSP	EET SPK
Total/NA	Prep	3510C			243.1 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 14:38	NMI	EET SPK

## Client Sample ID: MW-102

Date Collected: 12/12/22 12:48

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39528	12/20/22 18:31	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39529	12/20/22 18:31	JSP	EET SPK
Total/NA	Prep	3510C			265 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 14:59	NMI	EET SPK
Total/NA	Prep	3510C			265 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39547	12/19/22 12:35	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/21/22 23:52	NMI	EET SPK

## Client Sample ID: MW-201

Date Collected: 12/12/22 11:09

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39528	12/20/22 19:36	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39529	12/20/22 19:36	JSP	EET SPK
Total/NA	Prep	3510C			240.5 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 15:21	NMI	EET SPK
Total/NA	Prep	3510C			240.5 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39547	12/19/22 12:35	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 00:13	NMI	EET SPK

## Client Sample ID: MW-202

Date Collected: 12/12/22 11:40

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39528	12/20/22 20:19	JSP	EET SPK

Eurofins Spokane



# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-202**  
**Date Collected: 12/12/22 11:40**  
**Date Received: 12/16/22 12:30**

**Lab Sample ID: 590-19465-5**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39529	12/20/22 20:19	JSP	EET SPK
Total/NA	Prep	3510C			228.3 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 16:03	NMI	EET SPK
Total/NA	Prep	3510C			228.3 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39547	12/19/22 12:35	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 00:33	NMI	EET SPK
Total/NA	Analysis	300.0		10	5 mL	5 mL	39506	12/19/22 11:25	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	413678	12/22/22 14:37	TMH	EET SEA
Dissolved	Prep	3005A			50 mL	50 mL	413891	12/27/22 17:04	TMH	EET SEA
Dissolved	Analysis	6020B		5	50 mL	50 mL	414038	12/28/22 17:42	FCW	EET SEA
Total/NA	Analysis	353.2		1	100 mL	100 mL	598896	01/09/23 14:02	ZPM	EET DEN

**Client Sample ID: MW-204**  
**Date Collected: 12/12/22 11:08**  
**Date Received: 12/16/22 12:30**

**Lab Sample ID: 590-19465-6**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39528	12/20/22 20:41	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39529	12/20/22 20:41	JSP	EET SPK
Total/NA	Prep	3510C			258.9 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 16:24	NMI	EET SPK
Total/NA	Prep	3510C			258.9 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39547	12/19/22 12:35	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 00:53	NMI	EET SPK

**Client Sample ID: MW-206A**  
**Date Collected: 12/12/22 11:44**  
**Date Received: 12/16/22 12:30**

**Lab Sample ID: 590-19465-7**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39528	12/20/22 21:02	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39529	12/20/22 21:02	JSP	EET SPK
Total/NA	Prep	3510C			256.5 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 16:46	NMI	EET SPK
Total/NA	Prep	3510C			256.5 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39547	12/19/22 12:35	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 01:13	NMI	EET SPK

**Client Sample ID: MW-213**  
**Date Collected: 12/12/22 10:17**  
**Date Received: 12/16/22 12:30**

**Lab Sample ID: 590-19465-8**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39528	12/20/22 21:24	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39529	12/20/22 21:24	JSP	EET SPK

Eurofins Spokane

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Client Sample ID: MW-213

## Lab Sample ID: 590-19465-8

Date Collected: 12/12/22 10:17

Matrix: Water

Date Received: 12/16/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			248.5 mL	2 mL	39510	12/19/22 10:35	M1V	EET SPK
Total/NA	Analysis	8270E SIM		1	1 uL	1 uL	39521	12/20/22 11:37	NMI	EET SPK
Total/NA	Prep	3510C			263.2 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 17:07	NMI	EET SPK
Total/NA	Prep	3510C			263.2 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39547	12/19/22 12:35	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 01:34	NMI	EET SPK

## Client Sample ID: MW-214

## Lab Sample ID: 590-19465-9

Date Collected: 12/12/22 10:22

Matrix: Water

Date Received: 12/16/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39528	12/20/22 21:46	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39529	12/20/22 21:46	JSP	EET SPK
Total/NA	Prep	3510C			249 mL	2 mL	39510	12/19/22 10:35	M1V	EET SPK
Total/NA	Analysis	8270E SIM		1	1 uL	1 uL	39521	12/20/22 12:00	NMI	EET SPK
Total/NA	Prep	3510C			269.8 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 17:28	NMI	EET SPK
Total/NA	Prep	3510C			269.8 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39547	12/19/22 12:35	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 01:54	NMI	EET SPK

## Client Sample ID: MW-307

## Lab Sample ID: 590-19465-10

Date Collected: 12/12/22 14:20

Matrix: Water

Date Received: 12/16/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39528	12/20/22 22:07	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39529	12/20/22 22:07	JSP	EET SPK
Total/NA	Prep	3510C			250 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 17:49	NMI	EET SPK
Total/NA	Prep	3510C			250 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39547	12/19/22 12:35	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 02:34	NMI	EET SPK
Total/NA	Analysis	300.0		10	5 mL	5 mL	39506	12/19/22 12:21	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	413678	12/22/22 14:37	TMH	EET SEA
Dissolved	Prep	3005A			50 mL	50 mL	413891	12/27/22 17:04	TMH	EET SEA
Dissolved	Analysis	6020B		5	50 mL	50 mL	414038	12/28/22 18:01	FCW	EET SEA
Total/NA	Analysis	353.2		1	100 mL	100 mL	598896	01/09/23 14:04	ZPM	EET DEN

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Client Sample ID: MW-308

Date Collected: 12/12/22 13:53

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39528	12/20/22 22:29	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39529	12/20/22 22:29	JSP	EET SPK
Total/NA	Analysis	300.0		4	5 mL	5 mL	39506	12/19/22 12:34	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	413678	12/22/22 14:37	TMH	EET SEA
Dissolved	Prep	3005A			50 mL	50 mL	413891	12/27/22 17:04	TMH	EET SEA
Dissolved	Analysis	6020B		5	50 mL	50 mL	414038	12/28/22 18:05	FCW	EET SEA
Total/NA	Analysis	353.2		1	100 mL	100 mL	598896	01/09/23 14:06	ZPM	EET DEN

## Client Sample ID: TES-MW-1

Date Collected: 12/12/22 13:58

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39528	12/20/22 22:50	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39529	12/20/22 22:50	JSP	EET SPK
Total/NA	Prep	3510C			234 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 18:10	NMI	EET SPK

## Client Sample ID: TX-06A

Date Collected: 12/12/22 12:50

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39528	12/20/22 23:12	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39529	12/20/22 23:12	JSP	EET SPK
Total/NA	Prep	3510C			255.5 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 18:31	NMI	EET SPK
Total/NA	Prep	3510C			255.5 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39547	12/19/22 12:35	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 02:55	NMI	EET SPK

## Client Sample ID: MW-112A

Date Collected: 12/13/22 14:31

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39528	12/20/22 23:34	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39529	12/20/22 23:34	JSP	EET SPK
Total/NA	Prep	3510C			271.8 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 18:52	NMI	EET SPK
Total/NA	Prep	3510C			271.8 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39547	12/19/22 12:35	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 03:15	NMI	EET SPK

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Client Sample ID: MW-301

Lab Sample ID: 590-19465-15

Date Collected: 12/13/22 10:22

Matrix: Water

Date Received: 12/16/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 14:26	JSP	EET SPK

## Client Sample ID: MW-302

Lab Sample ID: 590-19465-16

Date Collected: 12/13/22 08:20

Matrix: Water

Date Received: 12/16/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 15:10	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 15:10	JSP	EET SPK
Total/NA	Prep	3510C			254.4 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 19:13	NMI	EET SPK
Total/NA	Prep	3510C			254.4 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39547	12/19/22 12:35	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 03:35	NMI	EET SPK
Total/NA	Analysis	300.0		10	5 mL	5 mL	39506	12/19/22 12:48	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	413678	12/22/22 14:37	TMH	EET SEA
Dissolved	Prep	3005A			50 mL	50 mL	413891	12/27/22 17:04	TMH	EET SEA
Dissolved	Analysis	6020B		5	50 mL	50 mL	414038	12/28/22 18:08	FCW	EET SEA
Total/NA	Analysis	353.2		1	100 mL	100 mL	598896	01/09/23 14:08	ZPM	EET DEN

## Client Sample ID: MW-303

Lab Sample ID: 590-19465-17

Date Collected: 12/13/22 09:22

Matrix: Water

Date Received: 12/16/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 16:16	JSP	EET SPK
Total/NA	Analysis	8260D		10	43 mL	43 mL	39572	12/22/22 18:09	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 16:16	JSP	EET SPK
Total/NA	Prep	3510C			269.9 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 19:55	NMI	EET SPK
Total/NA	Prep	3510C			269.9 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39547	12/19/22 12:35	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 03:55	NMI	EET SPK

## Client Sample ID: MW-304

Lab Sample ID: 590-19465-18

Date Collected: 12/13/22 08:47

Matrix: Water

Date Received: 12/16/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 16:38	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 16:38	JSP	EET SPK
Total/NA	Prep	3510C			256.2 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 20:16	NMI	EET SPK

Eurofins Spokane

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Client Sample ID: MW-304

## Lab Sample ID: 590-19465-18

Date Collected: 12/13/22 08:47

Matrix: Water

Date Received: 12/16/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			256.2 mL	2 mL	39514	12/19/22 12:35	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39547	12/19/22 12:35	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 04:16	NMI	EET SPK
Total/NA	Analysis	300.0		10	5 mL	5 mL	39506	12/19/22 13:02	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	413678	12/22/22 14:37	TMH	EET SEA
Dissolved	Prep	3005A			50 mL	50 mL	413891	12/27/22 17:04	TMH	EET SEA
Dissolved	Analysis	6020B		5	50 mL	50 mL	414038	12/28/22 17:58	FCW	EET SEA
Total/NA	Analysis	353.2		1	100 mL	100 mL	598896	01/09/23 14:10	ZPM	EET DEN

## Client Sample ID: MW-309

## Lab Sample ID: 590-19465-19

Date Collected: 12/13/22 09:51

Matrix: Water

Date Received: 12/16/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 17:01	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 17:01	JSP	EET SPK
Total/NA	Prep	3510C			255.5 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 21:40	NMI	EET SPK
Total/NA	Prep	3510C			255.5 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39548	12/20/22 10:14	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 05:36	NMI	EET SPK

## Client Sample ID: MW-310

## Lab Sample ID: 590-19465-20

Date Collected: 12/13/22 07:49

Matrix: Water

Date Received: 12/16/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 17:23	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 17:23	JSP	EET SPK
Total/NA	Prep	3510C			254.6 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 22:00	NMI	EET SPK
Total/NA	Prep	3510C			254.6 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39548	12/20/22 10:14	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 06:17	NMI	EET SPK
Total/NA	Analysis	300.0		10	5 mL	5 mL	39506	12/19/22 13:15	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	413678	12/22/22 14:37	TMH	EET SEA
Dissolved	Prep	3005A			50 mL	50 mL	413891	12/27/22 17:04	TMH	EET SEA
Dissolved	Analysis	6020B		5	50 mL	50 mL	414038	12/28/22 18:10	FCW	EET SEA
Total/NA	Analysis	353.2		1	100 mL	100 mL	598896	01/09/23 14:12	ZPM	EET DEN

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Client Sample ID: MW-311

Date Collected: 12/13/22 12:50

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-21

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 18:06	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 18:06	JSP	EET SPK
Total/NA	Analysis	300.0		1	5 mL	5 mL	39506	12/19/22 13:29	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	413678	12/22/22 14:37	TMH	EET SEA
Dissolved	Prep	3005A			50 mL	50 mL	413891	12/27/22 17:04	TMH	EET SEA
Dissolved	Analysis	6020B		5	50 mL	50 mL	414038	12/28/22 17:47	FCW	EET SEA
Total/NA	Analysis	353.2		1	100 mL	100 mL	598896	01/09/23 14:14	ZPM	EET DEN

## Client Sample ID: MW-312

Date Collected: 12/13/22 12:11

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-22

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 18:27	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 18:27	JSP	EET SPK
Total/NA	Analysis	300.0		1	5 mL	5 mL	39506	12/19/22 14:12	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	413678	12/22/22 14:37	TMH	EET SEA
Dissolved	Prep	3005A			50 mL	50 mL	413891	12/27/22 17:04	TMH	EET SEA
Dissolved	Analysis	6020B		5	50 mL	50 mL	414038	12/28/22 17:44	FCW	EET SEA
Total/NA	Analysis	353.2		1	100 mL	100 mL	598896	01/09/23 14:16	ZPM	EET DEN

## Client Sample ID: MW-313

Date Collected: 12/13/22 11:09

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-23

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 18:49	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 18:49	JSP	EET SPK
Total/NA	Prep	3510C			262 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 22:21	NMI	EET SPK
Total/NA	Prep	3510C			262 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39548	12/20/22 10:14	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 06:37	NMI	EET SPK

## Client Sample ID: MW-315

Date Collected: 12/13/22 11:37

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-24

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 19:10	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 19:10	JSP	EET SPK
Total/NA	Prep	3510C			256.8 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 22:42	NMI	EET SPK

Eurofins Spokane



# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-315**  
**Date Collected: 12/13/22 11:37**  
**Date Received: 12/16/22 12:30**

**Lab Sample ID: 590-19465-24**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			256.8 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39548	12/20/22 10:14	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 06:58	NMI	EET SPK

**Client Sample ID: SH-04**  
**Date Collected: 12/13/22 13:59**  
**Date Received: 12/16/22 12:30**

**Lab Sample ID: 590-19465-25**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 19:32	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 19:32	JSP	EET SPK
Total/NA	Prep	3510C			270.9 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 23:03	NMI	EET SPK
Total/NA	Prep	3510C			270.9 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39548	12/20/22 10:14	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 07:18	NMI	EET SPK

**Client Sample ID: TX-03A**  
**Date Collected: 12/13/22 14:58**  
**Date Received: 12/16/22 12:30**

**Lab Sample ID: 590-19465-26**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 19:53	JSP	EET SPK
Total/NA	Analysis	8260D		10	43 mL	43 mL	39572	12/22/22 18:30	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 19:53	JSP	EET SPK
Total/NA	Prep	3510C			272.1 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/20/22 23:44	NMI	EET SPK
Total/NA	Prep	3510C			272.1 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39548	12/20/22 10:14	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 07:38	NMI	EET SPK
Total/NA	Analysis	300.0		1	5 mL	5 mL	39506	12/19/22 14:26	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	413678	12/22/22 14:37	TMH	EET SEA
Dissolved	Prep	3005A			50 mL	50 mL	413891	12/27/22 17:04	TMH	EET SEA
Dissolved	Analysis	6020B		5	50 mL	50 mL	414038	12/28/22 17:40	FCW	EET SEA
Total/NA	Analysis	353.2		1	100 mL	100 mL	598896	01/09/23 14:34	ZPM	EET DEN

**Client Sample ID: TX-04**  
**Date Collected: 12/13/22 13:27**  
**Date Received: 12/16/22 12:30**

**Lab Sample ID: 590-19465-27**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 20:15	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 20:15	JSP	EET SPK
Total/NA	Prep	3510C			258.9 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/21/22 00:05	NMI	EET SPK

Eurofins Spokane

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Client Sample ID: MW-05

Date Collected: 12/14/22 10:18

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-28

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 20:36	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 20:36	JSP	EET SPK
Total/NA	Prep	3510C			244.7 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/21/22 00:26	NMI	EET SPK
Total/NA	Prep	3510C			244.7 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39548	12/20/22 10:14	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 07:59	NMI	EET SPK

## Client Sample ID: MW-104

Date Collected: 12/14/22 10:47

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-29

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 20:58	JSP	EET SPK
Total/NA	Prep	3510C			244.5 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/21/22 00:46	NMI	EET SPK
Total/NA	Prep	3510C			244.5 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39548	12/20/22 10:14	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 08:20	NMI	EET SPK
Total Recoverable	Prep	3005A			50 mL	50 mL	39594	12/28/22 09:08	AMB	EET SPK
Total Recoverable	Analysis	6010D		1			39609	12/28/22 14:03	AMB	EET SPK

## Client Sample ID: MW-105

Date Collected: 12/14/22 09:21

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-30

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 21:19	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 21:19	JSP	EET SPK
Total/NA	Prep	3510C			268.7 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/21/22 01:07	NMI	EET SPK
Total/NA	Prep	3510C			268.7 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39548	12/20/22 10:14	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 08:40	NMI	EET SPK
Total Recoverable	Prep	3005A			50 mL	50 mL	39594	12/28/22 09:08	AMB	EET SPK
Total Recoverable	Analysis	6010D		1			39609	12/28/22 14:27	AMB	EET SPK

## Client Sample ID: MW-111

Date Collected: 12/14/22 11:19

Date Received: 12/16/22 12:30

## Lab Sample ID: 590-19465-31

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 22:02	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 22:02	JSP	EET SPK

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# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Client Sample ID: MW-111

Lab Sample ID: 590-19465-31

Date Collected: 12/14/22 11:19

Matrix: Water

Date Received: 12/16/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			254.2 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/21/22 01:28	NMI	EET SPK
Total/NA	Prep	3510C			254.2 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39548	12/20/22 10:14	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 09:01	NMI	EET SPK

## Client Sample ID: MW-113

Lab Sample ID: 590-19465-32

Date Collected: 12/14/22 08:51

Matrix: Water

Date Received: 12/16/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 22:23	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 22:23	JSP	EET SPK
Total/NA	Prep	3510C			249 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/21/22 01:49	NMI	EET SPK
Total/NA	Prep	3510C			249 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39548	12/20/22 10:14	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 09:21	NMI	EET SPK

## Client Sample ID: MW-114

Lab Sample ID: 590-19465-33

Date Collected: 12/14/22 07:52

Matrix: Water

Date Received: 12/16/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 22:45	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 22:45	JSP	EET SPK
Total/NA	Prep	3510C			269.9 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/21/22 02:09	NMI	EET SPK
Total/NA	Prep	3510C			269.9 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39548	12/20/22 10:14	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 10:04	NMI	EET SPK

## Client Sample ID: MW-115

Lab Sample ID: 590-19465-34

Date Collected: 12/14/22 08:22

Matrix: Water

Date Received: 12/16/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	39543	12/21/22 23:06	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39544	12/21/22 23:06	JSP	EET SPK
Total/NA	Prep	3510C			231.3 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/21/22 02:30	NMI	EET SPK
Total/NA	Prep	3510C			231.3 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39548	12/20/22 10:14	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 10:25	NMI	EET SPK

Eurofins Spokane

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

**Client Sample ID: MW-203**

**Lab Sample ID: 590-19465-35**

**Date Collected: 12/14/22 12:31**

**Matrix: Water**

**Date Received: 12/16/22 12:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	39573	12/22/22 18:51	JSP	EET SPK
Total/NA	Prep	3510C			244.3 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39522	12/21/22 02:51	NMI	EET SPK
Total/NA	Prep	3510C			244.3 mL	2 mL	39524	12/20/22 10:14	M1V	EET SPK
Total/NA	Cleanup	3630C			1 mL	1 mL	39548	12/20/22 10:14	NMI	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	39542	12/22/22 10:47	NMI	EET SPK
Total/NA	Analysis	300.0		1	5 mL	5 mL	39506	12/19/22 14:39	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	413678	12/22/22 14:37	TMH	EET SEA
Dissolved	Prep	3005A			50 mL	50 mL	413891	12/27/22 17:04	TMH	EET SEA
Dissolved	Analysis	6020B		5	50 mL	50 mL	414038	12/28/22 18:03	FCW	EET SEA
Total/NA	Analysis	353.2		1	100 mL	100 mL	598896	01/09/23 14:40	ZPM	EET DEN

**Laboratory References:**

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100  
 EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310  
 EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

# Accreditation/Certification Summary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

## Laboratory: Eurofins Spokane

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4137	12-07-23
Washington	State	C569	01-06-23

## Laboratory: Eurofins Denver

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4025-011	01-09-23
Washington	State	C583-19	08-03-23

## Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-08-23
Washington	State	C788	07-13-23



# Method Summary

Client: GHD Services Inc.  
Project/Site: 2555 13th Avenue

Job ID: 590-19465-1

Method	Method Description	Protocol	Laboratory
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	EET SPK
8270E SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	EET SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	EET SPK
NWTPH-Dx	Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup	NWTPH	EET SPK
300.0	Anions, Ion Chromatography	MCAWW	EET SPK
6010D	Metals (ICP)	SW846	EET SPK
6020B	Metals (ICP/MS)	SW846	EET SEA
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	EET DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SEA
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SPK
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET SPK
3630C	Silica Gel Cleanup	SW846	EET SPK
5030C	Purge and Trap	SW846	EET SPK
FILTRATION	Sample Filtration	None	EET SEA

#### Protocol References:

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

None = None

NWTPH = Northwest Total Petroleum Hydrocarbon

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

#### Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

**LAB (LOCATION)**

ACCUTEST ( \_\_\_\_\_ )  
 CALSCIENCE ( \_\_\_\_\_ )  
 TESTAMERICA ( \_\_\_\_\_ )  
 Other ( \_\_\_\_\_ )

Lab Vendor # \_\_\_\_\_ Dropdown



# Shell Oil Products US Chain Of Custody Record

<b>Please Check Appropriate Box:</b> <input type="checkbox"/> SGW FDG <input type="checkbox"/> PIPELINE <input type="checkbox"/> RETAIL <input type="checkbox"/> CHEMICALS <input type="checkbox"/> CONSULTANT <input type="checkbox"/> LUBES <input type="checkbox"/> TRANSPORTATION <input type="checkbox"/> OTHER _____			<b>Print Bill To Contact Name:</b>  <b>PO #</b>	<b>PlaNNet Site or Project ID</b>  <b>GSAP Project ID</b>	<input type="checkbox"/> CHECK IF NO INCIDENT # APPLIES DATE: <i>12/14/22</i> PAGE: <i>1</i> of <i>4</i>
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<b>SAMPLING COMPANY:</b> Blaine Tech Services, Inc ADDRESS: 1680 Rogers Ave, San Jose, CA, 95112		<b>LOG CODE:</b> BTSS	<b>SITE ADDRESS: Street and City</b> 2555 13th Avenue State: WA	<b>GHD Project / Task Number:</b> 11218519																					
<b>PROJECT CONTACT (Handcopy or PDF Report to)</b> Jacquelyn England TELEPHONE: (707)523-1010    FAX: _____ Bill To Contact E-MAIL: jacquelyn.england@ghd.com		<b>EDF DELIVERABLE TO (Name, Company, Office Location)</b> Jacquelyn England, GHD, Santa Rosa    (707)523-1010    jacquelyn.england@ghd.com		<b>AECOM Other ID</b>  LAB USE ONLY																					
<b>TURNAROUND TIME (CALENDAR DAYS):</b> <input checked="" type="checkbox"/> STANDARD (14 DAY) <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 3 DAYS <input type="checkbox"/> 2 DAYS <input type="checkbox"/> 24 HOURS <input type="checkbox"/> RESULTS NEEDED ON WEEKEND		<b>REQUESTED ANALYSIS</b> <table border="1"> <thead> <tr> <th colspan="5">UNIT COST</th> <th colspan="5">NON-UNIT COST</th> </tr> </thead> <tbody> <tr> <td>8280C BTEX</td> <td>IWTPH-Dx</td> <td>8270D SIM PAH6</td> <td>300.0 Sulfide</td> <td></td> <td>IWTPH-GX</td> <td>8020A Total Lead</td> <td>553.2 Nitrate &amp; Nitrite</td> <td>8020A Diss. Iron &amp; Manganese (Lab Filter)</td> <td>300.0 Chloride</td> <td>2320B Alkalinity</td> </tr> </tbody> </table>		UNIT COST					NON-UNIT COST					8280C BTEX	IWTPH-Dx	8270D SIM PAH6	300.0 Sulfide		IWTPH-GX	8020A Total Lead	553.2 Nitrate & Nitrite	8020A Diss. Iron & Manganese (Lab Filter)	300.0 Chloride	2320B Alkalinity	<b>FIELD NOTES:</b>  <b>TEMPERATURE ON RECEIPT C°</b>  <b>Container PID Readings or Laboratory Notes</b>
UNIT COST					NON-UNIT COST																				
8280C BTEX	IWTPH-Dx	8270D SIM PAH6	300.0 Sulfide		IWTPH-GX	8020A Total Lead	553.2 Nitrate & Nitrite	8020A Diss. Iron & Manganese (Lab Filter)	300.0 Chloride	2320B Alkalinity															
<input type="checkbox"/> LA RWQCB REPORT FORMAT <input type="checkbox"/> UST AGENCY <b>DELIVERABLES:</b> <input type="checkbox"/> LEVEL 1 <input type="checkbox"/> LEVEL 2 <input type="checkbox"/> LEVEL 3 <input type="checkbox"/> LEVEL 4 <input type="checkbox"/> OTHER (SPECIFY) _____ <b>TEMPERATURE ON RECEIPT C°</b> Cooler #1 _____    Cooler #2 _____    Cooler #3 _____		<b>SPECIAL INSTRUCTIONS OR NOTES</b> <input type="checkbox"/> SHELL CONTRACT RATE APPLIES <input type="checkbox"/> STATE REIMBURSEMENT RATE APPLIES <input type="checkbox"/> EDD NOT NEEDED <input type="checkbox"/> RECEIPT VERIFICATION REQUESTED <input type="checkbox"/> PROVIDE LEDD DISK																							

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT	REQUESTED ANALYSIS															
		DATE	TIME		HCL	H2SO4	NONE	OTHER	8280C BTEX		IWTPH-Dx	8270D SIM PAH6	300.0 Sulfide	IWTPH-GX	8020A Total Lead	553.2 Nitrate & Nitrite	8020A Diss. Iron & Manganese (Lab Filter)	300.0 Chloride	2320B Alkalinity							
	TB-1	12/12	0960	LT	X					2	X															
	MW-101		1430		X					6	X	X														
	MW-102		1248		X					6	X	X														
	MW-201		1109		X					6	X	X														
	MW-202		1140		X		X	X		9	X	X	X			X	X									
	MW-204		1108		X					6	X	X														
	MW-206A		1144		X					6	X	X														
	MW 213		1017		X			X		8	X	X	X													
	MW-214		1022		X			X		8	X	X	X													
	MU-307		1420		X		X	X		9	X	X	X		X	X	X									



Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) SHIPPED VIA FedEx <i>[Signature]</i>	Date: 12/15/22	Time:  
Relinquished by: (Signature)  	Received by: (Signature)  	Date: 12/16/22	Time: 1230
Relinquished by: (Signature)  	Received by: (Signature)  	Date:  	Time:  

LAB (LOCATION)

- ACCUTEST (\_\_\_\_\_)
- CALSCIENCE (\_\_\_\_\_)
- TESTAMERICA (\_\_\_\_\_)
- Other (\_\_\_\_\_)

Lab Vendor # \_\_\_\_\_ Dropdown



# Shell Oil Products US Chain Of Custody Record

**Please Check Appropriate Box:**

<input type="checkbox"/> SGW FDG	<input type="checkbox"/> PIPELINE	<input type="checkbox"/> RETAIL
<input type="checkbox"/> CHEMICALS	<input type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES
<input type="checkbox"/> TRANSPORTATION	<input type="checkbox"/> OTHER _____	

<b>Print Bill To Contact Name</b>	<b>PlaNet Site or Project ID</b>	<input type="checkbox"/> CHECK IF NO INCIDENT # APPLIES
PO # _____	GSAP Project ID _____	DATE: <u>12/14/22</u>
		PAGE: <u>2</u> of <u>4</u>

**SAMPLING COMPANY**  
Blaine Tech Services Inc

**LOG CODE:**  
BTSS

**ADDRESS:**  
1680 Rogers Ave, San Jose, CA, 95112

**PROJECT CONTACT (Hardcopy or PDF Report to):**  
Jacquelyn England

**TELEPHONE:** (707)523-1010  
**FAX:** \_\_\_\_\_  
**Bill To Contact E-MAIL:** jacquelyn\_england@ghd.com

**TURNAROUND TIME (CALENDAR DAYS):**  
 STANDARD (14 DAY)  
  5 DAYS  
  3 DAYS  
  2 DAYS  
  24 HOURS  
  RESULTS NEEDED ON WEEKEND

LA RWQCB REPORT FORMAT    UST AGENCY

**DELIVERABLES:**  LEVEL 1    LEVEL 2    LEVEL 3    LEVEL 4    OTHER (SPECIFY) \_\_\_\_\_

**TEMPERATURE ON RECEIPT C°**   Cooler #1 \_\_\_\_\_   Cooler #2 \_\_\_\_\_   Cooler #3 \_\_\_\_\_

**SPECIAL INSTRUCTIONS OR NOTES**

SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 EDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED  
 PROVIDE LEDD DISK

**SITE ADDRESS: Street and City**  
2555 13th Avenue

**State:** WA

**GHD Project / Task Number:** 11218619

**EDF DELIVERABLE TO (Name, Company, Office Location):** Jacquelyn England, GHD, Santa Rosa

**PHONE NO:** (707)523-1010

**E-MAIL:** jacquelyn\_england@ghd.com

**AECOM Other ID:** \_\_\_\_\_

**SAMPLER NAME(S) (Print):** Sonah Davis, Christina Mroz

**LAB USE ONLY**

REQUESTED ANALYSIS												FIELD NOTES
UNIT COST						NON-UNIT COST						
8280G BTEX	INWTPH-GX	8270G SIM PAHs	300.0 Sulfide	INWTPH-GX	6020A Total Lead	353.2 Nitrate & Nitrite	6020A Diss. Iron & Manganese (lab filtered)	300.0 Chloride	2320B Alkalinity	Container PID Readings or Laboratory Notes		

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT	ANALYSIS										FIELD NOTES			
		DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER		UNIT COST						NON-UNIT COST							
											8280G BTEX	INWTPH-GX	8270G SIM PAHs	300.0 Sulfide	INWTPH-GX	6020A Total Lead	353.2 Nitrate & Nitrite	6020A Diss. Iron & Manganese (lab filtered)	300.0 Chloride	2320B Alkalinity				
	MW-308	12/14/22	1353	WT	X	X	X			7	X													
	TES-MW-1		1358		X					6	X	X												
	Tx-06A		1250		X					6	X	X												
	MW-112A	12/15/22	1431		X					6	X	X												
	MW-301		1022		X					4	X	X												
	MW-302		0820		X		X	X		9	X	X	X			X	X							
	MW-303		0922		X					6	X	X												
	MW-304		0847		X		X	X		9	X	X	X			X	X	X						
	MW-309		0951		X					6	X	X												
	MW-310		0719		X		X	X		9	X	X	X			X	X	X						

Relinquished by (Signature): <u>[Signature]</u>	Received by (Signature): <u>SHIPPED VIA FEDEX</u>	Date: <u>12/15/22</u>	Time: _____
Relinquished by (Signature): _____	Received by (Signature): _____	Date: _____	Time: _____
Relinquished by (Signature): _____	Received by (Signature): _____	Date: _____	Time: _____

Version: 14Dec15

LAB (LOCATION)



Shell Oil Products US Chain Of Custody Record

ACCUTEST ( )  
 CALSCIENCE ( )  
 TESTAMERICA ( )  
 Other ( )

Lab Vendor # \_\_\_\_\_ Dropdown

Please Check Appropriate Box:

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<input type="checkbox"/> TRANSPORTATION	<input type="checkbox"/> OTHER _____	

Print Bill To Contact Name: \_\_\_\_\_

PlaNNet Site or Project ID: \_\_\_\_\_

PO #: \_\_\_\_\_

GSAP Project ID: \_\_\_\_\_

DATE: 12/14/22

PAGE: 3 of 4

CHECK IF NO INCIDENT # APPLIES

SAMPLING COMPANY: Blaine Tech Services, Inc

LOG CODE: BTSS

ADDRESS: 1680 Rogers Ave, San Jose, CA, 95112

PROJECT CONTACT (Hardcopy or PDF Report to): Jacquelyn England

TELEPHONE: (707)523-1010 FAX: \_\_\_\_\_

TURNAROUND TIME (CALENDAR DAYS):  
 STANDARD (14 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS  RESULTS NEEDED ON WEEKEND

DELIVERABLES:  LEVEL 1  LEVEL 2  LEVEL 3  LEVEL 4  OTHER (SPECIFY) \_\_\_\_\_

TEMPERATURE ON RECEIPT C\* Cooler #1 \_\_\_\_\_ Cooler #2 \_\_\_\_\_ Cooler #3 \_\_\_\_\_

SPECIAL INSTRUCTIONS OR NOTES

SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 EDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED  
 PROVIDE LEDD DISK

SITE ADDRESS: Street and City: 2555 13th Avenue State: WA

EDF DELIVERABLE TO (Name, Company, Office Location): Jacquelyn England, GHD, Santa Rosa PHONE NO: (707)523-1010 E-MAIL: jacquelyn.england@ghd.com

GHD Project / Task Number: 11218519

SAMPLER NAME(S) (Print): \_\_\_\_\_ LAB USE ONLY

REQUESTED ANALYSIS												FIELD NOTES
UNIT COST						NON-UNIT COST						
8280C BTEX	NWTPH-Dx	8270D SIM PAHs	300.0 Sulfate			NWTPH-GX	8020A Total Lead	8552 Nitrate & Nitrite	8020A Diss. Iron & Manganese (lab filter)	300.0 Chloride	2220B Alkalinity	Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification		SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT	REQUESTED ANALYSIS												TEMPERATURE ON RECEIPT C*
			DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER		8280C BTEX	NWTPH-Dx	8270D SIM PAHs	300.0 Sulfate	NWTPH-GX	8020A Total Lead	8552 Nitrate & Nitrite	8020A Diss. Iron & Manganese (lab filter)	300.0 Chloride	2220B Alkalinity			
			MW-311	12/14/22		1250	WT	X	X	X				7	X		X			X	X	X		
MW-312		1211		X	X	X			7	X		X			X	X	X							
MW-313		1109		X					6	X	X				X									
MW-315		1137		X					6	X	X				X									
SH-04		1359		X					6	X	X				X									
TX-03A		1458		X	X	X			9	X	X	X			X	X	X							
TX-04		1327		X					6	X	X				X									
MW-05	12/14/22	1018		X					6	X	X				X									
MW-104		1047		X	X				7		X				X	X								
MW-105		0921		X	X				7	X	X				X	X								

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	SHEPHERD VIA FEDEX	12/15/22	
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Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:



LAB (LOCATION)

- ACCUTEST ( )
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 5 DAYS   
 3 DAYS   
 2 DAYS   
 24 HOURS   
 RESULTS NEEDED ON WEEKEND

LA RWQCB REPORT FORMAT     UST AGENCY

**DELIVERABLES:**   
 LEVEL 1   
 LEVEL 2   
 LEVEL 3   
 LEVEL 4   
 OTHER (SPECIFY) \_\_\_\_\_

**TEMPERATURE ON RECEIPT C°**    Cooler #1    Cooler #2    Cooler #3

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**SITE ADDRESS: Street and City**  
2555 13th Avenue

**State**  
WA

**GHD Project / Task Number**  
11218519

**EDF DELIVERABLE TO (Name, Company, Office Location):** Jacquelyn England, GHD, Santa Rosa      **PHONE NO.:** (707)523-1010      **E-MAIL:** jacquelyn.england@ghd.com      **AECOM Other ID**

**SAMPLER NAME(S) (Print):** Jonah Davis, Christina Mroz      **LAB USE ONLY**

REQUESTED ANALYSIS		UNIT COST	NON-UNIT COST	FIELD NOTES
8280C BTEX	NWTPH-GX			TEMPERATURE ON RECEIPT C°
8270D SIM PAHs	NWTPH-GX			
300.0 Sulfate	NWTPH-GX			
6020A Total Lead	NWTPH-GX			
333.2 Nitrate & Nitrite	NWTPH-GX			
6020A Disa. Iron & Manganese (lab filter)				Container PID Readings or Laboratory Notes
300.0 Chloride				
2220B Alkalinity				

LAB USE ONLY	Field Sample Identification		SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT	REQUESTED ANALYSIS										FIELD NOTES						
			DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER		8280C BTEX	NWTPH-GX	8270D SIM PAHs	300.0 Sulfate	6020A Total Lead	333.2 Nitrate & Nitrite	6020A Disa. Iron & Manganese (lab filter)	300.0 Chloride	2220B Alkalinity								
	MW-111		12/14/22	1119	WT	X					6	X	X															
	MW-113			0851		X					6	X	X															
	MW-114			0752		X					6	X	X															
	MW-115			0822		X					6	X	X															
	MW-203			1231		X		X	X		9	X	X	X	X	X												

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

Version: 14Dec15



**Eurofins Spokane**  
 11922 East 1st Ave  
 Spokane, WA 99206  
 Phone: 509-924-9200 Fax: 509-924-9290

# Chain of Custody Record



Environment Testing



<b>Client Information (Sub Contract Lab)</b>		Lab P#: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-7410-1																																																																																																														
Client Contact: Shipping/Receiving		E-Mail: Randee.Arrington@et.eurofins.com	State of Origin: Washington	Page: Page 1 of 2																																																																																																														
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Oregon; State - Washington; State Program - Was ...		Job #: 590-19465-1																																																																																																														
Address: 4955 Yarrow Street,		<b>Analysis Requested</b>																																																																																																																
City: Arvada		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - NCAAA W - pH 4-5 Y - Trizma Z - other (specify)																																																																																																																
Due Date Requested: 1/3/2023		Total Number of containers																																																																																																																
TAT Requested (days):		353.2, Pres/ Nitrate-Nitrite																																																																																																																
PO #:		Field Filtered Sample (Yes or No)																																																																																																																
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Project #: 59002120		Special Instructions/Note:																																																																																																																
Site: Shell - Washington		<table border="1"> <thead> <tr> <th>Sample Identification - Client ID (Lab ID)</th> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (C=Comp, G=grab)</th> <th>Matrix (Water, Solid, Organic)</th> <th>Preservation Code:</th> <th>Field Filtered Sample (Yes or No)</th> <th>Perform MS/MSD (Yes or No)</th> <th>353.2, Pres/ Nitrate-Nitrite</th> <th>Total Number of containers</th> <th>Special Instructions/Note:</th> </tr> </thead> <tbody> <tr> <td>MW-202 (590-19465-5)</td> <td>12/12/22</td> <td>11:40 Pacific</td> <td>Water</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> <td>1</td> <td></td> </tr> <tr> <td>MW-307 (590-19465-10)</td> <td>12/12/22</td> <td>14:20 Pacific</td> <td>Water</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> <td>1</td> <td></td> </tr> <tr> <td>MW-308 (590-19465-11)</td> <td>12/12/22</td> <td>13:53 Pacific</td> <td>Water</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> <td>1</td> <td></td> </tr> <tr> <td>MW-302 (590-19465-16)</td> <td>12/13/22</td> <td>08:20 Pacific</td> <td>Water</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> <td>1</td> <td></td> </tr> <tr> <td>MW-304 (590-19465-18)</td> <td>12/13/22</td> <td>08:47 Pacific</td> <td>Water</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> <td>1</td> <td></td> </tr> <tr> <td>MW-310 (590-19465-20)</td> <td>12/13/22</td> <td>07:49 Pacific</td> <td>Water</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> <td>1</td> <td></td> </tr> <tr> <td>MW-311 (590-19465-21)</td> <td>12/13/22</td> <td>12:50 Pacific</td> <td>Water</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> <td>1</td> <td></td> </tr> <tr> <td>MW-312 (590-19465-22)</td> <td>12/13/22</td> <td>12:11 Pacific</td> <td>Water</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> <td>1</td> <td></td> </tr> <tr> <td>TX-03A (590-19465-26)</td> <td>12/13/22</td> <td>14:58 Pacific</td> <td>Water</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> <td>1</td> <td></td> </tr> </tbody> </table>			Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Organic)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	353.2, Pres/ Nitrate-Nitrite	Total Number of containers	Special Instructions/Note:	MW-202 (590-19465-5)	12/12/22	11:40 Pacific	Water	Water	X	X			1		MW-307 (590-19465-10)	12/12/22	14:20 Pacific	Water	Water	X	X			1		MW-308 (590-19465-11)	12/12/22	13:53 Pacific	Water	Water	X	X			1		MW-302 (590-19465-16)	12/13/22	08:20 Pacific	Water	Water	X	X			1		MW-304 (590-19465-18)	12/13/22	08:47 Pacific	Water	Water	X	X			1		MW-310 (590-19465-20)	12/13/22	07:49 Pacific	Water	Water	X	X			1		MW-311 (590-19465-21)	12/13/22	12:50 Pacific	Water	Water	X	X			1		MW-312 (590-19465-22)	12/13/22	12:11 Pacific	Water	Water	X	X			1		TX-03A (590-19465-26)	12/13/22	14:58 Pacific	Water	Water	X	X			1	
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Organic)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	353.2, Pres/ Nitrate-Nitrite	Total Number of containers	Special Instructions/Note:																																																																																																								
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MW-312 (590-19465-22)	12/13/22	12:11 Pacific	Water	Water	X	X			1																																																																																																									
TX-03A (590-19465-26)	12/13/22	14:58 Pacific	Water	Water	X	X			1																																																																																																									
<b>Possible Hazard Identification</b>																																																																																																																		
Unconfirmed																																																																																																																		
Deliverable Requested: I, II, III, IV, Other (specify)																																																																																																																		
Primary Deliverable Rank: 2																																																																																																																		
Empty Kit Relinquished by:																																																																																																																		
Relinquished by: <i>[Signature]</i> Date: 12/16/22 1500																																																																																																																		
Relinquished by: <i>[Signature]</i> Date: 12/16/22 1500																																																																																																																		
Relinquished by: <i>[Signature]</i> Date: 12/16/22 1500																																																																																																																		
Custody Seals Intact: <i>[Signature]</i> Custody Seal No.:																																																																																																																		

Ver: 06/06/2021

# Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 590-19465-1

**Login Number: 19465**

**List Source: Eurofins Spokane**

**List Number: 1**

**Creator: Fettig, Riley**

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



# Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 590-19465-1

**Login Number: 19465**  
**List Number: 2**  
**Creator: Rystrom, Joshua R**

**List Source: Eurofins Denver**  
**List Creation: 12/17/22 02:08 PM**

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



## Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 590-19465-1

**Login Number: 19465**  
**List Number: 3**  
**Creator: Presley, Kim A**

**List Source: Eurofins Seattle**  
**List Creation: 12/21/22 04:01 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	IR9=6.8/6.4C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# **Appendix C**

## **Data Validation**

# Technical Memorandum

April 28, 2022

<b>To</b>	Jacquelyn England	<b>Tel</b>	1 206 914 3141
<b>Copy to</b>	Heather Gadwa	<b>Email</b>	Jeffrey.Cloud@ghd.com
<b>From</b>	Jeffrey Cloud/eew/7-NF	<b>Ref. No.</b>	11218519
<b>Subject</b>	<b>Analytical Results and Reduced Validation of Report J17195            Quarterly Groundwater Sampling            Shell International Petroleum – Triton West Consent Decree            Seattle, Washington            March 2022</b>		

## 1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in support of the Quarterly Groundwater Sampling at the Triton West Consent Decree site in Seattle, Washington during March 2022. Samples were submitted to Eurofins TestAmerica, located in Spokane, Washington. A sample collection and analysis summary is presented in Table 1. A summary of the analytical methodology is presented in Table 2. The validated analytical results are summarized in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, laboratory duplicate data, recovery data from surrogate spikes, laboratory control samples and a field QC sample.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 2 and applicable guidance from the document entitled "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540 R 2016 002, September 2016.

## 2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in the methods. The sample chain of custody documents and analytical report were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All sample containers were properly preserved, delivered on ice and stored by the laboratory at the required temperature (0-6°C).

### **3. Laboratory Blank Analyses**

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

### **4. Surrogate Spike Recoveries**

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices. Due to necessary sample dilutions, surrogate recoveries were not assessed for some samples.

All samples submitted for volatile organic compound (VOC), gasoline range organics (GRO) and diesel range organics (DRO)/motor oil range organics (ORO) analysis were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Surrogate recoveries were assessed against the control limits. All surrogate recoveries met the associated criteria.

### **5. Laboratory Control Sample Analyses**

Laboratory control samples (LCS)/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS/LCSD contained all analytes of interest. All LCS/LCSD recoveries and RPDs were within associated control limits, demonstrating acceptable analytical accuracy and precision.

### **6. Matrix Spike Analyses**

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as matrix spike (MS)/matrix spike duplicate (MSD) samples. The RPD between the MS and MSD is used to assess analytical precision. MS/MSD analyses were performed as specified in Table 1. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed.

The MS/MSD samples were spiked with the analytes of interest. All percent recoveries and RPD values were within the associated control limits, demonstrating acceptable analytical accuracy and precision with the exception of one low o-xylene recovery. Only the MSD was outside of the control limits, no qualification of the

data was performed based on the acceptable recovery of the companion spike and the acceptable RPD.  
Duplicate Sample Analyses

Analytical precision is evaluated based on the analysis of laboratory duplicate samples. For this study, duplicate samples were prepared and analyzed by the laboratory as specified in Table 1. The duplicate results were evaluated per the "Guidelines". All duplicate analyses performed were acceptable, demonstrating acceptable analytical precision with the exception of one high total xylenes RPD. If the reported concentration in both the investigative sample and its duplicate are less than five times the reporting limit (RL), the associated RPD is not assessed. No qualification of the data was deemed necessary.

## 7. Field QA/QC Samples

The field QA/QC consisted of one trip blank sample.

To evaluate contamination from sample collection, transportation, storage, and analytical activities, one trip blank was submitted to the laboratory for analysis. All results were non-detect for the analytes of interest.

## 8. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were reported as estimated (J) in Table 3. Non-detect results were presented as non-detect at the RL in Table 3.

## 9. Conclusion

Based on the assessment detailed in the foregoing, the summarized data are acceptable without qualification.

Regards



**Jeffrey Cloud**

Data Management Team – Data Validator



Table 1

**Sample Collection and Analysis Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, Washington**  
**March 2022**

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	<u>Analysis/Parameters</u>			Comments
					DRO/ORO	GRO	VOCs	
MW-301	MW-301	Water	03/29/2022	11:34		X	X	DUP
MW-302	MW-302	Water	03/28/2022	13:06		X	X	
MW-303	MW-303	Water	03/28/2022	14:03		X	X	
MW-304	MW-304	Water	03/28/2022	14:32		X	X	
MW-307	MW-307	Water	03/28/2022	11:48		X	X	
MW-308	MW-308	Water	03/28/2022	12:18		X	X	
MW-310	MW-310	Water	03/29/2022	11:03		X	X	
MW-311	MW-311	Water	03/29/2022	09:57		X	X	
MW-312	MW-312	Water	03/29/2022	10:28		X	X	
MW-313	MW-313	Water	03/29/2022	08:50	X	X	X	
MW-314	MW-314	Water	03/28/2022	10:19	X	X	X	DUP
MW-315	MW-315	Water	03/29/2022	09:22	X	X	X	MS/MSD
TX-03A	TX-03A	Water	03/28/2022	13:34		X	X	
TB-1	--	Water	03/28/2022	--		X	X	Trip Blank

## Notes:

- DUP - Laboratory Duplicate  
MS/MSD - Matrix Spike/Matrix Spike Duplicate  
VOCs - Volatile Organic Compounds  
GRO - Gasoline Range Organics  
DRO/ORO - Diesel Range Organics/Motor Oil Range Organics  
"--" - Not Applicable

Table 2

**Analytical Methods**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, Washington**  
**March 2022**

<b>Parameter</b>	<b>Method</b>	<b>Matrix</b>
Volatile Organic Compounds (VOCs)	SW-846 8260D <sup>(1)</sup>	Water
Gasoline Range Organics (GRO)	NWTPH-Gx <sup>(2)</sup>	Water
Diesel Range Organics (DRO)/Motor Oil Range Organics (ORO)	NWTPH-Dx <sup>(2)</sup>	Water

## Notes:

- (1) - SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions
- (2) - NWTPH - Referenced from "Washington State Department of Ecology Analytical Methods for Petroleum Hydrocarbons", Publication No. ECY 97-602, June 1997

Table 3

**Analytical Results Summary  
Quarterly Groundwater Sampling  
Shell International Petroleum - Triton West Consent Decree  
Seattle, Washington  
March 2022**

<b>Location ID:</b>	<b>MW-301</b>	<b>MW-302</b>	<b>MW-303</b>	<b>MW-304</b>	<b>MW-307</b>	<b>MW-308</b>	<b>MW-310</b>
<b>Sample Name:</b>	<b>MW-301</b>	<b>MW-302</b>	<b>MW-303</b>	<b>MW-304</b>	<b>MW-307</b>	<b>MW-308</b>	<b>MW-310</b>
<b>Sample Date:</b>	<b>03/29/2022</b>	<b>03/28/2022</b>	<b>03/28/2022</b>	<b>03/28/2022</b>	<b>03/28/2022</b>	<b>03/28/2022</b>	<b>03/29/2022</b>

**Parameters****Unit****Volatile Organic Compounds**

Benzene	µg/L	30.8	5.16	27.0	27.6	98.2	4.76	31.3
Ethylbenzene	µg/L	2.48	12.2	63.8	1.25	147	0.244 J	9.48
Toluene	µg/L	0.663 J	0.712 J	1.96	0.750 J	22.3	1.00 U	0.978 J
Xylenes (total)	µg/L	1.13 J	2.92 J	8.92	0.843 J	98.8	3.00 U	2.96 J

**Total Petroleum Hydrocarbons**

Gasoline	µg/L	572	1180	2630	624	3690	106 J	1550
Motor oil	µg/L	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons - Extractable (DRO)	µg/L	--	--	--	--	--	--	--

Table 3

**Analytical Results Summary  
Quarterly Groundwater Sampling  
Shell International Petroleum - Triton West Consent Decree  
Seattle, Washington  
March 2022**

	Location ID:	MW-311	MW-312	MW-313	MW-314	MW-315	TX-03A
	Sample Name:	MW-311	MW-312	MW-313	MW-314	MW-315	TX-03A
	Sample Date:	03/29/2022	03/29/2022	03/29/2022	03/28/2022	03/29/2022	03/28/2022
Parameters	Unit						
<b>Volatile Organic Compounds</b>							
Benzene	µg/L	0.243 J	13.6	0.400 U	0.477	45.2	121
Ethylbenzene	µg/L	0.302 J	2.40	1.00 U	1.00 U	0.890 J	12.0
Toluene	µg/L	0.909 J	1.72	1.00 U	0.624 J	4.20	2.55
Xylenes (total)	µg/L	0.828 J	1.80 J	3.00 U	0.682 J	2.52 J	1.63 J
<b>Total Petroleum Hydrocarbons</b>							
Gasoline	µg/L	1660	2770	150 U	253	2410	998
Motor oil	µg/L	--	--	395 U	391 U	136 J	--
Total Petroleum Hydrocarbons - Extractable (DRO)	µg/L	--	--	237 U	682	2440	--

## Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

"--" - Not analyzed

DRO - Diesel Range Organics

# Technical Memorandum

May 23, 2022

<b>To</b>	Amy Monier	<b>Tel</b>	1 206 914 3141
<b>Copy to</b>	Heather Gadwa	<b>Email</b>	Jeffrey.Cloud@ghd.com
<b>From</b>	Jeffrey Cloud/eew/8-NF	<b>Ref. No.</b>	11218519
<b>Subject</b>	<b>Analytical Results and Reduced Validation of Report J17328</b> <b>Quarterly Groundwater Sampling</b> <b>Shell International Petroleum - Triton West Consent Decree</b> <b>Seattle, Washington</b> <b>April 2022</b>		

## 1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in support of the Quarterly Groundwater Sampling at the Triton West Consent Decree site in Seattle, Washington during April 2022. Samples were submitted to Eurofins Environment Testing America, located in Spokane, Washington. A sample collection and analysis summary is presented in Table 1. A summary of the analytical methodology is presented in Table 2. The validated analytical results are summarized in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody form, finished report forms, method blank data, laboratory duplicate data, recovery data from surrogate spikes, laboratory control samples, matrix spikes and a field QC sample.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 2 and applicable guidance from the documents entitled:

1. "National Functional Guidelines for Organic Superfund Methods Data Review", USEPA 540-R-20-005, November 2020
2. "National Functional Guidelines for Inorganic Superfund Methods Data Review", USEPA 542-R-20-006, November 2020

These items will subsequently be referred to as the "Guidelines" in this Memorandum.

## 2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in the methods. The sample chain of custody document and analytical report were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All sample containers were properly preserved, delivered on ice and stored by the laboratory at the required temperature (0-6°C).

### **3. Laboratory Blank Analyses**

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation with the exception of two analytes present at low concentrations. The associated sample results with concentrations similar to the blank were qualified as non-detect due to contamination as evidenced by the blank (see Table 4).

### **4. Surrogate Spike Recoveries**

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC), gasoline range organics (GRO) and diesel range organics (DRO)/motor oil range organics (ORO) analysis were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Surrogate recoveries were assessed against the control limits. All surrogate recoveries met the associated criteria.

### **5. Laboratory Control Sample Analyses**

Laboratory control samples (LCS)/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS or LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

#### **5.1 Organic Analyses**

The LCS and LCS/LCSD contained all analytes of interest. All LCS and LCS/LCSD recoveries and RPDs were within associated control limits, demonstrating acceptable analytical accuracy and precision (where applicable).

#### **5.2 Inorganic Analyses**

The LCS contained the analyte of interest. The LCS recovery was assessed per the "Guidelines". The LCS recovery was within the control limits, demonstrating acceptable analytical accuracy.

### **6. Matrix Spike Analyses**

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and

analyzed as matrix spike (MS)/matrix spike duplicate (MSD) samples. The RPD between the MS and MSD is used to assess analytical precision. MS/MSD analyses were performed as specified in Table 1.

The MS/MSD samples were spiked with the analytes of interest. All percent recoveries and RPD values were within the associated control limits, demonstrating acceptable analytical accuracy and precision.

## 7. Duplicate Sample Analyses

Analytical precision is evaluated based on the analysis of laboratory duplicate samples. For this study, duplicate samples were prepared and analyzed by the laboratory as specified in Table 1. The duplicate results were evaluated per the "Guidelines". All duplicate analyses performed were acceptable, demonstrating acceptable analytical precision.

## 8. Field QA/QC Samples

The field QA/QC consisted of one trip blank sample.

To evaluate contamination from sample collection, transportation, storage, and analytical activities, one trip blank was submitted to the laboratory for analysis. All results were non-detect for the analytes of interest.

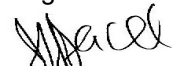
## 9. Analyte Reporting

Data were reported down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the reporting limit (RL) but greater than the MDL were reported as estimated (J) in Table 3 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 3.

## 10. Conclusion

Based on the assessment detailed in the foregoing, the summarized data are acceptable with the specific qualifications noted herein.

Regards



**Jeffrey Cloud**

Data Management Team – Data Validator

Table 1

**Sample Collection and Analysis Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, Washington**  
**April 2022**

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	<u>Analysis/Parameters</u>				Comments
					DRO/ORO	GRO	Lead	VOCs	
MW-05	MW-05	Water	04/18/2022	09:42	X	X		X	DUP
MW-104	MW-104	Water	04/18/2022	10:11	X	X	X		
MW-111	MW-111	Water	04/18/2022	10:45	X	X		X	MS/MSD
MW-112A	MW-112A	Water	04/18/2022	11:50	X	X		X	
SH-04	SH-04	Water	04/18/2022	11:21	X	X		X	
TB-1	--	Water	04/18/2022	--		X		X	Trip Blank

## Notes:

- DUP - Laboratory Duplicate  
MS/MSD - Matrix Spike/Matrix Spike Duplicate  
VOCs - Volatile Organic Compounds  
GRO - Gasoline Range Organics  
DRO/ORO - Diesel Range Organics/Motor Oil Range Organics  
- Not Applicable



Table 2

**Analytical Methods**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, Washington**  
**April 2022**

<b>Parameter</b>	<b>Method</b>	<b>Matrix</b>
Volatile Organic Compounds (VOCs)	SW-846 8260D <sup>(1)</sup>	Water
Gasoline Range Organics (GRO)	NWTPH-Gx <sup>(2)</sup>	Water
Diesel Range Organics (DRO)/Motor Oil Range Organics (ORO)	NWTPH-Dx <sup>(2)</sup>	Water
Lead	SW-846 6010D <sup>(1)</sup>	Water

## Notes:

- (1) - SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions
- (2) - NWTPH - Referenced from "Washington State Department of Ecology Analytical Methods for Petroleum Hydrocarbons", Publication No. ECY-602, June 1997

Table 3

**Analytical Results Summary  
 Quarterly Groundwater Sampling  
 Shell International Petroleum - Triton West Consent Decree  
 Seattle, Washington  
 April 2022**

<b>Location ID:</b>	<b>MW-05</b>	<b>MW-104</b>	<b>MW-111</b>	<b>MW-112A</b>	<b>SH-04</b>
<b>Sample Name:</b>	<b>MW-05</b>	<b>MW-104</b>	<b>MW-111</b>	<b>MW-112A</b>	<b>SH-04</b>
<b>Sample Date:</b>	<b>04/18/2022</b>	<b>04/18/2022</b>	<b>04/18/2022</b>	<b>04/18/2022</b>	<b>04/18/2022</b>

<b>Parameters</b>	<b>Unit</b>					
<b>Volatile Organic Compounds</b>						
Benzene	µg/L	0.400 U	--	0.400 U	1.02	6.26
Ethylbenzene	µg/L	1.00 U	--	1.00 U	27.9	3.84
Toluene	µg/L	1.00 U	--	1.00 U	0.759 J	1.05
Xylenes (total)	µg/L	3.00 U	--	3.00 U	2.69 J	4.57
<b>Metals</b>						
Lead	µg/L	--	60.0 U	--	--	--
<b>Total Petroleum Hydrocarbons</b>						
Gasoline	µg/L	150 U	896	150 U	1870	1170
Motor oil	µg/L	392 U	393 U	381 U	389 U	392 U
Total Petroleum Hydrocarbons - Extractable (DRO)	µg/L	235 U	503	229 U	1390	549

Notes:

- U - Not detected at the associated reporting limit
- J - Estimated concentration
- "--" - Not analyzed
- DRO - Diesel Range Organics

Table 4

**Qualified Sample Results Due to Analyte Concentrations in the Method Blanks**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, WA**  
**April 2022**

Parameter	Analyte	Analysis Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units
TPH	Total Petroleum Hydrocarbons - Extractable (DRO)	04/29/2022	131.9 J	MW-111	125 J	229 U	µg/L
		04/29/2022	151.7 J	MW-111	141 J	381 U	µg/L
				MW-112A	211 J	389 U	µg/L
				SH-04	227 J	392 U	µg/L
MW-104	135 J	393 U	µg/L				

## Notes:

- \* - Blank result adjusted for sample factors where applicable
- U - Not detected at the associated reporting limit
- J - Estimated concentration
- TPH - Total Petroleum Hydrocarbons

# Technical Memorandum

August 05, 2022

<b>To</b>	Amy Monier	<b>Tel</b>	1 206 914 3141
<b>Copy to</b>	Heather Gadwa	<b>Email</b>	Jeffrey.Cloud@ghd.com
<b>From</b>	Jeffrey Cloud/eew/9-NF	<b>Ref. No.</b>	11218519
<b>Subject</b>	<b>Analytical Results and Reduced Validation of Report J17941            Quarterly Groundwater Sampling            Shell International Petroleum - Triton West Consent Decree            Seattle, Washington            June 2022</b>		

## 1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in support of the Quarterly Groundwater Sampling at the Triton West Consent Decree site in Seattle, Washington during June 2022. Samples were submitted to Eurofins Environment Testing America, located in Spokane, Washington. A sample collection and analysis summary is presented in Table 1. A summary of the analytical methodology is presented in Table 2. The validated analytical results are summarized in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, laboratory duplicate data, recovery data from surrogate spikes, laboratory control samples, matrix spikes and a field QC sample.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 2 and applicable guidance from the documents entitled:

1. "National Functional Guidelines for Organic Superfund Methods Data Review", USEPA 540-R-20-005, November 2020
2. "National Functional Guidelines for Inorganic Superfund Methods Data Review", USEPA 542-R-20-006, November 2020

These items will subsequently be referred to as the "Guidelines" in this Memorandum.

## 2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in the methods. The sample chain of custody documents and analytical report were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All sample containers were properly preserved, delivered on ice and stored by the laboratory at the required temperature (0-6°C).

### **3. Laboratory Blank Analyses**

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

### **4. Surrogate Spike Recoveries**

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC), semi-volatile organic compound (SVOC), gasoline range organics (GRO) and diesel range organics (DRO)/motor oil range organics (ORO) analysis were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Surrogate recoveries were assessed against the control limits. All surrogate recoveries met the associated criteria.

### **5. Laboratory Control Sample Analyses**

Laboratory control samples (LCS)/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS or LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

#### **5.1 Organic Analyses**

The LCS and LCS/LCSD contained all analytes of interest. All LCS and LCS/LCSD recoveries and RPDs were within associated control limits, demonstrating acceptable analytical accuracy and precision (where applicable) with the exception of two high RPDs. The associated sample results were non-detect and were not impacted. No qualification of the data was deemed necessary.

#### **5.2 Inorganic Analyses**

The LCS contained the analyte of interest. The LCS recovery was assessed per the "Guidelines". The LCS recovery was within the control limits, demonstrating acceptable analytical accuracy.

## 6. Matrix Spike Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as matrix spike (MS)/matrix spike duplicate (MSD) samples. The RPD between the MS and MSD is used to assess analytical precision. MS/MSD analyses were performed as specified in Table 1.

The MS/MSD samples were spiked with the analytes of interest. All percent recoveries and RPD values were within the associated control limits, demonstrating acceptable analytical accuracy and precision.

## 7. Duplicate Sample Analyses

Analytical precision is evaluated based on the analysis of laboratory duplicate samples. For this study, duplicate samples were prepared and analyzed by the laboratory as specified in Table 1. The duplicate results were evaluated per the "Guidelines". All duplicate analyses performed were acceptable, demonstrating acceptable analytical precision.

## 8. Field QA/QC Samples

The field QA/QC consisted of one trip blank sample.

To evaluate contamination from sample collection, transportation, storage, and analytical activities, one trip blank was submitted to the laboratory for analysis. All results were non-detect for the analytes of interest.

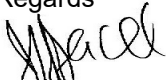
## 9. Analyte Reporting

Data were reported down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the reporting limit (RL) but greater than the MDL were reported as estimated (J) in Table 3. Non-detect results were presented as non-detect at the RL in Table 3.

## 10. Conclusion

Based on the assessment detailed in the foregoing, the summarized data are acceptable without qualification.

Regards



**Jeffrey Cloud**

Data Management Team – Data Validator

Table 1

**Sample Collection and Analysis Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, WA**  
**June 2022**

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	<u>Analysis/Parameters</u>					Comments
					DR/ORO	GRO	Lead	VOCs	SVOCs	
MW-05	MW-05	Water	06/29/2022	08:21	X	X		X		DUP
MW-104	MW-104	Water	06/29/2022	07:42	X	X	X	X		
MW-111	MW-111	Water	06/27/2022	13:46	X	X		X		
MW-112A	MW-112A	Water	06/28/2022	14:26	X	X		X		
MW-113	MW-113	Water	06/27/2022	12:37	X	X		X		
MW-114	MW-114	Water	06/27/2022	12:00	X	X		X		
MW-115	MW-115	Water	06/27/2022	11:24	X	X		X		
MW-202	MW-202	Water	06/29/2022	10:38	X	X				
MW-203	MW-203	Water	06/28/2022	11:31	X	X				
MW-213	MW-213	Water	06/29/2022	09:08	X	X		X	X	
MW-214	MW-214	Water	06/29/2022	09:45	X	X		X	X	
MW-301	MW-301	Water	06/28/2022	10:27		X		X		
MW-302	MW-302	Water	06/28/2022	09:14		X		X		
MW-303	MW-303	Water	06/28/2022	08:11		X		X		
MW-304	MW-304	Water	06/28/2022	08:45		X		X		
MW-307	MW-307	Water	06/29/2022	11:48	X	X		X		DUP
MW-308	MW-308	Water	06/29/2022	12:21		X		X		
MW-309	MW-309	Water	06/28/2022	10:55		X		X		MS/MSD
MW-310	MW-310	Water	06/28/2022	09:45		X		X		
MW-311	MW-311	Water	06/28/2022	15:02		X		X		
MW-312	MW-312	Water	06/29/2022	11:15		X		X		
MW-313	MW-313	Water	06/28/2022	12:35	X	X		X		
MW-314	MW-314	Water	06/28/2022	15:26	X	X		X		
MW-315	MW-315	Water	06/28/2022	12:03	X	X		X		
SH-04	SH-04	Water	06/28/2022	13:55	X	X		X		

Table 1

**Sample Collection and Analysis Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, WA**  
**June 2022**

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	<u>Analysis/Parameters</u>					Comments
					DRO/ORO	GRO	Lead	VOCs	SVOCs	
TX-03A	TX-03A	Water	06/28/2022	15:54		X		X		
TB-1	--	Water	06/27/2022	--		X		X		Trip Blank

## Notes:

- DUP - Laboratory Duplicate
- MS/MSD - Matrix Spike/Matrix Spike Duplicate
- VOCs - Volatile Organic Compounds
- SVOCs - Semivolatile Organic Compound
- GRO - Gasoline Range Organics
- DRO/ORO - Diesel Range Organics/Motor Oil Range Organics
- "--" - Not Applicable



Table 2

**Analytical Methods**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, WA**  
**June 2022**

<b>Parameter</b>	<b>Method</b>	<b>Matrix</b>
Volatile Organic Compounds (VOCs)	SW-846 8260D <sup>(1)</sup>	Water
Semivolatile Organic Compounds (SVOCs)	SW-846 8270E SIM <sup>(1)</sup>	Water
Gasoline Range Organics (GRO)	NWTPH-Gx <sup>(2)</sup>	Water
Diesel Range Organics (DRO)/Motor Oil Range Organics (ORO)	NWTPH-Dx <sup>(2)</sup>	Water
Lead	SW-846 6010D <sup>(1)</sup>	Water

## Notes:

- (1) - SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions
- (2) - NWTPH - Referenced from "Washington State Department of Ecology Analytical Methods for Petroleum Hydrocarbons", Publicatoin No. ECY 97-602, June 1997
- SIM - Selective Ion Monitoring

Table 3

**Analytical Results Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, WA**  
**June 2022**

Location ID:	MW-05	MW-104	MW-111	MW-112A	MW-113	MW-114	MW-115	MW-202	MW-203	
Sample Name:	MW-05	MW-104	MW-111	MW-112A	MW-113	MW-114	MW-115	MW-202	MW-203	
Sample Date:	06/29/2022	06/29/2022	06/27/2022	06/28/2022	06/27/2022	06/27/2022	06/27/2022	06/29/2022	06/28/2022	
Parameters	Unit									
<b>Volatile Organic Compounds</b>										
Benzene	µg/L	0.400 U	0.400 U	2.74	1.39	156	0.400 U	0.400 U	--	--
Ethylbenzene	µg/L	1.00 U	1.06	1.00 U	10.6	4.05	1.00 U	1.00 U	--	--
Toluene	µg/L	1.00 U	1.00 U	1.00 U	0.935 J	5.22	1.00 U	1.00 U	--	--
Xylenes (total)	µg/L	3.00 U	3.00 U	3.00 U	2.63 J	5.40	3.00 U	3.00 U	--	--
<b>Semi-volatile Organic Compounds, SIM</b>										
1-Methylnaphthalene	µg/L	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--	--	--	--	--	--	--
Chrysene	µg/L	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--	--	--	--	--	--	--
Naphthalene	µg/L	--	--	--	--	--	--	--	--	--
<b>Metals</b>										
Lead	µg/L	--	60.0 U	--	--	--	--	--	--	--
<b>Total Petroleum Hydrocarbons</b>										
Gasoline	µg/L	150 U	648	110 J	1260	15000 U	150 U	372	3330	34.3 J
Motor oil	µg/L	405 U	413 U	402 U	407 U	156 J	160 J	240 J	1090	1560
Total Petroleum Hydrocarbons - Extractable (DRO)	µg/L	243 U	381	118 J	675	933	413	4930	2840	645

Table 3

**Analytical Results Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, WA**  
**June 2022**

Location ID:	MW-213	MW-214	MW-301	MW-302	MW-303	MW-304	MW-307	MW-308	MW-309
Sample Name:	MW-213	MW-214	MW-301	MW-302	MW-303	MW-304	MW-307	MW-308	MW-309
Sample Date:	06/29/2022	06/29/2022	06/28/2022	06/28/2022	06/28/2022	06/28/2022	06/29/2022	06/29/2022	06/28/2022

Parameters	Unit									
<b>Volatile Organic Compounds</b>										
Benzene	µg/L	0.400 U	0.400 U	21.5	2.82	107	16.9	149	0.400 U	0.400 U
Ethylbenzene	µg/L	1.00 U	1.00 U	3.16	21.4	27.2	3.18	176	0.281 J	1.00 U
Toluene	µg/L	1.00 U	1.00 U	0.854 J	0.505 J	3.03	0.903 J	31.8	1.00 U	1.00 U
Xylenes (total)	µg/L	3.00 U	3.00 U	0.735 J	4.56	9.22	1.12 J	158 J	0.485 J	3.00 U
<b>Semi-volatile Organic Compounds, SIM</b>										
1-Methylnaphthalene	µg/L	0.0494 J	0.0272 J	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	0.0905 U	0.0910 U	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	0.0905 U	0.0910 U	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	0.0905 U	0.0123 J	--	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	0.0905 U	0.0910 U	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	0.0905 U	0.0910 U	--	--	--	--	--	--	--
Chrysene	µg/L	0.0905 U	0.0148 J	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	0.0905 U	0.0910 U	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	0.0905 U	0.0910 U	--	--	--	--	--	--	--
Naphthalene	µg/L	0.0905 U	0.0910 U	--	--	--	--	--	--	--
<b>Metals</b>										
Lead	µg/L	--	--	--	--	--	--	--	--	--
<b>Total Petroleum Hydrocarbons</b>										
Gasoline	µg/L	150 U	150 U	478	414	2250	549	2870	54.5 J	108 J
Motor oil	µg/L	475 U	135 J	--	--	--	--	330 J	--	--
Total Petroleum Hydrocarbons - Extractable (DRO)	µg/L	163 J	181 J	--	--	--	--	4020	--	--

Table 3

**Analytical Results Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, WA**  
**June 2022**

	Location ID:	MW-310	MW-311	MW-312	MW-313	MW-314	MW-315	SH-04	TX-03A
	Sample Name:	MW-310	MW-311	MW-312	MW-313	MW-314	MW-315	SH-04	TX-03A
	Sample Date:	06/28/2022	06/28/2022	06/29/2022	06/28/2022	06/28/2022	06/28/2022	06/28/2022	06/28/2022
Parameters	Unit								
<b>Volatile Organic Compounds</b>									
Benzene	µg/L	39.2	2.53	35.8	0.400 U	0.400 U	17.7	11.7	114
Ethylbenzene	µg/L	17.9	0.596 J	2.30	1.00 U	1.00 U	0.548 J	2.63	13.2
Toluene	µg/L	0.966 J	3.49	2.69	1.00 U	0.346 J	3.82	1.10	6.32
Xylenes (total)	µg/L	5.50	0.644 J	2.05 J	3.00 U	3.00 U	2.84 J	2.26 J	3.56
<b>Semi-volatile Organic Compounds, SIM</b>									
1-Methylnaphthalene	µg/L	--	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	--	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	--	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--	--	--	--	--	--
Chrysene	µg/L	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--	--	--	--	--	--
Naphthalene	µg/L	--	--	--	--	--	--	--	--
<b>Metals</b>									
Lead	µg/L	--	--	--	--	--	--	--	--
<b>Total Petroleum Hydrocarbons</b>									
Gasoline	µg/L	924	2050	2280	150 U	253	2370	813	1390
Motor oil	µg/L	--	--	--	140 J	166 J	207 J	140 J	--
Total Petroleum Hydrocarbons - Extractable (DRO)	µg/L	--	--	--	177 J	936	2310	380	--

## Notes:

U - Not detected at the associated reporting limit

J - Estimated concentrations

"--" - Not analyzed

SIM - Selective Ion Monitoring

# Technical Memorandum

November 08, 2022

<b>To</b>	Amy Monier	<b>Tel</b>	1 206 914 3141
<b>Copy to</b>	Heather Gadwa	<b>Email</b>	Jeffrey.Cloud@ghd.com
<b>From</b>	Jeffrey Cloud/eew/10	<b>Ref. No.</b>	11218519
<b>Subject</b>	<b>Analytical Results and Reduced Validation of Report J18699            Quarterly Groundwater Sampling            Shell International Petroleum - Triton West Consent Decree            Seattle, Washington            September 2022</b>		

## 1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in support of the Quarterly Groundwater Sampling at the Triton West Consent Decree site in Seattle, Washington during September 2022. Samples were submitted to Eurofins Environment Testing America, located in Spokane, Washington. A sample collection and analysis summary is presented in Table 1. A summary of the analytical methodology is presented in Table 2. The validated analytical results are summarized in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, laboratory duplicate data, recovery data from surrogate spikes, laboratory control samples and a field QC sample.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 2 and applicable guidance from the document entitled "National Functional Guidelines for Organic Superfund Methods Data Review", USEPA 540-R-20-005, November 2020.

## 2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in the methods. The sample chain of custody documents and analytical report were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All sample containers were properly preserved, delivered on ice and stored by the laboratory at the required temperature (0-6°C).

### **3. Laboratory Blank Analyses**

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

### **4. Surrogate Spike Recoveries**

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC), gasoline range organics (GRO) and diesel range organics (DRO)/motor oil range organics (ORO) analysis were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Surrogate recoveries were assessed against the control limits. All surrogate recoveries met the associated criteria with the exception of one low VOC surrogate recovery. The associated sample results were qualified as estimated due to the implied low bias (see Table 4).

### **5. Laboratory Control Sample Analyses**

Laboratory control samples (LCS)/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS or LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS and LCS/LCSD contained all analytes of interest. All LCS and LCS/LCSD recoveries and RPDs were within associated control limits, demonstrating acceptable analytical accuracy and precision (where applicable).

### **6. Duplicate Sample Analyses**

Analytical precision is evaluated based on the analysis of laboratory duplicate samples. For this study, duplicate samples were prepared and analyzed by the laboratory as specified in Table 1. The duplicate results were evaluated per the "Guidelines". All duplicate analyses performed were acceptable, demonstrating acceptable analytical precision.

### **7. Field QA/QC Samples**

The field QA/QC consisted of one trip blank sample.

To evaluate contamination from sample collection, transportation, storage, and analytical activities, one trip blank was submitted to the laboratory for analysis. All results were non-detect for the analytes of interest.

## 8. Analyte Reporting

Data were reported down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the reporting limit (RL) but greater than the MDL were reported as estimated (J) in Table 3. Non-detect results were presented as non-detect at the RL in Table 3.

If multiple QC results exhibit variability and/or high/low directional biases as related to a sample result, then any directional bias indicators are removed from the final sample result qualification.

## 9. Conclusion

Based on the assessment detailed in the foregoing, the summarized data are acceptable with the specific qualifications noted herein.

Regards



**Jeffrey Cloud**

Data Management Team – Data Validator

Table 1

**Sample Collection and Analysis Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, WA**  
**September 2022**

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	<u>Analysis/Parameters</u>			Comments
					DRO/ORO	GRO	VOCs	
MW-301	MW-301	Water	09/21/2022	08:51		X	X	DUP
MW-302	MW-302	Water	09/21/2022	07:53		X	X	
MW-303	MW-303	Water	09/21/2022	09:20		X	X	
MW-304	MW-304	Water	09/20/2022	13:56		X	X	
MW-307	MW-307	Water	09/20/2022	08:41		X	X	
MW-308	MW-308	Water	09/20/2022	09:23		X	X	
MW-310	MW-310	Water	09/20/2022	13:16		X	X	
MW-311	MW-311	Water	09/20/2022	11:57		X	X	
MW-312	MW-312	Water	09/20/2022	11:26		X	X	
MW-313	MW-313	Water	09/20/2022	10:56	X	X	X	
MW-314	MW-314	Water	09/20/2022	14:42	X	X	X	
MW-315	MW-315	Water	09/20/2022	10:23	X	X	X	
TX-03A	TX-03A	Water	09/21/2022	08:24		X	X	
TB-1	--	Water	09/20/2022	--		X	X	Trip Blank

## Notes:

- DUP - Laboratory Duplicate  
VOCs - Volatile Organic Compounds  
GRO - Gasoline Range Organics  
DRO/ORO - Diesel Range Organics/Motor Oil Range Organics  
"--" - Not Applicable



Table 2

**Analytical Methods**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, WA**  
**September 2022**

<b>Parameter</b>	<b>Method</b>	<b>Matrix</b>
Volatile Organic Compounds (VOCs)	SW-846 8260D <sup>(1)</sup>	Water
Gasoline Range Organics (GRO)	NWTPH-Gx <sup>(2)</sup>	Water
Diesel Range Organics (DRO)/Motor Oil Range Organics (ORO)	NWTPH-Dx <sup>(2)</sup>	Water

## Notes:

- (1) - SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions
- (2) - NWTPH - Referenced from "Washington State Department of Ecology Analytical Methods for Petroleum Hydrocarbons", Publication no. ECY 97-602, June 1997

**Table 3**  
**Analytical Results Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, WA**  
**September 2022**

<b>Location ID:</b>	<b>MW-301</b>	<b>MW-302</b>	<b>MW-303</b>	<b>MW-304</b>	<b>MW-307</b>	<b>MW-308</b>	<b>MW-310</b>
<b>Sample Name:</b>	<b>MW-301</b>	<b>MW-302</b>	<b>MW-303</b>	<b>MW-304</b>	<b>MW-307</b>	<b>MW-308</b>	<b>MW-310</b>
<b>Sample Date:</b>	<b>09/21/2022</b>	<b>09/21/2022</b>	<b>09/21/2022</b>	<b>09/20/2022</b>	<b>09/20/2022</b>	<b>09/20/2022</b>	<b>09/20/2022</b>

<b>Parameters</b>	<b>Unit</b>							
<b>Volatile Organic Compounds</b>								
Benzene	µg/L	9.32	5.27	216	133 J-	160	46.1	24.4
Ethylbenzene	µg/L	1.72	29.6	55.8	1.81 J-	117	0.888 J	1.62
Toluene	µg/L	0.952 J	1.90	7.10	0.434 J	19.9	3.55	1.29
Xylenes (total)	µg/L	0.953 J	6.93	12.1	1.34 J	108	1.71 J	2.06 J
<b>Total Petroleum Hydrocarbons</b>								
Gasoline	µg/L	245	540	1990	594	2490	696	770
Motor oil	µg/L	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons - Extractable (DRO)	µg/L	--	--	--	--	--	--	--

**Table 3**  
**Analytical Results Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, WA**  
**September 2022**

<b>Location ID:</b>	<b>MW-311</b>	<b>MW-312</b>	<b>MW-313</b>	<b>MW-314</b>	<b>MW-315</b>	<b>TX-03A</b>
<b>Sample Name:</b>	<b>MW-311</b>	<b>MW-312</b>	<b>MW-313</b>	<b>MW-314</b>	<b>MW-315</b>	<b>TX-03A</b>
<b>Sample Date:</b>	<b>09/20/2022</b>	<b>09/20/2022</b>	<b>09/20/2022</b>	<b>09/20/2022</b>	<b>09/20/2022</b>	<b>09/21/2022</b>

<b>Parameters</b>	<b>Unit</b>						
<b>Volatile Organic Compounds</b>							
Benzene	µg/L	2.23	20.3	0.400 U	5.23	6.10	8.95
Ethylbenzene	µg/L	0.472 J	2.07	1.00 U	29.4	0.566 J	1.81
Toluene	µg/L	3.39	2.40	1.00 U	1.87	3.79	0.999 J
Xylenes (total)	µg/L	1.13 J	2.31 J	3.00 U	7.95	2.30 J	1.11 J
<b>Total Petroleum Hydrocarbons</b>							
Gasoline	µg/L	1570	1900	40.7 J	634	2210	294
Motor oil	µg/L	--	--	383 U	237 J	194 J	--
Total Petroleum Hydrocarbons - Extractable (DRO)	µg/L	--	--	230 U	2630	2980	--

Notes:

- U - Not detected at the associated reporting limit
- J - Estimated concentration
- J- - Estimated concentration; implied low bias
- "--" - Not analyzed
- DRO - Diesel Range Organics

**Table 4**

**Qualified Sample Data Due to Outlying of Surrogate Recoveries  
 Quarterly Groundwater Sampling  
 Shell International Petroleum - Triton West Consent Decree  
 Seattle, WA  
 September 2022**

Parameter	Sample ID	Surrogate	Surrogate	Control Limits	Analyte	Qualified	Units
			% Recovery	% Recovery		Result	
VOCs	MW-304	p-Bromofluorobenzene	76	80-120	Benzene	133 J-	µg/L
					Ethylbenzene	1.81 J-	µg/L
					Toluene	0.434 J	µg/L
					Xylenes (total)	1.34 J	µg/L

Notes:

- J - Estimated concentration
- J- - Estimated concentration; implied low bias
- VOCs - Volatile Organic Compounds

# Technical Memorandum

January 25, 2023

<b>To</b>	Amy Monier	<b>Tel</b>	1 206 914 3141
<b>Copy to</b>	Heather Gadwa	<b>Email</b>	Jeffrey.Cloud@ghd.com
<b>From</b>	Jeffrey Cloud/eew/12	<b>Ref. No.</b>	11218519
<b>Subject</b>	<b>Analytical Results and Reduced Validation of Report J19465            Quarterly Groundwater Sampling            Shell International Petroleum - Triton West Consent Decree            Seattle, Washington            December 2022</b>		

## 1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in support of the Quarterly Groundwater Sampling at the Triton West Consent Decree site in Seattle, Washington during December 2022. Samples were submitted to Eurofins Environment Testing America, located in Spokane, Washington. A sample collection and analysis summary is presented in Table 1. A summary of the analytical methodology is presented in Table 2. The validated analytical results are summarized in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The analytical results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, laboratory duplicate data, recovery data from surrogate spikes, laboratory control samples, matrix spikes and a field QC sample.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 2 and applicable guidance from the documents entitled:

1. "National Functional Guidelines for Organic Superfund Methods Data Review", USEPA 540-R-20-005, November 2020
2. "National Functional Guidelines for Inorganic Superfund Methods Data Review", USEPA 542-R-20-006, November 2020

These items will subsequently be referred to as the "Guidelines" in this Memorandum.

## 2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in the methods. The sample chain of custody documents and analytical report were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All sample containers were properly preserved, delivered on ice and stored by the laboratory at the required temperature (0-6°C).

### **3. Laboratory Blank Analyses**

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

### **4. Surrogate Spike Recoveries**

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices. Due to necessary sample dilutions, surrogate recoveries were not assessed for some samples.

All samples submitted for volatile organic compound (VOC), semi-volatile organic compound (SVOC), gasoline range organics (GRO) and diesel range organics (DRO)/motor oil range organics (ORO) analysis were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Each individual surrogate compound is expected to meet the associated control limits with the exception of SVOC analyses. GHD professional judgment for SVOC analyses determined that up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against the control limits. All surrogate recoveries met the associated criteria.

### **5. Laboratory Control Sample Analyses**

Laboratory control samples (LCS)/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS or LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

#### **5.1 Organic Analyses**

The LCS/LCSD contained all analytes of interest. All LCS/LCSD recoveries and RPDs were within associated control limits, demonstrating acceptable analytical accuracy and precision.

## 5.2 Inorganic Analyses

The LCS and LCS/LCSD contained all analytes of interest. LCS recoveries were assessed per the "Guidelines". All LCS and LCS/LCSD recoveries and RPDs were within the control limits, demonstrating acceptable analytical accuracy and precision (where applicable).

## 6. Matrix Spike Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as matrix spike (MS)/matrix spike duplicate (MSD) samples. The RPD between the MS and MSD is used to assess analytical precision. MS/MSD analyses were performed as specified in Table 1.

### 6.1 Organic Analyses

The MS/MSD samples were spiked with the analytes of interest. All percent recoveries and RPD values were within the associated control limits, demonstrating acceptable analytical accuracy and precision with the exception of two high RPDs. The associated sample results were non-detect and were not impacted. No qualification of the data was deemed necessary.

### 6.2 Inorganic Analyses

The MS/MSD samples were spiked with the analytes of interest and the results were evaluated using the "Guidelines". All percent recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision with the exception of two low nitrate/nitrite recoveries. The associated sample results were qualified as estimated due to the implied low bias (see Table 4).

## 7. Duplicate Sample Analyses

Analytical precision is evaluated based on the analysis of laboratory duplicate samples. For this study, duplicate samples were prepared and analyzed by the laboratory as specified in Table 1. The duplicate results were evaluated per the "Guidelines". All duplicate analyses performed were acceptable, demonstrating acceptable analytical precision.

## 8. Field QA/QC Samples

The field QA/QC consisted of one trip blank sample.

To evaluate contamination from sample collection, transportation, storage, and analytical activities, one trip blank was submitted to the laboratory for analysis. All results were non-detect for the analytes of interest with the exception of GRO present at a low concentration. The associated sample results with concentrations similar to the blank were qualified as non-detect due to contamination as evidenced by the blank (see Table 5).

## 9. Analyte Reporting

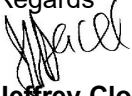
Data were reported down to the laboratory's quantitation limit (QL), which is defined as the method detection limit (MDL) with sample-specific adjustments for dilutions, aliquot size, volumes, etc. Positive analyte detections less than the reporting limit (RL) but greater than the QL were reported as estimated (J) in Table 3 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 3.

If multiple QC results exhibit variability and/or high/low directional biases as related to a sample result, then any directional bias indicators are removed from the final sample result qualification.

## 10. Conclusion

Based on the assessment detailed in the foregoing, the summarized data are acceptable with the specific qualifications noted herein.

Regards



**Jeffrey Cloud**

Data Management Team – Data Validator



Table 1

**Sample Collection and Analysis Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, Washington**  
**December 2022**

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters							Comments
					Anions	DRO/RO	DRO/RO w/sgc	GRO	Lead	Dissolved Metals	VOCs	
MW-05	MW-05	Water	12/14/2022	10:18	X	X	X				X	
MW-101	MW-101	Water	12/12/2022	14:30	X		X				X	DUP
MW-102	MW-102	Water	12/12/2022	12:48	X	X	X				X	MS/MSD
MW-104	MW-104	Water	12/14/2022	10:47	X	X	X	X				MS/MSD - DUP
MW-105	MW-105	Water	12/14/2022	09:21	X	X	X	X			X	
MW-111	MW-111	Water	12/14/2022	11:19	X	X	X				X	
MW-112A	MW-112A	Water	12/13/2022	14:31	X	X	X				X	
MW-113	MW-113	Water	12/14/2022	08:51	X	X	X				X	
MW-114	MW-114	Water	12/14/2022	07:52	X	X	X				X	
MW-115	MW-115	Water	12/14/2022	08:22	X	X	X				X	
MW-201	MW-201	Water	12/12/2022	11:09	X	X	X				X	
MW-202	MW-202	Water	12/12/2022	11:40	X	X	X	X		X	X	MS/MSD - DUP
MW-203	MW-203	Water	12/14/2022	12:31	X	X	X	X		X		
MW-204	MW-204	Water	12/12/2022	11:08	X	X	X				X	
MW-206A	MW-206A	Water	12/12/2022	11:44	X	X	X				X	
MW-213	MW-213	Water	12/12/2022	10:17	X	X	X				X	X
MW-214	MW-214	Water	12/12/2022	10:22	X	X	X				X	X
MW-301	MW-301	Water	12/13/2022	10:22							X	DUP
MW-302	MW-302	Water	12/13/2022	08:20	X	X	X	X		X	X	MS/MSD
MW-303	MW-303	Water	12/13/2022	09:22	X	X	X				X	
MW-304	MW-304	Water	12/13/2022	08:47	X	X	X	X		X	X	
MW-307	MW-307	Water	12/12/2022	14:20	X	X	X	X		X	X	
MW-308	MW-308	Water	12/12/2022	13:53	X		X			X	X	
MW-309	MW-309	Water	12/13/2022	09:51		X	X	X			X	
MW-310	MW-310	Water	12/13/2022	07:49	X	X	X	X		X	X	

Table 1

**Sample Collection and Analysis Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, Washington**  
**December 2022**

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters							Comments
					Anions	DRO/ORO	DRO/ORO w/sgc	GRO	Lead	Dissolved Metals	VOCs	
MW-311	MW-311	Water	12/13/2022	12:50	X		X		X	X		
MW-312	MW-312	Water	12/13/2022	12:11	X		X		X	X		
MW-313	MW-313	Water	12/13/2022	11:09		X	X	X			X	
MW-315	MW-315	Water	12/13/2022	11:37		X	X	X			X	
SH-04	SH-04	Water	12/13/2022	13:59		X	X	X			X	
TES-MW-1	TES-MW-1	Water	12/12/2022	13:58		X		X			X	
TX-03A	TX-03A	Water	12/13/2022	14:58	X	X	X	X		X	X	
TX-04	TX-04	Water	12/13/2022	13:27		X		X			X	
TX-06A	TX-06A	Water	12/12/2022	12:50		X	X	X			X	
TB-1	--	Water	12/12/2022	--				X			X	Trip Blank

## Notes:

- DUP - Laboratory Duplicate
- MS/MSD - Matrix Spike/Matrix Spike Duplicate
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- GRO - Gasoline Range Organics
- DRO/ORO - Diesel Range Organics/Motor Oil Range Organics
- w/sgc - With Silica Gel Cleanup
- "--" - Not Applicable

Table 2

**Analytical Methods**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, Washington**  
**December 2022**

<b>Parameter</b>	<b>Method</b>	<b>Matrix</b>
Volatile Organic Compounds (VOCs)	SW-846 8260D <sup>(1)</sup>	Water
Semivolatile Organic Compounds (SVOCs)	SW-846 8270E SIM <sup>(1)</sup>	Water
Gasoline Range Organics (GRO)	NWTPH-Gx <sup>(2)</sup>	Water
Diesel Range Organics (DRO)/Motor Oil Range Organics (ORO)	NWTPH-Dx <sup>(2)</sup>	Water
Metals	SW-846 6010D <sup>(1)</sup>	Water
	SW-846 6020B <sup>(1)</sup>	Water
Anions	EPA 300.0 <sup>(3)</sup>	Water
	EPA 353.2 <sup>(3)</sup>	Water

## Notes:

- (1) - SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions
- (2) - NWTPH - Referenced from "Washington State Department of Ecology Analytical Methods for Petroleum Hydrocarbons", Publication No. ECY 97-602, June 1997
- (3) - EPA - MCAWW - "Methods for Chemical Analysis of Water and Waste," EPA-600/4-79-020, revised March 1983, with subsequent revisions
- SIM - Selective Ion Monitoring

**Analytical Results Summary  
Quarterly Groundwater Sampling  
Shell International Petroleum - Triton West Consent Decree  
Seattle, Washington  
December 2022**

<b>Location ID:</b>	<b>MW-05</b>	<b>MW-101</b>	<b>MW-102</b>	<b>MW-104</b>	<b>MW-105</b>	<b>MW-111</b>	<b>MW-112A</b>	<b>MW-113</b>	<b>MW-114</b>
<b>Sample Name:</b>	<b>MW-05</b>	<b>MW-101</b>	<b>MW-102</b>	<b>MW-104</b>	<b>MW-105</b>	<b>MW-111</b>	<b>MW-112A</b>	<b>MW-113</b>	<b>MW-114</b>
<b>Sample Date:</b>	<b>12/14/2022</b>	<b>12/12/2022</b>	<b>12/12/2022</b>	<b>12/14/2022</b>	<b>12/14/2022</b>	<b>12/14/2022</b>	<b>12/13/2022</b>	<b>12/14/2022</b>	<b>12/14/2022</b>

<b>Parameters</b>	<b>Unit</b>									
<b>Volatile Organic Compounds</b>										
Benzene	µg/L	0.400 U	0.400 U	0.400 U	--	0.400 U	53.8	2.63	65.0	0.400 U
Ethylbenzene	µg/L	1.00 U	1.00 U	1.00 U	--	1.00 U	0.527 J	0.729 J	1.00 U	1.00 U
Toluene	µg/L	1.00 U	1.00 U	1.00 U	--	1.00 U	3.33	1.59	4.66	1.00 U
Xylenes (total)	µg/L	3.00 U	3.00 U	3.00 U	--	3.00 U	2.59 J	2.25 J	3.00 U	3.00 U
<b>Semi-volatile Organic Compounds, SIM</b>										
1-Methylnaphthalene	µg/L	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--	--	--	--	--	--	--
Chrysene	µg/L	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--	--	--	--	--	--	--
Naphthalene	µg/L	--	--	--	--	--	--	--	--	--
<b>Metals</b>										
Lead	µg/L	--	--	--	60.0 U	14.3 J	--	--	--	--
Iron (dissolved)	µg/L	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	µg/L	--	--	--	--	--	--	--	--	--

**Analytical Results Summary  
Quarterly Groundwater Sampling  
Shell International Petroleum - Triton West Consent Decree  
Seattle, Washington  
December 2022**

<b>Location ID:</b>	<b>MW-05</b>	<b>MW-101</b>	<b>MW-102</b>	<b>MW-104</b>	<b>MW-105</b>	<b>MW-111</b>	<b>MW-112A</b>	<b>MW-113</b>	<b>MW-114</b>
<b>Sample Name:</b>	<b>MW-05</b>	<b>MW-101</b>	<b>MW-102</b>	<b>MW-104</b>	<b>MW-105</b>	<b>MW-111</b>	<b>MW-112A</b>	<b>MW-113</b>	<b>MW-114</b>
<b>Sample Date:</b>	<b>12/14/2022</b>	<b>12/12/2022</b>	<b>12/12/2022</b>	<b>12/14/2022</b>	<b>12/14/2022</b>	<b>12/14/2022</b>	<b>12/13/2022</b>	<b>12/14/2022</b>	<b>12/14/2022</b>

<b>Parameters</b>	<b>Unit</b>									
<b>Total Petroleum Hydrocarbons</b>										
Gasoline	µg/L	150 U	150 U	150 U	153	150 U	490	1060	177	150 U
Motor oil	µg/L	191 J	411 U	143 J	1010	679	326 J	686	440	523
Total Petroleum Hydrocarbons - Extractable (DRO)	µg/L	387	247 U	226 U	2570	1250	1310	2670	1240	339
Total Petroleum Hydrocarbons - Extractable (DRO) (Silica Gel)	µg/L	245 U	--	226 U	159 J	223 U	236 U	508	397	222 U
Total Petroleum Hydrocarbons - Motor Oil (Silica Gel)	µg/L	409 U	--	377 U	409 U	292 J	393 U	368 U	402 U	371 U
<b>General Chemistry</b>										
Nitrite/Nitrate	mg/L	--	--	--	--	--	--	--	--	--
Sulfate	mg/L	--	--	--	--	--	--	--	--	--

Table 3

**Analytical Results Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, Washington**  
**December 2022**

Location ID:	MW-115	MW-201	MW-202	MW-203	MW-204	MW-206A	MW-213	MW-214	MW-301
Sample Name:	MW-115	MW-201	MW-202	MW-203	MW-204	MW-206A	MW-213	MW-214	MW-301
Sample Date:	12/14/2022	12/12/2022	12/12/2022	12/14/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/13/2022

Parameters	Unit									
<b>Volatile Organic Compounds</b>										
Benzene	µg/L	0.400 U	0.400 U	3.14	--	0.400 U	0.400 U	0.400 U	0.400 U	24.2
Ethylbenzene	µg/L	1.00 U	1.00 U	1.93	--	1.00 U	1.00 U	1.00 U	1.00 U	0.703 J
Toluene	µg/L	1.00 U	1.00 U	1.11	--	1.00 U	1.00 U	1.00 U	1.00 U	1.51
Xylenes (total)	µg/L	3.00 U	3.00 U	1.55 J	--	3.00 U	3.00 U	3.00 U	3.00 U	1.48 J
<b>Semi-volatile Organic Compounds, SIM</b>										
1-Methylnaphthalene	µg/L	--	--	--	--	--	--	0.0476 J	0.0904 U	--
2-Methylnaphthalene	µg/L	--	--	--	--	--	--	0.0905 U	0.0904 U	--
Benzo(a)anthracene	µg/L	--	--	--	--	--	--	0.0905 U	0.0904 U	--
Benzo(a)pyrene	µg/L	--	--	--	--	--	--	0.0905 U	0.0904 U	--
Benzo(b)fluoranthene	µg/L	--	--	--	--	--	--	0.0905 U	0.0904 U	--
Benzo(k)fluoranthene	µg/L	--	--	--	--	--	--	0.0905 U	0.0904 U	--
Chrysene	µg/L	--	--	--	--	--	--	0.0905 U	0.0904 U	--
Dibenz(a,h)anthracene	µg/L	--	--	--	--	--	--	0.0905 U	0.0904 U	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--	--	--	--	0.0905 U	0.0904 U	--
Naphthalene	µg/L	--	--	--	--	--	--	0.0905 U	0.0904 U	--
<b>Metals</b>										
Lead	µg/L	--	--	--	--	--	--	--	--	--
Iron (dissolved)	µg/L	--	--	122 J	8340	--	--	--	--	--
Manganese (dissolved)	µg/L	--	--	868	693	--	--	--	--	--

**Analytical Results Summary  
Quarterly Groundwater Sampling  
Shell International Petroleum - Triton West Consent Decree  
Seattle, Washington  
December 2022**

<b>Location ID:</b>	<b>MW-115</b>	<b>MW-201</b>	<b>MW-202</b>	<b>MW-203</b>	<b>MW-204</b>	<b>MW-206A</b>	<b>MW-213</b>	<b>MW-214</b>	<b>MW-301</b>
<b>Sample Name:</b>	<b>MW-115</b>	<b>MW-201</b>	<b>MW-202</b>	<b>MW-203</b>	<b>MW-204</b>	<b>MW-206A</b>	<b>MW-213</b>	<b>MW-214</b>	<b>MW-301</b>
<b>Sample Date:</b>	<b>12/14/2022</b>	<b>12/12/2022</b>	<b>12/12/2022</b>	<b>12/14/2022</b>	<b>12/12/2022</b>	<b>12/12/2022</b>	<b>12/12/2022</b>	<b>12/12/2022</b>	<b>12/13/2022</b>

<b>Parameters</b>	<b>Unit</b>									
<b>Total Petroleum Hydrocarbons</b>										
Gasoline	µg/L	150 U	150 U	2980	227	150 U	150 U	150 U	150 U	--
Motor oil	µg/L	420 J	163 J	505	350 J	458	575	268 J	275 J	--
Total Petroleum Hydrocarbons - Extractable (DRO)	µg/L	1240	556	22100	993	351	264	270	367	--
Total Petroleum Hydrocarbons - Extractable (DRO) (Silica Gel)	µg/L	713	249 U	4160	246 U	232 U	234 U	228 U	222 U	--
Total Petroleum Hydrocarbons - Motor Oil (Silica Gel)	µg/L	432 U	416 U	438 U	409 U	386 U	164 J	380 U	371 U	--
<b>General Chemistry</b>										
Nitrite/Nitrate	mg/L	--	--	0.100 UJ	0.0480 J	--	--	--	--	--
Sulfate	mg/L	--	--	100	7.94	--	--	--	--	--

Table 3

**Analytical Results Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, Washington**  
**December 2022**

Location ID:	MW-302	MW-303	MW-304	MW-307	MW-308	MW-309	MW-310	MW-311	MW-312
Sample Name:	MW-302	MW-303	MW-304	MW-307	MW-308	MW-309	MW-310	MW-311	MW-312
Sample Date:	12/13/2022	12/13/2022	12/13/2022	12/12/2022	12/12/2022	12/13/2022	12/13/2022	12/13/2022	12/13/2022

Parameters	Unit									
<b>Volatile Organic Compounds</b>										
Benzene	µg/L	0.400 U	139	4.66	82.0	1.43	0.400 U	16.3	3.74	3.92
Ethylbenzene	µg/L	1.00 U	58.0	0.588 J	74.0	1.00 U	1.00 U	0.555 J	0.542 J	1.26
Toluene	µg/L	1.00 U	4.83	1.00 U	19.0	1.00 U	1.00 U	1.03	2.60	2.14
Xylenes (total)	µg/L	3.00 U	9.82	0.748 J	79.3	3.00 U	3.00 U	1.44 J	1.00 J	1.98 J
<b>Semi-volatile Organic Compounds, SIM</b>										
1-Methylnaphthalene	µg/L	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--	--	--	--	--	--	--
Chrysene	µg/L	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--	--	--	--	--	--	--
Naphthalene	µg/L	--	--	--	--	--	--	--	--	--
<b>Metals</b>										
Lead	µg/L	--	--	--	--	--	--	--	--	--
Iron (dissolved)	µg/L	31800	--	8800	366 J	162 J	--	7740	6140	399 J
Manganese (dissolved)	µg/L	607	--	462	678	2.54 J	--	857	1890	903



Table 3

**Analytical Results Summary  
Quarterly Groundwater Sampling  
Shell International Petroleum - Triton West Consent Decree  
Seattle, Washington  
December 2022**

<b>Location ID:</b>	<b>MW-302</b>	<b>MW-303</b>	<b>MW-304</b>	<b>MW-307</b>	<b>MW-308</b>	<b>MW-309</b>	<b>MW-310</b>	<b>MW-311</b>	<b>MW-312</b>
<b>Sample Name:</b>	<b>MW-302</b>	<b>MW-303</b>	<b>MW-304</b>	<b>MW-307</b>	<b>MW-308</b>	<b>MW-309</b>	<b>MW-310</b>	<b>MW-311</b>	<b>MW-312</b>
<b>Sample Date:</b>	<b>12/13/2022</b>	<b>12/13/2022</b>	<b>12/13/2022</b>	<b>12/12/2022</b>	<b>12/12/2022</b>	<b>12/13/2022</b>	<b>12/13/2022</b>	<b>12/13/2022</b>	<b>12/13/2022</b>

<b>Parameters</b>	<b>Unit</b>									
<b>Total Petroleum Hydrocarbons</b>										
Gasoline	µg/L	198	1180	364	2000	150 U	150 U	463	1320	1720
Motor oil	µg/L	145 J	321 J	674	699	--	391 U	743	--	--
Total Petroleum Hydrocarbons - Extractable (DRO)	µg/L	387	3730	2150	5930	--	249	4640	--	--
Total Petroleum Hydrocarbons - Extractable (DRO) (Silica Gel)	µg/L	236 U	1020	367	924	--	235 U	709	--	--
Total Petroleum Hydrocarbons - Motor Oil (Silica Gel)	µg/L	393 U	371 U	390 U	400 U	--	391 U	393 U	--	--
<b>General Chemistry</b>										
Nitrite/Nitrate	mg/L	0.100 UJ	--	0.100 UJ	0.100 UJ	0.100 UJ	--	0.100 UJ	0.100 UJ	0.100 UJ
Sulfate	mg/L	39.1	--	51.6	1.43 J	48.0	--	22.2	0.429 J	4.73

**Analytical Results Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, Washington**  
**December 2022**

Location ID:	MW-313	MW-315	SH-04	TES-MW-1	TX-03A	TX-04	TX-06A	
Sample Name:	MW-313	MW-315	SH-04	TES-MW-1	TX-03A	TX-04	TX-06A	
Sample Date:	12/13/2022	12/13/2022	12/13/2022	12/12/2022	12/13/2022	12/13/2022	12/12/2022	
<b>Parameters</b>	<b>Unit</b>							
<b>Volatile Organic Compounds</b>								
Benzene	µg/L	0.400 U	0.400 U	6.97	0.400 U	122	0.400 U	0.400 U
Ethylbenzene	µg/L	1.00 U	1.00 U	3.27	1.00 U	1.40	1.00 U	1.00 U
Toluene	µg/L	1.00 U	1.00 U	1.07	1.00 U	7.01	1.00 U	1.00 U
Xylenes (total)	µg/L	3.00 U	3.00 U	2.83 J	3.00 U	6.82	3.00 U	3.00 U
<b>Semi-volatile Organic Compounds, SIM</b>								
1-Methylnaphthalene	µg/L	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	--	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--	--	--	--	--
Chrysene	µg/L	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--	--	--	--	--
Naphthalene	µg/L	--	--	--	--	--	--	--
<b>Metals</b>								
Lead	µg/L	--	--	--	--	--	--	--
Iron (dissolved)	µg/L	--	--	--	--	109 J	--	--
Manganese (dissolved)	µg/L	--	--	--	--	927	--	--

**Analytical Results Summary**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, Washington**  
**December 2022**

Location ID:	MW-313	MW-315	SH-04	TES-MW-1	TX-03A	TX-04	TX-06A
Sample Name:	MW-313	MW-315	SH-04	TES-MW-1	TX-03A	TX-04	TX-06A
Sample Date:	12/13/2022	12/13/2022	12/13/2022	12/12/2022	12/13/2022	12/13/2022	12/12/2022

Parameters	Unit	MW-313	MW-315	SH-04	TES-MW-1	TX-03A	TX-04	TX-06A
<b>Total Petroleum Hydrocarbons</b>								
Gasoline	µg/L	150 U	150 U	369	150 U	1050	150 U	150 U
Motor oil	µg/L	333 J	323 J	417	427 U	598	386 U	210 J
Total Petroleum Hydrocarbons - Extractable (DRO)	µg/L	523	470	1820	256 U	1510	232 U	659
Total Petroleum Hydrocarbons - Extractable (DRO) (Silica Gel)	µg/L	229 U	234 U	934	--	625	--	235 U
Total Petroleum Hydrocarbons - Motor Oil (Silica Gel)	µg/L	382 U	389 U	306 J	--	325 J	--	391 U
<b>General Chemistry</b>								
Nitrite/Nitrate	mg/L	--	--	--	--	0.100 UJ	--	--
Sulfate	mg/L	--	--	--	--	8.86	--	--

## Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

UJ - Not detected; associated reporting limit is estimated

"--" - Not analyzed

SIM - Selective Ion Monitoring

DRO - Diesel Range Organics

Table 4

**Qualified Sample Results Due to Outlying MS/MSD Results**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, Washington**  
**December 2022**

Parameter	Sample ID	Analyte	MS	MSD	RPD (percent)	Control Limits		Associated Sample IDs	Qualified Result	Units
			% Recovery	% Recovery		% Recovery	RPD			
General Chemistry	TX-03A	Nitrate/Nitrite	72	72	0	90-110	10	MW-307	<0.100 UJ	mg/L
								MW-308	<0.100 UJ	mg/L
								MW-302	<0.100 UJ	mg/L
								MW-304	<0.100 UJ	mg/L
								MW-310	<0.100 UJ	mg/L
								MW-311	<0.100 UJ	mg/L
								MW-312	<0.100 UJ	mg/L
								TX-03A	<0.100 UJ	mg/L
								MW-203	0.0480 J	mg/L
					MW-202	<0.100 UJ	mg/L			

## Notes:

- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- RPD - Relative Percent Difference
- J - Estimated concentration
- UJ - Not detected; associated concentration is estimated

Table 5

**Qualified Sample Data Due to Analyte Concentrations in the Trip Blanks**  
**Quarterly Groundwater Sampling**  
**Shell International Petroleum - Triton West Consent Decree**  
**Seattle, Washington**  
**December 2022**

Parameter	Blank Date (mm/dd/yyyy)	Analyte	Blank Result *	Associated Sample ID	Original Result	Qualified Result	Units
TPH	12/12/2022	Gasoline	78.3 J	MW-308	51.5 J	150 U	µg/L
				MW-309	51.1 J	150 U	µg/L
				MW-313	48.5 J	150 U	µg/L
				TX-04	34.1 J	150 U	µg/L
				MW-115	59.6 J	150 U	µg/L
				MW-204	91.4 J	150 U	µg/L

## Notes:

- \* - Blank result adjusted for sample factors where applicable
- U - Not detected at the associated concentration
- J - Estimated concentration
- TPH - Total Petroleum Hydrocarbons

