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May 19, 2020

Ronald Timm Toxics Cleanup Program Dept. of Ecology 3190 160th Ave SE Bellevue, WA 98008-5452

RE: Final 2019 Site-Wide Groundwater Monitoring Report Transmittal Consent Decree No. 07-2-33672-9 SEA: Site Name: BNSF Former Maintenance and Fueling Facility Site Address: Skykomish, WA Facility/Site ID No.: 2104 Cleanup Site ID No.: 34

Dear Mr. Timm:

Enclosed is the Final 2019 Site-Wide Groundwater Monitoring Report for Ecology's records.

Sincerely,

C Dh

Shane C. DeGross Manager Environmental Remediation, BNSF Railway

cc: Ms. Amy Essig Desai, Farallon Consulting



Washington Issaquah | Bellingham | Seattle

> Oregon Portland | Baker City

California Oakland | Folsom | Irvine

## 2019 SITE-WIDE GROUNDWATER MONITORING REPORT

# BNSF FORMER MAINTENANCE AND FUELING FACILITY SKYKOMISH, WASHINGTON CONSENT DECREE NO. 07-2-33672-9 SEA

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May 19, 2020

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# **EXECUTIVE SUMMARY**

Quarterly groundwater monitoring was conducted in 2019 at the BNSF Railway Company (BNSF) Former Maintenance and Fueling Facility in Skykomish, Washington. Groundwater samples collected during the monitoring events were analyzed for total petroleum hydrocarbons as dieseland as oil-range organics (herein referred to collectively as NWTPH-Dx) using Washington State Department of Ecology (Ecology) Method NWTPH-Dx.

Groundwater flow direction in 2019 generally was consistent with previous years. South (i.e., upgradient) of the hydraulic control and containment (HCC) system barrier wall, the groundwater flow direction is predominantly toward the west-northwest. North (i.e., down-gradient) of the HCC system barrier wall, groundwater flow direction is predominantly toward the west.

Light nonaqueous-phase liquid (LNAPL) was observed in monitoring wells and piezometers upgradient of and adjacent to the HCC system barrier wall, between the West Gate and Center Gate consistent with previous years. Measured LNAPL thicknesses ranged from a light trace (i.e., less than 0.01 foot) to 3.1 feet. A heavy trace of LNAPL was observed in recovery well RW-09 during the December 2019 groundwater monitoring event. LNAPL was not observed at nearby locations, including piezometer PZ-1, located east of recovery well RW-09, and the east, central, and west oil-water separator chambers (north and south) of the East Gate, indicating an isolated occurrence. Over the life cycle of the data record, measured LNAPL thicknesses have exhibited an overall decreasing or stable trend, with minor variability. LNAPL measurements at the site are subject to uncertainty due to the viscous nature of the LNAPL. Piezometers and recovery wells will continue to be monitored for LNAPL.

The site-specific NWTPH-Dx groundwater cleanup level of 208 micrograms per liter ( $\mu g/l$ ) and absence of sheen (CUL) is applicable at the groundwater conditional point of compliance, defined as the point where groundwater enters the Skykomish River. Compliance with the CUL is assessed using monitoring wells in the Levee Zone adjacent to the Skykomish River. Reported NWTPH-Dx concentrations in the groundwater samples collected from Levee Zone monitoring wells were less than the CUL.

The site-specific NWTPH-Dx groundwater remediation level of 477  $\mu$ g/l and absence of sheen (RL) is applicable from the BNSF railyard boundary to the groundwater conditional point of compliance. Reported NWTPH-Dx concentrations in the groundwater samples collected from monitoring wells north of the BNSF railyard and outside the Levee Zone were less than the RL, with the exception of select samples collected from HCC system monitoring well 2A-W-41.

Reported NWTPH-Dx concentrations in well 2A-W-41 have been variable since December 2013. Well 2A-W-41 is down-gradient of monitoring well GW-3, which is immediately north and down-gradient of the Center Gate, where substantial biofouling by iron bacteria has been observed. Quarterly groundwater samples collected from wells 2A-W-41 and GW-3 in 2019 were analyzed by Ecology Method NWTPH-Dx both with and without a silica gel cleanup preparation process. The March, June, September, and December 2019 samples collected from well 2A-W-41 and

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analyzed without silica gel cleanup had reported concentrations of 690, 510, 261, and 590  $\mu$ g/l, respectively. Reported NWTPH-Dx concentrations in all of the silica gel-prepared samples collected from well 2A-W-41 were less than the RL. The results of the analyses performed with and without silica gel cleanup suggest that the results from the non-silica-gel–prepared samples are biased high due to biogenic or petroleum metabolite interferences.

During the summer of 2018, the hot water flushing (HWF) remediation system that operated at the Skykomish School in 2016 and 2017 was decommissioned, and the associated sheet pile barrier wall was removed. Former HWF system recovery well RW-10 and schoolyard monitoring wells 5-W-51, 5-W-55, and 5-W-56 were retained to evaluate post-HWF treatment groundwater quality (former recovery well RW-10 was retained for gauging only, to monitor for the presence of LNAPL). Reported NWTPH-Dx concentrations in the groundwater samples collected from wells 5-W-51 and 5-W-56 in 2019 ranged from 740 to 2,310 µg/l. A heavy trace of LNAPL was observed in recovery well RW-10 in June 2019 and a light trace of LNAPL was observed in December 2019. LNAPL or sheen were not observed in any of Levee Zone monitoring wells situated down-gradient of RW-10 in 2019. According to the Consent Decree between BNSF and Ecology, if NWTPH-Dx concentrations exceeding the RL are reported in groundwater samples collected from the schoolyard monitoring wells or down-gradient of the Skykomish School property following HWF treatment, no additional measures are required to meet the RL on or immediately down-gradient of the Skykomish School property. Contingency treatment methods, which could potentially include air-sparging, enhanced bioremediation, or similar in-place treatment measures, will be employed if NWTPH-Dx concentrations exceeding the CUL are reported in groundwater samples at the conditional point of compliance during future groundwater monitoring events.

In general, with the exceptions noted above, groundwater monitoring data indicate that LNAPL thicknesses and NWTPH-Dx concentrations in groundwater remained stable or decreased in 2019. Reported NWTPH-Dx concentrations in the groundwater samples collected from the Levee Zone monitoring wells did not exceed the CUL.

Quarterly groundwater monitoring will continue in 2020 in accordance with the Consent Decree. Additionally, the Consent Decree requires that a Long-Term Monitoring Plan be submitted following termination of the HWF remediation system operation at the Skykomish School. The draft Long-Term Monitoring Plan was submitted on November 26, 2019 and is pending Ecology review. Groundwater samples collected from monitoring wells GW-3 and 2A-W-41 will continue to be analyzed both with and without the silica gel cleanup preparation process to gain additional perspective on likely biogenic or petroleum metabolite interferences affecting the analytical results from these wells.

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# **1.0 INTRODUCTION**

This 2019 Site-Wide Groundwater Monitoring Report was prepared on behalf of BNSF Railway Company (BNSF) and describes the groundwater monitoring activities conducted in 2019 at the BNSF Former Maintenance and Fueling Facility in Skykomish, Washington (herein referred to as the Site) (Figure 1). Groundwater monitoring is being conducted as part of the Site cleanup action in accordance with Consent Decree No. 07-2-33672-9 SEA between the Washington State Department of Ecology (Ecology) and BNSF (Consent Decree). Groundwater monitoring is conducted quarterly in accordance with the Consent Decree, the 2007 Cleanup Action Plan (Ecology 2007a) (2007 CAP), and the 2010 Groundwater Monitoring Plan (AECOM 2010b) (2010 GWMP).

#### 1.1 GROUNDWATER MONITORING OBJECTIVES

The objectives of the Site groundwater monitoring program are to:

- Monitor any changes in contaminant distribution pending completion of the cleanup action;
- Provide monitoring data to assess the effects of completed and ongoing remedial actions on groundwater quality; and
- Provide liquid-level gauging data to assess hydraulic gradients and the extent of light nonaqueous-phase liquid (LNAPL).

#### **1.2** CLEANUP LEVELS AND REMEDIATION LEVELS

The Site-specific groundwater cleanup level established in the 2007 CAP for total petroleum hydrocarbon concentrations, defined as the sum of total petroleum hydrocarbons as diesel-range organics (DRO) and oil-range organics (ORO) analyzed using Ecology Method NWTPH-Dx (herein referred to collectively as NWTPH-Dx), is 208 micrograms per liter ( $\mu$ g/l) and absence of sheen (CUL). The CUL is applicable at the groundwater conditional point of compliance (CPOC), defined as the surface water boundary where groundwater enters the Skykomish River and Former Maloney Creek. The basis for the CUL is protection of sediments from being adversely impacted by groundwater. Compliance with the CUL currently is assessed using monitoring wells in the Levee Zone adjacent to the Skykomish River (Figure 1). Based on historical groundwater elevation and hydraulic gradient data, groundwater does not flow toward or discharge to Former Maloney Creek.

The Site-specific groundwater remediation level for NWTPH-Dx is 477  $\mu$ g/l and absence of sheen (RL). The RL is applicable from the BNSF railyard boundary to the groundwater CPOC, and is used to assess groundwater quality in areas of the Site north of the BNSF railyard boundary and outside the Levee Zone (Figure 1). The groundwater RL is protective of drinking water.

According to the Consent Decree, there may be isolated areas outside of the BNSF railyard boundary where the RL cannot be achieved. Ecology will not require the RL be met beneath and



down-gradient of such isolated areas (e.g., the Skykomish School property), but the CUL must still be met at the CPOC in the Levee Zone (Figure 1). Contingency treatment methods will be employed at the groundwater CPOC if a sheen, or NWTPH-Dx concentrations exceeding 208  $\mu$ g/l, are reported in groundwater samples at the CPOC.

#### **1.3** SITE DESCRIPTION

The Site includes BNSF property and public and private properties in the Town of Skykomish in King County, Washington, and encompasses an area of approximately 40 acres (Figure 1). The Site is bounded by the Skykomish River to the north, the Town of Skykomish city limits to the east, Old Cascade Highway to the south, and Former Maloney Creek to the west. Railroad Avenue separates the BNSF railyard from the main commercial district of the Town of Skykomish (Figure 1). Additional Site history and background information is presented in the Consent Decree, 2007 CAP, and Supplemental Remedial Investigation Volume 1 (The RETEC Group, Inc. 2002b).

#### **1.4 REPORT ORGANIZATION**

The remainder of this report is organized into the following sections:

- Section 2, Groundwater Monitoring Well Network, describes the current monitoring well network.
- Section 3, Sampling, Analysis, and Reporting, describes the groundwater sampling methods, laboratory analysis and reporting procedures, and data management and validation protocols used.
- Section 4, Results and Discussion, describes the results from the groundwater monitoring, including groundwater levels and flow directions, field parameters, and groundwater analytical results.
- Section 5, Conclusions, provides conclusions based on the groundwater monitoring results.
- Section 6, Bibliography, provides a list of the documents used in preparing this report.



### 2.0 GROUNDWATER MONITORING WELL NETWORK

The network of wells used for groundwater monitoring was established in the 2010 GWMP (Figure 1). In addition, the 2010 GWMP included monitoring locations within the hydraulic control and containment (HCC) system that were used to assess the performance of the HCC system (i.e., treatment of groundwater as it flowed north through the four gates within the barrier wall). These monitoring locations included sentry wells, piezometers, and HCC system gate vaults (Figure 2). The dates of the groundwater monitoring events conducted in 2019 are presented in Table 1. During this reporting period, no modifications were made to the groundwater monitoring program. Tables 2 and 3 provide additional details regarding the sampling and liquid-level gauging frequencies for the locations included in the groundwater monitoring program.



# 3.0 SAMPLING, ANALYSIS, AND REPORTING

This section summarizes the sampling methods, laboratory analysis and reporting procedures, and data management and validation protocols for the groundwater monitoring program. Groundwater samples collected in 2019 were analyzed by TestAmerica Laboratories, Inc. of Tacoma, Washington. The groundwater analytical results were independently validated by Sayler Data Solutions, Inc. of Kirkland, Washington.

#### **3.1 SAMPLING METHODS**

Liquid-level gauging and groundwater sampling were conducted in accordance with the 2010 GWMP. Groundwater samples were collected using low-flow sampling techniques and peristaltic pumps. The samples were collected in laboratory-supplied containers after groundwater field parameters stabilized during well purging, with the exception of the HCC system sentry wells, which were sampled after 15 minutes of well purging. The filled sample containers were placed on ice in a cooler and delivered to the analytical laboratory under standard chain-of-custody protocols.

#### **3.2** LABORATORY ANALYSIS AND REPORTING PROCEDURES

Groundwater samples were analyzed by Ecology Method NWTPH-Dx. Groundwater samples collected from monitoring wells GW-3 and 2A-W-41 also were analyzed by Ecology Method NWTPH-Dx with a silica gel cleanup preparation process to assess whether potential biogenic substances and/or petroleum metabolites may be affecting the analytical results from these wells.

#### **3.3** DATA MANAGEMENT AND VALIDATION PROTOCOLS

The laboratory electronic data deliverables were directly imported into an electronic database that contains existing Site data. A quality control check was performed on the imported data to ensure that they were accurately uploaded. Laboratory analytical reports are provided in Appendix A.

Sayler Data Solutions, Inc. independently validated the groundwater analytical data to assess whether the data met the quality control/validation standards described in the 2010 GWMP. The data validation procedures were based on U.S. Environmental Protection Agency (2008) Guidelines for Organic Methods Data Review; data evaluation metrics included precision, accuracy, method compliance, and completeness of the data set. The data validation results indicate that the groundwater analytical data are suitable for the intended use of assessing Site groundwater quality. Data validation reports are provided in Appendix B.



## 4.0 **RESULTS AND DISCUSSION**

The results from the 2019 Site-wide groundwater monitoring program are summarized in this section. Groundwater sampling frequency, groundwater elevation and LNAPL thickness, and groundwater-quality parameters measured during the groundwater monitoring events are summarized in Tables 3, 4, and 5, respectively. Table 6 provides groundwater analytical results for the DRO and ORO fractions and calculated total NWTPH-Dx concentrations. Groundwater elevation contour maps for the groundwater monitoring events are presented on Figures 3 through 6. Figures 7 through 10 show the NWTPH-Dx results for each groundwater monitoring event and the estimated areal extent of LNAPL. NWTPH-Dx trend plots are provided in Appendix C.

#### 4.1 GROUNDWATER LEVELS AND GRADIENT DIRECTIONS

As noted on Figures 3 through 6, the calculated groundwater elevations at the HCC system barrier wall gate vaults and select wells and piezometers were not used for interpreting groundwater gradient and direction. Groundwater elevation data from these wells are not included because the gate vaults were not designed to provide representative water-level measurements. Groundwater elevations at some wells and piezometers were inconsistent with groundwater elevation data from nearby locations (likely due to local geological heterogeneities) and therefore were not considered representative. In other cases, it was not possible to graphically depict local details of groundwater elevation contours because the spatial scale of the groundwater elevation contour maps is too small.

Seasonal groundwater-level fluctuations of 2.57 to 6.11 feet occurred in wells and piezometers on the southern (i.e., up-gradient) side of the HCC system barrier wall. Seasonal groundwater-level fluctuations in wells and piezometers on the northern (i.e., down-gradient) side of the HCC system barrier wall were smaller, ranging from 0.06 to 4.62 feet. The HCC system barrier wall restricts groundwater flow, causing groundwater mounding on the southern side of the barrier wall, and accentuating a westerly component to groundwater flow near the wall. Groundwater elevation differentials across the central portion of the HCC system barrier wall ranged from 2.1 feet in September 2019 to 7.3 feet in March 2019, as measured in piezometer pairs adjacent to the barrier wall (i.e., one piezometer on either side of the wall).

Estimated hydraulic gradients in 2019 generally were consistent with previous years. South of the HCC system barrier wall, the gradient direction was predominantly toward the west-northwest. North of the HCC system barrier wall, the gradient direction was predominantly toward the west, subparallel to the Skykomish River flow direction. Estimated gradient magnitudes on the southern side of the HCC system barrier wall were on the order of 0.01 to 0.02 foot per foot. Estimated gradient magnitudes on the order of 0.01 foot per foot.



#### 4.2 FIELD PARAMETERS

Field parameters measured during well purging included temperature, pH, dissolved oxygen (DO), oxidation-reduction potential (ORP), turbidity, and specific conductivity. Table 5 presents the stabilized field parameter values recorded at the wells sampled in 2019.

Groundwater temperatures varied seasonally, ranging from 2.0 degrees Celsius (°C) in well 2A-W-10 in March 2019 to 15.8 °C in well 5-W-56 in September 2019. Groundwater pH values were generally consistent with previous years, ranging from 5.29 to 7.20. Measured DO concentrations also were generally consistent with previous years, ranging from 0.16 milligram per liter (mg/l) in well GW-2 in December 2019 to 12.84 mg/l in well MW-38R in March 2019. In general, monitoring wells with no reported detections of petroleum hydrocarbons exhibited higher DO values (average of 5.14 mg/l) than wells with reported detections (average of 3.27 mg/l), indicating that the petroleum hydrocarbons in Site groundwater are biodegrading.

ORP values were generally consistent with previous years, ranging from -194 millivolts in well 5-W-51 in December 2019 to 320 millivolts in well 2B-W-4 in June 2019. Of the 122 ORP values measured in 2019, 112 were positive. The predominantly positive ORP values and DO concentrations exceeding 1 mg/l indicate that conditions are favorable for aerobic biodegradation of petroleum hydrocarbons.

### 4.3 GROUNDWATER ANALYTICAL RESULTS

The NWTPH-Dx analytical results are reported as DRO and ORO fractions, which are summed to give the total NWTPH-Dx concentration. If both DRO and ORO fractions were detected, the total NWTPH-Dx concentration was calculated as the sum of the reported DRO and ORO concentrations. If either the DRO or ORO fraction was not detected, half the method detection limit (MDL) was used for the non-detected fraction in the NWTPH-Dx calculation.

The groundwater analytical results are summarized below. Table 6 shows groundwater analytical results for the DRO and ORO fractions and calculated total NWTPH-Dx concentrations. Figures 7 through 10 show the NWTPH-Dx results for each groundwater monitoring event and the estimated areal extent of LNAPL. NWTPH-Dx trend plots are provided in Appendix C.

#### 4.3.1 Levee Zone Monitoring Wells

Monitoring wells 5-W-14 and 5-W-16 through 5-W-19 were sampled quarterly. Reported NWTPH-Dx concentrations in the groundwater samples collected from the Levee Zone monitoring wells were less than the CUL. LNAPL or sheen was not observed in any of the Levee Zone monitoring wells.

#### 4.3.2 Schoolyard Monitoring Wells

Monitoring wells 5-W-51, 5-W-55, and 5-W-56 were sampled quarterly, and recovery well RW-10 was gauged for the presence of LNAPL quarterly. Reported NWTPH-Dx concentrations in the



groundwater samples collected from wells 5-W-51 and 5-W-56 ranged from 740 to 2,310  $\mu$ g/l. Reported NWTPH-Dx concentrations in the groundwater samples collected from well 5-W-55 ranged from less than the MDL (i.e., not detected) to 230  $\mu$ g/l (Table 6; Figures 7 through 10).

A heavy trace of LNAPL was observed in recovery well RW-10 during the June 2019 groundwater monitoring event and a light trace of LNAPL was observed in RW-10 during the December 2019 groundwater monitoring event. LNAPL or sheen was not observed in any of the Levee Zone monitoring wells situated down-gradient of RW-10 during any of the monitoring events.

#### 4.3.3 Hydraulic Control and Containment System Sentry and Monitoring Wells

The sentry wells are sampled semiannually. The HCC system monitoring wells are gauged and sampled quarterly. The piezometers, recovery wells, and barrier wall gate oil-water separator chambers are gauged quarterly for the presence or absence of LNAPL or sheen and are not sampled.

Reported NWTPH-Dx concentrations in the groundwater samples collected from sentry wells ranged from less than the MDL (i.e., not detected) to 370  $\mu$ g/l, with two exceptions:

- NWTPH-Dx was reported at a concentration of 620 µg/l in the September 2019 groundwater sample collected from up-gradient sentry well S2-BU in the east vault of the West Gate (Table 6; Figure 9). NWTPH-Dx was not reported at concentrations exceeding the MDL in the September 2019 groundwater sample collected from down-gradient sentry well S2-BD in the east vault of the West Gate.
- NWTPH-Dx was reported at a concentration of 701  $\mu$ g/l in the September 2019 groundwater sample collected from up-gradient sentry well S4-BU in the central valut of the East Gate (Table 6; Figure 9). NWTPH-Dx was not reported at concentrations exceeding the MDL in the September 2019 groundwater sample collected from down-gradient sentry well S4-BD in the central valut of the East Gate.

The two wells noted above are sentry wells located in the up-gradient granular activated carbon (GAC)/pea gravel chamber within their respective vaults. All up-gradient sentry wells are paired with a down-gradient sentry well located in the down-gradient GAC/pea gravel chamber in the same vault to evaluate the effectiveness of groundwater treatment. NWTPH-Dx was not reported at concentrations exceeding the MDL in the sentry wells situated down-gradient of S2-BU and S4-BU in September 2019, confirming the effectiveness of the GAC in treating groundwater.

Heavy traces of LNAPL were observed in the east vault oil-water separator south chamber of the West Gate in March and December 2019, an LNAPL thickness of 0.02 feet was measured in this chamber in September 2019, and a light trace of LNAPL was observed in this chamber in June 2019 (location WG-EV-South Chamber) (Table 4). A heavy trace of LNAPL was observed in the east vault oil-water separator north chamber of the West Gate in September 2019 and light traces were observed in March and December 2019 (location WG-EV-North Chamber) (Table 4). This LNAPL may be a source of elevated NWTPH-Dx concentrations in the east vault of the West Gate. However, the reported NWTPH-Dx concentrations in all but one groundwater sample



collected from down-gradient sentry well S2-BD in the east vault of the West Gate from 2009 through 2019 were less than 200  $\mu$ g/l; most results were less than 100  $\mu$ g/l (Appendix C).

Monitoring wells EW-1, EW-2A, 5-W-43, 2A-W-41, 1B-W-23, 2A-W-42, and GW-1 through GW-4 were sampled quarterly. Monitoring well 2A-W-40 was sampled in March, September, and December 2019. Reported NWTPH-Dx concentrations in the groundwater samples collected from these wells were less than the RL, with the exception of the March, June, and December 2019 samples collected from well 2A-W-41, which had reported concentrations of 690, 510, and 590  $\mu$ g/l, respectively (Table 6; Figures 7, 8, and 10). LNAPL or sheen was not observed in any of these monitoring wells.

Reported NWTPH-Dx concentrations in well 2A-W-41 have been variable since December 2013 as shown in the trend plot provided in Appendix C. Well 2A-W-41 is west and down-gradient of well GW-3 and the Center Gate. To evaluate whether the variable NWTPH-Dx concentrations reported in wells GW-3 and 2A-W-41 since June 2014 and December 2013, respectively, may be the result of interference from biogenic substances or petroleum metabolites, groundwater samples collected from each of these wells in 2019 were analyzed by Ecology Method NWTPH-Dx both with and without a silica gel cleanup preparation process. Reported NWTPH-Dx concentrations in the silica gel-prepared samples were less than the RL, and significantly less than the reported NWTPH-Dx concentrations in all eight associated non-silica-gel–prepared samples. The results of the analyses performed with and without a silica gel cleanup prepared samples are biased high due to biogenic or petroleum metabolite interferences.

#### 4.3.4 Former Air Sparge Area Monitoring Wells

Monitoring wells 1B-W-3, 1C-W-7, and 1C-W-8 were sampled quarterly. Reported NWTPH-Dx concentrations in groundwater samples collected from these wells were less than the RL. LNAPL or sheen was not observed in the former air sparge area monitoring wells.

#### 4.3.5 Former Maloney Creek Zone Monitoring Wells

Monitoring wells MW-3, MW-4, 2A-W-9, 2A-W-10, and 2B-W-4 were sampled quarterly. Reported NWTPH-Dx concentrations in groundwater samples collected from these wells ranged from 109 to 600  $\mu$ g/l, with the exception of the March, June, and December 2019 samples collected from well MW-3, which had reported concentrations of 2,620, 1,070, and 2,570  $\mu$ g/l, respectively (Table 6; Figures 7, 8, and 10). Historically (between November 2000 and September 2017), reported NWTPH-Dx detections in monitoring well MW-3 fluctuated over a range of 41 to 930  $\mu$ g/l, whereas since December 2017, reported NWTPH-Dx detections in well MW-3 fluctuated over a larger range of 108.5 to 3,400  $\mu$ g/l with six of the eight values exceeding 1,000  $\mu$ g/l.

A sulfur-like odor has been noted during purging of monitoring well MW-3, indicating the possible presence of biogenic material (i.e., non-petroleum-based organics) in groundwater. Analytical interference from biogenic material can bias the reported NWTPH-Dx concentrations high. As discussed in the 2018 Site-Wide Groundwater Monitoring Report (Farallon 2019b), groundwater



samples collected from well MW-3 in December 2017 and September 2018 were analyzed by NWTPH-Dx both with and without a silica gel cleanup preparation process. The reported NWTPH-Dx concentrations in the silica gel-treated samples (58  $\mu$ g/l and below the MDL) were significantly less than the reported concentrations in the non-silica-gel-treated sample (3,400 and 109  $\mu$ g/l, respectively), suggesting biogenic interference. Monitoring well MW-3 is in a former wetland area; photographs of remedial excavations completed near this well in 2011 show that woody debris was present in the excavation sidewalls (AECOM 2012d). Organic matter in soil near well MW-3 may be a source of interfering biogenic material in groundwater.

Groundwater was not encountered in monitoring well MW-3 during the September 2019 groundwater monitoring event. During the December 2019 groundwater monitoring event, woody debris was observed on the end of the water-level indicator while performing liquid level gauging in monitoring well MW-3. In addition, total depth of the well was measured at approximately 10.5 feet below ground surface. During previous groundwater monitoring events, the total depth of well MW-3 was generally measured at approximately 20 feet below ground surface. These observations indicate that monitoring well MW-3 is damaged. On February 17, 2020, a down-well camera was used to evaluate the condition of monitoring well MW-3. The results confirmed that roots have damaged and infiltrated the well casing. The presence of roots and reported NWTPH-Dx concentrations both with and without a silica gel cleanup preparation process are evidence that biogenic interferences are biasing the analytical results high in groundwater samples collected from monitoring well MW-3.

LNAPL or sheen was not observed in any of the Former Maloney Creek Zone monitoring wells.

#### 4.3.6 Site-Wide Monitoring Wells

Monitoring wells 1A-W-4, MW-16, MW-38R, 1B-W-2, 1C-W-3, and 1C-W-4 were sampled semiannually in March and September 2019. Monitoring well 1C-W-1 was sampled quarterly. Reported NWTPH-Dx concentrations in the groundwater samples collected from wells north of the railyard were less than the RL. LNAPL or sheen was not observed in any of the Site-wide monitoring wells.



## **5.0 CONCLUSIONS**

In general, with the exceptions noted below, the groundwater monitoring data indicate that LNAPL thicknesses and NWTPH-Dx concentrations in groundwater remained stable or decreased in 2019. Reported NWTPH-Dx concentrations in groundwater samples collected from the Levee Zone monitoring wells near the Skykomish River did not exceed the CUL.

LNAPL was observed in monitoring wells and piezometers up-gradient of and adjacent to the HCC system barrier wall, between the West Gate and Center Gate, consistent with previous years. Measured LNAPL thicknesses ranged from a light trace (i.e., less than 0.01 foot) to 3.1 feet. A heavy trace of LNAPL was observed in recovery well RW-09 during the December 2019 groundwater monitoring event. LNAPL was not observed at nearby locations, including piezometer PZ-1, located east of recovery well RW-09, and the east, central, and west oil-water separator chambers (north and south) of the East Gate, indicating an isolated occurrence. Over the life cycle of the data record, measured LNAPL thicknesses have exhibited an overall decreasing or stable trend, with minor variability. LNAPL measurements at the Site are subject to uncertainty due to the viscous nature of the LNAPL. Piezometers and recovery wells will continue to be monitored for LNAPL.

Reported NWTPH-Dx concentrations in well 2A-W-41 have been variable since December 2013. Well 2A-W-41 is down-gradient of monitoring well GW-3, which is immediately north and down-gradient of the Center Gate, where substantial biofouling by iron bacteria has been observed. Reported NWTPH-Dx concentrations in the silica-gel-prepared samples collected from wells 2A-W-41 and GW-3 were less than the reported concentration in the non-silica-gel-prepared samples. The biofouling observations noted proximate to wells 2A-W-41 and GW-3, and results of the analyses performed with and without silica gel cleanup, suggest that the results from the non-silica-gel-prepared samples are biased high due to biogenic or petroleum metabolite interferences. Groundwater samples collected from these wells will continue to be analyzed both with and without silica gel cleanup to gain additional perspective on likely biogenic or petroleum metabolite interferences affecting the analytical results.

Quarterly groundwater monitoring will continue in 2020 in accordance with the Consent Decree. Additionally, the Consent Decree requires that a Long-Term Monitoring Plan be submitted following termination of the HWF remediation system operation at the Skykomish School. The draft Long-Term Monitoring Plan was submitted on November 26, 2019 and is pending Ecology review.



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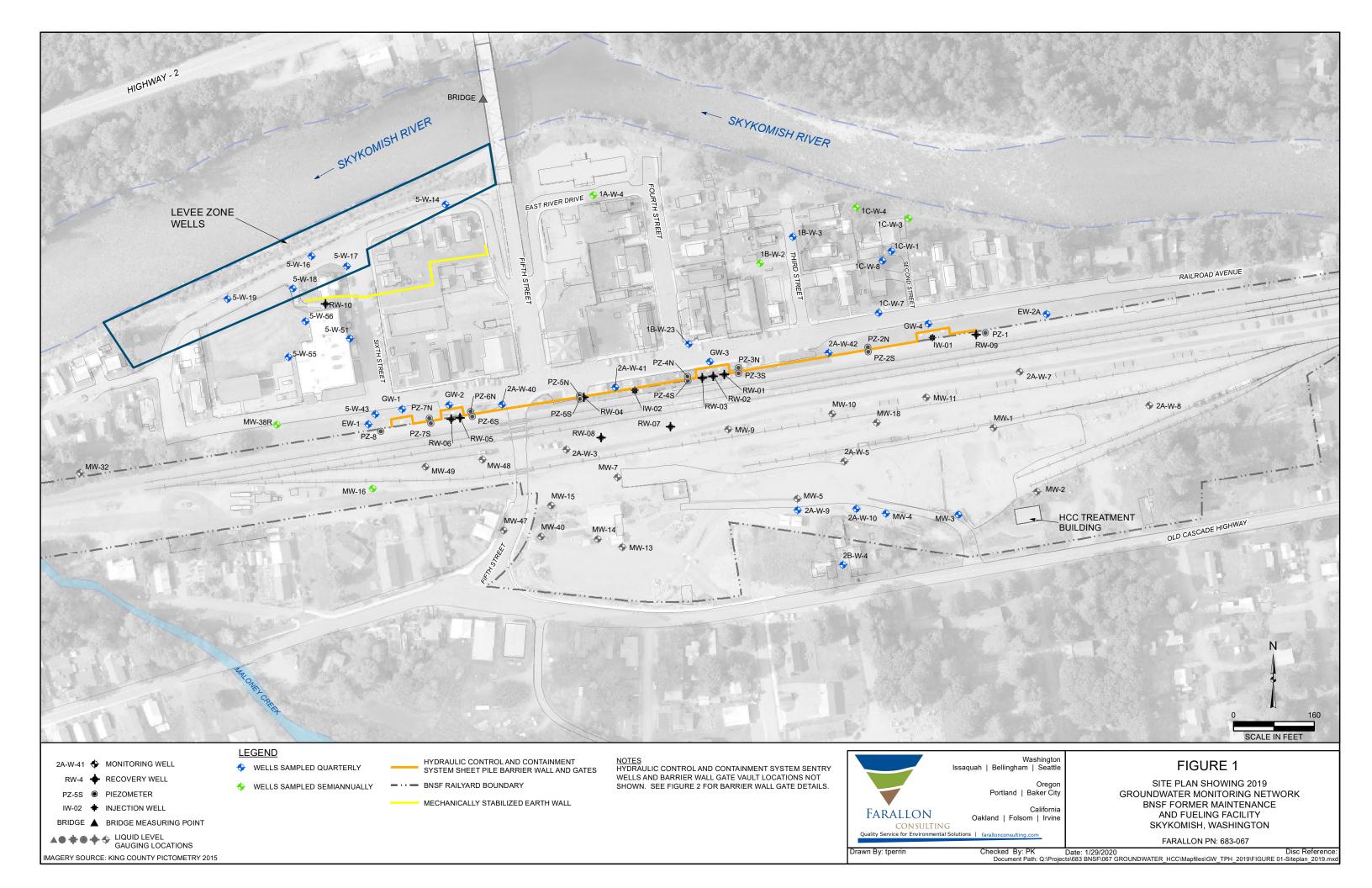


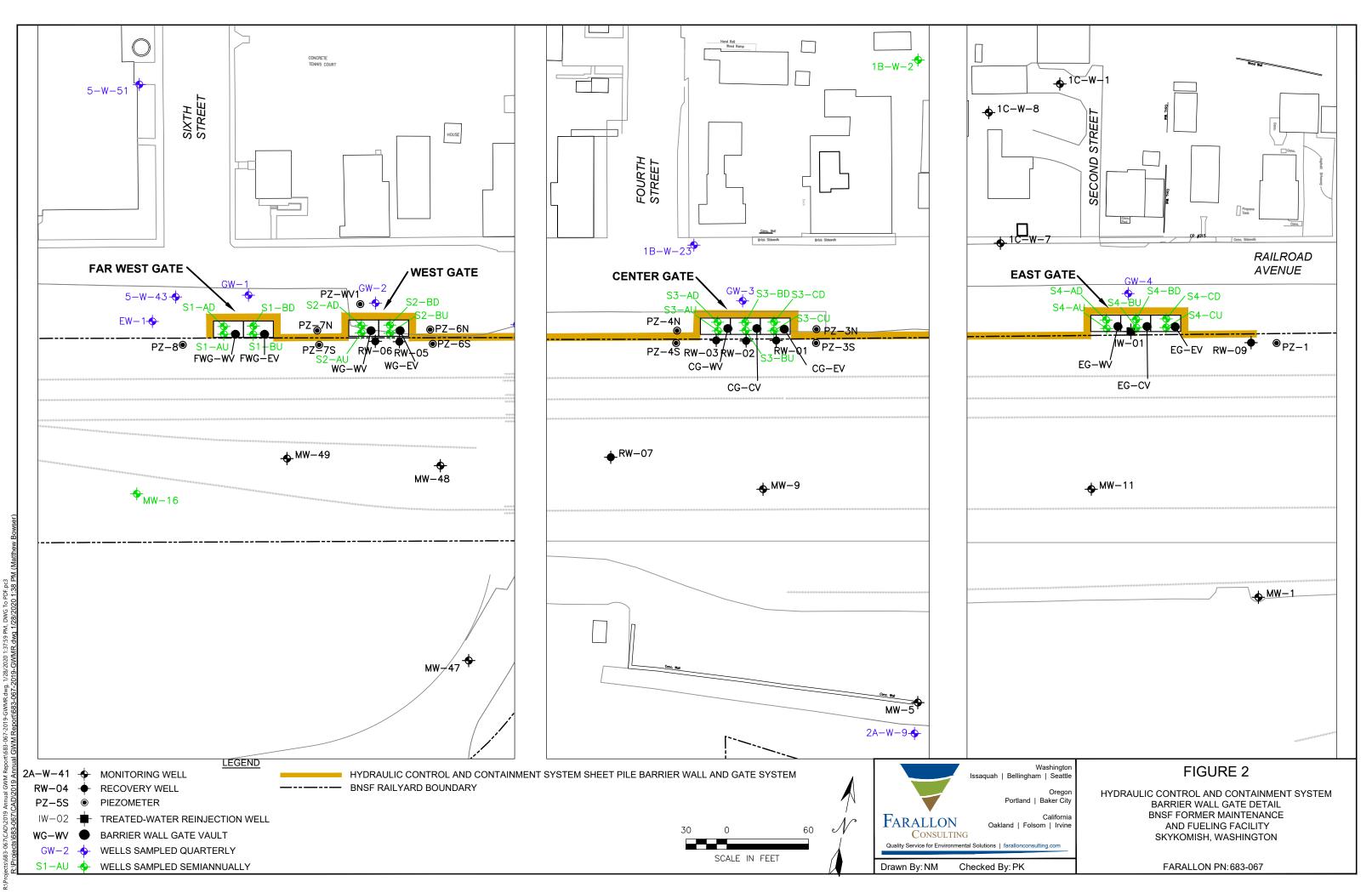
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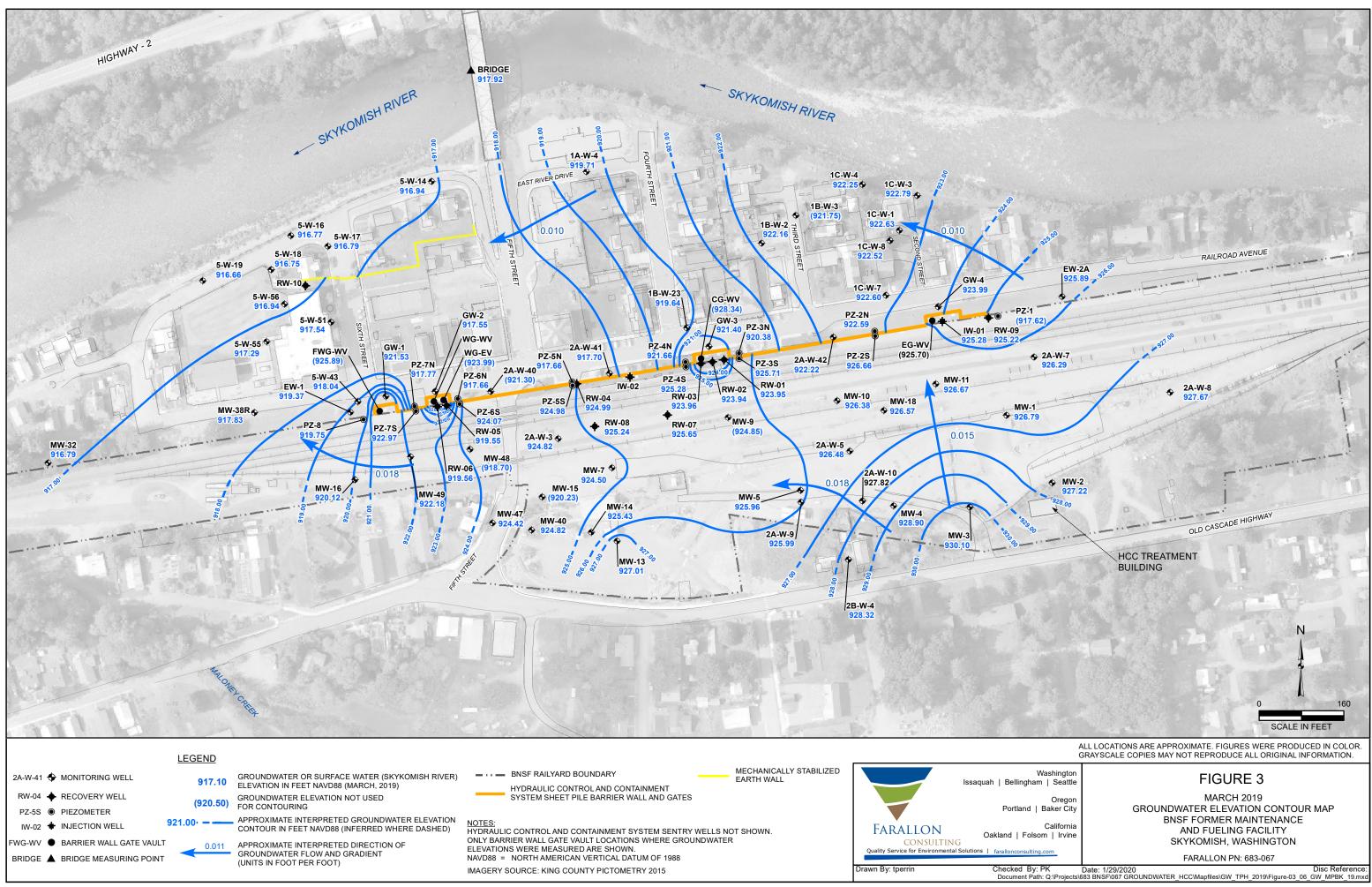
# **FIGURES**

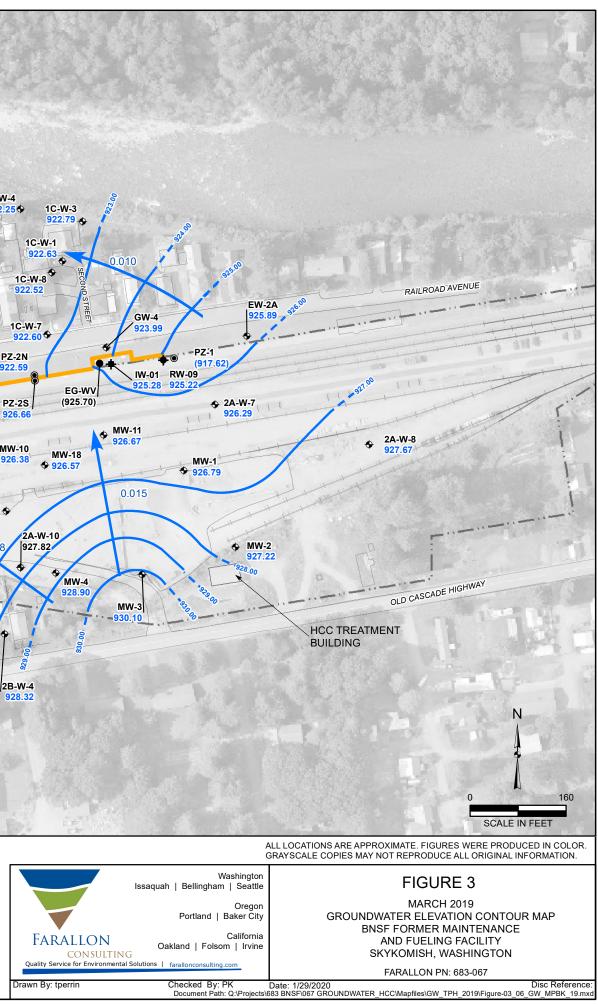
# 2019 SITE-WIDE GROUNDWATER MONITORING REPORT BNSF Former Maintenance and Fueling Facility Skykomish, Washington Consent Decree No. 07-2-33672-9 SEA

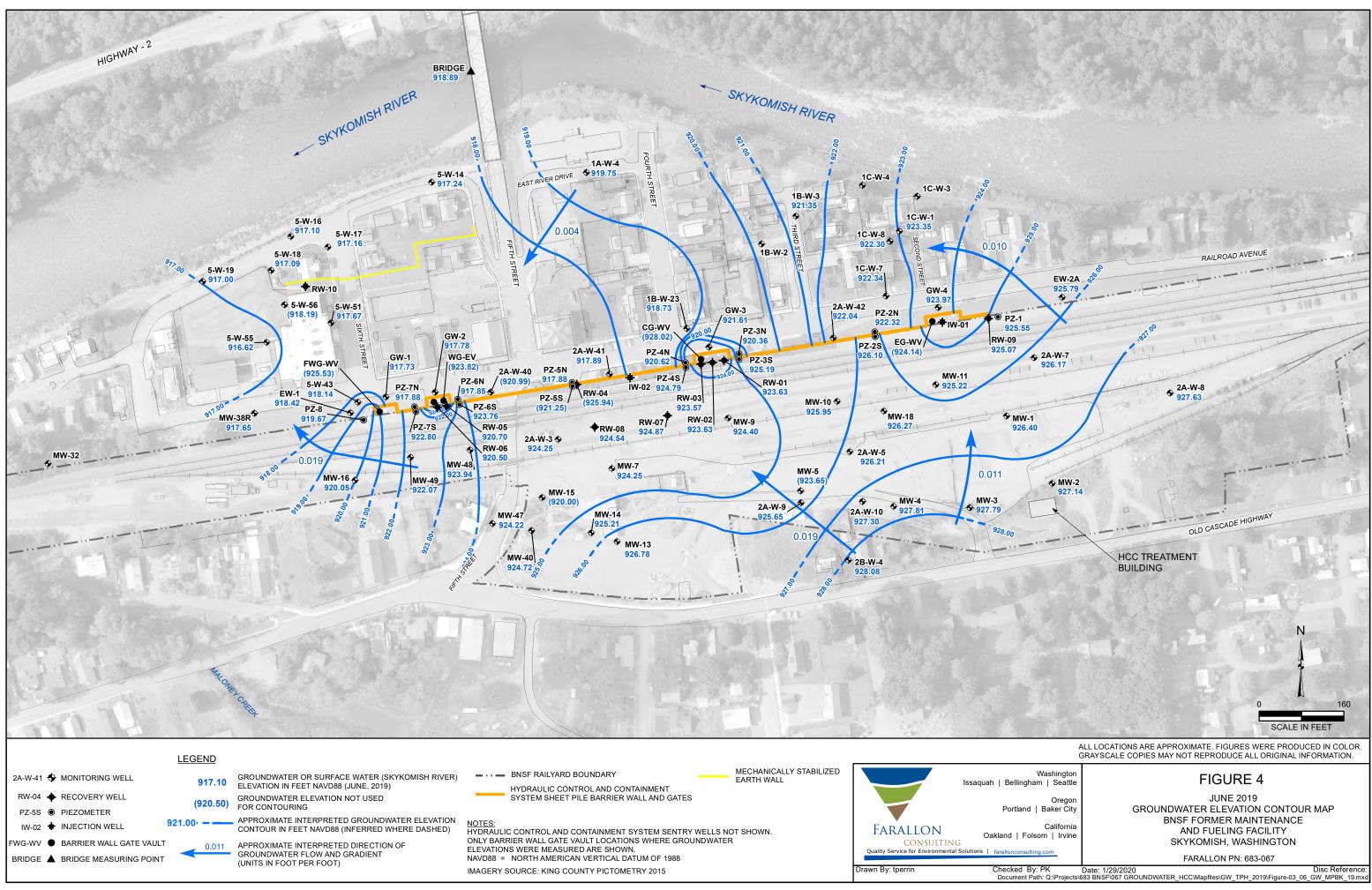
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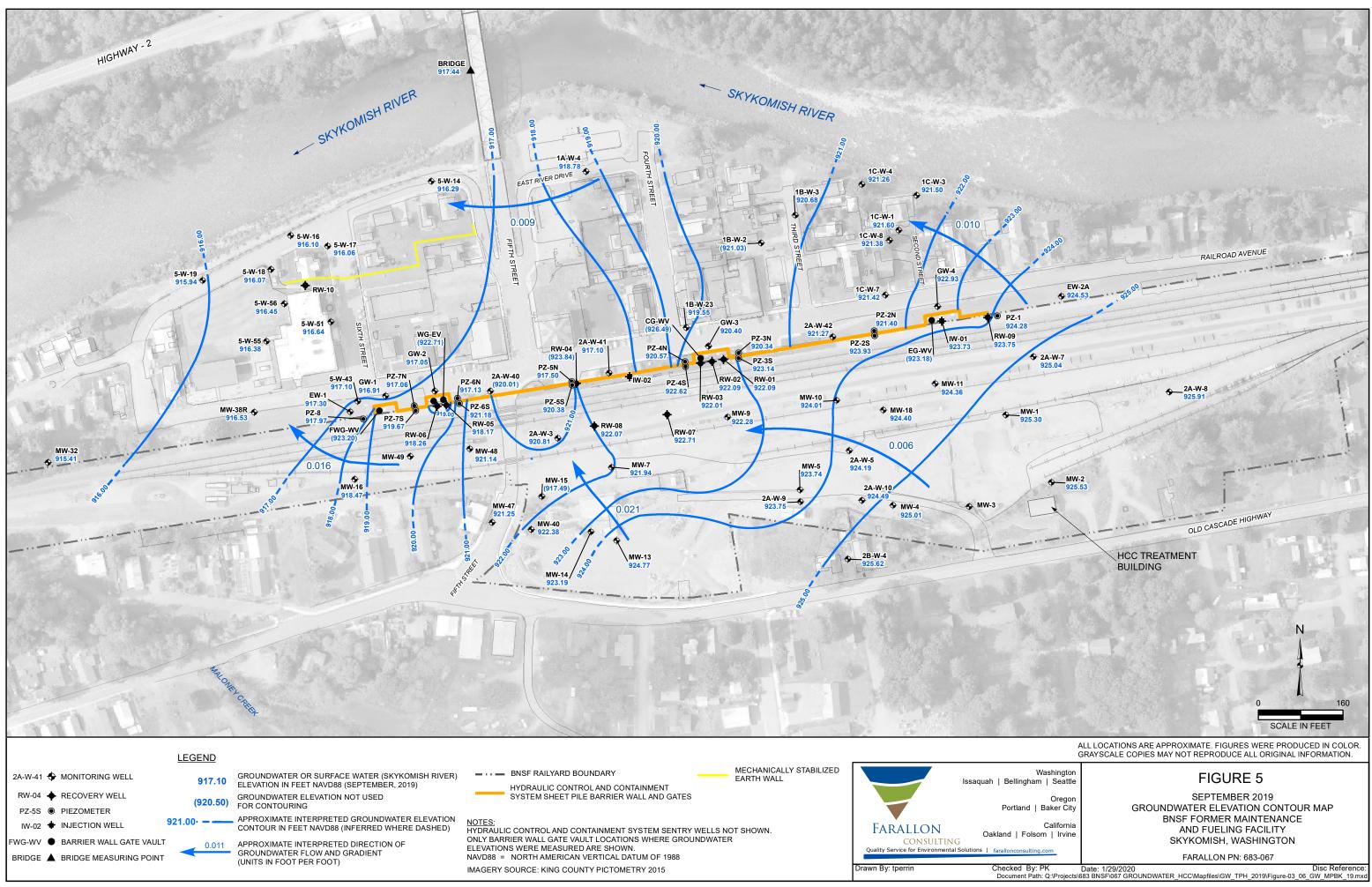


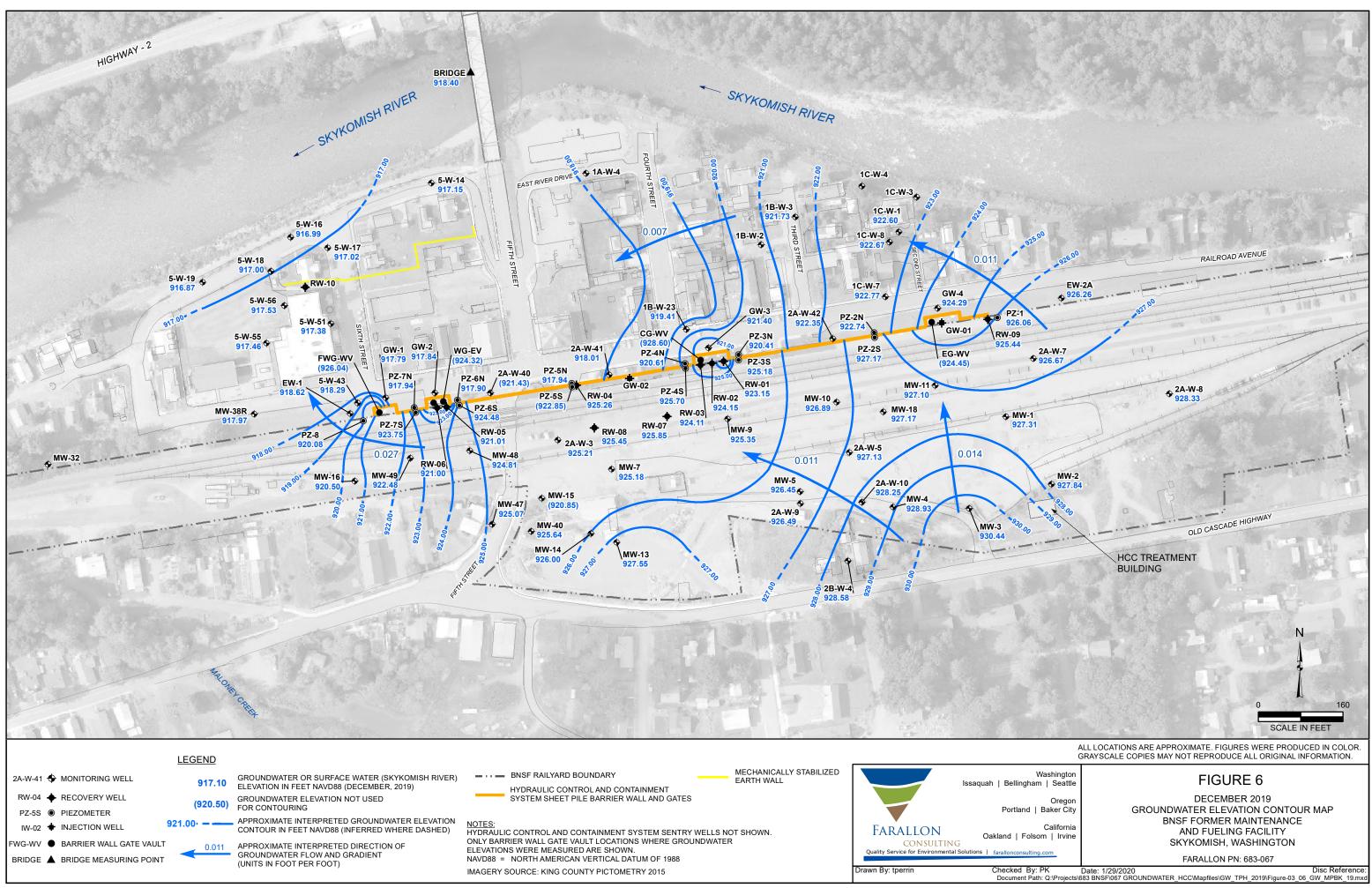


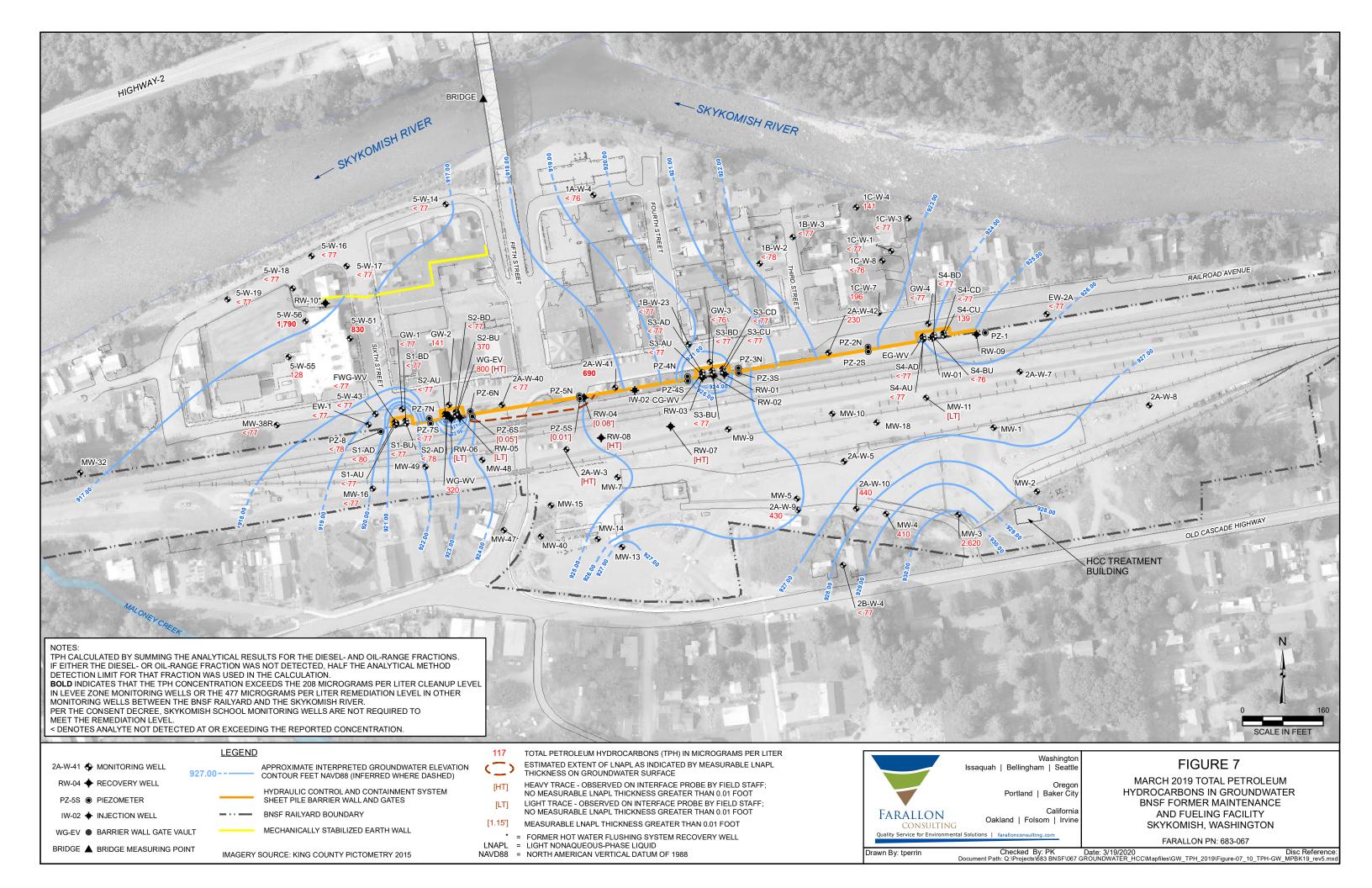


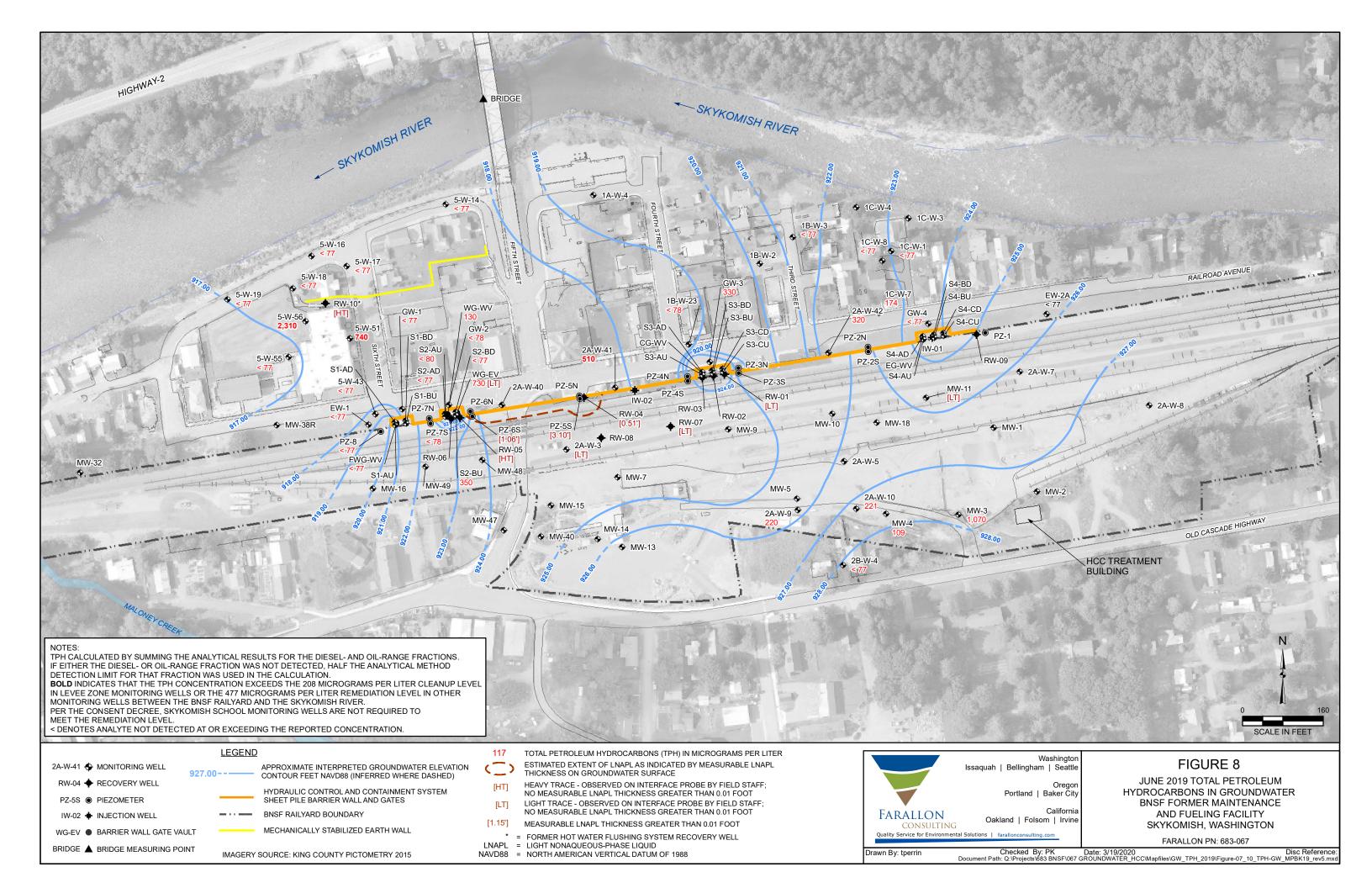


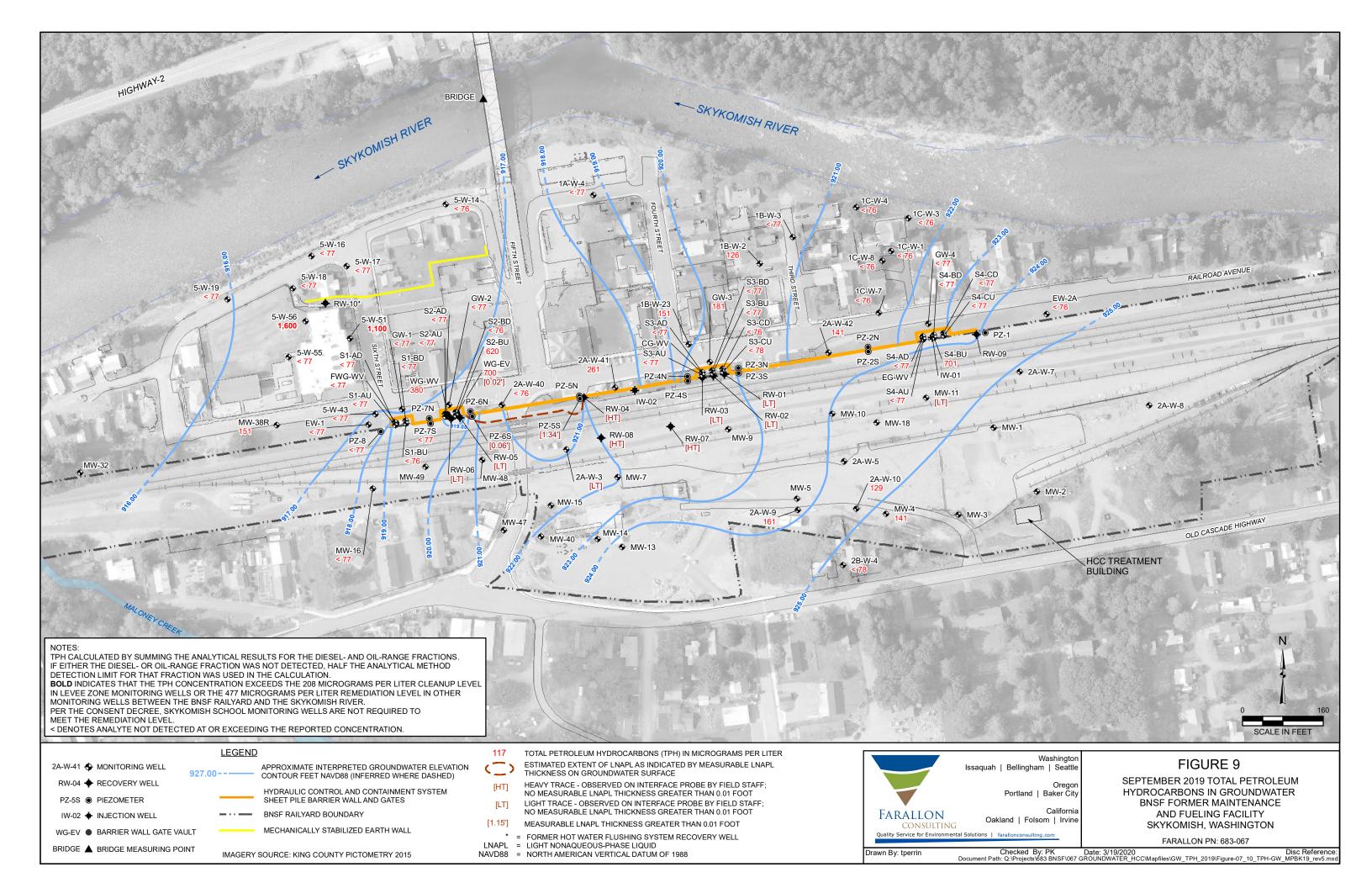


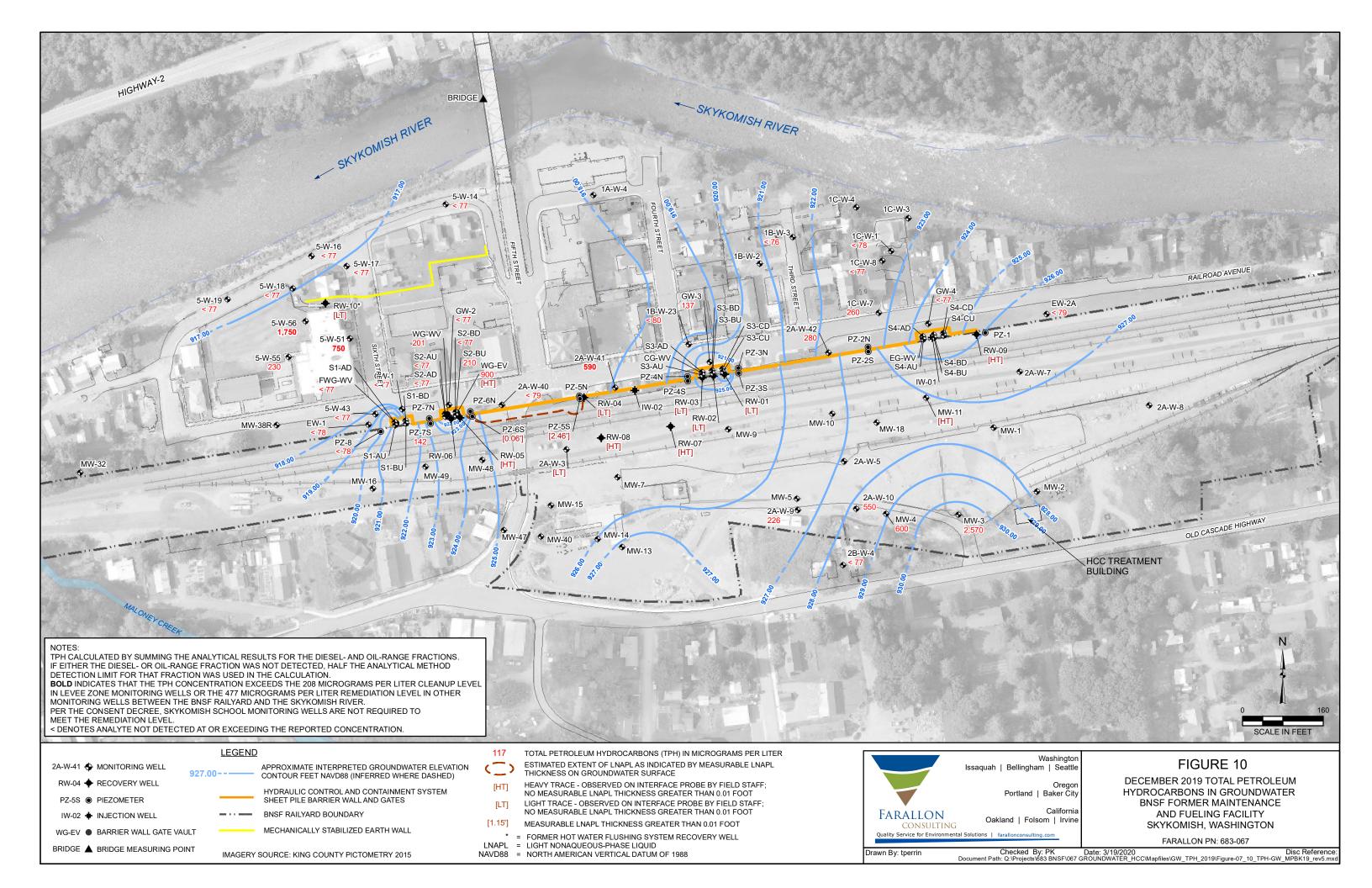












# **TABLES**

# 2019 SITE-WIDE GROUNDWATER MONITORING REPORT BNSF Former Maintenance and Fueling Facility Skykomish, Washington Consent Decree No. 07-2-33672-9 SEA

Farallon PN: 683-067

# Table 12019 Groundwater Monitoring Event DatesBNSF Former Maintenance and Fueling FacilitySkykomish, WashingtonFarallon PN: 683-067

Monitoring Event	Start Date	End Date
March Event	03/19/2019	03/22/2019
June Event	06/17/2019	06/19/2019
September Event	09/16/2019	09/19/2019
December Event	12/16/2019	12/19/2019

NOTE:

Sampling and liquid-level gauging details for the monitoring events are provided in Tables 2 and 3.

# Table 22019 Groundwater Sampling LocationsBNSF Former Maintenance and Fueling FacilitySkykomish, WashingtonFarallon PN: 683-067

Area/Well Group	Well	March Monitoring Event	June Monitoring Event	September Monitoring Event	December Monitoring Event	Analyte
	5-W-14	Х	Х	Х	Х	NWTPH-Dx
	5-W-16	Х	Х	Х	Х	NWTPH-Dx
Levee Zone	5-W-17	Х	Х	Х	Х	NWTPH-Dx
	5-W-18	X	Х	Х	Х	NWTPH-Dx
	5-W-19	X	Х	Х	Х	NWTPH-Dx
	5-W-51	Х	$\mathbf{X}^{1}$	Х	$X^1$	NWTPH-Dx
Schoolyard	5-W-55	X	X <sup>1</sup>	Х	X <sup>1</sup>	NWTPH-Dx
	5-W-56	X	X <sup>1</sup>	Х	X <sup>1</sup>	NWTPH-Dx
	S1-AD	Х	_	Х	_	NWTPH-Dx
	S1-AU	X		Х	_	NWTPH-Dx
	S1-BD	X		Х	_	NWTPH-Dx
	S1-BU	X		Х	_	NWTPH-Dx
	S2-AD	X		Х	_	NWTPH-Dx
	S2-AU	X		Х	_	NWTPH-Dx
	S2-BD	X		Х	_	NWTPH-Dx
	S2-BU	X		Х	_	NWTPH-Dx
	S3-AD	X		Х	_	NWTPH-Dx
	S3-AU	X		Х	_	NWTPH-Dx
	S3-BD	X		Х		NWTPH-Dx
	S3-BU	X		Х		NWTPH-Dx
	S3-CD	X		Х		NWTPH-Dx
	S3-CU	X		Х		NWTPH-Dx
	S4-AD	X		Х		NWTPH-Dx
HCC System	S4-AU	X		Х		NWTPH-Dx
	S4-BD	X		X		NWTPH-Dx
	S4-BU	X		X	_	NWTPH-Dx
	S4-CD	X		X		NWTPH-Dx
	S4-CU	X		X	_	NWTPH-Dx
	GW-1	X	X	X	Х	NWTPH-Dx
	GW-2	X	X	X	X	NWTPH-Dx
	GW-3	X	X	X	X	NWTPH-Dx
	GW-4	X	X	X	X	NWTPH-Dx
	EW-1	X	X	Х	Х	NWTPH-Dx
	EW-2A	X	X	Х	X	NWTPH-Dx
-	5-W-43	X	X	X	X	NWTPH-Dx
-	2A-W-40	X		X	X	NWTPH-Dx
-	2A-W-41	X	X	X	X	NWTPH-Dx
-	1B-W-23	X	X	X	X	NWTPH-Dx
-	2A-W-42	X	X	X	X	NWTPH-Dx
	1B-W-3	X	X	X	X	NWTPH-Dx
Former Air Sparge	1C-W-7	X	X	X	X	NWTPH-Dx
Area	1C-W-8	X	X	X	X	NWTPH-Dx

# Table 22019 Groundwater Sampling LocationsBNSF Former Maintenance and Fueling FacilitySkykomish, WashingtonFarallon PN: 683-067

Area/Well Group	Well	March Monitoring Event	June Monitoring Event	September Monitoring Event	December Monitoring Event	Analyte
	MW-3	Х	Х	_	Х	NWTPH-Dx
Башкан Маlанан	MW-4	Х	Х	Х	Х	NWTPH-Dx
Former Maloney Creek Zone	2A-W-9	Х	Х	Х	Х	NWTPH-Dx
Creek Zone	2A-W-10	Х	Х	Х	Х	NWTPH-Dx
	2B-W-4	Х	Х	Х	Х	NWTPH-Dx
	1A-W-4	Х	_	Х	_	NWTPH-Dx
	1B-W-2	Х	_	Х	_	NWTPH-Dx
	1C-W-1	Х	Х	Х	Х	NWTPH-Dx
Site-Wide	1C-W-3	Х	_	Х		NWTPH-Dx
	1C-W-4	Х	_	Х		NWTPH-Dx
	MW-16	Х		Х		NWTPH-Dx
	MW-38R	Х		Х		NWTPH-Dx

NOTES:

"-" denotes well not sampled.

<sup>1</sup>Schoolyard wells sampled quarterly following removal of the hot water flushing remediation system.

<sup>2</sup>Sentry wells were sampled quarterly as part of the HCC System Passive Operation Pilot Study.

NWTPH-Dx = total petroleum hydrocarbons as diesel-range and oil-range organics

HCC = hydraulic control and containment

# Table 32019 Liquid-Level Gauging FrequencyBNSF Former Maintenance and Fueling FacilitySkykomish, WashingtonFarallon PN: 683-067

			Gauging Frequency				
Area/Well Group	Location	<b>Continuous</b> <sup>1</sup>	Quarterly	Semiannually			
	5-W-14	—	Х	—			
	5-W-16	—	Х	—			
Levee Zone	5-W-17	—	Х	—			
	5-W-18	—	Х	—			
	5-W-19	—	Х	—			
	5-W-51	—	$X^2$	$X^2$			
Schoolyard	5-W-55	—	$X^2$	X <sup>2</sup>			
Schoolyard	5-W-56	_	$X^2$	$X^2$			
	RW-10	—	$X^2$				
	IW-01	—	_	Х			
	PZ-1	Х	Х				
	PZ-2N	Х	Х				
	PZ-2S	Х	Х	_			
	PZ-3N	Х	Х	_			
	PZ-3S	Х	Х	_			
	PZ-4N	Х	Х	_			
	PZ-4S	Х	Х				
	PZ-5N	Х	Х				
	PZ-5S	Х	Х				
	PZ-6N	Х	Х				
	PZ-6S	Х	Х	_			
HCC System	PZ-7N	Х	Х				
	PZ-7S	Х	Х	_			
	PZ-8	Х	Х				
	RW-01	Х	Х	_			
	RW-02	Х	Х	_			
	RW-03	Х	Х	—			
	RW-04	Х	Х	_			
	RW-05	Х	Х	—			
	RW-06	Х	Х	_			
	RW-07	Х	Х	_			
	RW-08	Х	Х	_			
	RW-09	Х	Х	_			

# Table 32019 Liquid-Level Gauging FrequencyBNSF Former Maintenance and Fueling FacilitySkykomish, WashingtonFarallon PN: 683-067

			Gauging Frequency	7
Area/Well Group	Location	Continuous <sup>1</sup>	Quarterly	Semiannually
•	EG-EV-South Chamber		X <sup>3</sup>	
	EG-EV-North Chamber	—	$X^3$	_
	EG-CV-South Chamber	_	X <sup>3</sup>	_
	EG-CV-North Chamber	—	$X^3$	
	EG-WV-South Chamber	Х	Х	
	(formerly EG-WV or EV)	Λ	Λ	
	EG-WV-North Chamber	—	Х	
	CG-EV-South Chamber	—	$X^3$	
	CG-EV-North Chamber	—	X <sup>3</sup>	_
	CG-CV-South Chamber	—	$X^3$	_
	CG-CV-North Chamber	—	X <sup>3</sup>	_
	CG-WV-South Chamber	Х	Х	
	(formerly CG-WV or CV)	Х	Λ	
	CG-WV-North Chamber	—	Х	_
	WG-EV-South Chamber	Х	Х	
	(formerly WG-EV or WV)	Λ	Λ	_
UCC System	WG-EV-North Chamber	—	Х	_
•	WG-WV-South Chamber		$X^3$	
(continued)	WG-WV-North Chamber		$X^3$	
	FWG-EV-South Chamber	—	$X^3$	_
	FWG-EV-North Chamber		X <sup>3</sup>	
HCC System (continued)	FWG-WV-South Chamber	V	V	
	(formerly FWG-WV or FWV)	Х	Х	_
	FWG-WV-North Chamber		Х	
	GW-1		Х	
	GW-2		Х	
	GW-3		Х	
	GW-4		Х	
	EW-1		Х	
	EW-2A		Х	
	5-W-43		Х	
	2A-W-40		Х	_
	2A-W-41		Х	
	1B-W-23		Х	
	2A-W-42		Х	
Earman Air Sparsa	1B-W-3		Х	
Former Air Sparge	1C-W-7		Х	_
Area	1C-W-8		Х	_

# Table 32019 Liquid-Level Gauging FrequencyBNSF Former Maintenance and Fueling FacilitySkykomish, WashingtonFarallon PN: 683-067

		Gauging Frequency				
Area/Well Group	Location	Continuous <sup>1</sup>	Quarterly	Semiannually		
	MW-1	_	X	_		
	MW-2	_	Х			
	MW-3	—	Х	—		
	MW-4	_	Х			
	MW-5		Х			
	MW-7		Х			
	MW-9		Х			
	MW-10		Х			
E Malanaa	MW-11		Х			
Former Maloney	MW-13		Х			
Creek Zone and	MW-14		Х			
Surrounding Area	MW-15		Х			
	MW-18	_	Х	_		
	MW-40	_	Х	_		
	2A-W-3	_	Х	_		
	2A-W-5	_	Х	_		
	2A-W-7	_	X X			
	2A-W-9	_	Х	_		
	2A-W-10	_	Х			
	2B-W-4	_	Х			
	1A-W-4	_	Х	_		
	1B-W-2	_		Х		
	1C-W-1	_	Х			
	1C-W-3			Х		
	1C-W-4			Х		
	2A-W-8		Х			
Site-Wide	MW-16		Х			
	MW-32			X		
	MW-38R		Х			
	MW-47		X			
	MW-48		X			
	MW-49		X			
Surface Water Monitoring Station	Skykomish River Bridge	—	X	_		

NOTES:

"—" denotes location not gauged at the frequency indicated.

HCC = hydraulic control and containment LNAPL = light nonaqueous-phase liquid

<sup>1</sup>Water-level transducers at the indicated locations provide continuous, real-time water level measurements; water levels are recorded hourly. Manual gauging for the presence of LNAPL at these locations is performed quarterly.

<sup>2</sup>Schoolyard wells gauged quarterly following removal of the hot water flushing remediation system.
<sup>3</sup>Vault chamber is visually inspected for the presence of LNAPL. Depth to water normally is not measured; LNAPL thickness is measured if measurable LNAPL is present.

3 of 3

Location	Measuring Point Elevation <sup>1</sup> (feet NAVD88)	Date Levee Zone Mon	Depth to Water <sup>2</sup> (feet) itoring Wells	Water Elevation <sup>1</sup> (feet NAVD88)	LNAPL Thickness (feet)
		3/19/2019	9.65	916.94	
<b>5</b> XX 14	006 50	6/17/2019	9.35	917.24	
5-W-14	926.59	9/16/2019	10.30	916.29	_
	Elevation <sup>1</sup>	12/16/2019	9.44	917.15	
		3/19/2019	8.43	916.77	_
5-W-16	025.20	6/17/2019	8.10	917.10	—
3-w-10	925.20	9/16/2019	9.10	916.10	—
		12/16/2019	8.21	916.99	
		3/19/2019	7.81	916.79	—
5-W-17	024.60	6/17/2019	7.44	917.16	
5- •• -1 /	924.00	9/16/2019	8.54	916.06	
		12/16/2019	7.58	917.02	
		3/19/2019	7.89	916.75	
5-W-18	924 64	6/17/2019	7.55	917.09	—
5	924.04	9/16/2019	8.57	916.07	—
		12/16/2019	7.64	917.00	—
		6/17/2019	7.35	917.00	—
5-W-19	924 35	3/19/2019	7.69	916.66	—
J-W-17	727.33	9/16/2019	8.41	915.94	
		12/16/2019	7.48	916.87	—

Location	Measuring Point Elevation <sup>1</sup> (feet NAVD88)	Date	Depth to Water <sup>2</sup> (feet)	Water Elevation <sup>1</sup> (feet NAVD88)	LNAPL Thickness (feet)
		Schoolyard Monito	oring Locations		
		3/19/2019	7.54	917.54	—
5-W-51	925.08	6/17/2019	7.41	917.67	—
5-w-51	925.08	9/16/2019	8.44	916.64	—
		12/16/2019	7.70	917.38	_
	923.92	3/19/2019	6.63	917.29	—
5-W-55		6/17/2019	7.30	916.62	—
5-W-55		9/16/2019	7.54	916.38	—
		12/16/2019	6.46	917.46	
		3/19/2019	7.82	916.94	—
5-W-56	924.76	6/17/2019	6.57	918.19	_
3-w-30	924.70	9/16/2019	8.31	916.45	—
		12/16/2019	7.23	917.53	—
		3/19/2019	7.34	917.77	—
<b>RW-10</b>	025 11	6/17/2019	7.31	917.80	Heavy Trace
Kw-10	925.11	9/16/2019	8.25	916.86	—
		12/16/2019	7.12	917.99	Light Trace

Location	Measuring Point Elevation <sup>1</sup> (feet NAVD88)	Date	Depth to Water <sup>2</sup> (feet)	Water Elevation <sup>1</sup> (feet NAVD88)	LNAPL Thickness (feet)				
	Hydraulic Control and Containment System Monitoring Locations								
IW-01	933.49	3/19/2019	8.21	925.28	—				
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	9/16/2019	9.76	923.73	—				
		3/19/2019	17.76	917.62	—				
PZ-1	935.38	6/17/2019	9.83	925.55	—				
		9/16/2019	11.10	924.28	—				
		12/16/2019	9.32	926.06	—				
		3/19/2019	11.76	922.59					
PZ-2N	934.35	6/17/2019	12.03	922.32	—				
12-21	754.55	9/16/2019	12.95	921.40	—				
		12/16/2019	11.61	922.74	—				
		3/19/2019	8.28	926.66	_				
PZ-2S	934.94	6/17/2019	8.84	926.10	_				
FZ-25		9/16/2019	11.01	923.93	_				
		12/16/2019	7.77	927.17	—				
		3/19/2019	14.03	920.38	—				
PZ-3N	934.41	6/17/2019	14.05	920.36	_				
FZ-5IN	934.41	9/16/2019	14.07	920.34					
		12/16/2019	14.00	920.41					
		3/19/2019	8.74	925.71	—				
PZ-3S	934.45	6/17/2019	9.26	925.19					
PZ-35	934.43	9/16/2019	11.31	923.14	—				
		12/16/2019	9.27	925.18					
		3/19/2019	13.61	921.66	—				
D7 4M	025.27	6/17/2019	14.65	920.62	—				
PZ-4N	935.27	9/16/2019	14.70	920.57	—				
		12/16/2019	14.66	920.61	_				
		3/19/2019	10.03	925.28					
D7 40	025.21	6/17/2019	10.52	924.79	—				
PZ-4S	935.31	9/16/2019	12.69	922.62	—				
		12/16/2019	9.61	925.70	_				

Location	Measuring Point Elevation <sup>1</sup> (feet NAVD88)	Date	Depth to Water <sup>2</sup> (feet)	Water Elevation <sup>1</sup> (feet NAVD88)	LNAPL Thickness (feet)
		3/19/2019	15.49	917.66	_
DZ SN	933.15	6/17/2019	15.27	917.88	
PZ-5N	935.15	9/16/2019	15.65	917.50	
		12/16/2019	15.21	917.94	_
		3/20/2019	8.48	924.98	0.01
D7 50	022.46	6/17/2019	12.21	921.25	3.10
PZ-5S	933.46	9/16/2019	13.08	920.38	1.34
		12/16/2019	10.61	922.85	2.46
		3/19/2019	13.51	917.66	
D7 (N	931.17	6/17/2019	13.32	917.85	
PZ-6N		9/16/2019	14.04	917.13	
		12/16/2019	13.27	917.90	
	931.41	3/20/2019	7.34	924.07	0.05
PZ-6S		6/17/2019	7.65	923.76	1.06
PZ-03	951.41	9/16/2019	10.23	921.18	0.06
		12/16/2019	6.93	924.48	0.06
		3/19/2019	12.60	917.77	
PZ-7N	930.37	6/17/2019	12.49	917.88	_
PZ-/IN	930.37	9/16/2019	13.31	917.06	
		12/16/2019	12.43	917.94	
		3/19/2019	7.43	922.97	
PZ-7S	930.4	6/17/2019	7.60	922.80	
r2-75	930.4	9/16/2019	10.73	919.67	—
		12/16/2019	6.65	923.75	
		3/19/2019	9.73	919.75	
PZ-8	929.48	6/17/2019	9.81	919.67	—
Г <i>L</i> -0	727.40	9/16/2019	11.51	917.97	
		12/16/2019	9.40	920.08	

Location	Measuring Point Elevation <sup>1</sup> (feet NAVD88)	Date	Depth to Water <sup>2</sup> (feet)	Water Elevation <sup>1</sup> (feet NAVD88)	LNAPL Thickness (feet)
		3/19/2019	8.89	923.95	Organic Sheen
<b>RW-01</b>	932.84	6/17/2019	9.21	923.63	Light Trace
KW-01	932.84	9/16/2019	10.75	922.09	Light Trace
		12/16/2019	9.69	923.15	Light Trace
		3/19/2019	9.9	923.94	Organic Sheen
RW-02	933.84	6/17/2019	10.21	923.63	
KW-02	955.84	9/16/2019	11.75	922.09	Light Trace
		12/16/2019	9.69	924.15	Light Trace
		3/19/2019	9.84	923.96	Organic Sheen
RW-03	933.80 -	6/17/2019	10.23	923.57	
KW-05		9/16/2019	11.79	922.01	Light Trace
		12/16/2019	9.69	924.11	Light Trace
	931.86	3/20/2019	6.87	924.99	0.08
<b>RW-04</b>		6/17/2019	5.92	925.94	0.51
K W -04	931.80	9/16/2019	8.02	923.84	Heavy Trace
		12/16/2019	6.60	925.26	Light Trace
		3/19/2019	8.98	919.55	Light Trace
RW-05	928.53	6/17/2019	7.83	920.70	Heavy Trace
KW-05	928.35	9/16/2019	10.36	918.17	Light Trace
		12/16/2019	7.52	921.01	Heavy Trace
		3/19/2019	8.97	919.56	Light Trace
RW-06	029.52	6/17/2019	8.03	920.50	
K W -00	928.53	9/16/2019	10.27	918.26	Light Trace
		12/16/2019	7.53	921.00	
		3/20/2019	7.41	925.65	Heavy Trace
RW-07	933.06	6/17/2019	8.19	924.87	Light Trace
KW-07	955.00	9/16/2019	10.35	922.71	Heavy Trace
		12/16/2019	7.21	925.85	Heavy Trace

Location	Measuring Point Elevation <sup>1</sup> (feet NAVD88)	Date	Depth to Water <sup>2</sup> (feet)	Water Elevation <sup>1</sup> (feet NAVD88)	LNAPL Thickness (feet)
		3/20/2019	6.61	925.24	Heavy Trace
	021.05	6/17/2019	7.31	924.54	
RW-08	931.85	9/16/2019	9.78	922.07	Heavy Trace
	-	12/16/2019	6.40	925.45	Heavy Trace
		3/19/2019	8.74	925.22	
DW/ 00	022.06	6/17/2019	8.89	925.07	
RW-09	933.96	9/16/2019	10.21	923.75	
		12/16/2019	8.52	925.44	Heavy Trace
		3/19/2019	NA	NA	
		6/17/2019	NA	NA	
EG-EV-South Chamber <sup>3</sup>	NA	9/16/2019	10.86	NA	
		12/16/2019	9.22	NA	
		3/19/2019	NA	NA	
	27.4	6/17/2019	NA	NA	
EG-EV-North Chamber <sup>3</sup>	NA	9/16/2019	10.86	NA	
		12/16/2019	9.23	NA	
		3/19/2019	NA	NA	
		6/17/2019	NA	NA	
EG-CV-South Chamber <sup>3</sup>	NA	9/16/2019	11.13	NA	
		12/16/2019	9.76	NA	
		3/19/2019	NA	NA	
	NA	6/17/2019	NA	NA	
EG-CV-North Chamber <sup>3</sup>	NA -	9/16/2019	11.13	NA	
		12/16/2019	9.75	NA	
		3/19/2019	8.61	925.70	
EG-WV-South Chamber	934.31	6/17/2019	10.17	924.14	
(formerly EG-WV or EV)	704.01	9/16/2019	11.13	923.18	—
		12/16/2019	9.86	924.45	

Location	Measuring Point Elevation <sup>1</sup> (feet NAVD88)	Date	Depth to Water <sup>2</sup> (feet)	Water Elevation <sup>1</sup> (feet NAVD88)	LNAPL Thickness (feet)
		3/19/2019	8.60	925.71	
FC WW No at Character	024.21	6/17/2019	10.19	924.12	
EG-WV-North Chamber	934.31	9/16/2019	11.13	923.18	
		12/16/2019	9.86	924.45	
		3/19/2019	NA	NA	
		6/17/2019	NA	NA	
CG-EV-South Chamber <sup>3</sup>	NA	9/16/2019	9.61	NA	
		12/16/2019	8.41	NA	Organic Sheen
		3/19/2019	NA	NA	—
		6/17/2019	NA	NA	
CG-EV-North Chamber <sup>3</sup>	NA	9/16/2019	9.61	NA	
		12/16/2019	8.40	NA	
		3/19/2019	NA	NA	
	27.4	6/17/2019	NA	NA	
CG-CV-South Chamber <sup>3</sup>	NA	9/16/2019	9.71	NA	
	-	12/16/2019	8.49	NA	
		3/19/2019	NA	NA	
		6/17/2019	NA	NA	
CG-CV-North Chamber <sup>3</sup>	NA	9/16/2019	9.71	NA	
		12/16/2019	8.49	NA	
		3/19/2019	8.75	928.34	Organic Sheen
CG-WV-South Chamber	937.09	6/17/2019	9.07	928.02	
(formerly CG-WV or CV)	957.09	9/16/2019	10.60	926.49	
		12/16/2019	8.49	928.60	
		3/19/2019	8.76	928.33	
CG-WV-North Chamber	937.09	6/17/2019	9.09	928.00	
CG-wv-norui Chamber	937.09	9/16/2019	10.60	926.49	—
		12/16/2019	8.49	928.60	

Location	Measuring Point Elevation <sup>1</sup> (feet NAVD88)	Date	Depth to Water <sup>2</sup> (feet)	Water Elevation <sup>1</sup> (feet NAVD88)	LNAPL Thickness (feet)
		3/19/2019	7.85	923.99	Heavy Trace
WG-EV-South Chamber	021.04	6/17/2019	8.02	923.82	Light Trace
(formerly WG-EV or WV)	931.84	9/16/2019	9.13	922.71	0.02
		12/16/2019	7.52	924.32	Heavy Trace
		3/19/2019	7.85	923.99	Light Trace
WC EV North Charalter	021.04	6/17/2019	8.02	923.82	_
WG-EV-North Chamber	931.84	9/16/2019	9.15	922.69	Heavy Trace
		12/16/2019	7.52	924.32	Light Trace
		3/19/2019	NA	NA	—
	NT A	6/17/2019	NA	NA	
WG-WV-South Chamber <sup>3</sup>	NA	9/16/2019	9.11	NA	
		12/16/2019	7.45	NA	
		3/19/2019	NA	NA	
	NT A	6/17/2019	NA	NA	
WG-WV-North Chamber <sup>3</sup>	NA	9/16/2019	9.11	NA	
		12/16/2019	7.45	NA	
		3/19/2019	NA	NA	
	NA	6/17/2019	NA	NA	
FWG-EV-South Chamber <sup>3</sup>	NA	9/16/2019	7.59	NA	
		12/16/2019	4.76	NA	
		3/19/2019	NA	NA	
$\mathbf{F} \mathbf{W} \mathbf{C} = \mathbf{F} \mathbf{V} \mathbf{N} + \mathbf{I} \mathbf{C} \mathbf{I} + \mathbf{I} \mathbf{S}^{3}$	NA	6/17/2019	NA	NA	
FWG-EV-North Chamber <sup>3</sup>	NA	9/16/2019	7.59	NA	
		12/16/2019	4.76	NA	
		3/19/2019	4.87	925.89	—
FWG-WV-South Chamber	930.76	6/17/2019	5.23	925.53	—
(formerly FWG-WV or FWV)	930.70	9/16/2019	7.56	923.20	
		12/16/2019	4.72	926.04	

Location	Measuring Point Elevation <sup>1</sup> (feet NAVD88)	Date	Depth to Water <sup>2</sup> (feet)	Water Elevation <sup>1</sup> (feet NAVD88)	LNAPL Thickness (feet)
		3/19/2019	4.87	925.89	_
EWC WW North Character	020 76	6/17/2019	5.23	925.53	
FWG-WV-North Chamber	930.76	9/16/2019	7.56	923.20	
		12/16/2019	4.72	926.04	
		3/19/2019	6.71	921.53	
CIV 1	028.24	6/17/2019	10.51	917.73	
GW-1	928.24	9/16/2019	11.33	916.91	
		12/16/2019	10.45	917.79	_
		3/19/2019	12.74	917.55	_
CIV 2	020.20	6/17/2019	12.51	917.78	
GW-2	930.29	9/16/2019	13.24	917.05	_
		12/16/2019	12.45	917.84	
		3/19/2019	14.42	921.40	
GW-3	025.02	6/17/2019	14.21	921.61	
GM-2	935.82	9/16/2019	15.42	920.40	
		12/16/2019	14.42	921.40	
		3/19/2019	10.69	923.99	
	024.69	6/17/2019	10.71	923.97	
GW-4	934.68	9/16/2019	11.75	922.93	
		12/16/2019	10.39	924.29	
		3/19/2019	9.35	919.37	
EW-1	029.72	6/17/2019	10.30	918.42	_
Ew-1	928.72	9/16/2019	11.42	917.30	_
		12/16/2019	10.10	918.62	
		3/19/2019	10.31	925.89	
EW-2A	936.2	6/17/2019	10.41	925.79	
EW-2A	930.2	9/16/2019	11.67	924.53	—
		12/16/2019	9.94	926.26	

Location	Measuring Point Elevation <sup>1</sup> (feet NAVD88)	Date	Depth to Water <sup>2</sup> (feet)	Water Elevation <sup>1</sup> (feet NAVD88)	LNAPL Thickness (feet)
		3/19/2019	8.14	918.04	—
5-W-43	926.18	6/17/2019	8.04	918.14	—
5-w-45	920.18	9/16/2019	9.08	917.10	—
		12/16/2019	7.89	918.29	
		3/19/2019	12.04	921.30	—
2A-W-40	022.24	6/17/2019	12.35	920.99	
2A-w-40	933.34	9/16/2019	13.33	920.01	—
		12/16/2019	11.91	921.43	—
		3/19/2019	17.52	917.70	—
2A-W-41	935.22	6/17/2019	17.33	917.89	—
2A-W-41	955.22	9/16/2019	18.12	917.10	—
	-	12/16/2019	17.21	918.01	—
		3/19/2019	16.61	919.64	—
1B-W-23	936.25	6/17/2019	17.52	918.73	_
1 <b>D</b> -W-23	930.25	9/16/2019	16.70	919.55	—
		12/16/2019	16.84	919.41	
		3/19/2019	13.15	922.22	—
2 A W 42	025 27	6/17/2019	13.33	922.04	—
2A-W-42	935.37	9/16/2019	14.10	921.27	_
		12/16/2019	13.02	922.35	

	Measuring Point Elevation <sup>1</sup>		Depth to Water <sup>2</sup>	Water Elevation <sup>1</sup>	LNAPL Thickness
Location	(feet NAVD88)	Date	(feet)	(feet NAVD88)	(feet)
	FO	rmer Air Sparge Are		921.75	
	-	3/19/2019	14.91		
1B-W-3	936.66	6/17/2019 9/16/2019	15.31 15.98	921.35	—
	-	12/16/2019	13.98	920.68 921.73	—
			12.44	921.73	—
	-	3/19/2019	12.44	922.60	
1C-W-7	935.04	6/17/2019	12.70		
	-	9/16/2019		921.42	
		12/16/2019	12.27	922.77	—
	-	3/19/2019	13.18	922.52	—
1C-W-8	935.7	6/17/2019	13.40	922.30	—
		9/16/2019	14.32	921.38	—
	E Malana	12/16/2019	13.03	922.67	
	Former Maloney		rrounding Area Monitori	-	
	-	3/19/2019	12.41	926.79	—
MW-1	939.2	6/17/2019	12.80	926.40	—
		9/16/2019	13.90	925.30	—
	-	12/16/2019	11.89	927.31	—
		3/19/2019	11.98	927.22	—
MW-2	939.2	6/17/2019	12.06	927.14	—
	-	9/16/2019	13.67	925.53	—
		12/16/2019	11.36	927.84	—
	-	3/19/2019	7.93	930.10	—
MW-3	938.03	6/17/2019	10.24	927.79	—
		9/16/2019		Well Dry	
		12/16/2019	7.59	930.44	—
		3/19/2019	8.05	928.90	—
MW-4	936.95	6/17/2019	9.14	927.81	—
		9/16/2019	11.94	925.01	—
		12/16/2019	8.02	928.93	—

Location	Measuring Point Elevation <sup>1</sup> (feet NAVD88)	Date	Depth to Water <sup>2</sup> (feet)	Water Elevation <sup>1</sup> (feet NAVD88)	LNAPL Thickness (feet)
		3/19/2019	7.40	925.96	
MW-5	933.36	6/17/2019	9.71	923.65	
INI W-S	955.50	9/16/2019	9.62	923.74	—
		12/16/2019	6.91	926.45	
		3/19/2019	12.39	924.50	
	026.90	6/17/2019	12.64	924.25	
MW-7	936.89	9/16/2019	14.95	921.94	
		12/16/2019	11.71	925.18	
		3/19/2019	12.68	924.85	
	027.52	6/17/2019	13.13	924.40	
MW-9	937.53	9/16/2019	15.25	922.28	
		12/16/2019	12.18	925.35	
		3/19/2019	11.96	926.38	
MW-10	938.34	6/17/2019	12.39	925.95	
MW-10	938.34	9/16/2019	14.33	924.01	
		12/16/2019	11.45	926.89	
		3/19/2019	12.53	926.67	Light Trace
<b>NAX</b> 7 11	020.0	6/17/2019	13.98	925.22	Light Trace
MW-11	939.2	9/16/2019	14.84	924.36	Light Trace
		12/16/2019	12.10	927.10	Heavy Trace
		3/19/2019	9.48	927.01	
MW 12	026.40	6/17/2019	9.71	926.78	
MW-13	936.49	9/16/2019	11.72	924.77	
		12/16/2019	8.94	927.55	—
		3/19/2019	11.37	925.43	—
MW-14	026.9	6/17/2019	11.59	925.21	
1VI VV - 1 4	936.8	9/16/2019	13.61	923.19	—
		12/16/2019	10.80	926.00	

Location	Measuring Point Elevation <sup>1</sup> (feet NAVD88)	Date	Depth to Water <sup>2</sup> (feet)	Water Elevation <sup>1</sup> (feet NAVD88)	LNAPL Thickness (feet)
		3/19/2019	13.09	920.23	—
MW-15	933.32	6/17/2019	13.32	920.00	
IVI W -13	955.52	9/16/2019	15.83	917.49	—
		12/16/2019	12.47	920.85	
		3/19/2019	14.11	926.57	
MW 10	040.69	6/17/2019	14.41	926.27	_
MW-18	940.68	9/16/2019	16.28	924.40	
		12/16/2019	13.51	927.17	
		3/19/2019	12.13	924.82	
MW 40	026.05	6/17/2019	12.23	924.72	
MW-40	936.95	9/16/2019	14.57	922.38	_
		12/16/2019	11.31	925.64	
		3/20/2019	9.61	924.82	Heavy Trace
2A-W-3	934.43	6/17/2019	10.18	924.25	Light Trace
2A-w-3	934.43	9/16/2019	13.62	920.81	Light Trace
		12/16/2019	9.22	925.21	Light Trace
		3/19/2019	12.99	926.48	_
2 A 111 5	020.47	6/17/2019	13.26	926.21	
2A-W-5	939.47	9/16/2019	15.28	924.19	
		12/16/2019	12.34	927.13	
		3/19/2019	11.47	926.29	
	027.76	6/17/2019	11.59	926.17	_
2A-W-7	937.76	9/16/2019	12.72	925.04	
		12/16/2019	11.09	926.67	—
		3/19/2019	10.59	925.99	
2A W 0	026.59	6/17/2019	10.93	925.65	_
2A-W-9	936.58	9/16/2019	12.83	923.75	—
		12/16/2019	10.09	926.49	—

Location	Measuring Point Elevation <sup>1</sup> (feet NAVD88)	Date	Depth to Water <sup>2</sup> (feet)	Water Elevation <sup>1</sup> (feet NAVD88)	LNAPL Thickness (feet)
		3/19/2019	10.11	927.82	—
2 A W 10	937.93	6/17/2019	10.63	927.30	_
2A-W-10	937.95	9/16/2019	13.44	924.49	_
		12/16/2019	9.68	928.25	—
		3/19/2019	2.71	928.32	—
2B-W-4	931.03	6/17/2019	2.95	928.08	—
2D-W-4	951.05	9/16/2019	5.41	925.62	—
		12/18/2019	2.45	928.58	—
		Site-Wide Moni	toring Wells		
		3/19/2019	9.36	919.71	—
1A-W-4	929.07	6/17/2019	9.32	919.75	—
1A-w-4	929.07	9/16/2019	10.29	918.78	—
		12/16/2019	NM	NM	—
1B-W-2	935.81	3/19/2019	13.65	922.16	—
1 <b>D-</b> w-2	933.01	9/16/2019	14.78	921.03	_
		3/19/2019	13.81	922.63	_
1C-W-1	936.44	6/17/2019	13.09	923.35	—
10-10-1	930.44	9/16/2019	14.84	921.60	—
		12/18/2019	13.84	922.60	—
1C-W-3	933.56	3/19/2019	10.77	922.79	—
1C-w-3	955.50	9/16/2019	12.06	921.50	_
1C-W-4	932.74 -	3/19/2019	10.49	922.25	_
10-11-4	932.14	9/16/2019	11.48	921.26	—
		3/19/2019	14.95	927.67	—
2A-W-8	942.62	6/17/2019	14.99	927.63	_
2A- W-0	942.02	9/16/2019	16.71	925.91	
		12/16/2019	14.29	928.33	—

Location	Measuring Point Elevation <sup>1</sup> (feet NAVD88)	Date	Depth to Water <sup>2</sup> (feet)	Water Elevation <sup>1</sup> (feet NAVD88)	LNAPL Thickness (feet)
		3/19/2019	13.20	920.12	—
MW-16	933.32	6/17/2019	13.27	920.05	
IVI W - 10	955.52	9/16/2019	14.85	918.47	—
	-	12/16/2019	12.82	920.50	_
MW-32	926.06	3/19/2019	9.27	916.79	—
IVI VV -32	920.00	9/16/2019	10.65	915.41	
		3/19/2019	4.73	917.83	—
MW-38R	922.56	6/17/2019	4.91	917.65	
WIW-38K	922.30	9/16/2019	6.03	916.53	_
		12/16/2019	4.59	917.97	
		3/19/2019	8.19	924.42	—
MW-47	932.61	6/17/2019	8.39	924.22	—
IVI VV -4 /		9/16/2019	11.36	921.25	
		12/16/2019	7.54	925.07	_
	933.9	3/19/2019	15.20	918.70	—
MW-48		6/17/2019	9.96	923.94	_
IVI W -48	955.9	9/16/2019	12.76	921.14	
	-	12/16/2019	9.09	924.81	_
		3/19/2019	10.96	922.18	
MW-49	933.14	6/17/2019	11.07	922.07	_
WIW-49	955.14	9/16/2019	W	ell Buried Under Grave	•
		12/19/2019	10.66	922.48	
	·	Surface Water Mor	nitoring Station		
		3/19/2019	25.17	917.92	
Skyleomich Divor Dridge	943.09	6/17/2019	24.20	918.89	—
Skykomish River Bridge	943.09	9/16/2019	25.65	917.44	—
		12/16/2019	24.69	918.40	

NOTES:

- denotes LNAPL was not observed.

<sup>1</sup>Elevations referenced to North American Vertical Datum of 1988 (NAVD88).

<sup>2</sup>Depths referenced to measuring point (e.g., top of well casing, top of vault).

<sup>3</sup>Vault oil-water separator chamber is visually inspected for presence of LNAPL during

monitoring events. LNAPL thickness measured only if measurable LNAPL is present.

LNAPL = light nonaqueous-phase liquid NA = not applicable NM = not measured

Well	Date	Temperature (degrees Celsius)	pH (Standard Units)	Dissolved Oxygen (milligrams per liter)	Oxidation-Reduction Potential (millivolts)	Specific Conductivity (mS/cm)	Turbidity (NTU)
			Levee Zon	e Monitoring Wells			
	3/20/2019	6.36	6.48	5.94	69.5	0.052	
<b>5 XX 14</b>	6/19/2019	8.2	6.24	6.15	209.0	0.090	15.41
5-W-14	9/17/2019	9.6	6.20	5.33	192.8	0.081	
	12/17/2019	7.2	6.31	6.78	5.5	0.094	0.27
	3/20/2019	4.69	6.85	10.24	44.6	0.044	
5 W 16	6/19/2019	11.4	6.60	8.03	233.8	0.062	36.27
5-W-16	9/17/2019	12.6	6.59	6.00	247.5	0.082	3.76
	12/17/2019	5.7	6.63	9.09	8.2	0.124	11.98
	3/20/2019	7.21	6.44	5.27	85.1	0.055	
5-W-17	6/19/2019	8.4	6.14	6.69	238.7	0.073	13.57
5-W-17	9/17/2019	9.5	6.35	5.06	176.9	0.077	
	12/17/2019	6.8	6.30	7.04	-3.7	0.093	1.01
	3/20/2019	5.25	6.54	4.56	25.2	0.059	
5 W 10	6/19/2019	8.8	6.00	4.80	234.0	0.098	4.75
5-W-18	9/17/2019	10.2	6.40	3.58	231.6	0.098	1.99
	12/17/2019	8.0	6.44	3.41	127.7	0.100	
	3/20/2019	6.94	6.60	6.88	30.1	0.073	
5-W-19	6/18/2019	8.9	6.31	7.27	223.9	0.080	6.10
3-w-19	9/17/2019	9.6	6.71	5.31	153.9	0.078	
	12/17/2019	6.6	6.46	4.94	123.7	0.075	
	-	-	Schoolyar	d Monitoring Wells			
	3/20/2019	6.60	6.22	0.58	72.4	0.063	
	6/19/2019	9.2	5.97	0.76	82.8	0.095	5.50
5-W-51	9/17/2019	11.2	6.06	0.35	57.5	0.089	2.30
	12/18/2019	8.3	6.06	3.51	-194.2	0.123	0.94
	3/20/2019	6.70	6.05	3.81	121.4	0.088	
	6/19/2019	12.1	5.85	1.25	164.1	0.129	5.13
5-W-55	9/17/2019	14.8	5.90	2.69	165.0	0.111	
	12/17/2019	8.9	6.04	3.37	146.6	0.161	
	3/20/2019	11.0	6.61	1.02	133.3	0.533	
	6/19/2019	14.2	6.34	0.91	-71.7	0.843	11.39
5-W-56	9/17/2019	15.8	6.42	0.93	114.8	0.847	6.51
	12/17/2019	11.6	6.14	2.83	-100.5	0.295	

Well	Date	Temperature (degrees Celsius)	pH (Standard Units)	Dissolved Oxygen (milligrams per liter)	Oxidation-Reduction Potential (millivolts)	Specific Conductivity (mS/cm)	Turbidity (NTU)
		Hydra	ulic Control and Co	ntainment System Moni	toring Wells		
	3/19/2019	5.70	6.26	3.25	45.9	0.067	
GW-1	6/18/2019	10.3	5.99	1.34	113.4	0.109	3.81
Gw-I	9/19/2019	11.6	6.11	2.03	170.7	0.082	
	12/18/2019	9.2	6.34	0.64	139.8	0.132	
	3/19/2019	7.9	5.93	7.30	289.4	0.047	11.5
CW 2	6/18/2019	10.6	6.19	1.17	138.1	0.085	77.06
GW-2	9/19/2019	12.0	5.89	4.94	91.4	0.115	7.6
	12/18/2019	8.8	6.23	0.16	85.5	0.098	
	3/20/2019	12.4	6.20	6.13	215.8	0.091	7.32
GW-3	6/18/2019	12.1	5.79	3.06	143.7	0.083	41.4
GW-3	9/18/2019	12.4	5.85	6.21	116.4	0.088	
	12/19/2019	7.4	5.82	5.00	126.1	0.103	
	3/21/2019	7.13	6.16	3.71	151.1	0.086	
	6/19/2019	8.8	6.28	3.62	130.0	0.096	34.7
GW-4	9/17/2019	9.4	5.93	7.68	167.1	0.072	
	12/18/2019	8.4	6.23	5.42	-107.8	0.124	1.24
	3/19/2019	7.7	6.16	3.53	247.8	0.072	3.86
	6/18/2019	8.3	5.88	2.40	228.5	0.074	3.10
EW-1	9/19/2019	10.0	6.00	0.80	240.9	0.069	2.52
	12/18/2019	9.5	6.11	0.99	242.2	0.086	
	3/21/2019	6.1	6.01	IE	261.6	0.056	4.71
	6/19/2019	9.7	5.78	5.71	190.0	0.050	37.2
EW-2A	9/17/2019	9.1	5.82	IE	142.4	0.061	17.6
	12/17/2019	8.4	6.00	4.52	266.0	0.058	
	3/19/2019	7.5	5.89	6.01	290.1	0.077	5.20
	6/18/2019	8.9	5.87	2.67	209.1	0.077	3.78
5-W-43	9/19/2019	10.7	5.89	1.79	243.6	0.087	3.17
	12/18/2019	8.9	6.14	1.68	244.7	0.088	
	3/20/2019	7.40	6.41	8.92	105.5	0.046	
	6/18/2019	,			Sampled		
2A-W-40	9/17/2019	11.2	7.20	7.86	158.6	0.058	2.98
	12/17/2019	8.5	6.64	5.56	255.7	0.058	

Well	Date	Temperature (degrees Celsius)	pH (Standard Units)	Dissolved Oxygen (milligrams per liter)	Oxidation-Reduction Potential (millivolts)	Specific Conductivity (mS/cm)	Turbidity (NTU)
	3/20/2019	9.87	6.46	2.42	14.6	0.171	
2A-W-41	6/18/2019	11.9	6.19	4.86	25.7	0.146	35.7
2A-w-41	9/18/2019	11.4	6.23	6.46	30.3	0.156	11.2
	12/17/2019	9.4	6.42	0.49	-17.2	0.180	
	3/20/2019	13.20	6.13	10.01	171.2	0.072	
1B-W-23	6/18/2019	14.4	6.10	8.88	165.4	0.093	190.0
1 <b>D</b> -w-25	9/18/2019	15.8	5.97	8.07	188.4	0.088	143.3
	12/17/2019	8.9	5.95	5.76	242.0	0.071	
	3/21/2019	7.8	5.89	IE	281.1	0.150	4.50
2A-W-42	6/18/2019	10.3	5.85	1.62	121.3	0.143	56.7
2A-w-42	9/18/2019	10.9	5.84	6.58	162.5	0.137	18.5
	12/18/2019	9.1	5.98	3.23	200.0	0.157	
			Former Air Spar	ge Area Monitoring We	lls		
	3/21/2019	8.02	6.75	3.10	69.3	0.092	
1B-W-3	6/19/2019	10.1	6.63	1.86	89.2	0.136	35.5
1B-W-3	9/18/2019	10.7	5.92	3.00	171.8	0.110	
	12/18/2019	8.6	6.33	4.02	-135.1	0.183	3.33
	3/21/2019	7.41	5.87	4.01	162.9	0.075	
1C-W-7	6/19/2019	9.8	5.96	4.00	166.9	0.077	46.3
IC-w-/	9/17/2019	12.4	5.96	5.32	166.2	0.109	23.2
	12/18/2019	8.1	5.90	5.06	238.0	0.091	
	3/21/2019	7.9	6.03	1.31	275.5	0.099	6.13
1C-W-8	6/19/2019	8.5	5.93	6.12	117.8	0.103	42.0
IC-W-0	9/17/2019	10.6	5.8	7.21	120.2	0.153	8.1
	12/18/2019	8.7	5.96	6.51	250.7	0.082	
			Former Maloney C	reek Zone Monitoring V	Vells		
	3/21/2019	3.50	6.05	6.67	100.4	0.083	
	6/19/2019	8.4	5.92	0.75	64.2	0.161	43.0
MW-3	9/19/2019		•	W	ell Dry		
	12/19/2019	7.1	5.93	4.40	-51.7	0.224	1.99
	3/21/2019	3.29	5.92	8.61	47.9	0.050	
MW-4	6/19/2019	8.9	5.67	0.93	125.1	0.065	35.0
IVI W-4	9/18/2019	10.9	5.68	0.32	88.1	0.068	4.03
	12/19/2019	4.8	5.60	4.34	-17.3	0.129	0.23

Well	Date	Temperature (degrees Celsius)	pH (Standard Units)	Dissolved Oxygen (milligrams per liter)	Oxidation-Reduction Potential (millivolts)	Specific Conductivity (mS/cm)	Turbidity (NTU)
	3/21/2019	4.85	6.01	0.29	99.0	0.051	
	6/19/2019	8.0	5.85	0.72	87.6	0.053	4.22
2A-W-9	9/18/2019	11.9	5.92	1.93	112.4	0.068	
	12/18/2019	8.2	5.93	2.86	-145.1	0.079	3.30
	3/21/2019	2.04	5.70	4.56	23.8	0.050	
2 A 11/10	6/19/2019	8.7	5.82	0.65	215.7	0.050	3.79
2A-W-10	9/18/2019	11.1	5.29	2.17	164.2	0.078	
	12/18/2019	6.2	5.44	3.07	213.3	0.103	
	3/21/2019	3.14	6.20	8.78	96.9	0.057	
	6/19/2019	8.5	6.07	4.43	319.9	0.049	3.67
2B-W-4	9/18/2019	13.6	5.94	3.2	244.3	0.12	2.42
	12/19/2019	7.1	6.26	4.58	238.8	0.057	
	•	-	Site-Wide	e Monitoring Wells	•		
1 4 337 4	3/20/2019	8.8	6.72	2.83	241.9	0.088	41.29
1A-W-4	9/18/2019	9.6	6.36	9.12	190	0.079	152.7
1B-W-2	3/21/2019	7.11	6.27	7.99	133.0	0.16	
1B-W-2	9/18/2019	13.2	5.88	2.05	168.7	0.239	
	3/21/2019	7.48	5.63	6.75	177.2	0.053	
1C-W-1	6/19/2019	9.9	5.84	6.00	148.5	0.055	34.6
IC-W-1	9/17/2019	11.9	5.84	7.68	155.3	0.066	38.6
	12/18/2019	8.6	5.90	6.54	246.3	0.072	
1C-W-3	3/21/2019	7.25	5.49	8.73	196.0	0.060	
IC-w-5	9/17/2019	13.8	6.18	4.75	144.5	0.095	66.85
1C-W-4	3/21/2019	7.9	5.99	7.69	261.7	0.081	5.24
IC-W-4	9/17/2019	10.6	5.85	6.45	158	0.068	35.3
MW-16	3/21/2019	6.18	5.91	7.65	70.1	0.038	
IVI VV - 1 O	9/18/2019	11.4	5.82	1.9	230	0.073	5.86
MW-38R	3/20/2019	7.24	6.70	12.84	36.8	0.038	
WIW-38K	9/17/2019	10.9	5.81	2.09	177	0.087	

NOTES:

IE = instrument error

mS/cm = milliSiemens per centimeter

NTU = nephelometric turbidity units

--- = parameter not recorded

Turbidity values of 0.0 NTU replace turbidity values recorded in the field as

negative, an indication of turbidity meter calibration error.

### Table 6 2019 Total Petroleum Hydrocarbon Concentrations in Groundwater BNSF Former Maintenance and Fueling Facility Skykomish, Washington Farallon PN: 683-067

				DRO $(\mu g/l)^1$			<b>ORO</b> $(\mu g/l)^1$		Calculated
Well	Date	Sample Identification	Result	MDL	MRL	Result	MDL	MRL	NWTPH-Dx <sup>2</sup> (µg/l)
		Levee Zo	one Monitoring	Wells: NWTPH	-Dx results com	pared to the CU	$UL = 208 \ \mu g/l$		
	3/20/2019	5-W-14-032019	< 62	62	62	< 91	91	91	< 77
5-W-14	6/19/2019	5-W-14-061919	< 62	62	62	< 91	91	91	< 77
J- W-14	9/17/2019	5-W-14-091719	< 61	61	61	< 91	91	91	< 76
	12/17/2019	5-W-14-121719	< 62	62	62	< 91	91	91	< 77
	3/20/2019	5-W-16-032019	< 62	62	62	< 91	91	91	< 77
5-W-16	6/19/2019	5-W-16-061919	< 62	62	62	< 91	91	91	< 77
J-W-10	9/17/2019	5-W-16-091719	< 62	62	62	< 92	92	92	< 77
1	12/17/2019	5-W-16-121719	< 62	62	62	< 91	91	91	< 77
	3/20/2019	5-W-17-032019	< 62	62	62	< 91	91	91	< 77
5-W-17	6/19/2019	5-W-17-061919	< 62	62	62	< 91	91	91	< 77
3-w-17	9/17/2019	5-W-17-091719	< 62	62	62	< 91	91	91	< 77
	12/17/2019	5-W-17-121719	< 62	62	62	< 91	91	91	< 77
	3/20/2019	5-W-18-032019	< 62	62	62	< 91	91	91	< 77
<b>5 W</b> 10	6/19/2019	5-W-18-061919	< 62	62	62	< 91	91	91	< 77
5-W-18	9/17/2019	5-W-18-091719	< 62	62	62	< 91	91	91	< 77
	12/17/2019	5-W-18-121719	< 62	62	62	< 91	91	91	< 77
	3/20/2019	5-W-19-032019	< 62	62	62	< 92	92	92	< 77
5-W-19	6/18/2019	5-W-19-061819	< 62	62	62	< 91	91	91	< 77
5-w-19	9/17/2019	5-W-19-091719	< 62	62	62	< 91	91	91	< 77
	12/17/2019	5-W-19-121719	< 62	62	62	< 91	91	91	< 77
		Schooly	ard Monitoring	g Wells: NWTPI	I-Dx results con	npared to the R	L = 477 μg/l		
	3/20/2019	5-W-51-032019	490	62	62	340	91	91	830
5-W-51	6/19/2019	5-W-51-061919	390	62	62	350	91	91	740
5-11-51	9/17/2019	5-W-51-091719	480 J	62	62	620	91	91	1,100
	12/18/2019	5-W-51-121819	420	62	62	330	91	91	750
	3/20/2019	5-W-55-032019	82	62	62	< 92	92	92	128
5-W-55	6/19/2019	5-W-55-061919	< 62	62	62	< 91	91	91	< 77
J- VV -JJ	9/17/2019	5-W-55-091719	< 62	62	62	< 91	91	91	< 77
	12/17/2019	5-W-55-121719	100	62	62	130	91	91	230

### Table 6 2019 Total Petroleum Hydrocarbon Concentrations in Groundwater BNSF Former Maintenance and Fueling Facility Skykomish, Washington Farallon PN: 683-067

				DRO $(\mu g/l)^1$			<b>ORO</b> $(\mu g/l)^1$		Calculated
Well	Date	Sample Identification	Result	MDL	MRL	Result	MDL	MRL	NWTPH-Dx <sup>2</sup> (µg/l)
	3/20/2019	5-W-56-032019	790	62	62	1,000	91	91	1,790
5-W-56	6/19/2019	5-W-56-061919	810	62	62	1,500	92	92	2,310
5-W-50	9/17/2019	5-W-56-091719	890	62	62	710	92	92	1,600
	12/17/2019	5-W-56-121719	450	62	62	1,300	91	91	1,750
		Hydrau	ilic Control and	l Containment S	System Sentry W	Vells and Monit	oring Wells		
	L	ocations Within and	South of the H	CC Barrier Wa	ll (within Railya	rd): No target I	NWTPH-Dx conce	ntration	
S1-AD	3/21/2019	S1-AD-032119	< 64	64	64	< 95	95	95	< 80
SI-AD	9/19/2019	S1-AD-091919	< 62	62	62	< 91	91	91	< 77
S1-AU	3/21/2019	S1-AU-032119	< 62	62	62	< 91	91	91	< 77
31-AU	9/19/2019	S1-AU-091919	< 62	62	62	< 91	91	91	< 77
S1-BD	3/21/2019	S1-BD-032119	< 62	62	62	< 92	92	92	< 77
31-DD	9/19/2019	S1-BD-091919	< 62	62	62	< 91	91	91	< 77
S1-BU	3/21/2019	S1-BU-032119	< 62	62	62	< 91	91	91	< 77
SI-BU	9/19/2019	S1-BU-091919	< 61	61	61	< 91	91	91	< 76
62 A D	3/19/2019	S2-AD-031919	< 63	63	63	< 93	93	93	< 78
S2-AD	9/19/2019	S2-AD-091919	< 62	62	62	< 91	91	91	< 77
S2-AU	3/19/2019	S2-AU-031919	< 62	62	62	< 92	92	92	< 77
52-AU	9/19/2019	S2-AU-091919	< 62	62	62	< 91	91	91	< 77
S2-BD	3/19/2019	S2-BD-031919	< 62	62	62	< 91	91	91	< 77
52-DD	9/19/2019	S2-BD-091919	< 61	61	61	< 91	91	91	< 76
S2-BU	3/19/2019	S2-BU-031919	250	62	62	120	91	91	370
32-BU	9/19/2019	S2-BU-091919	420	62	62	200	91	91	620
S3-AD	3/22/2019	S3-AD-032219	< 62	62	62	< 92	92	92	< 77
55-AD	9/18/2019	S3-AD-091819	< 62	62	62	< 92	92	92	< 77
S3-AU	3/22/2019	S3-AU-032219	< 62	62	62	< 91	91	91	< 77
33-AU	9/17/2019	S3-AU-091719	< 62	62	62	< 91	91	91	< 77
S3-BD	3/22/2019	S3-BD-032219	< 62	62	62	< 92	92	92	< 77
22-20	9/18/2019	S3-BD-091819	< 62	62	62	< 91	91	91	< 77
S2 DU	3/22/2019	S3-BU-032219	< 62	62	62	< 91	91	91	< 77
S3-BU	9/18/2019	S3-BU-091819	< 62	62	62	< 92	92	92	< 77

# Table 62019 Total Petroleum Hydrocarbon Concentrations in Groundwater<br/>BNSF Former Maintenance and Fueling Facility<br/>Skykomish, Washington<br/>Farallon PN: 683-067

				DRO $(\mu g/l)^1$			<b>ORO</b> $(\mu g/l)^1$		Calculated
Well	Date	Sample Identification	Result	MDL	MRL	Result	MDL	MRL	NWTPH-Dx <sup>2</sup> (µg/l)
S3-CD	3/22/2019	S3-CD-0322219	< 62	62	62	< 91	91	91	< 77
33-CD	9/18/2019	S3-CD-091819	< 61	61	61	< 91	91	91	< 76
S3-CU	3/22/2019	S3-CU-032219	< 62	62	62	< 91	91	91	< 77
33-00	9/18/2019	S3-CU-091819	< 63	63	63	< 93	93	93	< 78
S4-AD	3/22/2019	S4-AD-032219	< 62	62	62	< 91	91	91	< 77
54-AD	9/18/2019	S4-AD-091819	< 62	62	62	< 91	91	91	< 77
C4 AT	3/22/2019	S4-AU-032219	< 62	62	62	< 91	91	91	< 77
S4-AU	9/18/2019	S4-AU-091819	< 62	62	62	< 91	91	91	< 77
S4-BD	3/22/2019	S4-BD-032219	< 62	62	62	< 92	92	92	< 77
54-BD	9/18/2019	S4-BD-091819	< 62	62	62	< 91	91	91	< 77
S4-BU	3/22/2019	S4-BU-032219	< 61	61	61	< 91	91	91	< 76
34-DU	9/18/2019	S4-BU-091819	< 62	62	62	670	92	92	701
S4-CD	3/22/2019	S4-CD-032219	< 62	62	62	< 91	91	91	< 77
54-CD	9/18/2019	S4-CD-091819	< 62	62	62	< 92	92	92	< 77
S4 CU	3/22/2019	S4-CU-032219	93	62	62	< 91	91	91	139
S4-CU	9/18/2019	S4-CU-091819	< 62	62	62	< 91	91	91	< 77
		Locations Nor	th of the HCC	Barrier Wall: N	WTPH-Dx resu	lts compared to	the RL = $477 \ \mu g/l$		
	3/19/2019	GW-1-031919	< 62	62	62	< 91	91	91	< 77
GW-1	6/18/2019	GW-1-061819	< 62	62	62	< 91	91	91	< 77
Gw-1	9/19/2019	GW-1-091919	< 62	62	62	< 91	91	91	< 77
	12/18/2019	GW-1-121819	< 62	62	62	< 92	92	92	< 77
	3/19/2019	GW-2-031919	< 62	62	62	110	91	91	141
GW-2	6/18/2019	GW-2-061819	< 63	63	63	< 93	93	93	< 78
GW-2	9/19/2019	GW-2-091919	< 62	62	62	< 91	91	91	< 77
	12/18/2019	GW-2-121819	< 62	62	62	< 91	91	91	< 77

# Table 62019 Total Petroleum Hydrocarbon Concentrations in Groundwater<br/>BNSF Former Maintenance and Fueling Facility<br/>Skykomish, Washington<br/>Farallon PN: 683-067

				<b>DRO</b> $(\mu g/l)^1$			$ORO (\mu g/l)^1$		Calculated
Well	Date	Sample Identification	Result	MDL	MRL	Result	MDL	MRL	NWTPH-Dx <sup>2</sup> (µg/l)
	3/20/2019	GW-3-032019	< 61 < 61 <sup>3</sup>	61 61	61 61	< 91 < 91 <sup>3</sup>	91 91	91 91	< 76 < 76 <sup>3</sup>
	6/18/2019	GW-3-061819	$\frac{< 61}{180}$ < $63^3$	63 63	63 63	$\frac{150}{< 92^3}$	92 92	92 92	$330 < 78^3$
GW-3	9/18/2019	GW-3-091819	$< 62 < 62^3$	62 62	62 62	< 92 150 $< 91^3$	91 91	91 91	
	12/19/2019	GW-3-121919	$91 < 62^3$	62 62 62	62 62 62	<92<92 <sup>3</sup>	92 92	92 92	$ \begin{array}{r}     \hline     137 \\     < 77^3 \end{array} $
	3/21/2019	GW-4-032119	< 62	62	62	< 91	91	91	< 77
	6/19/2019	GW-4-061919	< 62	62	62	< 91	91	91	< 77
GW-4	9/17/2019	GW-4-091719	< 62	62	62	< 91	91	91	< 77
	12/18/2019	GW-4-121819	< 62	62	62	< 91	91	91	< 77
	3/19/2019	EW-1-031919	< 62	62	62	< 92	92	92	< 77
EW-1	6/18/2019	EW-1-061819	< 62	62	62	< 91	91	91	< 77
EW-1	9/19/2019	EW-1-091919	< 62	62	62	< 91	91	91	< 77
	12/18/2019	EW-1-121819	< 63	63	63	< 93	93	93	< 78
	3/21/2019	EW-2A-032119	< 62	62	62	< 91	91	91	< 77
EW-2A	6/19/2019	EW-2A-061919	< 62	62	62	< 92	92	92	< 77
EW-2A	9/17/2019	EW-2A-091719	< 61	61	61	< 91	91	91	< 76
	12/17/2019	EW-2A-121719	< 63	63	63	< 94	94	94	< 79
	3/19/2019	5-W-43-031919	< 62	62	62	< 92	92	92	< 77
5-W-43	6/18/2019	S-W-43-061819	< 62	62	62	< 91	91	91	< 77
5- W-45	9/19/2019	5-W-43-091919	< 62	62	62	< 92	92	92	< 77
	12/18/2019	5-W-43-121819	< 62	62	62	< 92	92	92	< 77
	3/20/2019	2A-W-40-032019	< 62	62	62	< 91	91	91	< 77
2A-W-40	6/18/2019				N	ot Sampled			
2m- W-40	9/17/2019	2A-W-40-091719	< 61	61	61	< 90	90	90	< 76
	12/17/2019	2A-W-40-121719	< 63	63	63	< 94	94	94	< 79

# Table 62019 Total Petroleum Hydrocarbon Concentrations in Groundwater<br/>BNSF Former Maintenance and Fueling Facility<br/>Skykomish, Washington<br/>Farallon PN: 683-067

				DRO $(\mu g/l)^1$			<b>ORO</b> $(\mu g/l)^1$		Calculated
Well	Date	Sample Identification	Result	MDL	MRL	Result	MDL	MRL	NWTPH-Dx <sup>2</sup> (µg/l)
	3/20/2019	2A-W-41-032019	430	62	62	260	91	91	690
	5/20/2017	211 11 11 052017	84 <sup>3</sup>	62	62	< 91 <sup>3</sup>	91	91	130 <sup>3</sup>
<b>A A W A</b>	6/18/2019	2A-W-41-061819	$280 < 62^3$	62 62	62 62	$230 < 92^3$	92 92	92 92	<b>510</b> < 77 <sup>3</sup>
2A-W-41	9/18/2019	2A-W-41-091819	< 61 85 <sup>3</sup>	61 61	61 61	$230 < 91^3$	91 91	91 91	261 131 <sup>3</sup>
	12/17/2019	2A-W-41-121719	310 98 <sup>3</sup>	62 62	62 62	$280 < 92^3$	92 92	92 92	<b>590</b> 144 <sup>3</sup>
	3/20/2019	1B-W-23-032019	< 62	62	62	< 92	92	92	< 77
	6/18/2019	1B-W-23-061819	< 63	63	63	< 93	93	93	< 78
1B-W-23	9/18/2019	1B-W-23-091819	< 61	61	61	120	91	91	151
	12/17/2019	1B-W-23-121719	< 64	64	64	< 95	95	95	< 80
	3/21/2019	2A-W-42-032119	120	62	62	110	91	91	230
2 A 11/ 42	6/18/2019	2A-W-42-061819	160	62	62	160	91	91	320
2A-W-42	9/18/2019	2A-W-42-091819	< 62	62	62	110	91	91	141
	12/18/2019	2A-W-42-121819	150	62	62	130	91	91	280
		Former Air Sp	arge Area Mon	itoring Wells: N	WTPH-Dx resu	ilts compared to	o the RL = 477 µg/	l	
	3/21/2019	1B-W-3-032119	< 62	62	62	< 91	91	91	< 77
1B-W-3	6/19/2019	1B-W-3-161919	< 62	62	62	< 92	92	92	< 77
1 <b>D</b> -W-3	9/18/2019	1B-W-3-091819	< 62	62	62	< 91	91	91	< 77
	12/18/2019	1B-W-3-121819	< 61	61	61	< 91	91	91	< 76
	3/21/2019	1C-W-7-032119	96	62	62	100	91	91	196
1C-W-7	6/19/2019	1C-W-7-061919	74	62	62	100	91	91	174
IC-w-7	9/17/2019	1C-W-7-091719	< 61	61	61	< 91	91	91	< 76
	12/18/2019	1C-W-7-121819	120	61	61	140	91	91	260
	3/21/2019	1C-W-8-032119	< 61	61	61	< 91	91	91	< 76
1C-W-8	6/19/2019	1C-W-8-061919	< 62	62	62	< 92	92	92	< 77
10-14-0	9/17/2019	1C-W-8-091719	< 61	61	61	< 91	91	91	< 76
	12/18/2019	1C-W-8-121819	< 62	62	62	< 91	91	91	< 77

### Table 6 2019 Total Petroleum Hydrocarbon Concentrations in Groundwater BNSF Former Maintenance and Fueling Facility Skykomish, Washington Farallon PN: 683-067

				DRO $(\mu g/l)^1$			<b>ORO</b> $(\mu g/l)^1$		Calculated
Well	Date	Sample Identification	Result	MDL	MRL	Result	MDL	MRL	NWTPH-Dx <sup>2</sup> (µg/l)
		Former Maloney C	reek Zone Mo	nitoring Wells (	vithin Railyard)	: No target NW	TPH-Dx concentra	ation	
	3/21/2019	MW-3-032119	720	62	62	1,900	92	92	2,620
MW-3	6/19/2019	MW-3-061919	330	62	62	740	91	91	1,070
101 00 -5	9/18/2019					Well Dry			
	12/19/2019	MW-3-121919	770	62	62	1,800	92	92	2,570
	3/21/2019	MW-4-032119	120	62	62	290	91	91	410
MW-4	6/19/2019	MW-4-061919	63	62	62	< 91	91	91	109
101 00 -4	9/18/2019	MW-4-091819	< 62	62	62	110	92	92	141
	12/19/2019	MW-4-121919	160	62	62	440	91	91	600
	3/21/2019	2A-W-9-032119	240	62	62	190	92	92	430
2A-W-9	6/19/2019	2A-W-9-061919	100	62	62	120	91	91	220
2A-w-9	9/18/2019	2A-W-9-091819	< 62	62	62	130	91	91	161
	12/18/2019	2A-W-9-121819	180	61	61	< 91	91	91	226
	3/21/2019	2A-W-10-032119	120	62	62	320	91	91	440
2 A 337 10	6/19/2019	2A-W-10-061919	< 62	62	62	190	91	91	221
2A-W-10	9/18/2019	2A-W-10-091819	< 61	61	61	98	91	91	129
	12/18/2019	2A-W-10-121819	140	62	62	410	91	91	550
	3/21/2019	2B-W-4-032119	< 62	62	62	< 91	91	91	< 77
	6/19/2019	2B-W-4-061919	< 62	62	62	< 91	91	91	< 77
2B-W-4	9/18/2019	2B-W-4-091819	< 63	63	63	< 93	93	93	< 78
	12/19/2019	2B-W-4-121919	< 62	62	62	< 92	92	92	< 77
					Ionitoring Wells				
				Railyard: NWTI	1				-
1A-W-4	3/20/2019	1A-W-4-032019	< 61	61	61	< 91	91	91	< 76
	9/18/2019	1A-W-4-091819	< 62	62	62	< 91	91	91	< 77
1B-W-2	3/21/2019	1B-W-2-032119	< 63	63	63	< 93	93	93	< 78
	9/18/2019	1B-W-2-091819	< 62	62	62	95	91	91	126

#### Table 6 2019 Total Petroleum Hydrocarbon Concentrations in Groundwater BNSF Former Maintenance and Fueling Facility Skykomish, Washington Farallon PN: 683-067

			DRO (µg/l) <sup>1</sup> ORO (µg/l) <sup>1</sup>					Calculated	
Well	Date	Sample Identification	Result	MDL	MRL	Result	MDL	MRL	NWTPH-Dx <sup>2</sup> (µg/l)
	3/21/2019	1C-W-1-032119	< 62	62	62	< 92	92	92	< 77
1C-W-1	6/19/2019	1C-W-1-061919	< 62	62	62	< 91	91	91	< 77
1C-w-1	9/17/2019	1C-W-1-091719	< 61	61	61	< 91	91	91	< 76
	12/18/2019	1C-W-1-121819	< 63	63	63	< 92	92	92	< 78
1C-W-3	3/21/2019	1C-W-3-032119	< 62	62	62	< 92	92	92	< 77
IC-w-5	9/17/2019	1C-W-3-091719	< 61	61	61	< 91	91	91	< 76
1C-W-4	3/21/2019	1C-W-4-032119	95	62	62	< 91	91	91	141
IC-W-4	9/17/2019	1C-W-4-091719	< 61	61	61	< 91	91	91	< 76
MW-38R	3/20/2019	MW-38R-032019	< 62	62	62	< 92	92	92	< 77
WI W-38K	9/17/2019	MW-38R-091719	< 62	62	62	120	91	91	151
		L	ocations Within	n the Railyard: 1	No target NWT	PH-Dx concent	ration		
MW-16	3/21/2019	MW-16-032119	< 62	62	62	< 91	91	91	< 77
101 00 -10	9/18/2019	MW-16-091819	< 62	62	62	< 92	92	92	< 77

NOTES:

Results in **bold** denote concentrations exceeding the 208  $\mu$ g/l NWTPH-Dx cleanup level (Levee Zone wells) or the 477  $\mu$ g/l NWTPH-Dx remediation level (wells outside the Levee Zone and between the BNSF railyard and the Skykomish River).

< denotes analyte not detected at or exceeding the reported concentration.

<sup>1</sup>Analyzed by Washington State Department of Ecology (Ecology) Method NWTPH-Dx without silica gel cleanup unless otherwise noted.

<sup>2</sup>Sum of DRO and ORO, using half the MDL for non-detect results.

<sup>3</sup>Sample analyzed by Ecology Method NWTPH-Dx with silica gel cleanup.

<sup>4</sup>Sample collected for follow-up analysis due to elevated NWTPH-Dx concentration reported in the September 2018 sample collected from well S2-BD.

#### CUL = Cleanup Level

DRO = total petroleum hydrocarbons as diesel-range organics

J = reported concentration is an estimated value

MDL = method detection limit

MRL = method reporting limit

 $\mu g/l = micrograms per liter$ 

ORO = total petroleum hydrocarbons as oil-range organics

RL = Remediation Level

### APPENDIX A LABORATORY ANALYTICAL REPORTS (PROVIDED ON COMPACT DISC IN PRINTED REPORT)

### 2019 SITE-WIDE GROUNDWATER MONITORING REPORT BNSF Former Maintenance and Fueling Facility Skykomish, Washington Consent Decree No. 07-2-33672-9 SEA

Farallon PN: 683-067



### **ANALYTICAL REPORT**

#### TestAmerica Laboratories, Inc.

TestAmerica Seattle 5755 8th Street East Tacoma, WA 98424 Tel: (253)922-2310

#### TestAmerica Job ID: 580-84844-1 Client Project/Site: BNSF Skykomish Monthly

### For:

Farallon Consulting LLC 975 5th Avenue NW Suite 100 Issaquah, Washington 98027

Attn: Peter Kingston

motine D. allen

Authorized for release by: 3/28/2019 12:14:32 PM

Kristine Allen, Manager of Project Management (253)248-4970 kristine.allen@testamericainc.com

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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The

Expert

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#### Job ID: 580-84844-1

#### Laboratory: TestAmerica Seattle

Narrative

Job Narrative 580-84844-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 3/22/2019 2:53 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 11 coolers at receipt time were 0.3° C, 0.6° C, 1.0° C, 1.0° C, 1.4° C, 1.4° C, 1.5° C, 1.5° C, 2.0° C, 2.6° C and 2.9° C.

#### GC Semi VOA

Method(s) NWTPH-Dx: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: WG-WV-031919 (580-84844-5), S2-BU-031919 (580-84844-6) and WG-EV-031919 (580-84844-12).

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.

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Monthly

#### Glossary

Clobbally		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	4
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	5
CFL	Contains Free Liquid	J
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)	8
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	9
LOQ	Limit of Quantitation (DoD/DOE)	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
PQL	Practical Quantitation Limit	
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)

#### Client Sample ID: 5-W-43-031919

Date Collected: 03/19/19 17:07 Date Received: 03/25/19 14:53

### Lab Sample ID: 580-84844-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 10:36	03/26/19 20:05	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		03/26/19 10:36	03/26/19 20:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150				03/26/19 10:36	03/26/19 20:05	1

TestAmerica Seattle

#### Client Sample ID: EW-1-031919

Date Collected: 03/19/19 16:36 Date Received: 03/25/19 14:53

#### Lab Sample ID: 580-84844-2 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 10:36	03/26/19 20:25	· · ·
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		03/26/19 10:36	03/26/19 20:25	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa

5

TestAmerica Seattle

#### Client Sample ID: PZ-8-031919

Date Collected: 03/19/19 15:45 Date Received: 03/25/19 14:53

#### Lab Sample ID: 580-84844-3 Matrix: Water

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.063	0.063	mg/L		03/26/19 10:36	03/26/19 20:46	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		03/26/19 10:36	03/26/19 20:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Surrogate o-Terphenyl	%Recovery 89	Qualifier	Limits 50 - 150				Prepared 03/26/19 10:36	Anal	

TestAmerica Seattle

Lab Sample ID: 580-84844-4

Matrix: Water

5

## Client Sample ID: FGW-WV-031919

Date Collected: 03/19/19 15:00 Date Received: 03/25/19 14:53

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 10:36	03/26/19 21:06	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		03/26/19 10:36	03/26/19 21:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	103		50 - 150				03/26/19 10:36	03/26/19 21:06	1

Surrogate

o-Terphenyl

Analyzed

03/26/19 21:26

Prepared

03/26/19 10:36

5

Dil Fac

1

#### Client Sample ID: WG-WV-031919 Lab Sample ID: 580-84844-5 Date Collected: 03/19/19 14:20 Matrix: Water Date Received: 03/25/19 14:53 Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) Dil Fac Analyte Result Qualifier MDL Unit D RL Prepared Analyzed #2 Diesel (C10-C24) 0.19 0.062 0.062 mg/L 03/26/19 10:36 03/26/19 21:26 1 03/26/19 10:36 03/26/19 21:26 0.091 0.091 mg/L Motor Oil (>C24-C36) 0.13 1

Limits

50 - 150

%Recovery Qualifier

92

#### Client Sample ID: S2-BU-031919

Date Collected: 03/19/19 11:55 Date Received: 03/25/19 14:53

## Lab Sample ID: 580-84844-6

Matrix: Water

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.25		0.062	0.062	mg/L		03/26/19 10:36	03/26/19 21:46	1
Motor Oil (>C24-C36)	0.12		0.091	0.091	mg/L		03/26/19 10:36	03/26/19 21:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				03/26/19 10:36	03/26/19 21:46	1

#### Client Sample ID: S2-AD-031919

Date Collected: 03/19/19 11:40 Date Received: 03/25/19 14:53

## Lab Sample ID: 580-84844-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.063	0.063	mg/L		03/27/19 07:11	03/27/19 18:23	1
Motor Oil (>C24-C36)	ND		0.093	0.093	mg/L		03/27/19 07:11	03/27/19 18:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	88		50 - 150				03/27/19 07:11	03/27/19 18:23	1

#### Client Sample ID: S2-AU-031919

Date Collected: 03/19/19 11:18 Date Received: 03/25/19 14:53

#### Lab Sample ID: 580-84844-8 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 10:36	03/26/19 22:46	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		03/26/19 10:36	03/26/19 22:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150				03/26/19 10:36	03/26/19 22:46	1

5

#### Client Sample ID: GW-1-031919

Date Collected: 03/19/19 17:20 Date Received: 03/25/19 14:53

#### Lab Sample ID: 580-84844-9 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 10:36	03/26/19 23:06	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/26/19 10:36	03/26/19 23:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	99		50 - 150				03/26/19 10:36	03/26/19 23:06	1

5

#### Client Sample ID: PZ-75-031919

Date Collected: 03/19/19 16:11 Date Received: 03/25/19 14:53

#### Lab Sample ID: 580-84844-10 Matrix: Water

5

			Unit	D	Prepared	Analyzed	Dil Fac
ND	0.062	0.062	mg/L		03/26/19 10:36	03/26/19 23:26	1
ND	0.091	0.091	mg/L		03/26/19 10:36	03/26/19 23:26	1
%Recovery Qualifier	Limits				Prepared	Analyzed	Dil Fac
	ND	ND 0.091	ND 0.091 0.091	ND 0.091 0.091 mg/L	ND 0.091 0.091 mg/L	ND 0.091 0.091 mg/L 03/26/19 10:36	ND         0.091         0.091 mg/L         03/26/19 10:36         03/26/19 23:26           %Recovery         Qualifier         Limits         Prepared         Analyzed

#### Client Sample ID: FWG-EV-031919

Date Collected: 03/19/19 14:38 Date Received: 03/25/19 14:53

## Lab Sample ID: 580-84844-11

Matrix: Water

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 10:36	03/26/19 23:47	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/26/19 10:36	03/26/19 23:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	100		50 - 150				03/26/19 10:36	03/26/19 23:47	1

#### Client Sample ID: WG-EV-031919 Lab Sample ID: 580-84844-12 Date Collected: 03/19/19 14:25 Date Received: 03/25/19 14:53 Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) Analyte Result Qualifier MDL Unit D Dil Fac RL Prepared Analyzed 0.062 #2 Diesel (C10-C24) 0.52 0.062 mg/L 03/26/19 10:36 03/27/19 00:07

Motor Oil (>C24-C36)	0.28		0.092	0.092 mg/L	03/26/19 10:36	03/27/19 00:07	1
Surrogate o-Terphenyl	%Recovery 89	Qualifier	Limits 50 - 150		Prepared 03/26/19 10:36	Analyzed 03/27/19 00:07	Dil Fac

Matrix: Water

5

1

#### Client Sample ID: S2-BD-031919

Date Collected: 03/19/19 12:18 Date Received: 03/25/19 14:53

#### Lab Sample ID: 580-84844-13 Matrix: Water

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 10:36	03/27/19 00:27	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/26/19 10:36	03/27/19 00:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	95		50 - 150				03/26/19 10:36	03/27/19 00:27	1

#### Client Sample ID: GW-2-031919

Date Collected: 03/19/19 17:54 Date Received: 03/25/19 14:53

#### Lab Sample ID: 580-84844-14 Matrix: Water

Matrix: Water

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 10:36	03/27/19 00:47	1
Motor Oil (>C24-C36)	0.11		0.091	0.091	mg/L		03/26/19 10:36	03/27/19 00:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenvl	107		50 - 150				03/26/19 10:36	03/27/19 00:47	1

**Client Sample ID: Method Blank** 

# 5

6

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)
Lab Sample ID: MB 580-297119/1-A
Matrix: Water

													_	
Matrix: Water												Prep Ty		
Analysis Batch: 297203												Prep E	atch: 2	297119
		мв мв												
Analyte	Res	sult Qua	alifier	R			Unit		D	Pi	repared	Analyze	ed	Dil Fac
#2 Diesel (C10-C24)		ND		0.06	5	0.065	mg/L		_	03/2	6/19 10:36	03/26/19 1	9:05	1
Motor Oil (>C24-C36)		ND		0.09	6	0.096	mg/L			03/2	6/19 10:36	03/26/19 1	9:05	1
		мв мв												
Surrogate	%Recov	ery Qua	alifier	Limits						P	repared	Analyze	ed	Dil Fac
o-Terphenyl		106		50 - 150	_					03/2	6/19 10:36	03/26/19 1	9:05	1
Lab Sample ID: LCS 580-2971	19/2-A								С	lient	Sample	ID: Lab Co	ntrol S	ample
Matrix: Water											Campio	Prep Ty		
Analysis Batch: 297203													Batch: 2	
Analysis Datch. 297205				Spike	LCS	LCS						%Rec.		
Analyte				Added	Result			Unit		D	%Rec	Limits		
#2 Diesel (C10-C24)				0.500	0.425			mg/L			85	50 - 120		
Motor Oil (>C24-C36)				0.500	0.468			mg/L			94	64 _ 120		
	LCS I	LCS												
Surrogate	%Recovery	Qualifier		Limits										
o-Terphenyl	91			50 - 150										
Lab Sample ID: LCSD 580-297	119/3-A							CI	ient	Sam	nle ID: I	ab Control	Samo	le Dun
Matrix: Water										•		Prep Ty		
Analysis Batch: 297203													Batch: 2	
Analysis Daten. 201200				Spike	LCSD	LCS	D					%Rec.		RPD
Analyte				Added	Result			Unit		D	%Rec	Limits	RPD	Limit
#2 Diesel (C10-C24)				0.500	0.396			mg/L			79	50 - 120	7	26
Motor Oil (>C24-C36)				0.500	0.463			mg/L			93	64 - 120	1	24
	LCSD	LCSD												
Surrogate	%Recovery	Qualifier		Limits										
o-Terphenyl	82			50 - 150										

**QC Sample Results** 

Lab Sample ID: MB 580-297217 Matrix: Water	/ <b>1-A</b>						Client Sa	mple ID: Metho Prep Type: T	
Analysis Batch: 297262								Prep Batch:	297217
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.065	0.065	mg/L		03/27/19 07:11	03/27/19 17:16	1
Motor Oil (>C24-C36)	ND		0.096	0.096	mg/L		03/27/19 07:11	03/27/19 17:16	1
	МВ	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	103		50 _ 150				03/27/19 07:11	03/27/19 17:16	1
Lab Sample ID: LCS 580-29721 Matrix: Water	7/2-A					C	lient Sample I	D: Lab Control Prep Type: T	10 C

#### Analysis Batch: 297262 Prep Batch: 297217 Spike LCS LCS %Rec. Added Result Qualifier Analyte Unit D %Rec Limits #2 Diesel (C10-C24) 0.500 0.410 mg/L 82 50 - 120 Motor Oil (>C24-C36) 0.500 0.520 mg/L 104 64 - 120

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

Lab Sample ID: LCS 580-297	217/2-A						Client	Sample	ID: Lab C	ontrol S	ample
Matrix: Water									Prep T	ype: To	tal/NA
Analysis Batch: 297262									Prep	Batch: 2	97217
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
o-Terphenyl	94		50 - 150								
_ Lab Sample ID: LCSD 580-2	97217/3-A					Clie	ent San	ple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Water								-	Prep T	ype: To	tal/NA
Analysis Batch: 297262									Prep	Batch: 2	97217
-			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
#2 Diesel (C10-C24)			0.500	0.458		mg/L		92	50 - 120	11	26
Motor Oil (>C24-C36)			0.500	0.530		mg/L		106	64 - 120	2	24
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
o-Terphenyl	93		50 _ 150								

Dilution

Factor

Dilution

Factor

Dilution

Factor

1

1

1

Run

Run

Run

Batch

Number

297119

297203

Batch

Number

297119

297203

Batch

Number

297119

297203

03/26/

03/26/

03/26/

03/26/

03/26/

03/26/

Client Sample ID: 5-W-43-031919

Batch

Туре

Prep

Client Sample ID: EW-1-031919 Date Collected: 03/19/19 16:36 Date Received: 03/25/19 14:53

Client Sample ID: PZ-8-031919 Date Collected: 03/19/19 15:45 Date Received: 03/25/19 14:53

Analysis

Batch

Туре

Prep

Analysis

Batch

Туре

Prep

Analysis

Batch

Method

3510C

Batch

Method

3510C

Batch

Method

3510C

NWTPH-Dx

NWTPH-Dx

NWTPH-Dx

Date Collected: 03/19/19 17:07 Date Received: 03/25/19 14:53

Prep Type

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

	b ID: 580-84844-1	estAmerica Jo	T	
	D: 580-84844-1	b Sample	La	
	Matrix: Water			
				Prepared
Ð		Lab	Analyst	or Analyzed
		TAL SEA	KO	03/26/19 10:36
6		TAL SEA	JCM	03/26/19 20:05
7				
	D: 580-84844-2	ab Sample	La	
8	Matrix: Water			
9				Prepared
		Lab	Analyst	or Analyzed
			KO	03/26/19 10:36
		TAL SEA	JCM	03/26/19 20:25
	D: 580-84844-3 Matrix: Water	ab Sample	La	
				Prepared
		Lab	Analyst	or Analyzed
		TAL SEA	КО	03/26/19 10:36
		TAL SEA	JCM	03/26/19 20:46
	D: 580-84844-4	ab Sample	La	
	Matrix: Water			
				Prepared
		Lab	Analyst	or Analyzed
		TAL SEA	КО	03/26/19 10:36
		TAL SEA	JCM	03/26/19 21:06
	D: 580-84844-5	ab Sample	La	
	Matrix: Water	-		

## Client Sample ID: FGW-WV-031919

Date Collected:	03/19/19	15:00
Date Received:	03/25/19	14:53

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297119	03/26/19 10:36	KO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297203	03/26/19 21:06	JCM	TAL SEA

#### Client Sample ID: WG-WV-031919 Date Collected: 03/19/19 14:20

Date Received: 03/25/19 14:53

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297119	03/26/19 10:36	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297203	03/26/19 21:26	JCM	TAL SEA

#### Client Sample ID: S2-BU-031919 Date Collected: 03/19/19 11:55

Date Received: 03/25/19 14:53

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297119	03/26/19 10:36	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297203	03/26/19 21:46	JCM	TAL SEA

**TestAmerica Seattle** 

Lab Sample ID: 580-84844-6

Matrix: Water

			ļ	Lab Chro	nicle				
lient: Farallon ( roject/Site: BN	-						Т	estAmerica Jo	b ID: 580-84844-1
Toject/One. Div	оп окукоппізн	Montiny							
Client Sample							La	b Sample	D: 580-84844-7
Date Collected: Date Received:									Matrix: Water
-	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			297217	03/27/19 07:11	КО	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	297262	03/27/19 18:23	W1T	TAL SEA	
Client Sample	e ID: S2-AU	-031919					La	b Sample	D: 580-84844-8
Date Collected:								-	Matrix: Water
Date Received:	03/25/19 14:5	3							
-	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			297119	03/26/19 10:36	КО	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	297203	03/26/19 22:46	JCM	TAL SEA	
Client Sample	e ID: GW-1-	031919					La	b Sample	D: 580-84844-9
Date Collected:	03/19/19 17:2	0							Matrix: Water
Date Received:	03/25/19 14:5	3							
	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Mathad							
		Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C	Run		297119	03/26/19 10:36	ко	TAL SEA	
			Run	<b>Factor</b>					
Total/NA Total/NA	Prep Analysis	3510C NWTPH-Dx	Run		297119	03/26/19 10:36	KO JCM	TAL SEA TAL SEA	): 580-84844-10
Total/NA Total/NA Client Sample Date Collected:	Prep Analysis e ID: PZ-75- 03/19/19 16:1	3510C NWTPH-Dx -031919 1	Run		297119	03/26/19 10:36	KO JCM	TAL SEA TAL SEA	): 580-84844-10 Matrix: Water
Total/NA Total/NA Client Sample Date Collected:	Prep Analysis e ID: PZ-75- 03/19/19 16:1 03/25/19 14:5	3510C NWTPH-Dx -031919 1 3	Run	1	297119 297203	03/26/19 10:36	KO JCM	TAL SEA TAL SEA	
Total/NA Total/NA Client Sample Date Collected: Date Received:	Prep Analysis e ID: PZ-75- 03/19/19 16:1 03/25/19 14:5: Batch	3510C NWTPH-Dx -031919 1 3 Batch		1	297119 297203 Batch	03/26/19 10:36 03/26/19 23:06 Prepared	ко јсм Lat	TAL SEA TAL SEA Sample IE	
Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type	Prep Analysis e ID: PZ-75- 03/19/19 16:1 03/25/19 14:5: Batch Type	3510C NWTPH-Dx -031919 1 3 Batch Method	Run	1	297119 297203 Batch Number	03/26/19 10:36 03/26/19 23:06 Prepared or Analyzed	KO JCM Lat	TAL SEA TAL SEA D Sample IE	
Total/NA Total/NA Client Sample Date Collected: Date Received:	Prep Analysis e ID: PZ-75- 03/19/19 16:1 03/25/19 14:5: Batch	3510C NWTPH-Dx -031919 1 3 Batch		1	297119 297203 Batch	03/26/19 10:36 03/26/19 23:06 Prepared	ко јсм Lat	TAL SEA TAL SEA Sample IE	
Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA	Prep Analysis e ID: PZ-75- 03/19/19 16:1 03/25/19 14:5: Batch Type Prep Analysis	3510C NWTPH-Dx -031919 1 3 Batch <u>Method</u> 3510C NWTPH-Dx		1 Dilution Factor	297119 297203 Batch Number 297119	03/26/19 10:36 03/26/19 23:06 Prepared or Analyzed 03/26/19 10:36	KO JCM Lat Analyst KO JCM	TAL SEA TAL SEA <b>Sample IE</b> TAL SEA TAL SEA	Matrix: Water
Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample	Prep Analysis e ID: PZ-75- 03/19/19 16:1 03/25/19 14:5 Batch Type Prep Analysis e ID: FWG-E	3510C NWTPH-Dx -031919 1 3 Batch Method 3510C NWTPH-Dx EV-031919		1 Dilution Factor	297119 297203 Batch Number 297119	03/26/19 10:36 03/26/19 23:06 Prepared or Analyzed 03/26/19 10:36	KO JCM Lat Analyst KO JCM	TAL SEA TAL SEA <b>Sample IE</b> TAL SEA TAL SEA	
Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Total/NA	Prep Analysis e ID: PZ-75- 03/19/19 16:1 03/25/19 14:53 Batch Type Prep Analysis e ID: FWG-E 03/19/19 14:3	3510C         NWTPH-Dx         -031919         1         3         Batch         Method         3510C         NWTPH-Dx		1 Dilution Factor	297119 297203 Batch Number 297119	03/26/19 10:36 03/26/19 23:06 Prepared or Analyzed 03/26/19 10:36	KO JCM Lat Analyst KO JCM	TAL SEA TAL SEA <b>Sample IE</b> TAL SEA TAL SEA	Matrix: Water
Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Total/NA	Prep Analysis e ID: PZ-75- 03/19/19 16:1 03/25/19 14:53 Batch Type Prep Analysis e ID: FWG-E 03/19/19 14:3 03/25/19 14:53	3510C         NWTPH-Dx         -031919         1         3         Batch         Method         3510C         NWTPH-Dx		1 Dilution Factor 1	297119 297203 Batch Number 297119 297203	03/26/19 10:36 03/26/19 23:06 Prepared or Analyzed 03/26/19 10:36 03/26/19 23:26	KO JCM Lat Analyst KO JCM	TAL SEA TAL SEA <b>Sample IE</b> TAL SEA TAL SEA	Matrix: Water
Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received:	Prep Analysis e ID: PZ-75- 03/19/19 16:1 03/25/19 14:53 Batch Type Prep Analysis e ID: FWG-E 03/19/19 14:3 03/25/19 14:53	3510C         NWTPH-Dx         -031919         1         3         Batch         Method         3510C         NWTPH-Dx	Run	Dilution Factor 1 Dilution	297119 297203 Batch Number 297119	03/26/19 10:36 03/26/19 23:06 Prepared or Analyzed 03/26/19 10:36 03/26/19 23:26 Prepared	KO JCM Lat KO JCM	TAL SEA TAL SEA Sample IC TAL SEA TAL SEA TAL SEA Sample IC	Matrix: Water
Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Total/NA	Prep Analysis e ID: PZ-75- 03/19/19 16:1 03/25/19 14:53 Batch Type Prep Analysis e ID: FWG-E 03/19/19 14:3 03/25/19 14:53	3510C         NWTPH-Dx         -031919         1         3         Batch         Method         3510C         NWTPH-Dx         EV-031919         8         3         Batch         Batch		1 Dilution Factor 1	297119 297203 Batch Number 297119 297203 Batch	03/26/19 10:36 03/26/19 23:06 Prepared or Analyzed 03/26/19 10:36 03/26/19 23:26	KO JCM Lat Analyst KO JCM	TAL SEA TAL SEA <b>Sample IE</b> TAL SEA TAL SEA	Matrix: Water
Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received: Date Received:	Prep Analysis e ID: PZ-75- 03/19/19 16:1 03/25/19 14:5: Batch Type Prep Analysis e ID: FWG-E 03/19/19 14:3 03/25/19 14:5: Batch Type	3510C NWTPH-Dx -031919 1 3 Batch <u>Method</u> 3510C NWTPH-Dx EV-031919 8 3 Batch Method	Run	Dilution Factor 1 Dilution	297119 297203 Batch Number 297119 297203 Batch Number	03/26/19 10:36 03/26/19 23:06 Prepared or Analyzed 03/26/19 10:36 03/26/19 23:26 03/26/19 23:26 Prepared or Analyzed	KO JCM Lat KO JCM Lat	TAL SEA TAL SEA <b>Sample ID</b> <b>Lab</b> TAL SEA TAL SEA TAL SEA <b>Sample ID</b> <b>Lab</b>	Matrix: Water
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Total/NA Total/NA Total/NA Client Sample Date Collected: Date Received: Total/NA Total/NA Client Sample Date Collected: Date Received: Total/NA Total/NA Total/NA Total/NA	Prep Analysis e ID: PZ-75- 03/19/19 16:1 03/25/19 14:5: Batch Type Prep Analysis e ID: FWG-E 03/19/19 14:5: Batch Type Prep Analysis e ID: WG-E 03/19/19 14:2	3510C         NWTPH-Dx         -031919         1         3         Batch         Method         3510C         NWTPH-Dx         EV-031919         8         3         Batch         Method         3         EV-031919         8         3         Batch         Method         3510C         NWTPH-Dx         Vol31919         V-031919         V5	Run	1 Dilution Factor 1 Dilution Factor	297119 297203 Batch Number 297119 297203 Batch Number 297119	03/26/19 10:36 03/26/19 23:06 Prepared or Analyzed 03/26/19 10:36 03/26/19 23:26 Prepared or Analyzed 03/26/19 10:36	KO JCM Lat KO JCM Lat KO JCM	TAL SEA TAL SEA TAL SEA <b>Sample IE</b> TAL SEA TAL SEA TAL SEA TAL SEA TAL SEA	Matrix: Water 0: 580-84844-11 Matrix: Water
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Lab Sample ID: 580-84844-13

## 2 3 4 5 6 7 8 9 10 11

#### Client Sample ID: S2-BD-031919

Prep Type Total/NA	Туре	Method	_			-		
Total/NIA		Method	Run	Factor	Number	or Analyzed	Analyst	Lab
TOLAI/INA	Prep	3510C			297119	03/26/19 10:36	KO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297203	03/27/19 00:27	JCM	TAL SEA
lient Sample	ID: GW-2-	031919					Lat	b Sample ID: 580-84844-1

_	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C	·		297119	03/26/19 10:36	KO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297203	03/27/19 00:47	JCM	TAL SEA

#### Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

## Accreditation/Certification Summary

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Monthly TestAmerica Job ID: 580-84844-1

#### Laboratory: TestAmerica Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-024	01-19-20
ANAB	DoD / DOE		L2236	01-19-22
ANAB	ISO/IEC 17025		L2236	01-19-22
California	State Program	9	2901	11-05-19
Montana (UST)	State Program	8	N/A	04-30-20
Nevada	State Program	9	WA000502019-1	07-31-19
Oregon	NELAP	10	WA100007	11-05-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-20

#### **Sample Summary**

Matrix

Water

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Monthly

**Client Sample ID** 

5-W-43-031919

EW-1-031919

PZ-8-031919

FGW-WV-031919

WG-WV-031919

S2-BU-031919

S2-AD-031919

S2-AU-031919

GW-1-031919

PZ-75-031919

FWG-EV-031919

WG-EV-031919

S2-BD-031919

GW-2-031919

Lab Sample ID

580-84844-1

580-84844-2

580-84844-3

580-84844-4

580-84844-5

580-84844-6

580-84844-7

580-84844-8

580-84844-9

580-84844-10

580-84844-11

580-84844-12

580-84844-13

580-84844-14

TestAmerica Job ID: 580-84844-1

Collected

03/19/19 17:07

03/19/19 16:36

03/19/19 15:45

03/19/19 15:00

03/19/19 14:20

03/19/19 11:55

03/19/19 11:40

03/19/19 11:18

03/19/19 17:20

03/19/19 16:11

03/19/19 14:38

03/19/19 14:25

03/19/19 12:18

03/19/19 17:54

9

Received	
03/25/19 14:53	
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				LA	BORAT	ORY IN	FORMA					LAB WORK OR	DER: KAVAN	101 8
BNSF	Laboratory. Project Manager:				ger:	SHIPMENT INFORMATION			ION					
RAILWAY	Address:							Phone:		Shipment Method:				
CHAIN OF CUSTODY	City/State/ZIP:							Fax:				Tracking Numbe	r:	
BNSF PROJECT INFORMATION	Project State of	Origin:					C	ONSULTAN	IT INFORMATI	ON		Project Number:	683-067	
SF Project Number: 683-067	Project City:				Company	Fa	valer	r Con	scuting			Project Manager:	Peter kines	kn
SF Project Name: BNSF - Skykomish SF Contact:	Mont	they			Address:	97.	5 51	4 AVE	NW			Email: pkiny	ston Ofara ikin co	nsulty can
SF Contact:	BNSF Work Ord	ler No.:			City/State	/ZIP:	ssage	with ,	NA			Phone:	Fax:	
TURNAROUND TIME	D	ELIVERABLES	[] OI	her Del	iverables		V			IODS FOR A	NALYSIS			
1-day Rush 5- to 8-day Rush	BNSF St	andard (Level II)									1			
2-day Rush Standard 10-Day	Level III		EC	DD Reg.	, Format'	?								
3-day Rush Other	_ Level IV			*****				X						
SF		TION						1641-						
		Samp	ble Collection		Filtered	Type								
Sample Identification	Containers	Date	Time Sa	ampler	Y/N	(Comp Grab)		MM					COMMENTS	LAB USE
5-W-43-031919	2	3/19/19	1707 0	В	N	6	Water	<u> </u>					COMMENTS	LAD USE
EW-1-031919	1	1	1636 C	1	۱	1	1	X						
PZ-8-031919			1545 C		1			X'						
FGW-WV-03/9/9			1500 C					K						
WG-WV-031919			1420 0					X					······································	
52-BU-031919			1155 C					ĸ						
52-AB-031919			1140 C		1		1	X						
52 - 40 -031919				3				X						
GW-1-031919				·ρ				X						
PZ-75-031919				SP				X			·			1
FWG-EV-031919				SP	1			X						
WG-EV-031919				P				X						
52-BD-031919				ρ	1	$\neg$		X						
GW-2- 031919	1	خل_،		2		<u> </u>		X				580-8484	4 Chain of Custody	
				·										
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nguished By.	Date Time:	1145	Received By:		ŧĈ	<u> </u>			Date/Time:	H	-			
eived by Laboratory:	Date/Time:		Lab Remarks:						Lab: Custod	iy Intact? s No	Custody S	eal No.	BNSF COC No	

**ORIGINAL - RETURN TO LABORATORY WITH SAMPLES** 

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TAL-1001 (0912)

3/28/2019

#### Client: Farallon Consulting LLC

#### Login Number: 84844

List Number: 1 Creator: Luna, Francisco J

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
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 <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 580-84844-1

List Source: TestAmerica Seattle



# **ANALYTICAL REPORT**

#### TestAmerica Laboratories, Inc.

TestAmerica Seattle 5755 8th Street East Tacoma, WA 98424 Tel: (253)922-2310

#### TestAmerica Job ID: 580-84853-1

Client Project/Site: BNSF Skykomish Semi Annual Sampling Event: Skykomish HCC System

## For:

Farallon Consulting LLC 975 5th Avenue NW Suite 100 Issaquah, Washington 98027

Attn: Peter Kingston

Kristine D. allen

Authorized for release by: 4/2/2019 4:26:53 PM

Kristine Allen, Manager of Project Management (253)248-4970 kristine.allen@testamericainc.com

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.

..... Links **Review your project** results through **Total** Access Have a Question? Ask-The Expert Visit us at: www.testamericainc.com

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Definitions 5	3
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	3
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Receipt Checklists 8	35

#### Job ID: 580-84853-1

#### Laboratory: TestAmerica Seattle

Narrative

Job Narrative 580-84853-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 3/22/2019 2:53 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 11 coolers at receipt time were 0.1° C, 0.3° C, 1.0° C, 1.0° C, 1.4° C, 1.4° C, 1.5° C, 1.5° C, 2.0° C, 2.6° C and 2.9° C.

#### **Receipt Exceptions**

The samples were submitted with the following errors that were confirmed by the client. The client submitted a revised COC.

The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC). The client instructed the lab to add to the end of the sample event and add Dx analysis. MW-30-032119 (580-84853-53)

Sample 2B-W-4-032119 (580-84853-22) was listed twice on the COC however we only received one set of containers. The second occurrence was crossed off the COC.

Several sample dates on page 2 of the COC do not match the container nor the sample ID format. The client confirmed that all of these samples in question were collected on 3/21/19 as the label states. The COC was revised to include the correct sample date.

Sample S4-CU-032219 1009 is missing from the container submission however we have received 2 sets of containers for S4-BU-032219. There was an underlying label on these containers that has this missing S4-CU-032219 (580-84853-40) sample ID as well as it's correct collection time. This container was labeled as S4-CU-032219.

#### GC Semi VOA

Method(s) NWTPH-Dx: The continuing calibration verification (CCV) associated with batch 580-297262 recovered above the upper control limit for Motor Oil (>C24-C36). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 1C-W-1-032119 (580-84853-29), 1C-W-3-032119 (580-84853-34), 1B-W-3-032119 (580-84853-35), S1-BD-032119 (580-84853-36), S1-AU-032119 (580-84853-37), S1-BU-032119 (580-84853-38), S1-AD-032119 (580-84853-39), S4-CD-032219 (580-84853-41), S4-BD-032219 (580-84853-42), S4-BU-032219 (580-84853-43), S3-AU-032219 (580-84853-44), S3-BU-032219 (580-84853-45), S4-AD-032219 (580-84853-46), S3-CU-032219 (580-84853-47) and (CCV 580-297262/19).

Method(s) NWTPH-Dx: The following samples were reanalyzed for motor oil due to a failing motor oil CCV in the initial analysis. 1C-W-8-032119 (580-84853-30), MW-16-032119 (580-84853-31), 1B-W-2-032119 (580-84853-32), 1C-W-4-032119 (580-84853-33) and S4-CU-032219 (580-84853-40)

Method(s) NWTPH-Dx: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: 2A-W-41-032019 (580-84853-9) and MW-30-032119 (580-84853-53).

Method(s) NWTPH-Dx: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: 2A-W-410-032019 (580-84853-10), 5-W-51-032019 (580-84853-12), 5-W-56-032019 (580-84853-13), 5-W-560-032019 (580-84853-14), 5-W-55-032019 (580-84853-15), 2A-W-10-032119 (580-84853-20), MW-4-032119 (580-84853-21) and 2A-W-9-032119 (580-84853-25).

Method(s) NWTPH-Dx: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: 2A-W-10-032119 (580-84853-20), MW-4-032119 (580-84853-21), 2A-W-9-032119 (580-84853-25), 1C-W-7-032119 (580-84853-26), 2A-W-42-032119 (580-84853-27) and MW-3-032119 (580-84853-28).

Method(s) NWTPH-Dx: The continuing calibration verification (CCV) standard associated with batch 580-297186 recovered outside %Drift acceptance criteria for o-Terphenyl surrogate. The %Recovery is within acceptance criteria for the surrogate in the CCV and associated

## 1 2 3 4 5 6 7 8 9 10

### Job ID: 580-84853-1 (Continued)

#### Laboratory: TestAmerica Seattle (Continued)

samples; therefore, the data are qualified and reported. (CCV 580-297186/14) and (CCV 580-297186/25)

Method(s) NWTPH-Dx: The continuing calibration verification (CCV) associated with batch 580-297186 recovered above the upper control limit for #2 Diesel (C10-C24). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-38R-032019 (580-84853-16), MW-380R-032019 (580-84853-17), 5-W-14-032019 (580-84853-18), 5-W-16-032019 (580-84853-19), 2B-W-4-032119 (580-84853-22), GW-4-032119 (580-84853-23), EW-2A-032119 (580-84853-24) and (CCV 580-297186/25).

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.

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Semi Annual

#### Glossary

Clossury		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	4
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	5
CFL	Contains Free Liquid	
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)	8
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	9
LOQ	Limit of Quantitation (DoD/DOE)	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
PQL	Practical Quantitation Limit	
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)

RL

0.062

0.091

Limits

50 - 150

MDL Unit

0.062 mg/L

0.091 mg/L

D

#### Client Sample ID: 5-W-18-032019

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

Result Qualifier

ND

ND

%Recovery Qualifier

89

Date Collected: 03/20/19 11:04	
Date Received: 03/22/19 14:53	

Analyte

Surrogate

o-Terphenyl

#2 Diesel (C10-C24)

Motor Oil (>C24-C36)

Lab Sample	ID:	580-8485	3-1
		Matrix: Wa	ater

5

Prepared	Analyzed	Dil Fac	Ę
03/26/19 10:36	03/27/19 01:07	1	
03/26/19 10:36	03/27/19 01:07	1	
Prepared	Analyzed	Dil Fac	
03/26/19 10:36	03/27/19 01:07	1	

#### Client Sample ID: 5-W-19-032019

Date Collected: 03/20/19 11:11	
Date Received: 03/22/19 14:53	

Lab Sample ID	):	580-84853-2
		Matrix: Wator

Matrix: Water

03/27/19 01:27		Qualifier R	Result	Analyte F
03/27/19 01.27	03/26/19 10:36 03/27/19 0	 0.06	ND	<sup>‡</sup> 2 Diesel (C10-C24)
03/27/19 01:27	03/26/19 10:36 03/27/19 0	0.09	ND	Notor Oil (>C24-C36)
Analyzed	Prepared Analyz	Qualifier Limits	covery	Surrogate %Rec
	<b>Prepared</b> 03/26/19 10:	Qualifier Limits	ecovery	Surrogate %Rec

RL

0.062

0.091

Limits

50 - 150

MDL Unit

0.062 mg/L

0.091 mg/L

D

Prepared

03/26/19 10:36

03/26/19 10:36

Prepared

03/26/19 10:36

#### Client Sample ID: 5-W-17-032019

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

Result Qualifier

ND

ND

%Recovery Qualifier

99

Date Collected: 03/20/19 12:14	
Date Received: 03/22/19 14:53	

Analyte

Surrogate

o-Terphenyl

#2 Diesel (C10-C24)

Motor Oil (>C24-C36)

Lab Sample ID:	580-84853-3
	Matrix: Water

Analyzed

03/27/19 01:47

03/27/19 01:47

Analyzed

03/27/19 01:47

Dil Fac

Dil Fac

1

1

1

Lab Sample ID: 580-84853-4

#### Client Sample ID: 5-W-170-032019

Date Collected: 03/20/19 12:16 Date Received: 03/22/19 14:53

	Matrix: Water
 Somi Veletile Petroleum Producto (CC)	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 10:36	03/27/19 02:27	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		03/26/19 10:36	03/27/19 02:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	99		50 - 150				03/26/19 10:36	03/27/19 02:27	1

Lab Sample ID: 580-84853-5

Matrix: Water

#### Client Sample ID: 1A-W-4-032019

Date Collected: 03/20/19 16:30	
Date Received: 03/22/19 14:53	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		03/26/19 10:36	03/27/19 02:47	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/26/19 10:36	03/27/19 02:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150				03/26/19 10:36	03/27/19 02:47	1

Client Sample ID: GW-3-032019

#### Lab Sample ID: 580-84853-6 Matrix: Water

ate Collected: 03/20/19 14:35								Matrix	x: Water
ate Received: 03/22/19 14:53									
Method: NWTPH-Dx - Northw	vest - Semi-Volatile	Petroleum	Products (GC)	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		03/27/19 12:46	03/31/19 23:04	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/27/19 12:46	03/31/19 23:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	101		50 - 150				03/27/19 12:46	03/31/19 23:04	1
_ Method: NWTPH-Dx - Semi-V	/olatile Petroleum	Products b	• NWTPH with !	Silica Ge	l Cleanup	,			
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		03/27/19 12:46	03/31/19 16:22	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/27/19 12:46	03/31/19 16:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	113		50 - 150				03/27/19 12:46	03/31/19 16:22	1

Lab Sample ID: 580-84853-7

Matrix: Water

#### Client Sample ID: GW-30-032019

Date Collected: 03/20/19 14:45	
Date Received: 03/22/19 14:53	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		03/26/19 10:36	03/27/19 03:08	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/26/19 10:36	03/27/19 03:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	88		50 - 150				03/26/19 10:36	03/27/19 03:08	1

Lab Sample ID: 580-84853-8

Matrix: Water

5

## Client Sample ID: 1B-W-23-032019

Date Collected: 03/20/19 14:30 Date Received: 03/22/19 14:53

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 12:18	03/30/19 12:00	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		03/26/19 12:18	03/30/19 12:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	104		50 - 150				03/26/19 12:18	03/30/19 12:00	1

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Semi Annual

Lab Sample ID: 580-84853-9

Matrix: Water

Client Sample I	D: 2A-W-41-032019
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Date Collected: 03/20/19 15:55

Date Received: 03/22/19 14:53

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.43		0.062	0.062	mg/L		03/27/19 12:46	03/31/19 23:24	1
Motor Oil (>C24-C36)	0.26		0.091	0.091	mg/L		03/27/19 12:46	03/31/19 23:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150				03/27/19 12:46	03/31/19 23:24	1
		-					Prenared	Analyzed	Dil Fac
Analyte	Result	Products by Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte #2 Diesel (C10-C24)		-		MDL 0.062	Unit		Prepared 03/27/19 12:46 03/27/19 12:46	Analyzed 03/31/19 16:42 03/31/19 16:42	Dil Fac 1
Method: NWTPH-Dx - Semi Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate	Result 0.084	Qualifier	RL 0.062	MDL 0.062	Unit mg/L		03/27/19 12:46	03/31/19 16:42	Dil Fac

Surrogate

o-Terphenyl

Analyzed

03/30/19 12:21

Prepared

03/26/19 12:18

5

Dil Fac

1

#### Client Sample ID: 2A-W-410-032019 Lab Sample ID: 580-84853-10 Date Collected: 03/20/19 16:20 Matrix: Water Date Received: 03/22/19 14:53 Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) Dil Fac Analyte Result Qualifier MDL Unit D Analyzed RL Prepared #2 Diesel (C10-C24) 0.28 0.062 0.062 mg/L 03/26/19 12:18 03/30/19 12:21 1 03/26/19 12:18 03/30/19 12:21 0.092 0.092 mg/L Motor Oil (>C24-C36) 0.14 1

Limits

50 - 150

%Recovery Qualifier

93

TestAmerica Seattle
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# Client Sample ID: 2A-W-40-032019 Lab Sample ID: 580-84853-11 Date Collected: 03/20/19 17:55 Matrix: Water Date Received: 03/22/19 14:53 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 12:18	03/30/19 12:43	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/26/19 12:18	03/30/19 12:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	103		50 - 150				03/26/19 12:18	03/30/19 12:43	1

Surrogate

o-Terphenyl

Analyzed

03/30/19 13:06

Prepared

03/26/19 12:18

5

Dil Fac

1

#### Client Sample ID: 5-W-51-032019 Lab Sample ID: 580-84853-12 Date Collected: 03/20/19 13:54 Matrix: Water Date Received: 03/22/19 14:53 Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) Dil Fac Analyte Result Qualifier MDL Unit D Prepared RL Analyzed #2 Diesel (C10-C24) 0.49 0.062 0.062 mg/L 03/26/19 12:18 03/30/19 13:06 1 03/26/19 12:18 03/30/19 13:06 0.091 0.091 mg/L Motor Oil (>C24-C36) 0.34 1

Limits

50 - 150

%Recovery Qualifier

92

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o-Terphenyl

03/30/19 13:28

03/26/19 12:18

5

1

#### Client Sample ID: 5-W-56-032019 Lab Sample ID: 580-84853-13 Date Collected: 03/20/19 15:09 Matrix: Water Date Received: 03/22/19 14:53 Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) Dil Fac Analyte Result Qualifier MDL Unit D Analyzed RL Prepared #2 Diesel (C10-C24) 0.79 0.062 0.062 mg/L 03/26/19 12:18 03/30/19 13:28 1 03/26/19 12:18 03/30/19 13:28 0.091 0.091 mg/L Motor Oil (>C24-C36) 1.0 1 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac

50 - 150

78

TestAmerica	a Seattle

Surrogate

o-Terphenyl

Analyzed

03/30/19 13:50

Prepared

03/26/19 12:18

5

Dil Fac

1

#### Client Sample ID: 5-W-560-032019 Lab Sample ID: 580-84853-14 Date Collected: 03/20/19 15:20 Matrix: Water Date Received: 03/22/19 14:53 Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) Dil Fac Analyte Result Qualifier MDL Unit D RL Prepared Analyzed #2 Diesel (C10-C24) 0.81 0.062 0.062 mg/L 03/26/19 12:18 03/30/19 13:50 1 03/26/19 12:18 03/30/19 13:50 0.091 0.091 mg/L Motor Oil (>C24-C36) 0.98 1

Limits

50 - 150

%Recovery Qualifier

78

# Client Sample ID: 5-W-55-032019 Date Collected: 03/20/19 15:21 Date Received: 03/22/19 14:53 Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.082		0.062	0.062	mg/L		03/26/19 12:18	03/30/19 14:12	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		03/26/19 12:18	03/30/19 14:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenvl	109		50 - 150				03/26/19 12:18	03/30/19 14:12	1

### Client Sample ID: MW-38R-032019 Date Collected: 03/20/19 17:04

Date Received: 03/22/19 14:53

# Lab Sample ID: 580-84853-16

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 12:18	03/30/19 14:57	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		03/26/19 12:18	03/30/19 14:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	102		50 - 150				03/26/19 12:18	03/30/19 14:57	1

Matrix: Water

5

#### Client Sample ID: MW-380R-032019 Lab Sample ID: 580-84853-17 Date Collected: 03/20/19 17:02

Date Received: 03/22/19 14:53

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.063	0.063	mg/L		03/26/19 12:18	03/30/19 15:19	1
Motor Oil (>C24-C36)	ND		0.093	0.093	mg/L		03/26/19 12:18	03/30/19 15:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	107		50 - 150				03/26/19 12:18	03/30/19 15:19	1

### Client Sample ID: 5-W-14-032019

Client Sample ID: 5-W-14-032019	Lab Sample ID: 580-84853-18
Date Collected: 03/20/19 12:54	Matrix: Water
Date Received: 03/22/19 14:53	
Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 12:18	03/30/19 15:42	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/26/19 12:18	03/30/19 15:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	102		50 - 150				03/26/19 12:18	03/30/19 15:42	1

5

Lab Sample ID: 580-84853-19

#### Client Sample ID: 5-W-16-032019

Date	Collected: 03/20/19 11:59	
Date	Received: 03/22/19 14:53	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 12:18	03/30/19 16:05	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/26/19 12:18	03/30/19 16:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	107		50 - 150				03/26/19 12:18	03/30/19 16:05	1

Matrix: Water

# Client Sample ID: 2A-W-10-032119

Date Collected: 03/21/19 09:54 Date Received: 03/22/19 14:53

### Lab Sample ID: 580-84853-20 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.12		0.062	0.062	mg/L		03/26/19 12:18	04/01/19 20:03	1
Motor Oil (>C24-C36)	0.32		0.091	0.091	mg/L		03/26/19 12:18	03/30/19 16:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	111		50 _ 150				03/26/19 12:18	03/30/19 16:27	1
o-Terphenyl	92		50 - 150				03/26/19 12:18	04/01/19 20:03	1

5

#### Client Sample ID: MW-4-032119

Date Collected: 03/21/19 10:56 Date Received: 03/22/19 14:53

Lab Sample	ID:	580-84853-21
		Matrix: Water

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.12		0.062	0.062	mg/L		03/26/19 12:18	04/01/19 20:23	1
Motor Oil (>C24-C36)	0.29		0.091	0.091	mg/L		03/26/19 12:18	03/30/19 16:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	106		50 _ 150				03/26/19 12:18	03/30/19 16:50	1
o-Terphenyl	87		50 - 150				03/26/19 12:18	04/01/19 20:23	1

### Client Sample ID: 2B-W-4-032119

Date	Collected: 03/21/19 12:04	
Date	Received: 03/22/19 14:53	

Lab Sample ID:	580-84853-22
	Matrix: Mator

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 12:18	03/30/19 17:13	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/26/19 12:18	03/30/19 17:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	105		50 - 150				03/26/19 12:18	03/30/19 17:13	1

# Client Sample ID: GW-4-032119

Date Collected: 03/21/19 09:50	
Date Received: 03/22/19 14:53	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 12:18	03/30/19 17:35	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/26/19 12:18	03/30/19 17:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	113		50 - 150				03/26/19 12:18	03/30/19 17:35	1

 
 Lab Sample ID: 580-84853-23 Matrix: Water
 3

 Prepared
 Analyzed
 Dil Fac

 D2/06/40 42:48
 02/20/40 47:25
 1

Lab Sample ID: 580-84853-24

Matrix: Water

5

### Client Sample ID: EW-2A-032119

Date Collected: 03/21/19 09:50	
Date Received: 03/22/19 14:53	

Method: NWTPH-Dx - Northwe	st - Semi-Volatile	Petroleum	Products (GC)						
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/26/19 12:18	03/30/19 17:58	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/26/19 12:18	03/30/19 17:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	111		50 - 150				03/26/19 12:18	03/30/19 17:58	1

#### Client Sample ID: 2A-W-9-032119

Date Collected: 03/21/19 09:54 Date Received: 03/22/19 14:53

#### Lab Sample ID: 580-84853-25 Matrix: Water

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.24		0.062	0.062	mg/L		03/26/19 12:18	04/01/19 20:43	1
Motor Oil (>C24-C36)	0.19		0.092	0.092	mg/L		03/26/19 12:18	03/30/19 18:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	106		50 - 150				03/26/19 12:18	03/30/19 18:20	1
o-Terphenyl	101		50 - 150				03/26/19 12:18	04/01/19 20:43	1

TestAmerica Job ID: 580-84853-1

#### Client Sample ID: 1C-W-7-032119 Date Collected: 03/21/19 10:45 Date Received: 03/22/19 14:53 Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) Arabita

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
#2 Diesel (C10-C24)	0.096		0.062	0.062	mg/L		03/26/19 12:18	04/01/19 21:04	1	
Motor Oil (>C24-C36)	0.10		0.091	0.091	mg/L		03/26/19 12:18	04/01/19 21:04	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
o-Terphenyl	95		50 - 150				03/26/19 12:18	04/01/19 21:04	1	

Surrogate

o-Terphenyl

TestAmerica Job ID: 580-84853-1

Analyzed

Prepared

03/26/19 12:18 04/01/19 21:24

5

Dil Fac

1

#### Client Sample ID: 2A-W-42-032119 Lab Sample ID: 580-84853-27 Date Collected: 03/21/19 11:05 Matrix: Water Date Received: 03/22/19 14:53 Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) Dil Fac Analyte Result Qualifier MDL Unit D RL Prepared Analyzed 03/26/19 12:18 04/01/19 21:24 #2 Diesel (C10-C24) 0.12 0.062 0.062 mg/L 1 03/26/19 12:18 04/01/19 21:24 0.091 0.091 mg/L Motor Oil (>C24-C36) 0.11 1

Limits

50 - 150

%Recovery Qualifier

83

TestAmerica Job ID: 580-84853-1

Lab Sample ID: 580-84853-28

Matrix: Water

#### Client Sample ID: MW-3-032119 Date Collected: 03/21/19 11:21 Date Received: 03/22/19 14:53

	west - Semi-Volatile		Floudels (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.72		0.062	0.062	mg/L		03/26/19 12:18	04/01/19 21:44	1
Motor Oil (>C24-C36)	1.9		0.092	0.092	mg/L		03/26/19 12:18	04/01/19 21:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	85		50 - 150				03/26/19 12:18	04/01/19 21:44	1

Lab Sample ID: 580-84853-29

Matrix: Water

# Client Sample ID: 1C-W-1-032119

Date Collected: 03/21/19 12:30	
Date Received: 03/22/19 14:53	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 07:11	03/27/19 19:07	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		03/27/19 07:11	03/27/19 19:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	109		50 - 150				03/27/19 07:11	03/27/19 19:07	1

RL

RL

0.091

0.061

Limits

Limits

50 - 150

50 - 150

MDL Unit

0.061 mg/L

MDL Unit

0.091 mg/L

D

D

Prepared

03/27/19 07:11

Prepared

03/27/19 07:11

Prepared

03/27/19 07:11

Prepared

03/27/19 07:11

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Semi Annual

#### Client Sample ID: 1C-W-8-032119

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

Result Qualifier

Result Qualifier

Qualifier

Qualifier

ND

92

ND

104

%Recovery

%Recovery

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

Date Collected: 03/21/19 12:40 Date Received: 03/22/19 14:53

Analyte

Surrogate

Analyte

Surrogate

o-Terphenyl

o-Terphenyl

#2 Diesel (C10-C24)

Motor Oil (>C24-C36)

Lab Sample	ID:	580-848	53-30
		Matrix:	Water

Analyzed

03/27/19 19:29

Analyzed

03/27/19 19:29

Analyzed

03/28/19 22:33

Analyzed

03/28/19 22:33

Dil Fac

Dil Fac

Dil Fac

Dil Fac

1

1

1

1

TestAmerica Seattle	
---------------------	--

RL

RL

0.091

0.062

Limits

Limits

50 - 150

50 - 150

MDL Unit

0.062 mg/L

MDL Unit

0.091 mg/L

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Semi Annual

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

Result Qualifier

Result Qualifier

Qualifier

ND

100

ND

%Recovery Qualifier

117

%Recovery

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

Date Collected: 03/21/19 13:00

Date Received: 03/22/19 14:53

Analyte

Surrogate

Analyte

Surrogate

o-Terphenyl

o-Terphenyl

#2 Diesel (C10-C24)

Motor Oil (>C24-C36)

Prepared

03/27/19 07:11

Prepared

03/27/19 07:11

Prepared

03/27/19 07:11

Prepared

03/27/19 07:11

D

D

TestAmerica Job ID: 580-84853-1

Analyzed

03/27/19 19:51

Analyzed

03/27/19 19:51

Analyzed

03/28/19 22:54

Analyzed

03/28/19 22:54

Lab Sample ID: 580-84853-31 Matrix: Water Dil Fac

1

1

1

1

Dil Fac

Dil Fac

Dil Fac

	5
	8
	9

RL

RL

0.093

0.063

Limits

Limits

50 - 150

50 - 150

MDL Unit

0.063 mg/L

MDL Unit

0.093 mg/L

D

D

Prepared

03/27/19 07:11

Prepared

03/27/19 07:11

Prepared

03/27/19 07:11

Prepared

03/27/19 07:11

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Semi Annual

#### Client Sample ID: 1B-W-2-032119

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

Result Qualifier

Result Qualifier

Qualifier

ND

96

ND

%Recovery Qualifier

114

%Recovery

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

Date Collected: 03/21/19 14:18	
Date Received: 03/22/19 14:53	

Analyte

Surrogate

Analyte

Surrogate

o-Terphenyl

o-Terphenyl

#2 Diesel (C10-C24)

Motor Oil (>C24-C36)

#### Lab Sample ID: 580-84853-32 Matrix: Water

Analyzed

03/27/19 20:13

Analyzed

03/27/19 20:13

Analyzed

03/28/19 23:14

Analyzed

03/28/19 23:14

Dil Fac	
1	
Dil Fac 1	
Dil Fac	
1 Dil Fac	
1	

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Semi Annual

Client Sample ID: 1C-W-4-032119

# Lab Sample ID: 580-84853-33 Matrix: Water

5

Date Collected: 03/21/19 15:05 Date Received: 03/22/19 14:53

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.095		0.062	0.062	mg/L		03/27/19 07:11	03/27/19 20:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150				03/27/19 07:11	03/27/19 20:35	
	thwest - Semi-Volatile	Petroleum		- <b>RA</b>			00,21,10 01.11	00/21/10/20.00	
Method: NWTPH-Dx - Nort		Petroleum Qualifier		- RA MDL	Unit	D	Prepared	Analyzed	Dil Fa
Method: NWTPH-Dx - Nort Analyte			Products (GC)	MDL	Unit mg/L	D			Dil Fa
Method: NWTPH-Dx - Nort	Result	Qualifier	Products (GC)	MDL		D	Prepared	Analyzed	Dil Fa

# Client Sample ID: 1C-W-3-032119

Date Collected: 03/21/19 15:00	
Date Received: 03/22/19 14:53	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 07:11	03/27/19 20:57	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		03/27/19 07:11	03/27/19 20:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	100		50 - 150				03/27/19 07:11	03/27/19 20:57	1

 Prepared
 Analyzed
 Dil Fac
 5

 03/27/19 07:11
 03/27/19 20:57
 1
 6

Lab Sample ID: 580-84853-35

# Client Sample ID: 1B-W-3-032119

Date Collected: 03/21/19 15:05	
Date Received: 03/22/19 14:53	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 07:11	03/27/19 21:19	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/27/19 07:11	03/27/19 21:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	94		50 - 150				03/27/19 07:11	03/27/19 21:19	1

Matrix: Water

5

Lab Sample ID: 580-84853-36

Matrix: Water

# Client Sample ID: S1-BD-032119

Date Collected: 03/21/19 16:05	
Date Received: 03/22/19 14:53	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 07:11	03/27/19 21:41	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		03/27/19 07:11	03/27/19 21:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150				03/27/19 07:11	03/27/19 21:41	1

### Client Sample ID: S1-AU-032119

Date Collected: 03/21/19 16:10	
Date Received: 03/22/19 14:53	

# Lab Sample ID: 580-84853-37

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 07:11	03/27/19 22:03	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/27/19 07:11	03/27/19 22:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	92		50 - 150				03/27/19 07:11	03/27/19 22:03	1

Lab Sample ID: 580-84853-38

Matrix: Water

# Client Sample ID: S1-BU-032119

Date Collected: 03/21/19 16:05	
Date Received: 03/22/19 14:53	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 07:11	03/27/19 22:25	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/27/19 07:11	03/27/19 22:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150				03/27/19 07:11	03/27/19 22:25	1

### Client Sample ID: S1-AD-032119

Date Collected: 03/21/19 16:10	
Date Received: 03/22/19 14:53	

# Lab Sample ID: 580-84853-39

Matrix: Water

nalyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
2 Diesel (C10-C24)	ND		0.064	0.064	mg/L		03/27/19 07:11	03/27/19 23:08	1	
lotor Oil (>C24-C36)	ND		0.095	0.095	mg/L		03/27/19 07:11	03/27/19 23:08	1	
urrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
-Terphenyl	91		50 - 150				03/27/19 07:11	03/27/19 23:08	1	

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Semi Annual

Client Sample ID: S4-CU-032219

Date Collected: 03/22/19 10:06

# Lab Sample ID: 580-84853-40 Matrix: Water

Date Received: 03/22/19 14:53									
Method: NWTPH-Dx - Northwe	est - Semi-Volatile	e Petroleun	n Products (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.093		0.062	0.062	mg/L		03/27/19 07:11	03/27/19 23:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	93		50 - 150				03/27/19 07:11	03/27/19 23:30	1
- Method: NWTPH-Dx - Northwe	est - Semi-Volatile	e Petroleun	n Products (GC)	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/27/19 07:11	03/28/19 23:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	106		50 - 150				03/27/19 07:11	03/28/19 23:54	1

TestAmerica Job ID: 580-84853-1

Lab Sample ID: 580-84853-41

Matrix: Water

#### Client Sample ID: S4-CD-032219 Date Collected: 03/22/19 10:09

Date Received: 03/22/19 14:53
-------------------------------

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 07:11	03/27/19 23:52	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/27/19 07:11	03/27/19 23:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	90		50 - 150				03/27/19 07:11	03/27/19 23:52	1

TestAmerica Job ID: 580-84853-1

#### Client Sample ID: S4-BD-032219

Date Collected: 03/22/19 09:37 Date Received: 03/22/19 14:53

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 07:11	03/28/19 00:14	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		03/27/19 07:11	03/28/19 00:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	92		50 - 150				03/27/19 07:11	03/28/19 00:14	1

Lab Sample ID: 580-84853-42 Matrix: Water

TestAmerica Job ID: 580-84853-1

Lab Sample ID: 580-84853-43

Matrix: Water

5

# Client Sample ID: S4-BU-032219

Date Collected: 03/22/19 09:37	
Date Received: 03/22/19 14:53	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		03/27/19 07:11	03/28/19 00:36	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/27/19 07:11	03/28/19 00:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	89		50 - 150				03/27/19 07:11	03/28/19 00:36	1

TestAmerica Job ID: 580-84853-1

# Client Sample ID: S3-AU-032219

Date Collected: 03/22/19 08:55 Date Received: 03/22/19 14:53

Lab Sample	ID:	580-84853-44
		Matrix: Water

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 07:11	03/28/19 00:57	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/27/19 07:11	03/28/19 00:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150				03/27/19 07:11	03/28/19 00:57	1

TestAmerica Job ID: 580-84853-1

Lab Sample ID: 580-84853-45

Matrix: Water

# Client Sample ID: S3-BU-032219

Date Collected: 03/22/19 08:58 Date Received: 03/22/19 14:53

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 07:11	03/28/19 01:19	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/27/19 07:11	03/28/19 01:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	95		50 - 150				03/27/19 07:11	03/28/19 01:19	1

TestAmerica Job ID: 580-84853-1

### Client Sample ID: S4-AD-032219 Date Collected: 03/22/19 10:05

Date Received: 03/22/19	4:53		
Method: NWTPH-Dx - No	orthwest - Semi-Volatile Petroleum F	Products (GC)	
Analyte	Result Qualifier	RL	MDL Uni

	oonn ronanno			- /					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 07:11	03/28/19 01:41	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/27/19 07:11	03/28/19 01:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	90		50 - 150				03/27/19 07:11	03/28/19 01:41	1

 Analyzed
 Dil Fac
 5

 03/27/19 07:11
 03/28/19 01:41
 1
 6

TestAmerica Job ID: 580-84853-1

Lab Sample ID: 580-84853-47

Matrix: Water

### Client Sample ID: S3-CU-032219

Date Collected: 03/22/19 09:30 Date Received: 03/22/19 14:53

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 07:11	03/28/19 02:03	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/27/19 07:11	03/28/19 02:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	92		50 - 150				03/27/19 07:11	03/28/19 02:03	1

TestAmerica Job ID: 580-84853-1

Lab Sample ID: 580-84853-48

Matrix: Water

5

#### Client Sample ID: S4-AU-032219

Date Collected: 03/22/19 10:05 Date Received: 03/22/19 14:53

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 12:46	04/01/19 05:27	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/27/19 12:46	04/01/19 05:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	90		50 - 150				03/27/19 12:46	04/01/19 05:27	1

TestAmerica Job ID: 580-84853-1

Lab Sample ID: 580-84853-49

Matrix: Water

#### Client Sample ID: S3-BD-032219

Date Collected: 03/22/19 08:55 Date Received: 03/22/19 14:53

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 12:46	04/01/19 03:46	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		03/27/19 12:46	04/01/19 03:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	103		50 - 150				03/27/19 12:46	04/01/19 03:46	1

TestAmerica Job ID: 580-84853-1

Lab Sample ID: 580-84853-50

Matrix: Water

#### Client Sample ID: S3-AD-032219

	te Collected: 03/22/19 08:55 te Received: 03/22/19 14:53
м	ethod: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 12:46	04/01/19 04:06	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		03/27/19 12:46	04/01/19 04:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	94		50 - 150				03/27/19 12:46	04/01/19 04:06	1

Matrix: Water

#### Client Sample ID: MW-555-032219 Lab Sample ID: 580-84853-51 Date Collected: 03/22/19 11:05

	Date Received: 03/22/19 14:53	
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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 12:46	04/01/19 04:26	1	
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/27/19 12:46	04/01/19 04:26	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
o-Terphenyl	90		50 - 150				03/27/19 12:46	04/01/19 04:26	1	

Matrix: Water

#### Client Sample ID: S3-CD-0322219 Lab Sample ID: 580-84853-52 Date Collected: 03/22/19 09:30 Date Received: 03/22/19 14:53

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		03/27/19 12:46	04/01/19 04:46	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		03/27/19 12:46	04/01/19 04:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	93		50 - 150				03/27/19 12:46	04/01/19 04:46	1

5

Surrogate

o-Terphenyl

Analyzed

04/01/19 05:06

Prepared

03/27/19 12:46

5

Dil Fac

1

#### Client Sample ID: MW-30-032119 Lab Sample ID: 580-84853-53 Date Collected: 03/21/19 11:28 Matrix: Water Date Received: 03/22/19 14:53 Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) Dil Fac Analyte Result Qualifier MDL Unit D RL Prepared Analyzed 03/27/19 12:46 #2 Diesel (C10-C24) 0.64 0.062 0.062 mg/L 04/01/19 05:06 1 03/27/19 12:46 04/01/19 05:06 0.092 0.092 mg/L Motor Oil (>C24-C36) 1.9 1

Limits

50 - 150

%Recovery Qualifier

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

# Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 297119 5 repared Analyzed Dil Fac

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Lab Sample ID: MB 580-29711	19/1-A											Client Sa	mple ID: I	Nethod	d Blank
Matrix: Water															otal/NA
Analysis Batch: 297203															297119
		ΜВ	MB												
Analyte	Res	sult	Qualifier	R	۲L		MDL	Unit		D	Р	repared	Analyz	ed	Dil Fac
#2 Diesel (C10-C24)		ND		0.06	65	(	0.065	mg/L			03/2	6/19 10:36	03/26/19	9:05	1
Motor Oil (>C24-C36)		ND		0.09	96	(	0.096	mg/L			03/2	6/19 10:36	03/26/19	19:05	1
		MВ	MB								_				
Surrogate	%Recov		Qualifier	Limits								repared	Analyz		Dil Fac
o-Terphenyl		106		50 - 150							03/2	26/19 10:36	03/26/19	19:05	1
Lab Sample ID: LCS 580-2971	10/2 4									~	liont	Sample	ID: Lab Co	ntrol	Sampla
Matrix: Water	15/2-A									C	nem	Sample			
															otal/NA 297119
Analysis Batch: 297203				Spike		LCS	LCS						%Rec.	Jaton.	257115
Analyte				Added		Result		lifier	Unit		D	%Rec	Limits		
#2 Diesel (C10-C24)				0.500		0.425			mg/L			85	50 <sub>-</sub> 120		
Motor Oil (>C24-C36)				0.500		0.468			mg/L			94	64 _ 120		
				0.000		000			<u>9</u> .=			0.1	0.1-120		
	LCS	LCS													
Surrogate	%Recovery	Qua	lifier	Limits											
o-Terphenyl	91			50 - 150											
_									_						
Lab Sample ID: LCSD 580-297	7119/3-A								C	lient	Sam	ple ID: L	ab Contro		
Matrix: Water															otal/NA
Analysis Batch: 297203				0		1.005		_						Satch:	297119
A b -d				Spike		LCSD			11		-	0/ D	%Rec.		RPD
Analyte #2 Diesel (C10-C24)				Added		Result	Qua	litier	Unit			%Rec	Limits		Limit
						0.396 0.463			mg/L			79 93	50 - 120 64 - 120	1	26 24
Motor Oil (>C24-C36)				0.500		0.403			mg/L			93	04 - 120	I	24
	LCSD	LCS	D												
Surrogate	%Recovery	Qua	lifier	Limits											
o-Terphenyl	82			50 - 150											
_															
Lab Sample ID: MB 580-29714	13/1-A											Client Sa	mple ID: I		
Matrix: Water															otal/NA
Analysis Batch: 297186													Prep E	Batch:	297143
• • •			MB	_						_	_				
Analyte			Qualifier	R	_		MDL			D	-	repared	Analyz		Dil Fac
#2 Diesel (C10-C24)		ND		0.06				mg/L				6/19 12:18	03/30/19		1
Motor Oil (>C24-C36)		ND		0.09	90	(	0.096	mg/L			03/2	6/19 12:18	03/30/19 ′	10:54	1
		ΜВ	МВ												
Surrogate	%Recov	rery	Qualifier	Limits							Р	repared	Analyz	ed	Dil Fac
o-Terphenyl		101		50 - 150	_						03/2	26/19 12:18	03/30/19	10:54	1
_															
Lab Sample ID: LCS 580-2971	43/2-A									С	lient	Sample	ID: Lab Co		
Matrix: Water															otal/NA
Analysis Batch: 297186														Batch:	297143
				Spike			LCS						%Rec.		
Analyte				Added		Result	Qua	lifier	Unit			%Rec	Limits		
#2 Diesel (C10-C24)				0.500		0.441			mg/L			88	50 - 120		
Motor Oil (>C24-C36)				0.500		0.421			mg/L			84	64 - 120		

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Lab Sample ID: LCS 580-2971	43/2-A						Clie	ent Sam	ple	ID: Lab Co		
Matrix: Water										Prep Ty	ype: To	otal/NA
Analysis Batch: 297186										Prep E	Batch: 2	297143
	LCS	LCS										
Surrogate	%Recovery	Qualifier	Limits									
o-Terphenyl	108		50 - 150									
Lab Sample ID: LCSD 580-297	′143/3-A					С	ient S	ample I	D: La	ab Contro	I Samp	le Dup
Matrix: Water										Prep Ty	ype: To	otal/NA
Analysis Batch: 297186										Prep E	Batch: 2	297143
			Spike	LCSD	LCSD					%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit		D %Re	ec _	Limits	RPD	Limit
#2 Diesel (C10-C24)			0.500	0.461		mg/L		ç	92	50 - 120	4	26
Motor Oil (>C24-C36)			0.500	0.449		mg/L		ç	90	64 - 120	7	24
	LCSD	LCSD										
Surrogate	%Recovery	Qualifier	Limits									
o-Terphenyl	113		50 - 150									
Lab Sample ID: MB 580-29721	7/1_4							Clier	nt Sa	mple ID: I	Method	l Blank
Matrix: Water								oner		Prep T		
Analysis Batch: 297262											Batch: 2	
····· <b>,</b> ··· · · · · · · · · · · · · · · · · ·		MB MB										
Analyte	Re	esult Qualifier	RL		MDL Uni	t	D	Prepare	ed	Analyz	ed	Dil Fac
#2 Diesel (C10-C24)		ND	0.065	(	0.065 mg/	L	0	3/27/19 0	)7:11	03/27/19 1	17:16	1
Motor Oil (>C24-C36)		ND	0.096	(	).096 mg/	L	0	3/27/19 0	)7:11	03/27/19 1	17:16	1
		MB MB										
Surrogate	%Reco	very Qualifier	Limits					Prepare	∋d	Analyz	ed	Dil Fac
o-Terphenyl		103	50 - 150				C	3/27/19 0	)7:11	03/27/19	17:16	1
Lab Sample ID: LCS 580-2972	17/2-A						Clie	ent Sam	ple	ID: Lab Co	ontrol S	Sample
Matrix: Water									÷	Prep Ty		
Analysis Batch: 297262										Prep E	Batch: 2	297217
			Spike	LCS	LCS					%Rec.		
Analyte			Added	Result	Qualifier	Unit		D %Re	ec	Limits		
#2 Diesel (C10-C24)			0.500	0.410		mg/L			32	50 - 120		
Motor Oil (>C24-C36)			0.500	0.520		mg/L		10	)4	64 - 120		
	LCS	LCS										
Surrogate	%Recovery	Qualifier	Limits									
o-Terphenyl	94		50 - 150									
Lab Sample ID: LCSD 580-297	217/2-1					C	iont S	amplo I	<b>D</b> • L	ab Contro	l Samn	
Matrix: Water	211/0-4							ampici	D. L	Prep T		
Analysis Batch: 297262											Batch: 2	
			Spike	LCSD	LCSD					%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit		D %Re	ec	Limits	RPD	Limit
#2 Diesel (C10-C24)			0.500	0.458		mg/L		ç	92 —	50 - 120	11	26
Motor Oil (>C24-C36)			0.500	0.530		mg/L		10	06	64 - 120	2	24
	LCSD	LCSD										

93 o-Terphenyl

TestAmerica Seattle

50 - 150

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с	0
с 1	0
<u> </u>	9

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

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Lab Sample ID: MB 580-297 Matrix: Water	265/1-A									Client Sa	mple ID: M Prep Ty		
Analysis Batch: 297618											Prep E	Batch: 2	97265
-	N	IB MB											
Analyte	Res	ult Qualifier	RL		MDL	Unit		D	Р	repared	Analyze	əd	Dil Fac
#2 Diesel (C10-C24)	N	ND	0.065	0	.065	mg/L		·	03/2	7/19 12:46	03/31/19 2	21:44	1
Motor Oil (>C24-C36)	Ν	1D	0.096	0	.096	mg/L			03/2	7/19 12:46	03/31/19 2	21:44	1
	٨	IB MB											
Surrogate	%Recove	ry Qualifier	Limits						P	repared	Analyze	ed	Dil Fac
o-Terphenyl	1	20	50 - 150						03/2	7/19 12:46	03/31/19 2	21:44	1
Lab Sample ID: LCS 580-297	7265/2-A							C	lient	Sample	ID: Lab Co	ontrol S	ample
Matrix: Water											Prep Ty	pe: To	tal/NA
Analysis Batch: 297618												Batch: 2	
-			Spike	LCS	LCS						%Rec.		
Analyte			Added	Result	Qual	ifier	Unit		D	%Rec	Limits		
#2 Diesel (C10-C24)			0.500	0.432			mg/L		_	86	50 - 120		
Motor Oil (>C24-C36)			0.500	0.486			mg/L			97	64 _ 120		
	LCS L	cs											
Surrogate	%Recovery Q	ualifier	Limits										
o-Terphenyl	87		50 - 150										
Lab Sample ID: LCSD 580-2	97265/3-A						С	ient	Sam	ple ID: L	ab Control	l Sampl	le Dup
Matrix: Water											Prep Ty	pe: To	tal/NA
Analysis Batch: 297618											Prep E	Batch: 2	297265
-			Spike	LCSD	LCSI	D					%Rec.		RPD
Analyte			Added	Result	Qual	ifier	Unit		D	%Rec	Limits	RPD	Limit
#2 Diesel (C10-C24)			0.500	0.485			mg/L		_	97	50 - 120	11	26
Motor Oil (>C24-C36)			0.500	0.556			mg/L			111	64 _ 120	13	24
	LCSD L	CSD											
Surrogate	%Recovery Q	ualifier	Limits										
o-Terphenyl	90		50 - 150										

#### Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Lab Sample ID: MB 580-297265/1-B										<b>Client Sa</b>	mple ID: Metho	d Blank
Matrix: Water											Prep Type: 1	Total/NA
Analysis Batch: 297618											Prep Batch	: 297265
	MB	MB										
Analyte	Result	Qualifier	RL	ľ	MDL	Unit		D	P	repared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.065	0	.065	mg/L		_	03/2	7/19 12:46	03/31/19 15:22	1
Motor Oil (>C24-C36)	ND		0.096	0	.096	mg/L			03/2	7/19 12:46	03/31/19 15:22	1
	MB	МВ										
Surrogate	%Recovery	Qualifier	Limits						P	repared	Analyzed	Dil Fac
o-Terphenyl	113		50 - 150						03/2	7/19 12:46	03/31/19 15:22	1
- Lab Sample ID: LCS 580-297265/2-B								С	lient	Sample	ID: Lab Control	Sample
Matrix: Water											Prep Type: 1	Total/NA
Analysis Batch: 297618											Prep Batch	297265
			Spike	LCS	LCS						%Rec.	
Analyte			Added	Result	Qual	lifier	Unit		D	%Rec	Limits	
#2 Diesel (C10-C24)			0.500	0.462			mg/L			92	50 - 120	

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# Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup (Continued)

Lab Sample ID: LCS 580-297	7265/2-B						Client	Sample	ID: Lab Co	ontrol Sa	ample
Matrix: Water									Prep T	ype: To	tal/NA
Analysis Batch: 297618									Prep I	Batch: 2	97265
			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Motor Oil (>C24-C36)			0.500	0.548		mg/L		110	64 - 120		
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
	97265/3-B		50 - 150			Clie	nt Sam	nle ID:	ab Contro	al Samol	e Du
Lab Sample ID: LCSD 580-2 Matrix: Water			50 - 150			Clie	nt Sam	iple ID: I		ype: To	tal/N/
Lab Sample ID: LCSD 580-2 Matrix: Water			50 - 150 Spike	LCSD	LCSD	Clie	nt Sam	ple ID: I	Prep T		tal/NA 9726
Lab Sample ID: LCSD 580-2 Matrix: Water Analysis Batch: 297618					LCSD Qualifier	<b>Clie</b> Unit	nt Sam	ple ID:   %Rec	Prep T Prep I	ype: To	tal/NA 9726 RPI
Lab Sample ID: LCSD 580-2 Matrix: Water Analysis Batch: 297618 <sup>Analyte</sup>			Spike						Prep T Prep I %Rec.	ype: To Batch: 2	tal/NA 9726 RPI Limi
Lab Sample ID: LCSD 580-2 Matrix: Water Analysis Batch: 297618 Analyte #2 Diesel (C10-C24)			Spike Added	Result		Unit		%Rec	Prep T Prep I %Rec. Limits	ype: Tot Batch: 2 RPD	tal/N/ 9726 RPI Limi
Lab Sample ID: LCSD 580-2 Matrix: Water Analysis Batch: 297618 Analyte #2 Diesel (C10-C24)	97265/3-B 	LCSD	Spike Added 0.500	<b>Result</b> 0.429		Unit mg/L		%Rec 86	Prep T Prep I %Rec. Limits 50 - 120	ype: Tot Batch: 2 RPD 7	tal/NA 97265 RPE Limi
o-Terphenyl Lab Sample ID: LCSD 580-2 Matrix: Water Analysis Batch: 297618 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate	97265/3-B 		Spike Added 0.500	<b>Result</b> 0.429		Unit mg/L		%Rec 86	Prep T Prep I %Rec. Limits 50 - 120	ype: Tot Batch: 2 RPD 7	tal/NA

Factor

Dilution

Factor

Dilution

Factor

1

1

1

Run

Run

Run

Batch

Number

297119

297203

Batch

Number

297119

297203

Batch

Number

297119

297203

Prepared

or Analyzed

03/26/19 10:36

03/27/19 01:07

Prepared

or Analyzed

03/26/19 10:36

03/27/19 01:27

Prepared

or Analyzed

03/26/19 10:36

03/27/19 01:47

Analyst

Analyst

Analyst

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JCM

Batch

Туре

Prep

Client Sample ID: 5-W-19-032019

Date Collected: 03/20/19 11:11 Date Received: 03/22/19 14:53

Analysis

Batch

Туре

Prep

Client Sample ID: 5-W-17-032019

Date Collected: 03/20/19 12:14 Date Received: 03/22/19 14:53

Analysis

Batch

Туре

Prep

Analysis

Batch

Method

3510C

Batch

Method

3510C

Batch

Method

3510C

NWTPH-Dx

NWTPH-Dx

NWTPH-Dx

Client Sample ID: 5-W-18-032019

Date Collected: 03/20/19 11:04 Date Received: 03/22/19 14:53

Prep Type

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

TestAmerica Job ID: 580-84853-1	2
Lab Sample ID: 580-84853-1	3
Matrix: Water	4
st Lab	5
TAL SEA	
TAL SEA	6
	7
Lab Sample ID: 580-84853-2 Matrix: Water	0
matrix: Water	ð
	9
st Lab	10
TAL SEA	10
TAL SEA	11
Lab Sample ID: 580-84853-3	
Matrix: Water	
st Lab	
TAL SEA	

# Client Sample ID: 5-W-170-032019

## Lab Sample ID: 580-84853-4

Lab Sample ID: 580-84853-5

Lab Sample ID: 580-84853-6

Matrix: Water

Matrix: Water

Matrix: Water

Date Collected: 03/20/19 12:16 Date Received: 03/22/19 14:53

<b>[</b>	Batch	Batch	_	Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297119	03/26/19 10:36	KO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297203	03/27/19 02:27	JCM	TAL SEA

#### Client Sample ID: 1A-W-4-032019 Date Collected: 03/20/19 16:30 Date Received: 03/22/19 14:53

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297119	03/26/19 10:36	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297203	03/27/19 02:47	JCM	TAL SEA

#### Client Sample ID: GW-3-032019 Date Collected: 03/20/19 14:35

Date Received: 03/22/19 14:53

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297265	03/27/19 12:46	KO	TAL SEA
Total/NA	Cleanup	3630C			297314	03/27/19 18:34	BAH	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297618	03/31/19 16:22	W1T	TAL SEA

#### Lab Chronicle

TestAmerica Job ID: 580-84853-1

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Semi Annual

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297265	03/27/19 12:46	KO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297618	03/31/19 23:04	W1T	TAL SEA

#### Client Sample ID: GW-30-032019

Date Collected: 03/20/19 14:45

_	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297119	03/26/19 10:36	KO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297203	03/27/19 03:08	JCM	TAL SEA

#### Client Sample ID: 1B-W-23-032019

Date Collected: 03/20/19 14:30

Date Received: 03/22/19 14:53

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297143	03/26/19 12:18	KO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297186	03/30/19 12:00	T1W	TAL SEA

#### Client Sample ID: 2A-W-41-032019

Date Collected: 03/20/19 15:55 Date Received: 03/22/19 14:53

#### Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab Total/NA 3510C 297265 03/27/19 12:46 KO TAL SEA Prep Total/NA 3630C 297314 03/27/19 18:34 TAL SEA Cleanup BAH Total/NA NWTPH-Dx 297618 03/31/19 16:42 W1T TAL SEA Analysis 1 Total/NA Prep 3510C 297265 03/27/19 12:46 KO TAL SEA Total/NA NWTPH-Dx 297618 03/31/19 23:24 W1T TAL SEA Analysis 1

#### Client Sample ID: 2A-W-410-032019

#### Date Collected: 03/20/19 16:20

Date Received: 03/22/19 14:53

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297143	03/26/19 12:18	KO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297186	03/30/19 12:21	T1W	TAL SEA

#### Client Sample ID: 2A-W-40-032019 Date Collected: 03/20/19 17:55

Date Received: 03/22/19 14:53

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297143	03/26/19 12:18	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297186	03/30/19 12:43	T1W	TAL SEA

**TestAmerica Seattle** 

Lab Sample ID: 580-84853-9 Matrix: Water

## Lab Sample ID: 580-84853-10

Lab Sample ID: 580-84853-11

Matrix: Water

Matrix: Water

Matrix: Water

Client Sample ID: 5-W-51-032019

Batch

Туре

Prep

Client Sample ID: 5-W-56-032019

Date Collected: 03/20/19 15:09 Date Received: 03/22/19 14:53

Date Collected: 03/20/19 15:20 Date Received: 03/22/19 14:53

Analysis

Batch

Туре

Prep

Client Sample ID: 5-W-560-032019

Analysis

Batch

Туре

Prep

Client Sample ID: 5-W-55-032019

Date Collected: 03/20/19 15:21 Date Received: 03/22/19 14:53

Date Collected: 03/20/19 17:04 Date Received: 03/22/19 14:53

Analysis

Batch

Туре

Prep

Client Sample ID: MW-38R-032019

Analysis

Batch

Туре

Prep

Analysis

Batch

Method

3510C

NWTPH-Dx

NWTPH-Dx

NWTPH-Dx

NWTPH-Dx

NWTPH-Dx

Date Collected: 03/20/19 13:54 Date Received: 03/22/19 14:53

Prep Type

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Prep Type

Prep Type

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA Total/NA

				nicle	_ab Chro	L
b ID: 580-84853-1	estAmerica Joł	Т				
: 580-84853-12	Sample ID	Lal				
Matrix: Water						
			Prepared	Batch	Dilution	
	Lab	Analyst	or Analyzed	Number	Factor	Run
	TAL SEA	KO	03/26/19 12:18	297143		
	TAL SEA	T1W	03/30/19 13:06	297186	1	
: 580-84853-13	Sample ID	Lal				
Matrix: Water						
			Prepared	Batch	Dilution	
	Lab	Analyst	or Analyzed	Number	Factor	Run
	TAL SEA	КО	03/26/19 12:18	297143		
	TAL SEA	T1W	03/30/19 13:28	297186	1	
	o Sample ID	Lal				
	o Sample ID	Lal	Prepared	Batch	Dilution	
	Sample ID	Lal	Prepared or Analyzed	Batch Number	Dilution Factor	tun
			-			Run
: 580-84853-14 Matrix: Wate	Lab	Analyst	or Analyzed	Number		Run
Matrix: Wate	Lab TAL SEA TAL SEA	Analyst KO T1W	or Analyzed 03/26/19 12:18	Number 297143	Factor	Run
Matrix: Wate	Lab TAL SEA TAL SEA	Analyst KO T1W	or Analyzed 03/26/19 12:18	Number 297143	Factor	Run
Matrix: Wate	Lab TAL SEA TAL SEA	Analyst KO T1W	or Analyzed 03/26/19 12:18 03/30/19 13:50	Number 297143 297186	Factor1	
Matrix: Wate	Lab TAL SEA TAL SEA Sample ID	Analyst KO T1W	or Analyzed 03/26/19 12:18 03/30/19 13:50 Prepared	Number           297143           297186   Batch	1	
	Lab TAL SEA TAL SEA Sample ID	Analyst KO T1W Lal	or Analyzed 03/26/19 12:18 03/30/19 13:50 Prepared or Analyzed	Number 297143 297186 Batch Number	1	
Matrix: Wate	Lab TAL SEA TAL SEA Sample ID Sample ID TAL SEA TAL SEA	Analyst KO T1W Lal Analyst KO T1W	or Analyzed 03/26/19 12:18 03/30/19 13:50 Prepared or Analyzed 03/26/19 12:18	Number           297143           297186           Batch           Number           297143	Factor       1       Dilution       Factor	Run
Matrix: Wate : 580-84853-14 Matrix: Wate : 580-84853-16	Lab TAL SEA TAL SEA Sample ID Sample ID TAL SEA TAL SEA	Analyst KO T1W Lal Analyst KO T1W	or Analyzed 03/26/19 12:18 03/30/19 13:50 Prepared or Analyzed 03/26/19 12:18	Number           297143           297186           Batch           Number           297143	Factor       1       Dilution       Factor	
Matrix: Wate : 580-84853-14 Matrix: Wate : 580-84853-16	Lab TAL SEA TAL SEA Sample ID Sample ID TAL SEA TAL SEA	Analyst KO T1W Lal Analyst KO T1W	or Analyzed 03/26/19 12:18 03/30/19 13:50 Prepared or Analyzed 03/26/19 12:18 03/30/19 14:12	Number           297143           297186           Batch           Number           297143           297143           297186	Factor 1 Dilution Factor 1	Run
Matrix: Wate : 580-84853-14 Matrix: Wate : 580-84853-16	Lab TAL SEA TAL SEA Sample ID A TAL SEA TAL SEA TAL SEA	Analyst KO T1W Lal Analyst KO T1W Lal	or Analyzed 03/26/19 12:18 03/30/19 13:50 Prepared 03/26/19 12:18 03/30/19 14:12 Prepared	Number           297143           297186           Batch           Number           297143           297143           297186	Factor 1 Dilution Factor 1 Dilution	

#### Client Sample ID: MW-380R-032019 Date Collected: 03/20/19 17:02 Date Received: 03/22/19 14:53

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297143	03/26/19 12:18	KO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297186	03/30/19 15:19	T1W	TAL SEA

TestAmerica Seattle

Matrix: Water

Lab Sample ID: 580-84853-17

Dilution

Factor

1

Factor

1

Run

Run

Batch

Number

297143

297186

Batch

Number

297143

297186

Prepared

or Analyzed

03/26/19 12:18

03/30/19 15:42

Batch

Туре

Prep

Client Sample ID: 5-W-16-032019

Date Collected: 03/20/19 11:59

Date Received: 03/22/19 14:53

Analysis

Batch

Туре

Prep

Analysis

Batch

Method

3510C

Batch

Method

3510C

NWTPH-Dx

NWTPH-Dx

Client Sample ID: 5-W-14-032019

Date Collected: 03/20/19 12:54

Date Received: 03/22/19 14:53

Prep Type

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Lab Sample ID: 580-84853-18

Lab Sample ID: 580-84853-19

# 2 3 4 5 6 7 8

Matrix: Water

Matrix: Water

Prepared		
or Analyzed	Analyst	Lab
03/26/19 12:18	КО	TAL SEA
03/30/19 16:05	T1W	TAL SEA

Analyst

KO

T1W

Lab

TAL SEA

TAL SEA

#### Client Sample ID: 2A-W-10-032119 Date Collected: 03/21/19 09:54 Date Received: 03/22/19 14:53

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297143	03/26/19 12:18	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297186	03/30/19 16:27	T1W	TAL SEA
Total/NA	Prep	3510C			297143	03/26/19 12:18	ко	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297706	04/01/19 20:03	CJ	TAL SEA

#### Client Sample ID: MW-4-032119

#### Date Collected: 03/21/19 10:56 Date Received: 03/22/19 14:53

-	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297143	03/26/19 12:18	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297186	03/30/19 16:50	T1W	TAL SEA
Total/NA	Prep	3510C			297143	03/26/19 12:18	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297706	04/01/19 20:23	CJ	TAL SEA

#### Client Sample ID: 2B-W-4-032119 Date Collected: 03/21/19 12:04 Date Received: 03/22/19 14:53

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297143	03/26/19 12:18	KO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297186	03/30/19 17:13	T1W	TAL SEA

### TAL SEA

Lab Sample ID: 580-84853-20

### Lab Sample ID: 580-84853-21

Lab Sample ID: 580-84853-22

Matrix: Water

Matrix: Water

Matrix: Water

Factor

1

1

Run

Run

Batch

Number

297143

297186

297186

Batch

Туре

Prep

Batch

Туре

Prep

Analysis

Client Sample ID: EW-2A-032119

Analysis

Batch

Method

3510C

Batch

Method

3510C

NWTPH-Dx

NWTPH-Dx

Client Sample ID: GW-4-032119

Date Collected: 03/21/19 09:50

Date Received: 03/22/19 14:53

Date Collected: 03/21/19 09:50

Date Received: 03/22/19 14:53

Prep Type

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

## Lab Sample ID: 580-84853-23 Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

#### Lab Sample ID: 580-84853-24 Dilution Batch Prepared Factor Number or Analyzed Lab Analyst 297143 03/26/19 12:18 KO TAL SEA

03/30/19 17:58

Prepared

or Analyzed

03/26/19 12:18

03/30/19 17:35

Analyst

KO

T1W

T1W

Lab

TAL SEA

TAL SEA

TAL SEA

Lab Sample ID: 580-84853-25

Lab Sample ID: 580-84853-26

Lab Sample ID: 580-84853-27

Lab Sample ID: 580-84853-28

#### Client Sample ID: 2A-W-9-032119 Date Collected: 03/21/19 09:54 Date Received: 03/22/19 14:53

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297143	03/26/19 12:18	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297186	03/30/19 18:20	T1W	TAL SEA
Total/NA	Prep	3510C			297143	03/26/19 12:18	ко	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297706	04/01/19 20:43	CJ	TAL SEA

#### Client Sample ID: 1C-W-7-032119

#### Date Collected: 03/21/19 10:45 Date Received: 03/22/19 14:53

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297143	03/26/19 12:18	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297706	04/01/19 21:04	CJ	TAL SEA

#### Client Sample ID: 2A-W-42-032119 Date Collected: 03/21/19 11:05 Data Bassivadi 02/22/40 44.52

Date Received: 0	3/22/19 14:53

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297143	03/26/19 12:18	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297706	04/01/19 21:24	CJ	TAL SEA

#### Client Sample ID: MW-3-032119 Date Collected: 03/21/19 11:21

#### Date Received: 03/22/19 14:53

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297143	03/26/19 12:18	КО	TAL SEA

Factor

Dilution

Factor

1

1

Run

Run

Batch

Number

297706

Batch

Number

297217

297262

Prepared

or Analyzed

04/01/19 21:44

Prepared

or Analyzed

03/27/19 07:11

03/27/19 19:07

Analyst

Analyst

KO

W1T

CJ

Lab

Lab

TAL SEA

TAL SEA

TAL SEA

Batch

Туре

Batch

Туре

Prep

Analysis

Client Sample ID: 1C-W-1-032119

Analysis

Batch

Batch

Method

3510C

NWTPH-Dx

Method

NWTPH-Dx

Client Sample ID: MW-3-032119

Date Collected: 03/21/19 11:21

Date Received: 03/22/19 14:53

Date Collected: 03/21/19 12:30

Date Received: 03/22/19 14:53

Prep Type

Prep Type

Total/NA

Total/NA

Total/NA

Lab Sample ID: 580-84853-28

Lab Sample ID: 580-84853-29

Lab Sample ID: 580-84853-30

Matrix: Water

Matrix: Water

Matrix: Water

# 2 3 4 5 6 7

8 9 1

#### Client Sample ID: 1C-W-8-032119 Date Collected: 03/21/19 12:40

#### Date Received: 03/22/19 14:53

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297217	03/27/19 07:11	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297262	03/27/19 19:29	W1T	TAL SEA
Total/NA	Prep	3510C	RA		297217	03/27/19 07:11	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	297341	03/28/19 22:33	TL1	TAL SEA

#### Client Sample ID: MW-16-032119

#### Date Collected: 03/21/19 13:00

Date F	Received:	03/22/19	14:53
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_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297217	03/27/19 07:11	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297262	03/27/19 19:51	W1T	TAL SEA
Total/NA	Prep	3510C	RA		297217	03/27/19 07:11	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	297341	03/28/19 22:54	TL1	TAL SEA

#### Client Sample ID: 1B-W-2-032119 Date Collected: 03/21/19 14:18 Date Received: 03/22/19 14:53

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297217	03/27/19 07:11	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297262	03/27/19 20:13	W1T	TAL SEA
Total/NA	Prep	3510C	RA		297217	03/27/19 07:11	ко	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	297341	03/28/19 23:14	TL1	TAL SEA

## Lab Sample ID: 580-84853-31

Matrix: Water

#### Lab Sample ID: 580-84853-32

Matrix: Water

roject/Site. Biv	SF Skykomish	Semi Annual							
Client Sampl							Lat	o Sample ID	: 580-84853-33
Date Collected: Date Received:									Matrix: Water
Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			297217	03/27/19 07:11	ко	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	297262	03/27/19 20:35	W1T	TAL SEA	
Total/NA	Prep	3510C	RA		297217	03/27/19 07:11	КО	TAL SEA	
Total/NA	Analysis	NWTPH-Dx	RA	1	297341	03/28/19 23:34	TL1	TAL SEA	
Client Sampl	e ID: 1C-W-	3-032119					Lat	o Sample ID	: 580-84853-34
Date Collected:									Matrix: Water
Date Received:	03/22/19 14:53	3							
_	Batch	Batch		Dilution	Batch	Prepared			
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			297217	03/27/19 07:11	KO	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	297262	03/27/19 20:57	W1T	TAL SEA	
Client Sampl							Lat	o Sample ID	: 580-84853-35 Matrix: Water
Date Received:									
_	Batch	Batch		<b>B</b> 11 <i>(</i> 1	Batch	- ·			
	Datch	Dutoll		Dilution	Datch	Prepared			
Ргер Туре	Туре	Method	Run	Factor	Number	Prepared or Analyzed	Analyst	Lab	
Prep Type Total/NA			Run			•	Analyst KO	- Lab TAL SEA	
	Туре	Method	Run		Number	or Analyzed			
Total/NA Total/NA	<b>Type</b> Prep Analysis	Method 3510C NWTPH-Dx	Run	Factor	Number 297217	or Analyzed	ко W1T	TAL SEA TAL SEA	. 580 84853 36
Total/NA Total/NA Client Sampl	Type Prep Analysis	Method 3510C NWTPH-Dx -032119	Run	Factor	Number 297217	or Analyzed	ко W1T	TAL SEA TAL SEA	: 580-84853-36 Matrix: Water
Total/NA Total/NA Client Sampl Date Collected:	Type           Prep           Analysis           e ID: S1-BD           03/21/19 16:05	Method 3510C NWTPH-Dx -032119 5	Run	Factor	Number 297217	or Analyzed	ко W1T	TAL SEA TAL SEA	: 580-84853-36 Matrix: Water
Total/NA Total/NA Client Sampl Date Collected:	Type Prep Analysis e ID: S1-BD 03/21/19 16:03 03/22/19 14:53	Method 3510C NWTPH-Dx -032119 5 3	Run	1	Number 297217 297262	or Analyzed 03/27/19 07:11 03/27/19 21:19	ко W1T	TAL SEA TAL SEA	
Total/NA Total/NA Client Sampl Date Collected: Date Received:	Type Prep Analysis e ID: S1-BD 03/21/19 16:03 03/22/19 14:53 Batch	Method 3510C NWTPH-Dx -032119 5 3 Batch		1	Number           297217           297262           Batch	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared	ко w1т Lat	TAL SEA TAL SEA D Sample ID	
Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type	Type Prep Analysis e ID: S1-BD 03/21/19 16:03 03/22/19 14:53 Batch Type	Method 3510C NWTPH-Dx -032119 5 3 Batch Method	Run	1	Number 297217 297262 Batch Number	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared or Analyzed	KO W1T Lat	TAL SEA TAL SEA D Sample ID	
Total/NA Total/NA Client Sampl Date Collected: Date Received:	Type Prep Analysis e ID: S1-BD 03/21/19 16:03 03/22/19 14:53 Batch	Method 3510C NWTPH-Dx -032119 5 3 Batch		1	Number           297217           297262           Batch	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared	ко w1т Lat	TAL SEA TAL SEA D Sample ID	
Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA	Type Prep Analysis e ID: S1-BD 03/21/19 16:03 03/22/19 14:53 Batch Type Prep Analysis	Method 3510C NWTPH-Dx -032119 5 3 Batch Method 3510C NWTPH-Dx		Factor       1       Dilution       Factor	Number           297217           297262           Batch           Number           297217	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared or Analyzed 03/27/19 07:11	KO W1T Lat Analyst KO W1T	TAL SEA TAL SEA <b>D Sample ID</b> - Lab TAL SEA TAL SEA	Matrix: Water
Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sampl	Type           Prep           Analysis           e ID: S1-BD           03/21/19 16:09           03/22/19 14:53           Batch           Type           Prep           Analysis	Method 3510C NWTPH-Dx -032119 5 3 Batch Method 3510C NWTPH-Dx -032119		Factor       1       Dilution       Factor	Number           297217           297262           Batch           Number           297217	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared or Analyzed 03/27/19 07:11	KO W1T Lat Analyst KO W1T	TAL SEA TAL SEA <b>D Sample ID</b> - Lab TAL SEA TAL SEA	Matrix: Water
Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sampl Date Collected:	Type           Prep           Analysis           e ID: S1-BD           03/21/19 16:09           03/22/19 14:53           Batch           Type           Prep           Analysis	Method 3510C NWTPH-Dx -032119 5 3 Batch Method 3510C NWTPH-Dx -032119 0		Factor       1       Dilution       Factor	Number           297217           297262           Batch           Number           297217	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared or Analyzed 03/27/19 07:11	KO W1T Lat Analyst KO W1T	TAL SEA TAL SEA <b>D Sample ID</b> - Lab TAL SEA TAL SEA	Matrix: Water
Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA Total/NA Client Sampl Date Collected:	Type           Prep           Analysis           e ID: S1-BD           03/21/19 16:09           03/22/19 14:53           Batch           Type           Prep           Analysis	Method 3510C NWTPH-Dx -032119 5 3 Batch Method 3510C NWTPH-Dx -032119 0 3		Factor1 Dilution111	Number           297217           297262           Batch           Number           297217           297262	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared or Analyzed 03/27/19 07:11 03/27/19 21:41	KO W1T Lat Analyst KO W1T	TAL SEA TAL SEA <b>D Sample ID</b> - Lab TAL SEA TAL SEA	Matrix: Water
Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sampl Date Collected: Date Received:	Type           Prep           Analysis           e ID: S1-BD           03/21/19 16:03           03/22/19 14:53           Batch           Type           Prep           Analysis	Method 3510C NWTPH-Dx -032119 5 3 Batch Method 3510C NWTPH-Dx -032119 0 3 Batch Batch	Run	Factor 1 Dilution Factor 1 Dilution Dilution	Number           297217           297262           Batch           Number           297262           Batch           Batch           Batch	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared or Analyzed 03/27/19 07:11 03/27/19 21:41 Prepared	KO W1T Lat KO W1T	TAL SEA TAL SEA <b>Sample ID</b> <b>Lab</b> TAL SEA TAL SEA TAL SEA	Matrix: Water
Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type	Type           Prep           Analysis           e ID: S1-BD           03/21/19 16:03           03/22/19 14:53           Batch           Type           Prep           Analysis	Method           3510C           NWTPH-Dx           -032119           5           3           Batch           Method           3510C           NWTPH-Dx		Factor1 Dilution111	Number 297217 297262 Batch Number 297217 297262 Batch Number	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared or Analyzed 03/27/19 07:11 03/27/19 21:41 Prepared or Analyzed	KO W1T Lat Analyst KO W1T Lat Analyst	TAL SEA TAL SEA D Sample ID TAL SEA TAL SEA TAL SEA D Sample ID	Matrix: Water
Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA Total/NA Client Sampl Date Collected: Date Received:	Type           Prep           Analysis           e ID: S1-BD           03/21/19 16:03           03/22/19 14:53           Batch           Type           Prep           Analysis	Method 3510C NWTPH-Dx -032119 5 3 Batch Method 3510C NWTPH-Dx -032119 0 3 Batch Batch	Run	Factor 1 Dilution Factor 1 Dilution Dilution	Number           297217           297262           Batch           Number           297262           Batch           Batch           Batch	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared or Analyzed 03/27/19 07:11 03/27/19 21:41 Prepared	KO W1T Lat KO W1T	TAL SEA TAL SEA <b>Sample ID</b> <b>Lab</b> TAL SEA TAL SEA TAL SEA	Matrix: Water
Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA	Type           Prep           Analysis           e ID: S1-BD           03/21/19 16:09           03/22/19 14:53           Batch           Type           Prep           Analysis           e ID: S1-AU           03/21/19 16:10           03/21/19 16:10           03/22/19 14:53           e ID: S1-AU           03/22/19 14:53           Batch           Type           Prep           Analysis	Method           3510C           NWTPH-Dx           -032119           5           3           Batch           Method           3510C           NWTPH-Dx           -032119           0           3           Batch           Method           3510C           NWTPH-Dx           -032119           0           3           Batch           Method           3510C	Run	Factor 1 Dilution Factor 1 Dilution Factor Factor Factor	Number           297217           297262           Batch           Number           297262           Batch           Number           297262           Batch           Number           297217           297217           297262           Batch           Number           297217	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared or Analyzed 03/27/19 07:11 03/27/19 21:41 Prepared or Analyzed 03/27/19 07:11	KO W1T Lat KO W1T Lat Analyst KO	TAL SEA TAL SEA D Sample ID TAL SEA TAL SEA D Sample ID Sample ID	Matrix: Water
Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA	Type           Prep           Analysis           e ID: S1-BD:           03/21/19 16:09           03/22/19 14:53           Batch           Type           Prep           Analysis           e ID: S1-AU           03/21/19 16:10           03/21/19 16:11           03/21/19 16:12           03/22/19 14:53           e ID: S1-AU           03/21/19 16:11           03/22/19 14:53           Batch           Type           Prep           Analysis	Method           3510C           NWTPH-Dx           -032119           5           3           Batch           Method           3510C           NWTPH-Dx           -032119           0           3510C           NWTPH-Dx           -032119           0           3           Batch           Method           3510C           NWTPH-Dx	Run	Factor 1 Dilution Factor 1 Dilution Factor Factor Factor	Number           297217           297262           Batch           Number           297262           Batch           Number           297262           Batch           Number           297217           297217           297262           Batch           Number           297217	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared or Analyzed 03/27/19 07:11 03/27/19 21:41 Prepared or Analyzed 03/27/19 07:11	KO W1T Lat KO W1T Lat Analyst KO W1T	TAL SEA TAL SEA D Sample ID TAL SEA TAL SEA TAL SEA D Sample ID Lab TAL SEA TAL SEA	Matrix: Water
Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA Total/NA	Type           Prep           Analysis           e ID: S1-BD           03/21/19 16:09           03/22/19 14:53           Batch           Type           Prep           Analysis           e ID: S1-AU           03/21/19 16:10           03/21/19 16:10           03/21/19 16:10           03/22/19 14:53           Batch           Type           Prep           Analysis	Method           3510C           NWTPH-Dx           -032119           5           3           Batch           Method           3510C           NWTPH-Dx           -032119           0           3           Batch           Method           3510C           NWTPH-Dx           -032119           0           3           Batch           Method           3510C           NWTPH-Dx           -032119	Run	Factor 1 Dilution Factor 1 Dilution Factor Factor Factor	Number           297217           297262           Batch           Number           297262           Batch           Number           297262           Batch           Number           297217           297217           297262           Batch           Number           297217	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared or Analyzed 03/27/19 07:11 03/27/19 21:41 Prepared or Analyzed 03/27/19 07:11	KO W1T Lat KO W1T Lat Analyst KO W1T	TAL SEA TAL SEA D Sample ID TAL SEA TAL SEA TAL SEA D Sample ID Lab TAL SEA TAL SEA	Matrix: Water
Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sampl Date Collected: Date Received: Total/NA Total/NA Total/NA Total/NA	Type           Prep           Analysis           e ID: S1-BD           03/21/19 16:03           03/22/19 14:53           Batch           Type           Prep           Analysis           e ID: S1-AU           03/21/19 16:10           03/21/19 16:10           03/22/19 14:53           e ID: S1-AU           03/22/19 14:53           Batch           Type           Prep           Analysis           e ID: S1-AU           Prep           Analysis           e ID: S1-BU           03/21/19 16:05	Method           3510C           NWTPH-Dx           -032119           5           3           Batch           Method           3510C           NWTPH-Dx           -032119           0           3           Batch           Method           3510C           NWTPH-Dx           -032119           0           3           Batch           Method           3510C           NWTPH-Dx           -032119           5	Run	Factor 1 Dilution Factor 1 Dilution Factor Factor Factor	Number           297217           297262           Batch           Number           297262           Batch           Number           297262           Batch           Number           297217           297217           297262           Batch           Number           297217	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared or Analyzed 03/27/19 07:11 03/27/19 21:41 Prepared or Analyzed 03/27/19 07:11	KO W1T Lat KO W1T Lat Analyst KO W1T	TAL SEA TAL SEA D Sample ID TAL SEA TAL SEA TAL SEA D Sample ID Lab TAL SEA TAL SEA	Matrix: Water 580-84853-37 Matrix: Water 580-84853-38
Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA	Type           Prep           Analysis           e ID: S1-BD           03/21/19 16:03           03/22/19 14:53           Batch           Type           Prep           Analysis           e ID: S1-AU           03/21/19 16:10           03/21/19 16:10           03/22/19 14:53           e ID: S1-AU           03/22/19 14:53           Batch           Type           Prep           Analysis           e ID: S1-AU           Prep           Analysis           e ID: S1-BU           03/21/19 16:05	Method           3510C           NWTPH-Dx           -032119           5           3           Batch           Method           3510C           NWTPH-Dx           -032119           0           3           Batch           Method           3510C           NWTPH-Dx           -032119           0           3           Batch           Method           3510C           NWTPH-Dx           -032119           5	Run	Factor 1 Dilution Factor 1 Dilution Factor Factor Factor	Number           297217           297262           Batch           Number           297262           Batch           Number           297262           Batch           Number           297217           297217           297262           Batch           Number           297217	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared or Analyzed 03/27/19 07:11 03/27/19 21:41 Prepared or Analyzed 03/27/19 07:11	KO W1T Lat KO W1T Lat Analyst KO W1T	TAL SEA TAL SEA D Sample ID TAL SEA TAL SEA TAL SEA D Sample ID Lab TAL SEA TAL SEA	Matrix: Water 580-84853-37 Matrix: Water 580-84853-38
Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA Total/NA Client Sampl Date Collected:	Type           Prep           Analysis           e ID: S1-BD           03/21/19 16:03           03/22/19 14:53           Batch           Type           Prep           Analysis           e ID: S1-AU           03/21/19 16:10           03/21/19 16:10           03/22/19 14:53           e ID: S1-AU           03/22/19 14:53           e ID: S1-BU           Analysis           e ID: S1-BU           03/21/19 16:03           03/21/19 16:03           03/21/19 14:53	Method           3510C           NWTPH-Dx           -032119           5           3           Batch           Method           3510C           NWTPH-Dx           -032119           0           3           Batch           Method           3510C           NWTPH-Dx           -032119           0           3           Batch           Method           3510C           NWTPH-Dx           -032119           5           3	Run	Factor 1 Dilution Factor 1 Dilution Factor 1	Number           297217           297262           Batch           Number           297217           297262           Batch           Number           297217           297262           297217           297217           297217           297217           297262	or Analyzed 03/27/19 07:11 03/27/19 21:19 Prepared or Analyzed 03/27/19 07:11 03/27/19 21:41 Prepared or Analyzed 03/27/19 07:11 03/27/19 07:11 03/27/19 07:11	KO W1T Lat KO W1T Lat Analyst KO W1T	TAL SEA TAL SEA D Sample ID TAL SEA TAL SEA TAL SEA D Sample ID Lab TAL SEA TAL SEA	Matrix: Water 580-84853-37 Matrix: Water 580-84853-38

Lab Sample ID: 580-84853-38

# 2 3 4 5 6 7 8

8 9 1(

# Lab Sample ID: 580-84853-40

Lab Sample ID: 580-84853-41

Lab Sample ID: 580-84853-43

Matrix: Water

Matrix: Water

Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Analysis	NWTPH-Dx		1	297262	03/27/19 22:25	W1T	TAL SEA	

#### Date Collected: 03/21/19 16:10 Date Received: 03/22/19 14:53

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297217	03/27/19 07:11	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297262	03/27/19 23:08	W1T	TAL SEA

#### Client Sample ID: S4-CU-032219

#### Date Collected: 03/22/19 10:06 Date Received: 03/22/19 14:53

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297217	03/27/19 07:11	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297262	03/27/19 23:30	W1T	TAL SEA
Total/NA	Prep	3510C	RA		297217	03/27/19 07:11	ко	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	297341	03/28/19 23:54	TL1	TAL SEA

#### Client Sample ID: S4-CD-032219

Date Collected: 03/22/19 10:09

#### Date Received: 03/22/19 14:53

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297217	03/27/19 07:11	KO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297262	03/27/19 23:52	W1T	TAL SEA

#### Client Sample ID: S4-BD-032219 Lab Sample ID: 580-84853-42 Date Collected: 03/22/19 09:37 Matrix: Water Date Received: 03/22/19 14:53 Batch Batch Dilution Batch Prepared Method Prep Type Туре Factor Number or Analyzed Run Analyst Lab TAL SEA Total/NA Prep 3510C 297217 03/27/19 07:11 кo Total/NA NWTPH-Dx 297262 03/28/19 00:14 TAL SEA Analysis 1 W1T

#### Client Sample ID: S4-BU-032219

#### Date Collected: 03/22/19 09:37

Date Received: 03/22/19 14:53

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297217	03/27/19 07:11	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297262	03/28/19 00:36	W1T	TAL SEA

TestAmerica Seattle

Matrix: Water

		-		nicle	_ab Chro	I			–
ID: 580-84853-1	estAmerica Job	le						-	lient: Farallon C roject/Site: BNS
580-84853-44	Sample ID:	Lab					-032219	ID: S3-AU	Client Sample
Matrix: Water									Date Collected:
									Date Received: (
			Prepared	Batch	Dilution		Batch	Batch	_
	Lab	Analyst	or Analyzed	Number	Factor	Run	Method	Туре	Prep Type
	TAL SEA	KO	03/27/19 07:11	297217				Prep	Total/NA
	TAL SEA	W1T	03/28/19 00:57	297262	1		NWTPH-Dx	Analysis	Total/NA
								,	_
580-84853-45	Sample ID:	Lab					-032219	e ID: S3-BU	Client Sample
Matrix: Water	•								Date Collected:
									Date Received: (
			Prepared	Batch	Dilution		Batch	Batch	_
	Lab	Analyst	or Analyzed	Number	Factor	Run	Method	Туре	Prep Type
	TAL SEA	KO	03/27/19 07:11	297217			3510C	Prep	Total/NA
	TAL SEA	W1T	03/28/19 01:19	297217	1		NWTPH-Dx	Analysis	Total/NA
			50,20,10 01.10	201202	I			, 11019010	
580-84853-46	Sample ID:	Lah					-032219	D: S4-AD	Client Sample
Matrix: Water									Date Collected:
									Date Received: (
			Prepared	Batch	Dilution		Batch	Batch	_
	Lab	Analyst	or Analyzed	Number	Factor	Run	Method	Туре	Prep Type
	TAL SEA	KO	03/27/19 07:11	297217			3510C	Prep	Total/NA
	TAL SEA	W1T	03/28/19 01:41	297262	1		NWTPH-Dx	Analysis	Total/NA
									_
580-84853-47	Sample ID:	Lab					-032219	e ID: S3-CU	Client Sample
Matrix: Water							D	03/22/19 09:30	Date Collected:
							3	03/22/19 14:53	Date Received: (
			Prepared	Batch	Dilution		Batch	Batch	_
	Lab	Analyst	or Analyzed	Number	Factor	Run	Method	Туре	Prep Type
	TAL SEA	KO	03/27/19 07:11	297217			3510C	Prep	Total/NA
	TAL SEA	W1T	03/28/19 02:03	297262	1		NWTPH-Dx	Analysis	Total/NA
500 04052 40	Comple ID.						022240		Client Come
580-84853-48 Matrix: Water	Joannpie ID:	Lab							Client Sample Date Collected:
matrix. Water									Date Conected: (
				D-4-1	Dilutia				_
			Decencer -		Dilution		Batch	Batch	
	Lab	Analyst	Prepared	Batch	Easter.	D	Mothed	Tuna	Bron Tuno
		Analyst	or Analyzed	Number	Factor	Run	Method	Type	Prep Type
	TAL SEA	ко	or Analyzed	Number 297265		Run	3510C	Prep	Total/NA
		-	or Analyzed	Number	Factor	Run			
580-84853-49	TAL SEA TAL SEA	KO W1T	or Analyzed	Number 297265		Run	3510C NWTPH-Dx	Prep Analysis	Total/NA Total/NA
580-84853-49 Matrix: Water	TAL SEA TAL SEA	KO W1T	or Analyzed	Number 297265		Run	3510C NWTPH-Dx -032219	Prep Analysis	Total/NA Total/NA Client Sample
580-84853-49 Matrix: Water	TAL SEA TAL SEA	KO W1T	or Analyzed	Number 297265		<u>Run</u>	3510C NWTPH-Dx -032219 5	Prep Analysis e ID: S3-BD 03/22/19 08:55	Total/NA Total/NA Client Sample Date Collected:
	TAL SEA TAL SEA	KO W1T	or Analyzed 03/27/19 12:46 04/01/19 05:27	Number 297265 297618	1	Run	3510C NWTPH-Dx -032219 5 3	Prep Analysis e ID: S3-BD 03/22/19 08:55 03/22/19 14:53	Total/NA Total/NA Client Sample Date Collected:
	TAL SEA TAL SEA Sample ID:	KO W1T Lab	or Analyzed 03/27/19 12:46 04/01/19 05:27 Prepared	Number           297265           297618           Batch	1		3510C NWTPH-Dx -032219 5 3 Batch	Prep Analysis e ID: S3-BD- 03/22/19 08:55 03/22/19 14:53 Batch	Total/NA Total/NA Client Sample Date Collected: Date Received: (
	TAL SEA TAL SEA	KO W1T	or Analyzed 03/27/19 12:46 04/01/19 05:27	Number 297265 297618	1	Run	3510C NWTPH-Dx -032219 5 3	Prep Analysis e ID: S3-BD 03/22/19 08:55 03/22/19 14:53	Total/NA

Factor

Dilution

Factor

1

1

Run

Run

Batch

Туре

Prep

Client Sample ID: MW-555-032219

Analysis

Batch

Туре

Prep

Client Sample ID: S3-CD-0322219

Analysis

Batch

Method

3510C

Batch

Method

3510C

NWTPH-Dx

NWTPH-Dx

Client Sample ID: S3-AD-032219

Date Collected: 03/22/19 08:55 Date Received: 03/22/19 14:53

Date Collected: 03/22/19 11:05 Date Received: 03/22/19 14:53

Date Collected: 03/22/19 09:30 Date Received: 03/22/19 14:53

Prep Type

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

	estAmerica Job I	-		
80-84853-50	Sample ID:	Lat		
Matrix: Water				
			Prepared	Batch
	Lab	Analyst	or Analyzed	Number
	TAL SEA	КО	03/27/19 12:46	297265
	TAL SEA	W1T	04/01/19 04:06	297618
	Comple ID: /	Lat		
80-84853-51 Matrix: Water	Sample ID: :	Lux		
			Prenared	Batch
			Prepared or Analyzed	Batch
	Lab	Analyst KO	Prepared or Analyzed 03/27/19 12:46	Batch Number 297265
	Lab	Analyst	or Analyzed	Number
Matrix: Water	Lab TAL SEA	Analyst KO W1T	or Analyzed 03/27/19 12:46	Number 297265
Matrix: Water	TAL SEA	Analyst KO W1T	or Analyzed 03/27/19 12:46	Number 297265
Matrix: Water	TAL SEA	Analyst KO W1T	or Analyzed 03/27/19 12:46	Number 297265

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297265	03/27/19 12:46	KO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297618	04/01/19 04:46	W1T	TAL SEA

#### Client Sample ID: MW-30-032119 Date Collected: 03/21/19 11:28 Date Received: 03/22/19 14:53

Lab Sample ID: 580-84853-53 Matrix: Water

Matrix: water

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			297265	03/27/19 12:46	КО	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	297618	04/01/19 05:06	W1T	TAL SEA

#### Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

## Accreditation/Certification Summary

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Semi Annual TestAmerica Job ID: 580-84853-1

#### Laboratory: TestAmerica Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-024	01-19-20
ANAB	DoD / DOE		L2236	01-19-22
ANAB	ISO/IEC 17025		L2236	01-19-22
California	State Program	9	2901	11-05-19
Montana (UST)	State Program	8	N/A	04-30-20
Nevada	State Program	9	WA000502019-1	07-31-19
Oregon	NELAP	10	WA100007	11-05-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-20

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-84853-1	5-W-18-032019	Water	03/20/19 11:04	03/22/19 14:53
580-84853-2	5-W-19-032019	Water	03/20/19 11:11	03/22/19 14:53
580-84853-3	5-W-17-032019	Water	03/20/19 12:14	03/22/19 14:53
580-84853-4	5-W-170-032019	Water	03/20/19 12:16	03/22/19 14:53
580-84853-5	1A-W-4-032019	Water	03/20/19 16:30	03/22/19 14:53
580-84853-6	GW-3-032019	Water	03/20/19 14:35	03/22/19 14:53
580-84853-7	GW-30-032019	Water	03/20/19 14:45	03/22/19 14:53
580-84853-8	1B-W-23-032019	Water	03/20/19 14:30	03/22/19 14:53
580-84853-9	2A-W-41-032019	Water	03/20/19 15:55	03/22/19 14:53
580-84853-10	2A-W-410-032019	Water	03/20/19 16:20	03/22/19 14:53
580-84853-11	2A-W-40-032019	Water	03/20/19 17:55	03/22/19 14:53
580-84853-12	5-W-51-032019	Water	03/20/19 13:54	03/22/19 14:53
580-84853-13	5-W-56-032019	Water	03/20/19 15:09	03/22/19 14:53
580-84853-14	5-W-560-032019	Water	03/20/19 15:20	03/22/19 14:53
580-84853-15	5-W-55-032019	Water	03/20/19 15:21	03/22/19 14:53
580-84853-16	MW-38R-032019	Water	03/20/19 17:04	03/22/19 14:53
580-84853-17	MW-380R-032019	Water	03/20/19 17:02	03/22/19 14:53
580-84853-18	5-W-14-032019	Water	03/20/19 12:54	03/22/19 14:53
580-84853-19	5-W-16-032019	Water	03/20/19 11:59	03/22/19 14:53
580-84853-20	2A-W-10-032119	Water	03/21/19 09:54	03/22/19 14:53
580-84853-21	MW-4-032119	Water	03/21/19 10:56	03/22/19 14:53
580-84853-22	2B-W-4-032119	Water	03/21/19 10:00	03/22/19 14:53
580-84853-23	GW-4-032119	Water	03/21/19 09:50	03/22/19 14:53
580-84853-24	EW-2A-032119	Water	03/21/19 09:50	03/22/19 14:53
580-84853-25	2A-W-9-032119	Water	03/21/19 09:54	03/22/19 14:53
580-84853-26	1C-W-7-032119	Water	03/21/19 10:45	03/22/19 14:53
580-84853-27	2A-W-42-032119	Water	03/21/19 11:05	03/22/19 14:53
580-84853-28	MW-3-032119	Water	03/21/19 11:21	03/22/19 14:53
580-84853-29	1C-W-1-032119	Water	03/21/19 12:30	03/22/19 14:53
580-84853-30	1C-W-8-032119	Water	03/21/19 12:40	03/22/19 14:53
580-84853-31	MW-16-032119	Water	03/21/19 13:00	03/22/19 14:53
580-84853-32	1B-W-2-032119	Water	03/21/19 14:18	03/22/19 14:53
580-84853-33	1C-W-4-032119	Water	03/21/19 15:05	03/22/19 14:53
580-84853-34	1C-W-3-032119	Water	03/21/19 15:00	03/22/19 14:53
580-84853-35	1B-W-3-032119	Water	03/21/19 15:05	03/22/19 14:53
580-84853-36	S1-BD-032119	Water	03/21/19 16:05	03/22/19 14:53
580-84853-37	S1-AU-032119	Water	03/21/19 16:10	03/22/19 14:53
580-84853-38	S1-BU-032119	Water	03/21/19 16:05	03/22/19 14:53
580-84853-39	S1-AD-032119	Water	03/21/19 16:10	03/22/19 14:53
580-84853-40	S4-CU-032219	Water	03/22/19 10:06	03/22/19 14:53
580-84853-41	S4-CD-032219	Water	03/22/19 10:09	03/22/19 14:53
580-84853-42	S4-BD-032219	Water	03/22/19 09:37	03/22/19 14:53
580-84853-43	S4-BU-032219	Water	03/22/19 09:37	03/22/19 14:53
580-84853-44	S3-AU-032219	Water	03/22/19 08:55	03/22/19 14:53
580-84853-45	S3-BU-032219	Water	03/22/19 08:58	03/22/19 14:53
580-84853-46	S4-AD-032219	Water	03/22/19 10:05	03/22/19 14:53
580-84853-47	S3-CU-032219	Water	03/22/19 09:30	03/22/19 14:53
580-84853-48	S4-AU-032219	Water	03/22/19 10:05	03/22/19 14:53
580-84853-49	S3-BD-032219	Water	03/22/19 08:55	03/22/19 14:53
580-84853-50	S3-AD-032219	Water	03/22/19 08:55	03/22/19 14:53
580-84853-51	MW-555-032219	Water	03/22/19 11:05	03/22/19 14:53
580-84853-52	S3-CD-0322219	Water	03/22/19 09:30	03/22/19 14:53
580-84853-53	MW-30-032119	Water	03/21/19 11:28	03/22/19 14:53
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BNSF	Laboratory:							Project	Manager:						SHIPME	NT INFORMAT	ION	
RAILWAY	Address:							Phone:					Shipmer	nt Method	Ŀ			
CHAIN OF CUSTODY	City/State/ZtP:							Fax:					Tracking Number:					
BNSF PROJECT INFORMATION	Project State of	f Origin;			Ι		(	CONSUL	TANT IN	FORMATIO	)N		Project Number: 683-067					
BNSF Project Number: 683-067	Project City:	Project City:				Company: Forallon Consulting							Project M	lanager:	Pete	Kings faration Fax	fon	
BNSF Project Name: BNSF - Steep Kornist	~	Jenni A	mul	<b>.</b>	Address:				ANE		7		Email:	pking	stona	forallon	consulty	licon
BNSF Contact:	BNSF Work On				City/State	a/21P:	1-504	ucil	1105	A			Phone:		Į	Fax:	¥	f
TURNAROUND TIME	D	ELIVERABLES		] Other De	aliverable:			ή			ODS FOR AN	ALYSIS			]		Τ	
1-day Rush 5- to 8-day Rush	BNSF St	andard (Level II)							<u>خ</u>				1		-			
2-day Rush 🕅 Standard 10-Day	Level III			] EDD Rei	q, Format	?		Ìà	YO-HOLMN									
3-day Rush Other	Level IV						<u></u>											
SAM	PLE INFORM	ATION		******				1 ā	Z									
		Samp	le Collection		Filtered	Туре		NW TPH	SGC-									
Sample Identification	Containers	Date	Time	Sampler	Y/N	(Comp/ Grab)	Matrix	$ \leq$	N N						cor	MENTS	LAB U	JSE
5-W-18-032019	2	3/20/19	1104	GP	N	6	W	X										
25-W-19-032019			ini	AB	j		1	X										
5-W-17-032019			1214	CB				X										
15-W-170-032019			1216	CB				X										
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6W-3-032019			1435	NT				X	X									
16W-30-032019			1445	NT				ΪX										
· 1B-W-23- 032014			1430	AB				x										
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13 5-W-56-032019				GP				X									<b>I</b>	
1. 5-W-560-032019			1	GP				X										
10 J-W-555 -032219	1	$\mathbf{V}$	1521	CH	<u>٧</u>	V.	$\mathbb{V}$	X										
15 J-W -35 -032219 Relinquished By: Malgalint Relinquished By:	Pate/Time: 0572/14 Date/Time:	191453	Received By: Received By:	TonB	lun	4	>			Date/Time: 3/22/15 Date/Time:	1453	Comme	nts and	Special	Analytical	Requirements	:	
Relinguished By:	Date/Time:		Received By:							Date/Time:		1						
Received by Laboratory:	Date/Time:		Lab Remarks:							Lab: Custody	Intact?	Custody S	eal No.			BNSF COC No		

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

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BNSF	Laboratory:							Project Ma	anager:				SHIPMENT INFORMATION			
RAILWAY	Address:							Phone:					Shipment Method:			
CHAIN OF CUSTODY	City/Stale/ZIP:			Fax:								Tracking Number:				
BNSF PROJECT INFORMATION	Project State o	Project State of Origin;					CONSULTANT INFORMATION							685	2-06	9
BNSF Project Number: 683-067	Project City:				Сотрану	-	evra	Um	Con	sut	3		Project Manag	er Pet	- Vi	y ston
BNSF Project Name BNSF Contact: BNSF Contact:	. Sem	i- Am	. l		Address:					NW			Email: Pla	mastin	Con Louise	Margareth
BNSF Contact:	BNSF Work Or	rder No.:			City/State	/ZIP	5520	noh	- (	VA "	28:07	+	Phone:		Fax:	Davensuum
TURNAROUND TIME		ELIVERABLES	Г	Other De	liverables			Ť	/ (	METHODS						T
1-day Rush 5- to 8-day Rush	BNSF S	tandard (Level II)														
2-day Rush Standard 10-Day	Level III		Ē	EDD Rec	. Format'	?		$\times$								
3-day Rush Other	Level IV							Ô								
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		1	ple Collection		I	7	1	HALLMN								
Sample Identification	Containers	Date	Time	Sampler	Filtered Y/N	Type (Comp Grab)	/ Matrix	13								
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EW-24-032119			0950	NT				$\left  \times \right $								
2A-W9-032119			0954	CH				X								
1C-W-7-032119			1045	AB				$\left  \times \right $								
2 2A-W-42-03219			1105	NT				X								
, MW-3-032119			1121	CH				X								
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5 1(-W-1-072119	$\forall$	$\vee$	1230		V	V	$\forall$	X			1	1				
5 10-W-1-032119 Relinguissed By: Chutal Balina Relinguisted By:	Date/Time:	190145	Received By:	Tom	lon	Ż	2	•	Di	ate/Time: 3/22/19 ate/Time:	1453	Comme	nts and Spe	t cial Analytical f	₹equirements	<b>1</b>
Refinquished By:	Date/Time:		Received By:						Di	ite/Time:		1				
Received by Laboratory:	Date/Time:		Lab Remarks:						La	b: Custody Intac	?	Custody S	eal No.		BNSF COC No	
											No	1				

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

TAL-1001 (0912)

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BNSF	······································				oject Manager:			SHIPMENT INFORMA	TION	
RAILWAY	Address:				ione:		Shipment Met	hod:		
CHAIN OF CUSTODY	City/State/ZIP:			F	IX:			Tracking Num	ber:	
BNSF PROJECT INFORMATION	Project State of Origin:	NA		CON	SULTANT I			Project Number:	683-06	07
3NSF Project Number: 633-067	Project City: 541	(pm15/)	Company: FG	call	SU	COASL	Itin	Project Manager	Lote Vinny	stiv 1
BNSF Project Name: BNSF SKYKEY BNSF Contact:	MISH - SCH	1 cinnier (	Address: O City/State/ZIP:	75		WAY N		Phone:	nyston	-callen Cons
TURNAROUND TIME	DELIVERAB	LES Other Del		<u>, SAC</u>	PAR		FOR ANALYS		T	T
1-day Rush 5- to 8-day Rush	BNSF Standard (Leve	el fi)								
2-day Rush Standard 10-Day		EDD Req	, Formal?	ĺ	X					
3-day Rush Other	Level IV				(')					
	SAMPLE INFORMATION				HELM					
		Sample Collection	Type		F					
Sample Identification	Containers Date		Filtered (Comp/ Y/N Grab)	Matrix	Z				COMMENTS	LAB USE
1C-W-8-032119	D1/21/19 Z	1240 612	NG	W	$\times$					
MW-16-032/19		1300		1	1					
1B-W-2-032119		1418								
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51-BD-032119		1605								
52 - 40-032119		1610								
SI - BU - 032119		1605								
51- AD-0321(9	V	1610								
S4-CU-032214	03/22/19	1006								
SY-CD-032219		1009								
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S3-AU-032219	A A	0855 7	7 7	$\forall$	¥					
elinquished By: Chr. Hullsonfur	Date/Time:		anty	<u>C</u>		Date/Time: 3/22/19 Date/Time:	1453 Co	mments and Speci	al Analytical Requirements	50 
elinquished By:	Date/Time:	Received By:	<u> </u>	/		Date/Time:				
eceived by Laboratory:	Date/Time:	Lab Remarks:				Lab: Custody Intact?	Cus	tody Seal No.	BNSF COC No	
DRIGINAL - RETURN TO LABORATORY WITH SAMPLES		DUI	LICATE - CONSUL	TANT			] No			TAL-1001 (0912)

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	T T			LA	BORAT	ORY IN	FORMAT	ION						LAB WC	ORK ORDE		$\sim$
BNSF	Laboratory:							Project M	anager:				SHIPMENT INFORMATION			TION	
RAILWAY	Address:							Phone:						Shipmer	nt Method:		
CHAIN OF CUSTODY	City/State/ZIP:				Fax:									£ -	Number:		
BNSF PROJECT INFORMATION	Project State o	Project State of Origin:				CONSULTANT INFORMATION								Project No	umber:	583-067	
BNSF Project Number: 603-067	Project City:				Company	fo	wal	lon	Ca	nsid	Iton			Project M	anager:	683-567 Pede Kingsto Non Oberallon Fax	vi
BNSF Project Name: BNSF Styllowith.	- Semi-	Anna	6		Address:		15 3					7		Email:	They	ton Spirallon	Consellon C
BNSF Contact:	BNSF Work Or	der No.:			City/State	/ZIP:	5300	int	· .0	A-	480	73		Phone:	/	Fax:	
TURNAROUND TIME		ELIVERABLES		Other De	liverables							OR ANAL	YSIS				
1-day Rush 5- to 8-day Rush	BNSF S	andard (Level II)							l						1		
2-cíay Rush 🛛 🕅 Standard 10-Day	Level III			EDD Rec	ą. Format	,		2	K								
3-day Rush Other	Level IV																
	AMPLE INFORM	ATION						1 <del>.</del> .	1								
		Same	e Collection			Туре		日									
Sample Identification	Containers	Date	Time	Sampler	Filtered Y/N	(Comp/ Grab)	Matrix	Halonn								COMMENTS	LAB USE
5-W-14-032019	2	3/20/19	1254	GP	N	6	W	X								COMMENTO	
5-W-16-032019	ĩ	1	1159	6P	í	Ì	ì										
5-W-18-032014			1104	GP	1												
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5-W-17-032019				ĊВ													
5-W-170-032019			1216	CB													
5-W-51-032019			1354	GP													
5-W-56-032019	1		1509	6P													
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5-W-55-032019			1521	GP													
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12 MW-380R-032019			1702	-													
13 5-W-14-032019			1254													·····	
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Refinquished By:	Date/Time:		Received By:		·					Date/Time:							
Received by Laboratory:	Date/Time:		Lab Remarks:	······						Lab: Custor	dy Intact?		Custody S	eal No.		BNSF COC N	0

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

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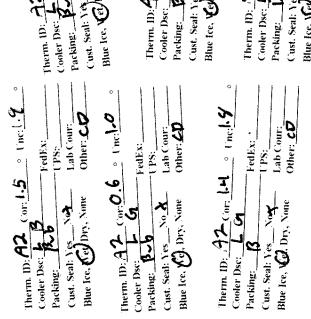
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				84853 5 of 5	
		ABORATORY INFORMATION		LAB WORK ORDER:	
BNSE	Laboratory:	Project Manager:		SHIPMENT INFORMA	TION
RAILWAY	Address:	Phone:		Shipment Method:	
CHAIN OF CUSTODY	City/State/ZiP:	Fax:		Tracking Number:	
BNSF PROJECT INFORMATION	Project State of Origin:	CONSULTANT IN	FORMATION	Project Number: 602-0	67
BNSF Project Number: 693-067	Project City:	Company: Farallon	ANKING	Project Manager: PAD Vary	ston
INSF Project Name: DIKE SVI 1/	MIGH-SEMI ANNUA	Address: 975 C	Th ALENIN	Email: plangyston Ctoro Phone: Fax:	illon const da
SNSF Contact:	BNSF Work Order No.:	City/State/ZIP: Khan (11)	WA 900	Rhone: Fax:	the second for
TURNAROUND TIME	DELIVERABLES Other	Deliverables?	METHODS FOR ANALYSIS		
1-day Rush 5- to 8-day Rush	BNSF Standard (Level II)				
2-day Rush	[	leg, Format?			
_ <u>`</u>		Á			
3-day Rush Other					
SAM		E			
Sample Identification	Containers Date Time Sample	Filtered Type er V/N Grab Matrix		COMMENTS	LAB USE
53-BU-032219	2 03/22/19858 64	NGWA			
53-BU-032219 34-AD-032219 53-CU-032219	1 1 1005				
53-00-032219	0930				
54-AU-032219	1005				
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Relinquished By: Chutabatta	Date-Time Received By: Received	mtzp	Date/Tyne: 3/22/19 145.3 Date/Time:	ents and Special Analytical Requiremen	15.
Relinquished By:	Date/Time: Received By:	*****	Date/Time:		
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ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

TAL-1001 (0912)

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Lab Cour: Other CO	leade Court
acking: Not Not Ites Seal: Ver Not Sue Ice, Ver Dry, None	Therm. ID: 42 (or: 1.0 ° tinc; 4 Cooler Dsc: 1.6 ° tinc; 4 Packing: 9xb FedEx: Cust Seat: Yes Avat 1.PS: Blue fce, Yes Dry, None Lab Cour:

•

TPS: Lab Cour: Other: <b>CD</b>	• 1.nc: <b>9.0</b>
Cust. Seat: ) es And	Therm. 1D: A. Cor: 2.6

• • • • • • • • •	FedEx:	TPS:	Other: CD	
Therm. ID: .17 Corr. 2.6	Packing: 130b	Cust. Seal: Yes Not	Blue Ice, Ver Dry, None	

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FedEx:



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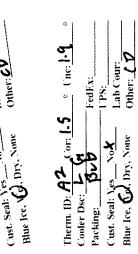
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FedEx:

l'PS:

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Lab Court isa. I

Cust. Seal: Ves\_Nork\_ Blue Ice. W. Dry, None

Page 80 of 85

Revised 3/22/19

					ABORA	Printe an						-				1.1	F & 4	
	Laboratory;								Manager;				LAS V	VORK DR	DER:	1.0		
RAILWAY	Address:							Phone:						SHIPMENT INFORMATION				
CHAIN OF CUSTODY	City/State/21	*						Filte					Shipm	Shipmont Method;				
BNSF PROJECT INFORMATION	Project Sigts	reject State of Origin:											Track	ng Number	r.			
ISINGIF Project Number: 683-067	Project City:		Compan	RV:				FORMATIC			Project	Nombet:	682	-067				
BUSE - Skykomi	sta -	Saula			Address	-7	21/0	lon	Ger	sultin	9		Project	Manager;	P2 to	Kings	-da t-	
ENEF Contact:	EINEF Work C	Holer No.:	City/Stat	97	5	5th	AVE	NW	Emek:	al-Sa	attend (	E famila	1990					
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84	MPLE INFORM	INTION						-HOTWN	2				1					
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14-W-4-032019			1630				┝┝	X	<u> </u>	┝──┞-								
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4/2/2019

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	Leboratory:				ABORA	TORY IN	FORMA							LAB WORK ORDER:				
RAILWAY	Address:	Project Managan:													SHIPMENT INFORMATION			
	City/State/23	P:				Phone:								Bhipment Method:				
CHAIN OF CUSTODY BNSF PROJECT INFORMATION	Project Stale	of Cillaire			Far:						Tracking N	iumber;			-			
		Project City:					C	ONBULT	ANT IN	FORMA	TION			Project Norri	ber:	18-		4
IBINSF Protect Number: 683-067 BINSF Protect Nemes: 0 BISS - 067					Company	· -	ava	Um	1	nn	ula			Project Mars	inger: 1	6832-06 Kete (ci) 151-00 hum	7	_
BNBF Project Name: BNSF - Stykomste BNSF Contact:	- Sen	4- Am	ist		Acktress:	9-	15 .	5R	<u></u>	E A	e. 1	1	_	Enel: O		rete kul	yston	
	BNSF Work C	Dider No.;			City/State	VZIP:		neh	211	e ry	W O	12.0		Phone	King	Stor @ hours	Unonut	+ Co
TURNAROUND TIME		DELIVERABLES		Other D	i. Nverable			T	,			807				Pluc,		7
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3-day Rush Cither		v			Clu			X										
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A		Date	Time	Sampler	Y/N	Grab)	Pro-Quie Life	Ž										
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. 5-W-16-032019			1159	GP			┝┼╌┙					<u> </u>						1
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MW-4-032119		2100000					- -	X				ļ						1
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GW-4-032119			1204	60	4	<u> </u>		x										
EW-24-032119	╺╁╌╂╌	<u>↓      </u>	0950					X							-	· · · · · · · · · · · · · · · · · · ·		
			0950	NT				X			<u> </u>				-+			-
· 2A-W9-032119			19954	CH				K							-+			
10-W-7-032119		4	1045	AB				X							-+			
2A-W-42-03219			1105	NT				X										
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and and By: Chutal Bafins	Deter Time:	L.O.L.C.	Received By:,	14-1	Y	<u>v</u>		X							- F	1962 107	5	1
tolinquished By:	Distart Group	Areius	Flocelved By:	Inn I	(	$\rightarrow$	<u>)</u>			122	19 1	453	Comme	rts and Spi	sciel Ar	nelytical Requirements;		
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ORIGINAL - RETURN TO LABORATORY WITH SAMPLES			Car cannality;							Letic Casta	dy Intest?	Ma	Cuelody 84	el No.		BNEF COC No		ł
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4/2/2019

TAL-1001 (0912)

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TAL-1001 (0912)

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4/2/2019

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	Projuct Manager;									SHIPMENT INFORMATION						
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4/2/2019

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#### Client: Farallon Consulting LLC

#### Login Number: 84853

List Number: 1 Creator: Luna, Francisco J

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
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 <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 580-84853-1

List Source: TestAmerica Seattle

# 🛟 eurofins

# Environment Testing TestAmerica

# **ANALYTICAL REPORT**

#### Eurofins TestAmerica, Seattle 5755 8th Street East Tacoma, WA 98424 Tel: (253)922-2310

### Laboratory Job ID: 580-87060-1

Client Project/Site: BNSF Skykomish Monthly

## For:

Farallon Consulting LLC 975 5th Avenue NW Suite 100 Issaquah, Washington 98027

Attn: Peter Kingston

Knitche D. allen

Authorized for release by: 7/3/2019 10:21:09 AM

Kristine Allen, Manager of Project Management (253)248-4970 kristine.allen@testamericainc.com

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.

..... Links **Review your project** results through **Total** Access Have a Question? Ask-The Expert Visit us at: www.testamericainc.com

# **Table of Contents**

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QC Sample Results	20
Chronicle	21
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Sample Summary	25
Chain of Custody	26
Receipt Checklists	27

#### Job ID: 580-87060-1

#### Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-87060-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 6/20/2019 2:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.2° C, 1.4° C and 3.7° C.

#### GC Semi VOA

Method(s) NWTPH-Dx: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: S2-BU-061819 (580-87060-10), WG-WV-061819 (580-87060-12), WG-EV-061819 (580-87060-13) and FWG-EV-061819 (580-87060-14).

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.

### **Definitions/Glossary**

### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Monthly

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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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
C	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)

### Client Sample ID: GW-1-061819 Date Collected: 06/18/19 09:51

Date Received: 06/20/19 14:05

### Lab Sample ID: 580-87060-1 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062		mg/L		07/01/19 15:37	07/02/19 16:26	1
Motor Oil (>C24-C36)	ND		0.091		mg/L		07/01/19 15:37	07/02/19 16:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
o-Terphenvl			50 - 150				07/01/19 15:37	07/02/19 16:26	

### Client Sample ID: PZ-7S-061819 Date Collected: 06/18/19 10:00

Date Received: 06/20/19 14:05

### Lab Sample ID: 580-87060-2 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.063		mg/L		07/01/19 15:37	07/02/19 16:48	1
Motor Oil (>C24-C36)	ND		0.092		mg/L		07/01/19 15:37	07/02/19 16:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	100		50 - 150				07/01/19 15:37	07/02/19 16:48	1

### Job ID: 580-87060-1

### Client Sample ID: PZ-8-061819 Date Collected: 06/18/19 11:15 Date Received: 06/20/19 14:05

### Lab Sample ID: 580-87060-3 Matrix: Water

Matrix. Walter

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062		mg/L		07/01/19 15:37	07/02/19 17:10	1
Motor Oil (>C24-C36)	ND		0.091		mg/L		07/01/19 15:37	07/02/19 17:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150				07/01/19 15:37	07/02/19 17:10	1

### Client Sample ID: S-W-43-061819 Date Collected: 06/18/19 11:16

Date Received: 06/20/19 14:05

### Lab Sample ID: 580-87060-4 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062		mg/L		07/01/19 15:37	07/02/19 17:32	1
Motor Oil (>C24-C36)	ND		0.091		mg/L		07/01/19 15:37	07/02/19 17:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150				07/01/19 15:37	07/02/19 17:32	1

### Job ID: 580-87060-1

### Client Sample ID: EW-1-061819 Date Collected: 06/18/19 14:18 Date Received: 06/20/19 14:05

### Lab Sample ID: 580-87060-5 Matrix: Water

Watrix. Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062		mg/L		07/01/19 15:37	07/02/19 17:53	1
Motor Oil (>C24-C36)	ND		0.091		mg/L		07/01/19 15:37	07/02/19 17:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	93		50 - 150				07/01/19 15:37	07/02/19 17:53	

### Client Sample ID: GW-2-061819 Date Collected: 06/18/19 14:35

Date Received: 06/20/19 14:05

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

Method. WWTTTT-DX - Northwest -	Senn-Volatile	reuoieum							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.063		mg/L		07/01/19 15:37	07/02/19 18:15	1
Motor Oil (>C24-C36)	ND		0.093		mg/L		07/01/19 15:37	07/02/19 18:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	88		50 - 150				07/01/19 15:37	07/02/19 18:15	1

Job ID: 580-87060-1

### Lab Sample ID: 580-87060-6 Matrix: Water

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### Client Sample ID: GW-20-061819 Date Collected: 06/18/19 14:45

Date Received: 06/20/19 14:05

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

	West - Ocim-Volutile	, i cuoicum	11000000 (00)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062		mg/L		07/01/19 15:37	07/02/19 18:37	1
Motor Oil (>C24-C36)	ND		0.092		mg/L		07/01/19 15:37	07/02/19 18:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150				07/01/19 15:37	07/02/19 18:37	1

Lab Sample ID: 580-87060-7 Matrix: Water

### Client Sample ID: S2-BD-061819 Date Collected: 06/18/19 14:57

Date Received: 06/20/19 14:05

### Lab Sample ID: 580-87060-8 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062		mg/L		07/01/19 15:37	07/02/19 19:21	1
Motor Oil (>C24-C36)	ND		0.091		mg/L		07/01/19 15:37	07/02/19 19:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	94		50 _ 150				07/01/19 15:37	07/02/19 19:21	1

### Lab Sample ID: 580-87060-9 Matrix: Water

Wallix. Walei

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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.064		mg/L		07/01/19 15:37	07/02/19 19:43	1
Motor Oil (>C24-C36)	ND		0.095		mg/L		07/01/19 15:37	07/02/19 19:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	82		50 - 150				07/01/19 15:37	07/02/19 19:43	1

### Client Sample ID: S2-BU-061819 Date Collected: 06/18/19 15:30

Date Received: 06/20/19 14:05

### Lab Sample ID: 580-87060-10 Matrix: Water

matrix. Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.19		0.062		mg/L		07/01/19 15:37	07/02/19 20:05	1
Motor Oil (>C24-C36)	0.16		0.091		mg/L		07/01/19 15:37	07/02/19 20:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenvl	79		50 - 150				07/01/19 15:37	07/02/19 20:05	1

### Client Sample ID: S2-AD-061819 Date Collected: 06/18/19 15:39

Date Received: 06/20/19 14:05

### Lab Sample ID: 580-87060-11 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
#2 Diesel (C10-C24)	ND		0.062		mg/L		07/01/19 15:37	07/02/19 20:27	1	
Motor Oil (>C24-C36)	ND		0.092		mg/L		07/01/19 15:37	07/02/19 20:27	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
o-Terphenyl	%Recovery 96	Qualifier	50 - 150				07/01/19 15:37	Analyzed 07/02/19 20:27		1 Fac

Job ID: 580-87060-1

### Client Sample ID: WG-WV-061819 Date Collected: 06/18/19 16:05

Date Received: 06/20/19 14:05

### Lab Sample ID: 580-87060-12 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
#2 Diesel (C10-C24)	ND		0.062		mg/L		07/01/19 15:37	07/02/19 20:49	1	
Motor Oil (>C24-C36)	0.099		0.091		mg/L		07/01/19 15:37	07/02/19 20:49	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
o-Terphenyl	83		50 - 150				07/01/19 15:37	07/02/19 20:49	1	

### Client Sample ID: WG-EV-061819 Date Collected: 06/18/19 16:10

Date Received: 06/20/19 14:05

### Lab Sample ID: 580-87060-13 Matrix: Water

Watrix. Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.39		0.063		mg/L		07/01/19 15:37	07/02/19 21:11	1
Motor Oil (>C24-C36)	0.34		0.092		mg/L		07/01/19 15:37	07/02/19 21:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	82		50 - 150				07/01/19 15:37	07/02/19 21:11	1

Job ID: 580-87060-1

Matrix: Water

Lab Sample ID: 580-87060-14

### Client Sample ID: FWG-EV-061819 Date Collected: 06/18/19 16:48

Date Received: 06/20/19 14:05

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

	oonn vonanie	- i ou oiouini		,						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
#2 Diesel (C10-C24)	0.068		0.062		mg/L		07/01/19 15:37	07/02/19 21:33	1	
Motor Oil (>C24-C36)	0.20		0.092		mg/L		07/01/19 15:37	07/02/19 21:33	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
o-Terphenyl	88		50 - 150				07/01/19 15:37	07/02/19 21:33	1	

### Client Sample ID: FWG-WV-061819 Date Collected: 06/18/19 16:52

Date Received: 06/20/19 14:05

### Lab Sample ID: 580-87060-15 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062		mg/L		07/01/19 15:37	07/02/19 21:55	1
Motor Oil (>C24-C36)	ND		0.092		mg/L		07/01/19 15:37	07/02/19 21:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	88		50 _ 150				07/01/19 15:37	07/02/19 21:55	1

Lab Sample ID: MB 580-304552/1-A

Matrix: Water

Analysis Batch: 304632

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

Job ID: 580-87060-1

Client Sample ID: Method Blank	
Prep Type: Total/NA	
Prep Batch: 304552	

Analysis Dalch. 304032											гіер в	attin. 5	0433
	м	B MB											
Analyte	Resu	It Qualifier	RL		MDL	Unit		D	Pr	repared	Analyze	d	Dil Fa
#2 Diesel (C10-C24)	N	D	0.065			mg/L			07/0	1/19 15:37	07/02/19 1	5:20	
Motor Oil (>C24-C36)	Ν	D	0.096			mg/L		C	07/0 <sup>/</sup>	1/19 15:37	07/02/19 1	5:20	
	М	B MB											
Surrogate	%Recover	ry Qualifier	Limits						Pı	repared	Analyze	d	Dil Fa
o-Terphenyl	8	39	50 - 150					0	07/0	1/19 15:37	07/02/19 1	5:20	
Lab Sample ID: LCS 580-304	552/2-A							Clie	ent	Sample	ID: Lab Co	ntrol Sa	ampl
Matrix: Water											Prep Ty		
Analysis Batch: 304632											Prep B		
			Spike	LCS	LCS						%Rec.		
Analyte			Added	Result	Quali	ifier	Unit		D	%Rec	Limits		
#2 Diesel (C10-C24)			0.500	0.408			mg/L			82	50 - 120		
Motor Oil (>C24-C36)			0.500	0.483			mg/L			97	64 - 120		
	LCS LC	cs											
Surrogate	%Recovery Qu	ualifier	Limits										
o-Terphenyl	90		50 - 150										
Lab Sample ID: LCSD 580-30	4552/3-A						CI	ient S	am	ple ID: L	ab Control	Sampl	le Dur
Matrix: Water											Prep Ty		
Analysis Batch: 304632											Prep B		
			Spike	LCSD	LCSE	)					%Rec.		RP
Analyte			Added	Result	Quali	ifier	Unit		D	%Rec	Limits	RPD	Lim
#2 Diesel (C10-C24)	·		0.500	0.374	-		mg/L			75	50 - 120	9	2
Motor Oil (>C24-C36)			0.500	0.462			mg/L			92	64 - 120	5	2
	LCSD LC	CSD											
Surrogate	%Recovery Qu	ualifier	Limits										
o-Terphenyl													

Prep Type

Total/NA

Total/NA

Batch

Туре

Prep

Client Sample ID: PZ-7S-061819

Analysis

Batch

Method

3510C

NWTPH-Dx

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Lab Sample ID: 580-87060-1

Lab Sample ID: 580-87060-3

Lab Sample ID: 580-87060-4

Lab Sample ID: 580-87060-5

Lab Sample ID: 580-87060-6

# Lab Sample ID: 580-87060-2 Matrix: Water

	Date Collected: Date Received:		-							Matrix:
ſ	-	Batch	Batch		Dilution	Batch	Prepared			
	Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
	Total/NA	Prep	3510C			304552	07/01/19 15:37	N1C	TAL SEA	
	Total/NA	Analysis	NWTPH-Dx		1	304632	07/02/19 16:48	T1W	TAL SEA	

Dilution

Factor

1

Run

Batch

Number

304552

Prepared

or Analyzed

07/01/19 15:37

304632 07/02/19 16:26

Analyst

N1C

T1W

Lab

TAL SEA

TAL SEA

### Client Sample ID: PZ-8-061819

Date Collected: 06/18/19 11:15

Date Received: 06/20/19 14:05
-------------------------------

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304552	07/01/19 15:37	N1C	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304632	07/02/19 17:10	T1W	TAL SEA

### Client Sample ID: S-W-43-061819

Date Collected: 06/18/19 11:16

Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304552	07/01/19 15:37	N1C	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304632	07/02/19 17:32	T1W	TAL SEA

### Client Sample ID: EW-1-061819

Date Collected: 06/18/19 14:18 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304552	07/01/19 15:37	N1C	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304632	07/02/19 17:53	T1W	TAL SEA

### Client Sample ID: GW-2-061819 Date Collected: 06/18/19 14:35 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304552	07/01/19 15:37	N1C	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304632	07/02/19 18:15	T1W	TAL SEA

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Lab Sample ID: 580-87060-7 Matrix: Water

Lab Sample ID: 580-87060-8

Lab Sample ID: 580-87060-10

Lab Sample ID: 580-87060-11

Lab Sample ID: 580-87060-12

### Client Sample ID: GW-20-061819 Date Collected: 06/18/19 14:45 Date Received: 06/20/19 14:05

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304552	07/01/19 15:37	N1C	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304632	07/02/19 18:37	T1W	TAL SEA

### Client Sample ID: S2-BD-061819 Date Collected: 06/18/19 14:57 Date Received: 06/20/19 14:05

Γ		Batch	Batch		Dilution	Batch	Prepared		
Pre	р Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Tota	al/NA	Prep	3510C			304552	07/01/19 15:37	N1C	TAL SEA
Tota	al/NA	Analysis	NWTPH-Dx		1	304632	07/02/19 19:21	T1W	TAL SEA

### Client Sample ID: S2-AU-061819

Lab Sample ID: 580-87060-9 Matrix: Water

#### Date Collected: 06/18/19 15:12 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304552	07/01/19 15:37	N1C	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304632	07/02/19 19:43	T1W	TAL SEA

### Client Sample ID: S2-BU-061819

Date Collected: 06/18/19 15:30

Date Received: 06/20/19 14:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analvzed	Analvst	Lab
Total/NA	Prep		Kull		304552	07/01/19 15:37	N1C	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304632	07/02/19 20:05	T1W	TAL SEA

### Client Sample ID: S2-AD-061819

Date Collected: 06/18/19 15:39 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304552	07/01/19 15:37	N1C	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304632	07/02/19 20:27	T1W	TAL SEA

### Client Sample ID: WG-WV-061819 Date Collected: 06/18/19 16:05 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304552	07/01/19 15:37	N1C	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304632	07/02/19 20:49	T1W	TAL SEA

Matrix: Water

Matrix: Water

Lab Sample ID: 580-87060-13

Lab Sample ID: 580-87060-14

### 2 3 4 5 6 7 8

### Client Sample ID: WG-EV-061819 Date Collected: 06/18/19 16:10 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304552	07/01/19 15:37	N1C	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304632	07/02/19 21:11	T1W	TAL SEA

### Client Sample ID: FWG-EV-061819 Date Collected: 06/18/19 16:48 Date Received: 06/20/19 14:05

_	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304552	07/01/19 15:37	N1C	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304632	07/02/19 21:33	T1W	TAL SEA

### Client Sample ID: FWG-WV-061819

Lab Sample ID: 580-87060-15 Matrix: Water

Date Collected: 06/18/19 16:52 Date Received: 06/20/19 14:05

ſ	_	Batch	Batch		Dilution	Batch	Prepared		
	Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
	Total/NA	Prep	3510C			304552	07/01/19 15:37	N1C	TAL SEA
	Total/NA	Analysis	NWTPH-Dx		1	304632	07/02/19 21:55	T1W	TAL SEA

#### Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

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**8** 9

#### Laboratory: Eurofins TestAmerica, Seattle Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below. Authority Program EPA Region Identification Number **Expiration Date** Washington State Program 10 C553 02-17-20 The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification. Matrix Analysis Method Prep Method Analyte

### Sample Summary

### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Monthly

	n Consulting LLC NSF Skykomish Monthly				Job ID: 580-87060-1	
Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID	
580-87060-1	GW-1-061819	Water	06/18/19 09:51	06/20/19 14:05		
580-87060-2	PZ-7S-061819	Water	06/18/19 10:00	06/20/19 14:05		
580-87060-3	PZ-8-061819	Water	06/18/19 11:15	06/20/19 14:05		
580-87060-4	S-W-43-061819	Water	06/18/19 11:16	06/20/19 14:05		
580-87060-5	EW-1-061819	Water	06/18/19 14:18	06/20/19 14:05		
580-87060-6	GW-2-061819	Water	06/18/19 14:35	06/20/19 14:05		
580-87060-7	GW-20-061819	Water	06/18/19 14:45	06/20/19 14:05		
580-87060-8	S2-BD-061819	Water	06/18/19 14:57	06/20/19 14:05		
580-87060-9	S2-AU-061819	Water	06/18/19 15:12	06/20/19 14:05		
580-87060-10	S2-BU-061819	Water	06/18/19 15:30	06/20/19 14:05		
580-87060-11	S2-AD-061819	Water	06/18/19 15:39	06/20/19 14:05		
580-87060-12	WG-WV-061819	Water	06/18/19 16:05	06/20/19 14:05		
580-87060-13	WG-EV-061819	Water	06/18/19 16:10	06/20/19 14:05		
580-87060-14	FWG-EV-061819	Water	06/18/19 16:48	06/20/19 14:05		
580-87060-15	FWG-WV-061819	Water	06/18/19 16:52	06/20/19 14:05		

	-			L.	ABORA	TORY IN	FORMAT	ION		LAB WORK ORDER: 8706	0
BNSF	Laboratory:							Project Manage	ər:	SHIPMENT INFORMATIO	N
RAILWAY	Address:							Phone:		Shipment Method:	
CHAIN OF CUSTODY	City/State/ZIP					<u> </u>		Fax:		Tracking Number:	
BNSF PROJECT INFORMATION	Project State of	wes	hington				С	ONSULTANT	INFORMATION	Project Number:	
SNSF Project Number: 683-067	Project City:	stykoma	sh		Company	a	raller	n Consi	reting	Project Manager: Pede Kingston	
	lanthly				Address:	975	549	AVE NO	F1	Email: Pkingston@farallon Carie Phone: Phone Fax:	ILLA COAR
NSF Contact:	BNSF Work O	rder No.:	· · · · · · · · · · · · · · · · · · ·		City/State	1/ZIP: 15		h, us	4 95027	Phone: Hd5 -295 -2800	uy.corr
TURNAROUND TIME		ELIVERABLES		] Other De	eliverable				METHODS FOR A		
1-day Rush 5- to 8-day Rush	BNSF S	landard (Level II)									
2-day Rush Standard 10-Day	Levei III		Г	EDD Red	ą, Format	?					
🗙 3-day Rush 🔄 Other	Level IV							ž			
	MPLE INFORM										
******		Sam	ple Collection		1	Туре		dL		580-87060 Chain of Custody	
Sample Identification	Containers	Date	Time	Sampler	Filtered Y/N	(Comp/ Grab)	Matrix	HUTWN			
GW-1-061819										COMMENTS	LAB USE
	2	6/18/19	0951	69	N	6	Wester	K			
PZ-13-061819		<b>\</b>	1000	LT				X		Therm ID: <u>42</u> Cor: <u>1.4</u> •	Unc: 1.7
PZ-8-061819			1115	LT				X		Cooler Dsc: <u>by files</u> Packing: <u>aubble</u> Fed	Ex:
5-W-43-061819			1116	GP	<b></b>			X		Cant Seed, Ver V V	: Cour: <u></u>
EW-1-061819		<u> </u>	1418	6P			<b></b>	x			cour: <u>v</u>
GW-2-061819			1435	67				K			13.0
GW-20-061819			1445	LT				X		Therm. ID: <u>#~7</u> Cor: <u>3.7</u> °	Unc: 9.0
S2-BD-061819			1457	6P				X		Cooler Dsc: $\underline{l_{y}} \underline{\beta} \underline{h_{y}} \underline{\ell}$ Packing: $\underline{\beta} \underline{h_{y}} \underline{h_{y}} \underline{\ell}$ Fed	Ex:
S2-AU-061819			1512	LT				X		Packing: Buhhld UPS Cust. Seal: Yes Y No Lab	Cour: Y
52-BU-061819			1530	6P				X			er:
52-49-061819			1539	LT				X			
WG-WV-061819			1605	GP				X		Therm. ID: $A \ Cor: 0.2 \ Cooler Dsc: 1. B_{11} \ Cor$	Unc: U.>
WG-EV-061819			1610	LT				X		Packing Dubble Fe	IEx:
FWG - EV-061819			1648					X		Cust. Seal: Yes <u>V</u> No La	b Cour: X
FWG-WV-961819	1	L	1 1			L	1	X		Blue Ice, Vet, Dry, None Otl	ner:
inquished By:	Date/Time:	9/19/054	Received By:	24					Date/fime: G/201199 1405	Comments and Special Analytical Requirements:	
inquished By:	Date/Time:	//· /	Received By:	/					Date/Time:		
inquished By:	Date/Time:		Received By:			······			Date/Time:	-	
seived by Laboratory:	Date/Time:		Lab Remarks:						Lab: Custody Intact?	Custody Seal No. BNSF COC No.	
SINAL - RETHEN TO LABORATORY WITH SAMPLES			L						Ves No		

**ORIGINAL - RETURN TO LABORATORY WITH SAMPLES** 

DUPLICATE - CONSULTANT

TAL-1001 (0912)

e.

Client: Farallon Consulting LLC

### Login Number: 87060 List Number: 1

Creator: Blankinship, Tom X

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	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?	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 <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 580-87060-1

List Source: Eurofins TestAmerica, Seattle

## 🛟 eurofins

## Environment Testing TestAmerica

### **ANALYTICAL REPORT**

Eurofins TestAmerica, Seattle 5755 8th Street East Tacoma, WA 98424 Tel: (253)922-2310

### Laboratory Job ID: 580-87064-1

Client Project/Site: BNSF Skykomish Ground Water Sampling Event: Skykomish HCC System

### For:

Farallon Consulting LLC 975 5th Avenue NW Suite 100 Issaquah, Washington 98027

Attn: Peter Kingston

Knistine D. allen

Authorized for release by: 7/8/2019 12:07:24 PM Kristine Allen, Manager of Project Management (253)248-4970

kristine.allen@testamericainc.com

LINKS Review your project results through TOTOLACCESS Have a Question? Ask

Visit us at: www.testamericainc.com

The

Expert

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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### Job ID: 580-87064-1

### Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-87064-1

### Comments

No additional comments.

### Receipt

The samples were received on 6/20/2019 2:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 0.2° C, 0.7° C, 0.9° C, 1.4° C and 2.5° C.

### GC Semi VOA

Method(s) NWTPH-Dx: Surrogate recovery for the following sample was outside control limits: GW-3-061819 (580-87064-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) NWTPH-Dx: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: 5-W-56-061919 (580-87064-11), 5-W-51-061919 (580-87064-13), 1C-W-7-061919 (580-87064-16), 2A-W-9-061919 (580-87064-21), 2A-W-10-061919 (580-87064-22) and MW-3-061919 (580-87064-24).

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

### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

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### Qualifiers

GC Semi	VOA
---------	-----

 Qualifier
 Qualifier Description

 X
 Surrogate is outside control limits

### Classom

AbbreviationThese commonly used abbreviations may or may not be present in this report.aListed under the "D" column to designate that the result is reported on a dry weight basis%RPercent RecoveryCFLContains Free LiquidCNFContains No Free Liquid absolute difference)DERDuplicate Error Ratio (normalized absolute difference)Dil FacDilution FactorDLDetection Limit (DoD/DOE)DL, RA, RE, INIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sampleDLCDecision Level Concentration (Radiochemistry)EDLEstimated Detection Limit (Dioxin)LOQLimit of Detection (DoD/DOE)MDAMinimum Detectable Activity (Radiochemistry)MDCMinimum Detectable Concentration (Radiochemistry)MDLMethod Detection Limit	
%RPercent RecoveryCFLContains Free LiquidCNFContains No Free LiquidDERDuplicate Error Ratio (normalized absolute difference)Di IracDiution FactorDLDetection Limit (DoD/DE)DL, RA, RE, INIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sampleDLCDecision Level Concentration (Radiochemistry)EDLEstimated Detection Limit (Dioxin)LOQLimit of Detection (DoD/DE)LOQLimit of Quantitation (DoD/DE)MDAMinimun Detectable Activity (Radiochemistry)MDAMinimun Detectable Activity (Radiochemistry)MDAMinimun Detectable Activity (Radiochemistry)	
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CNFContains No Free LiquidDERDuplicate Error Ratio (normalized absolute difference)Dil FacDilution FactorDLDetection Limit (DoD/DOE)DL, RA, RE, INIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sampleDLCDecision Level Concentration (Radiochemistry)EDLEstimated Detection Limit (Dioxin)LODLimit of Detection (DoD/DOE)LOQLimit of Quantitation (DoD/DOE)MDAMinimun Detectable Activity (Radiochemistry)MDCMinimun Detectable Concentration (Radiochemistry)MDLMethod Detection Limit (Dioxin)	
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LOQLimit of Quantitation (DoD/DOE)MDAMinimum Detectable Activity (Radiochemistry)MDCMinimum Detectable Concentration (Radiochemistry)MDLMethod Detection Limit	
MDAMinimum Detectable Activity (Radiochemistry)MDCMinimum Detectable Concentration (Radiochemistry)MDLMethod Detection Limit	
MDC     Minimum Detectable Concentration (Radiochemistry)       MDL     Method Detection Limit	
MDL Method Detection Limit	
ML Minimum Level (Dioxin)	
NC Not Calculated	
ND Not Detected at the reporting limit (or MDL or EDL if shown)	
PQL Practical Quantitation Limit	
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)	

### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

Job ID: 580-87064-1

Matrix: Water

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Lab Sample ID: 580-87064-1

### Client Sample ID: 2A-W-41-061819 Date Collected: 06/18/19 11:06

Date Received: 06/20/19 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.28		0.062	0.062	mg/L		06/27/19 14:05	06/29/19 00:51	1
Motor Oil (>C24-C36)	0.23		0.092	0.092	mg/L		06/27/19 14:05	06/29/19 00:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	85		50 - 150				06/27/19 14:05	06/29/19 00:51	1
		Products by Qualifier	/ NWTPH with \$		I Cleanup Unit	D	Prepared	Analyzed	Dil Fa
Analyte					Unit		Prepared 06/27/19 14:05	Analyzed	Dil Fa
Analyte #2 Diesel (C10-C24)	Result		RL	MDL	Unit mg/L		·		Dil Fa
Method: NWTPH-Dx - Semi- Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate	Result ND ND	Qualifier	RL 0.062	MDL 0.062	Unit mg/L		06/27/19 14:05	06/28/19 22:39	Dil Fac

Job ID: 580-87064-1

Matrix: Water

Lab Sample ID: 580-87064-2

### Client Sample ID: 2A-W-410-061819 Date Collected: 06/18/19 11:07

Date Received: 06/20/19 14:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.29		0.062	0.062	mg/L		06/27/19 14:05	06/29/19 01:13	1
Motor Oil (>C24-C36)	0.23		0.092	0.092	mg/L		06/27/19 14:05	06/29/19 01:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	77		50 - 150				06/27/19 14:05	06/29/19 01:13	1

### Client Sample ID: 1B-W-23-061819 Date Collected: 06/18/19 14:35

Date Received: 06/20/19 14:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.063	0.063	mg/L		06/27/19 14:05	06/29/19 01:35	1
Motor Oil (>C24-C36)	ND		0.093	0.093	mg/L		06/27/19 14:05	06/29/19 01:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150				06/27/19 14:05	06/29/19 01:35	1

Lab Sample ID: 580-87064-3

Job ID: 580-87064-1

Matrix: Water

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

### Client Sample ID: GW-3-061819 Date Collected: 06/18/19 16:01

Date Received: 06/20/19 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.18		0.063	0.063	mg/L		06/27/19 14:05	06/29/19 01:57	1
Motor Oil (>C24-C36)	0.15		0.092	0.092	mg/L		06/27/19 14:05	06/29/19 01:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	288	X	50 - 150				06/27/19 14:05	06/29/19 01:57	1
Method: NWTPH-Dx - Semi-V	/olatile Petroleum	Products by	/ NWTPH with \$	Silica Ge	l Cleanup				
		Products by Qualifier	y NWTPH with \$ RL	Silica Ge MDL	l Cleanup <sub>Unit</sub>	D	Prepared	Analyzed	Dil Fac
Analyte					Unit		Prepared 06/27/19 14:05	Analyzed 06/28/19 23:01	Dil Fac
Analyte #2 Diesel (C10-C24)	Result			MDL	Unit mg/L		·		Dil Fac
Analyte #2 Diesel (C10-C24)	Result ND		RL	MDL 0.063	Unit mg/L		06/27/19 14:05	06/28/19 23:01	Dil Fac
Method: NWTPH-Dx - Semi-V Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate	Result ND	Qualifier	RL	MDL 0.063	Unit mg/L		06/27/19 14:05	06/28/19 23:01	Dil Fac 1 1 Dil Fac

Job ID: 580-87064-1

Lab Sample ID: 580-87064-4

Matrix: Water

### Client Sample ID: GW-30-061819 Date Collected: 06/18/19 16:05

Date Received: 06/20/19 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		06/27/19 14:05	06/29/19 02:19	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		06/27/19 14:05	06/29/19 02:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	92		50 - 150				06/27/19 14:05	06/29/19 02:19	1

Job ID: 580-87064-1

### Lab Sample ID: 580-87064-5

Matrix: Water

Job ID: 580-87064-1

Matrix: Water

Lab Sample ID: 580-87064-6

### Client Sample ID: 2A-W-42-061819 Date Collected: 06/18/19 17:45

Date Received: 06/20/19 14:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.16		0.062	0.062	mg/L		06/27/19 14:05	06/29/19 02:41	1
Motor Oil (>C24-C36)	0.16		0.091	0.091	mg/L		06/27/19 14:05	06/29/19 02:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	82		50 - 150				06/27/19 14:05	06/29/19 02:41	1

Eurofins TestAmerica, Seattle

### Client Sample ID: 5-W-19-061819 Date Collected: 06/18/19 18:52

Date Received: 06/20/19 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		06/27/19 14:05	06/29/19 03:03	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		06/27/19 14:05	06/29/19 03:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	92		50 - 150				06/27/19 14:05	06/29/19 03:03	1

Lab Sample ID: 580-87064-7

Job ID: 580-87064-1

5

Eurofins TestAmerica, Seattle

Matrix: Water

### Client Sample ID: 5-W-18-061919 Date Collected: 06/19/19 08:42

Date Received: 06/20/19 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 13:27	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		07/02/19 10:40	07/03/19 13:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	89		50 - 150				07/02/19 10:40	07/03/19 13:27	1

Job ID: 580-87064-1

Matrix: Water

Lab Sample ID: 580-87064-8

#### Client Sample ID: 5-W-16-061919 Date Collected: 06/19/19 09:40

Date Received: 06/20/19 14:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 13:48	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		07/02/19 10:40	07/03/19 13:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150				07/02/19 10:40	07/03/19 13:48	1

Lab Sample ID: 580-87064-9

Matrix: Water

Job ID: 580-87064-1

#### Client Sample ID: 5-W-17-061919 Date Collected: 06/19/19 10:44

Date Received: 06/20/19 14:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 14:10	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		07/02/19 10:40	07/03/19 14:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150				07/02/19 10:40	07/03/19 14:10	1

Matrix: Water

Job ID: 580-87064-1

Lab Sample ID: 580-87064-10

Date Received: 06/20/19 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.81		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 14:32	1
Motor Oil (>C24-C36)	1.5		0.092	0.092	mg/L		07/02/19 10:40	07/03/19 14:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	80		50 - 150				07/02/19 10:40	07/03/19 14:32	1

Lab Sample ID: 580-87064-11

Matrix: Water

#### Client Sample ID: 5-W-55-061919 Date Collected: 06/19/19 13:11

Date Received: 06/20/19 14:05

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)
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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 14:54	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		07/02/19 10:40	07/03/19 14:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	94		50 - 150				07/02/19 10:40	07/03/19 14:54	1

Lab Sample ID: 580-87064-12

Matrix: Water

Job ID: 580-87064-1

#### Client Sample ID: 5-W-51-061919 Date Collected: 06/19/19 14:09

Date Received: 06/20/19 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.39		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 15:16	1
Motor Oil (>C24-C36)	0.35		0.091	0.091	mg/L		07/02/19 10:40	07/03/19 15:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150				07/02/19 10:40	07/03/19 15:16	1

Lab Sample ID: 580-87064-13

Job ID: 580-87064-1

Matrix: Water

#### Client Sample ID: 5-W-14-061919 Date Collected: 06/19/19 15:06

Date Received: 06/20/19 14:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 15:38	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		07/02/19 10:40	07/03/19 15:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	89		50 - 150				07/02/19 10:40	07/03/19 15:38	1

Lab Sample ID: 580-87064-14

Matrix: Water

5

#### Client Sample ID: 1B-W-3-161919 Date Collected: 06/19/19 08:48

|--|

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 16:22	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		07/02/19 10:40	07/03/19 16:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	95		50 - 150				07/02/19 10:40	07/03/19 16:22	1

Lab Sample ID: 580-87064-15

### Job ID: 580-87064-1

Matrix: Water

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#### Client Sample ID: 1C-W-7-061919 Date Collected: 06/19/19 10:07

Date Received: 06/20/19 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.074		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 16:44	1
Motor Oil (>C24-C36)	0.10		0.091	0.091	mg/L		07/02/19 10:40	07/03/19 16:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	93		50 - 150				07/02/19 10:40	07/03/19 16:44	1

Lab Sample ID: 580-87064-16 Matrix: Water

atrix: water

Job ID: 580-87064-1

#### Client Sample ID: GW-4-061919 Date Collected: 06/19/19 11:35

Date Received: 06/20/19 14:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 17:06	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		07/02/19 10:40	07/03/19 17:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	94		50 - 150				07/02/19 10:40	07/03/19 17:06	1

7/8/2019

#### Lab Sample ID: 580-87064-17 Matrix: Water

#### Client Sample ID: EW-2A-061919 Date Collected: 06/19/19 13:00

Date Received: 06/20/19 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 17:28	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		07/02/19 10:40	07/03/19 17:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150				07/02/19 10:40	07/03/19 17:28	1

Lab Sample ID: 580-87064-18

Job ID: 580-87064-1

Matrix: Water

#### Client Sample ID: 1C-W-1-061919 Date Collected: 06/19/19 14:07

Date Received: 06/20/19 14:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 17:50	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		07/02/19 10:40	07/03/19 17:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	88		50 - 150				07/02/19 10:40	07/03/19 17:50	1

Lab Sample ID: 580-87064-19

Job ID: 580-87064-1

Matrix: Water

#### Client Sample ID: 1C-W-8-061919 Date Collected: 06/19/19 15:00

Date Received: 06/20/19 14:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 18:12	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		07/02/19 10:40	07/03/19 18:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 _ 150				07/02/19 10:40	07/03/19 18:12	1

Lab Sample ID: 580-87064-20

Job ID: 580-87064-1

Matrix: Water

#### Client Sample ID: 2A-W-9-061919 Date Collected: 06/19/19 16:21

Date Received: 06/20/19 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.10		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 18:34	1
Motor Oil (>C24-C36)	0.12		0.091	0.091	mg/L		07/02/19 10:40	07/03/19 18:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150				07/02/19 10:40	07/03/19 18:34	1

Lab Sample ID: 580-87064-21

7/8/2019

Job ID: 580-87064-1

### Client Sample ID: 2A-W-10-061919 Date Collected: 06/19/19 16:40

Date Received: 06/20/19 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 18:56	1
Motor Oil (>C24-C36)	0.19		0.091	0.091	mg/L		07/02/19 10:40	07/03/19 18:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	95		50 - 150				07/02/19 10:40	07/03/19 18:56	1

Lab Sample ID: 580-87064-22 Matrix: Water

/ater 4

#### Client Sample ID: 2B-W-4-061919 Date Collected: 06/19/19 17:48

Date Received: 06/20/19 14:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 19:17	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		07/02/19 10:40	07/03/19 19:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150				07/02/19 10:40	07/03/19 19:17	1

Job ID: 580-87064-1

Matrix: Water

Lab Sample ID: 580-87064-23

Job ID: 580-87064-1

#### Client Sample ID: MW-3-061919 Date Collected: 06/19/19 16:40

Date Received: 06/20/19 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.33		0.062	0.062	mg/L		07/02/19 10:40	07/03/19 19:39	1
Motor Oil (>C24-C36)	0.74		0.091	0.091	mg/L		07/02/19 10:40	07/03/19 19:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	85		50 - 150				07/02/19 10:40	07/03/19 19:39	1

 
 Lab Sample ID: 580-87064-24 Matrix: Water
 3

 Prepared
 Analyzed
 Dil Fac
 5

#### Client Sample ID: MW-4-061919 Date Collected: 06/19/19 17:47

Date Received: 06/20/19 14:05

Method: NWTPH-Dx - North Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.063		0.062	0.062	mg/L		07/02/19 10:40	07/06/19 14:29	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		07/02/19 10:40	07/06/19 14:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	93		50 - 150				07/02/19 10:40	07/06/19 14:29	1

Matrix: Water

Job ID: 580-87064-1

Lab Sample ID: 580-87064-25

#### Client Sample ID: MW-555-061919 Date Collected: 06/19/19 18:25

Date Received: 06/20/19 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		07/02/19 10:40	07/06/19 14:51	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		07/02/19 10:40	07/06/19 14:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	79		50 - 150				07/02/19 10:40	07/06/19 14:51	1

Lab Sample ID: 580-87064-26

Matrix: Water

Job ID: 580-87064-1

Lab Sample ID: MB 580-304216/1-A

Motor Oil (>C24-C36)

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

**Client Sample ID: Method Blank** 

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	210/1-4										chefit 3a			
Matrix: Water												Prep Ty	ype: To	otal/NA
Analysis Batch: 304316												Prep B	atch:	304216
		ΜВ	MB											
Analyte	Re	esult	Qualifier	RL		MDL	Unit		D	P	repared	Analyze	∋d	Dil Fac
#2 Diesel (C10-C24)		ND		0.065		0.065	mg/L			06/2	7/19 14:05	06/28/19 2	3:45	1
Motor Oil (>C24-C36)		ND		0.096	i	0.096	mg/L			06/2	7/19 14:05	06/28/19 2	3:45	1
			МВ											
Surrogate	%Reco		Qualifier	Limits						P	repared	Analyze	∋d	Dil Fac
o-Terphenyl		99		50 - 150						06/2	7/19 14:05	06/28/19 2	:3:45	1
Lab Sample ID: LCS 580-304	1216/2-A								C	lient	Sample	ID: Lab Co	ntrol S	Sample
Matrix: Water												Prep Ty	ype: To	otal/NA
Analysis Batch: 304316												Prep B	atch:	304216
				Spike	LCS	LCS	;					%Rec.		
Analyte				Added	Result	Qua	lifier	Unit		D	%Rec	Limits		
#2 Diesel (C10-C24)				0.500	0.447			mg/L		_	89	50 - 120		
Motor Oil (>C24-C36)				0.500	0.521			mg/L			104	64 - 120		
	LCS													
Surrogate	%Recovery	Qua	lifier	Limits										
o-Terphenyl	95			50 - 150										
Matrix: Water Analysis Batch: 304316				Spike	LCSD	LCS	D					Prep Ty Prep B %Rec.		
Analyte				Added	Result	Qua	lifier	Unit		D	%Rec	Limits	RPD	Limi
#2 Diesel (C10-C24)				0.500	0.461			mg/L		_	92	50 - 120	3	26
Motor Oil (>C24-C36)				0.500	0.504			mg/L			101	64 - 120	3	24
	LCSD	LCS	D											
Surrogate	%Recovery	Qua	lifier	Limits										
o-Terphenyl	93			50 - 150										
Lab Sample ID: MB 580-304 Matrix: Water Analysis Batch: 304710	607/1-A	МВ	МВ								Client Sa	ample ID: M Prep Ty Prep B	ype: To	otal/NA
Analyte	Re	esult	Qualifier	RL		MDL	Unit		D	P	repared	Analyze	∋d	Dil Fac
#2 Diesel (C10-C24)		ND	_	0.065		0.065	mg/L			07/0	2/19 10:39	07/03/19 1	2:22	1
Motor Oil (>C24-C36)		ND		0.096	i	0.096	mg/L			07/0	2/19 10:39	07/03/19 1	2:22	1
		ΜВ	МВ											
Surrogate	%Reco	very	Qualifier	Limits						P	repared	Analyze		Dil Fac
o-Terphenyl		90		50 - 150						07/0	2/19 10:39	07/03/19 1	2:22	1
Lab Sample ID: LCS 580-304 Matrix: Water	4607/2-A								C	lient	Sample	ID: Lab Co Prep Ty		
Analysis Batch: 304710												Prep B		
				Spike	LCS	LCS	;					%Rec.		
Analyte				Added	Result			Unit		D	%Rec	Limits		
#2 Diesel (C10-C24)				0.500	0.396			mg/L		_	79	50 - 120		
Motor Oil (>C24 C36)				0.500	0.400			ma/l			08	64 120		

Eurofins TestAmerica, Seattle

64 - 120

98

0.490

mg/L

0.500

6

#### Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued) Lab Sample ID: LCS 580-304607/2-A **Client Sample ID: Lab Control Sample** Matrix: Water Prep Type: Total/NA Analysis Batch: 304710 Prep Batch: 304607 LCS LCS Surrogate %Recovery Qualifier Limits 50 - 150 o-Terphenyl 105 Lab Sample ID: LCSD 580-304607/3-A **Client Sample ID: Lab Control Sample Dup** Matrix: Water Prep Type: Total/NA Analysis Batch: 304710 Prep Batch: 304607 Spike LCSD LCSD %Rec. RPD Added RPD Limit Analyte Result Qualifier %Rec Limits Unit D #2 Diesel (C10-C24) 0.500 0.367 50 - 120 7 26 mg/L 73 Motor Oil (>C24-C36) 0.500 0.470 mg/L 94 64 - 120 4 24 LCSD LCSD Surrogate %Recovery Qualifier Limits 50 - 150 o-Terphenyl 87 Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup Lab Sample ID: MB 580-304216/1-B **Client Sample ID: Method Blank** Matrix: Water Prep Type: Total/NA Analysis Batch: 304316 Prep Batch: 304216 MB MB Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac #2 Diesel (C10-C24) ND 0.065 0.065 mg/L 06/27/19 14:05 06/28/19 21:32 1 Motor Oil (>C24-C36) 0.096 ND 0.096 mg/L 06/27/19 14:05 06/28/19 21:32 1 MB MB Surrogate Qualifier Limits Prepared Dil Fac %Recovery Analyzed o-Terphenyl 101 50 - 150 06/27/19 14:05 06/28/19 21:32 1 Lab Sample ID: LCS 580-304216/2-B **Client Sample ID: Lab Control Sample** Matrix: Water Prep Type: Total/NA Analysis Batch: 304316 Prep Batch: 304216 Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits #2 Diesel (C10-C24) 0.500 0.431 mg/L 86 50 - 120 Motor Oil (>C24-C36) 0.500 0.522 mg/L 104 64 - 120LCS LCS Surrogate %Recovery Qualifier Limits o-Terphenyl 50 - 150 111 Lab Sample ID: LCSD 580-304216/3-B **Client Sample ID: Lab Control Sample Dup**

Matrix: Water							Prep T	ype: To	tal/NA
Analysis Batch: 304316							Prep E	Batch: 3	04216
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
#2 Diesel (C10-C24)	0.500	0.472		mg/L		94	50 _ 120	9	26
Motor Oil (>C24-C36)	0.500	0.533		mg/L		107	64 - 120	2	24
LCSD	LCSD								

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
o-Terphenyl	109		50 - 150

Dilution

Factor

Run

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 2A-W-41-061819

Batch

Туре

Prep

Prep

Batch

Method

Date Collected: 06/18/19 11:06

Date Received: 06/20/19 14:05

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

#### Lab Sample ID: 580-87064-1 Matrix: Water

#### 3510C 304216 06/27/19 14:05 DCV TAL SEA 3630C 304260 DCV TAL SEA Cleanup 06/27/19 18:56 Analysis NWTPH-Dx 1 304316 06/28/19 22:39 JCM TAL SEA 3510C 304216 DCV TAL SEA 06/27/19 14:05 Analysis NWTPH-Dx 1 304316 06/29/19 00:51 JCM TAL SEA Lab Sample ID: 580-87064-2 Client Sample ID: 2A-W-410-061819 Date Collected: 06/18/19 11:07 Date Received: 06/20/19 14:05 Batch Batch Dilution Batch Prenared

Batch

Number

Prepared

or Analyzed

Analyst

Lab

	Baton	Baton		Bhation	Baton	Tiopaioa		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304216	06/27/19 14:05	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304316	06/29/19 01:13	JCM	TAL SEA
<u> </u>								

#### Client Sample ID: 1B-W-23-061819 Date Collected: 06/18/19 14:35 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304216	06/27/19 14:05	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304316	06/29/19 01:35	JCM	TAL SEA

#### Client Sample ID: GW-3-061819 Date Collected: 06/18/19 16:01 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304216	06/27/19 14:05	DCV	TAL SEA
Total/NA	Cleanup	3630C			304260	06/27/19 18:56	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304316	06/28/19 23:01	JCM	TAL SEA
Total/NA	Prep	3510C			304216	06/27/19 14:05	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304316	06/29/19 01:57	JCM	TAL SEA

#### Client Sample ID: GW-30-061819 Date Collected: 06/18/19 16:05 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304216	06/27/19 14:05	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304316	06/29/19 02:19	JCM	TAL SEA

#### Lab Sample ID: 580-87064-3 Matrix: Water

Lab Sample ID: 580-87064-4

Lab Sample ID: 580-87064-5

Matrix: Water

Matrix: Water

Matrix: Water

Client Sample ID: 2A-W-42-061819

Batch

Туре

Prep

Client Sample ID: 5-W-19-061819

Analysis

Batch

Method

3510C

NWTPH-Dx

\_\_\_\_

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

#### Lab Sample ID: 580-87064-7 Matrix: Water

Lab Sample ID: 580-87064-8

Lab Sample ID: 580-87064-9

Lab Sample ID: 580-87064-10

Lab Sample ID: 580-87064-11

Lab Sample ID: 580-87064-6

Date Collected: 06/18/19 18:52 Date Received: 06/20/19 14:05

Date Collected: 06/18/19 17:45

Date Received: 06/20/19 14:05

Prep Type

Total/NA

Total/NA

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304216	06/27/19 14:05	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304316	06/29/19 03:03	JCM	TAL SEA

Dilution

Factor

1

Run

Batch

Number

304216

304316

Prepared

or Analyzed

06/27/19 14:05

06/29/19 02:41

Analyst

DCV

JCM

Lab

TAL SEA

TAL SEA

#### Client Sample ID: 5-W-18-061919

Date Collected: 06/19/19 08:42

Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304710	07/03/19 13:27	T1W	TAL SEA

#### Client Sample ID: 5-W-16-061919

Date Collected: 06/19/19 09:40 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304710	07/03/19 13:48	T1W	TAL SEA

#### Client Sample ID: 5-W-17-061919

Date Collected: 06/19/19 10:44 Date Received: 06/20/19 14:05

<b>–</b>								
	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304710	07/03/19 14:10	T1W	TAL SEA

#### Client Sample ID: 5-W-56-061919 Date Collected: 06/19/19 12:16 Date Received: 06/20/19 14:05

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304710	07/03/19 14:32	T1W	TAL SEA

Lab Sample ID: 580-87064-12 Matrix: Water Batch Droporod -13 ater -14 ater 304710 07/03/19 15:38 T1W TAL SEA Lab Sample ID: 580-87064-15 Matrix: Water

#### Client Sample ID: 5-W-55-061919 Date Collected: 06/19/19 13:11 Date Received: 06/20/19 14:05

Г

	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	304710	07/03/19 14:54	T1W	TAL SEA	
Client Samp	le ID: 5-W-51	I-061919					Lal	b Sample ID	: 580-87064-
Date Collected	: 06/19/19 14:0	9							Matrix: Wa
Date Received:	06/20/19 14:0	5							
_	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	304710	07/03/19 15:16	T1W	TAL SEA	
Client Samp	le ID: 5-W-14	4-061919					Lal	b Sample ID	: 580-87064-
Date Collected	: 06/19/19 15:0	6							Matrix: Wa
Date Received:	06/20/19 14:0	5							
_	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA	
		NWTPH-Dx				07/03/19 15:38			

#### Client Sample ID: 1B-W-3-161919

Date Collected: 06/19/19 08:48 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304710	07/03/19 16:22	T1W	TAL SEA

#### Client Sample ID: 1C-W-7-061919

Date Collected: 06/19/19 10:07 Date Received: 06/20/19 14:05

Г	_ / .							
	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304710	07/03/19 16:44	T1W	TAL SEA

#### Client Sample ID: GW-4-061919 Date Collected: 06/19/19 11:35 Date Received: 06/20/19 14:05

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304710	07/03/19 17:06	T1W	TAL SEA

Lab Sample ID: 580-87064-16

Lab Sample ID: 580-87064-17

Matrix: Water

Matrix: Water

Batch

Туре

Prep

Client Sample ID: 1C-W-1-061919

Analysis

Batch

Method

3510C

NWTPH-Dx

Client Sample ID: EW-2A-061919

Date Collected: 06/19/19 13:00

Date Received: 06/20/19 14:05

Prep Type

Total/NA

Total/NA

\_

Matrix: Water

#### Lab Sample ID: 580-87064-19 Matrix: Water

Lab Sample ID: 580-87064-18

Date Collected: 06/19/19 14:07 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304710	07/03/19 17:50	T1W	TAL SEA

Dilution

Factor

1

Run

Batch

Number

304607

Prepared

or Analyzed

07/02/19 10:40

304710 07/03/19 17:28

Analyst

PRO

T1W

Lab

TAL SEA

TAL SEA

#### Client Sample ID: 1C-W-8-061919

Lab Sample ID: 580-87064-20 Matrix: Water

Lab Sample ID: 580-87064-21

Lab Sample ID: 580-87064-22

Lab Sample ID: 580-87064-23

Matrix: Water

Matrix: Water

Matrix: Water

#### Date Collected: 06/19/19 15:00 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304710	07/03/19 18:12	T1W	TAL SEA

#### Client Sample ID: 2A-W-9-061919

Date Collected: 06/19/19 16:21 Date Received: 06/20/19 14:05

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C		·	304607	07/02/19 10:40	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304710	07/03/19 18:34	T1W	TAL SEA

#### Client Sample ID: 2A-W-10-061919

Date Collected: 06/19/19 16:40 Date Received: 06/20/19 14:05

_	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304710	07/03/19 18:56	T1W	TAL SEA

#### Client Sample ID: 2B-W-4-061919 Date Collected: 06/19/19 17:48 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304710	07/03/19 19:17	T1W	TAL SEA

Matrix: Water

Matrix: Water

Lab Sample ID: 580-87064-24

Lab Sample ID: 580-87064-25

#### Client Sample ID: MW-3-061919 Date Collected: 06/19/19 16:40 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304710	07/03/19 19:39	T1W	TAL SEA

#### Client Sample ID: MW-4-061919 Date Collected: 06/19/19 17:47 Date Received: 06/20/19 14:05

_	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304875	07/06/19 14:29	W1T	TAL SEA

#### Client Sample ID: MW-555-061919

Lab Sample ID: 580-87064-26 Matrix: Water

Date Collected: 06/19/19 18:25 Date Received: 06/20/19 14:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			304607	07/02/19 10:40	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	304875	07/06/19 14:51	W1T	TAL SEA

#### Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

#### Accreditation/Certification Summary

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

#### Job ID: 580-87064-1

#### Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-024	01-19-20
ANAB	Dept. of Defense ELAP		L2236	01-19-22
ANAB	DoD		L2236	01-19-22
ANAB	ISO/IEC 17025		L2236	01-19-22
ANAB	ISO/IEC 17025		L2236	01-19-22
California	State Program	9	2901	11-05-19
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-19
Oregon	NELAP		WA100007	11-05-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-20

#### Sample Summary

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-87064-1	2A-W-41-061819	Water	06/18/19 11:06	06/20/19 14:05
580-87064-2	2A-W-410-061819	Water	06/18/19 11:07	06/20/19 14:05
580-87064-3	1B-W-23-061819	Water	06/18/19 14:35	06/20/19 14:05
580-87064-4	GW-3-061819	Water	06/18/19 16:01	06/20/19 14:05
580-87064-5	GW-30-061819	Water	06/18/19 16:05	06/20/19 14:05
580-87064-6	2A-W-42-061819	Water	06/18/19 17:45	06/20/19 14:05
580-87064-7	5-W-19-061819	Water	06/18/19 18:52	06/20/19 14:05
580-87064-8	5-W-18-061919	Water	06/19/19 08:42	06/20/19 14:05
580-87064-9	5-W-16-061919	Water	06/19/19 09:40	06/20/19 14:05
80-87064-10	5-W-17-061919	Water	06/19/19 10:44	06/20/19 14:05
580-87064-11	5-W-56-061919	Water	06/19/19 12:16	06/20/19 14:05
580-87064-12	5-W-55-061919	Water	06/19/19 13:11	06/20/19 14:05
580-87064-13	5-W-51-061919	Water	06/19/19 14:09	06/20/19 14:05
80-87064-14	5-W-14-061919	Water	06/19/19 15:06	06/20/19 14:05
80-87064-15	1B-W-3-161919	Water	06/19/19 08:48	06/20/19 14:05
580-87064-16	1C-W-7-061919	Water	06/19/19 10:07	06/20/19 14:05
580-87064-17	GW-4-061919	Water	06/19/19 11:35	06/20/19 14:05
580-87064-18	EW-2A-061919	Water	06/19/19 13:00	06/20/19 14:05
580-87064-19	1C-W-1-061919	Water	06/19/19 14:07	06/20/19 14:05
580-87064-20	1C-W-8-061919	Water	06/19/19 15:00	06/20/19 14:05
580-87064-21	2A-W-9-061919	Water	06/19/19 16:21	06/20/19 14:05
580-87064-22	2A-W-10-061919	Water	06/19/19 16:40	06/20/19 14:05
580-87064-23	2B-W-4-061919	Water	06/19/19 17:48	06/20/19 14:05
580-87064-24	MW-3-061919	Water	06/19/19 16:40	06/20/19 14:05
80-87064-25	MW-4-061919	Water	06/19/19 17:47	06/20/19 14:05
580-87064-26	MW-555-061919	Water	06/19/19 18:25	06/20/19 14:05

· · · ·							Page 1 or	FZ		
		Li	ABORATORY INFOR	MATION		LAB W	ORK ORDER:			
BNSF	Laboratory:			Project Mana	ger:		SHIPMENT INFORMATION			
RAILWAY	Address:	· · · · · · · · · · · · · · · · · · ·		Phone:		ipment Method:				
CHAIN OF CUSTODY	City/State/Z1P:			Fax:		Trackir	king Number:			
BNSF PROJECT INFORMATION	Project State of Origin:			CONSULTAN	T INFORMATION	Project I	Number: 683-667			
SNSF Project Number: 683-067	Project City: Slapka	omish 10.A	Company: Far	ellon a	msutting	Project	Manager: Pete King Ston			
BNSF Project Name: BNSF Skykonish Quar				5th AVE		Emaii:	Philastrachiallon canvet	tradom		
SNSF Contact:	BNSF Work Order No.:		City/State/ZIP: 1550c	rush, in	A 98223	Phone:	Phingston@pundlon consult \$25-295-0500 Fex	- <u></u>		
TURNAROUND TIME	DELIVERAE	3LES Other De			METHODS FOR					
1-day Rush 5- to 8-day Rush	BNSF Standard (Levi	el II)			£2					
2-day Rush 🔀 Standard 10-Day	Level III	EDD Rec	ą, Format?		641 (KRN)					
3-day Rush Other	Level IV			_ ×	26					
		······					Therm. ID: <u>A2</u> Cor: <u>O</u> .	2 º Une: 11, 5		
		Sample Collection	Type	ーをじ			Cooler Dsc: $L_{\zeta} = B_{1_{k}} A_{\ell}$ Packing: $n_{1_{k}} N_{1_{k}} A_{\ell}$	FedEx:		
Sample Identification	Containers Date	·····		atrix HdLmN			Therm. ID: $AZ$ Cor: $O$ . Cooler Dsc: $\underline{L}_{\mathcal{L}} = \underline{B}   \underline{u} \underline{v}$ Packing: $\underline{B}   \underline{u} \underline{b} h   \underline{v}$ Cust. Seal: Yes $\underline{\forall}$ No	UPS: Lab Cour:		
2A-W-41-06/819	2 6/181	119 1106 CB	NGW		X		Blue Ice, Wet, Dry, None	Other:		
2A-W-410-061319		119 1107 63	NI	IX			Therm. ID: <u>A2</u> Cor: <u>1.4</u>	•		
IB-W-23-061819		119 1435 68	N	X			Cooler Dsc: 15 breen	° Unc:_ <u>1.7</u>		
GW-3-061819		19 1601 68	······		x	8	Cooler Dsc: <u>15 breen</u> Packing: <u>Bubble</u>	FedEx:UPS:		
6W-30-061319		119 1605 CB	N	x		0-87	$\frac{\text{Cust. Seal: Y es} \times \text{N}_0}{\text{Blue Lee } \text{Wey } \text{P}}$	Lab Cour: Y		
2A-W-42-001819	2 6/13	119174508	N	X		064		Other:		
5-W-19-061819		19 1852 GP	N	X			Therm. ID: $\underline{A2}$ Cor: $\underline{O}_{a}$ <b>7</b>	• I'mes 1 G		
5-W-18-061919	2 6/19/1		N	X			$\mathcal{O}$ ODET DSC: $L$ , $\mathcal{K}$ $\mathcal{A}$			
5-W-16-061919	2 1	0940 GP	N	× ×		Ust and a second	Cust Seal: Vos Y N.	FedEx:		
5-W-17-061919	2	1044 GP	N	X		lá l	Ring los from D	Lab Cour: X		
5-W-56-061919	2	1244 GP	N	× ×	•••••••			Other:		
5-W-55-061919	r		N	X			Therm. ID: <u>JUY</u> Cor: <u>0.9</u>	• Unc: 1.2		
5-W-51-061919	2	1311 GP 1409 GP	N			-	Packing: <u>Rabhly</u>	FedEx:		
5-W-14-061919	$\frac{1}{\nu}$	1506 GP	N	<i>X</i>		-	Cust Scale Van & Va	CFS:		
18-w-3-061919	2 1	· · · · · · · · · · · · · · · · · · ·	NVV	<u>X</u>   X				Lab Cour: X		
HIB S-DE1919	Date/Time: / /				Daje/Time:	Comments and	Special Analytical Requirements:			
linguished By:	Date/Time:	Received By:			Date/Time: 2/20/14 140 Date/Time:	'S Constact	Bruject manager to			
linguished By:	Date/Time:	Received By:			Date/Time:	Contirm	Project manager to Silica gel Clean up o Therm. ID: A2 Cor: 2-5	Samples		
ceived by Laboratory:	Date/Time:	Lab Remarks:			Lab: Custody Intact?	Custody Seal No.	Therm. ID: A2 Cor: 2-5	• Enc. 2.8 <		
RIGINAL - RETURN TO LABORATORY WITH SAMPLES		DUI	PLICATE - CONSULTA	NT	Yes No		Cooler Dsc: Le breen			
							Packing: Nubhlz Fo	edEx: PS:		
· · · · · · · · · · · · · · · · · · ·			Page 40 c	of 43			Cust. Seal: Yes <u>Y</u> No La	ab Co <b>u/8/2019</b>		
							Bille Ice, Wet, Dry, None Of	ther:		

					L	ABORA	TORY IN	IFORMAT	ION			***			LAB W	ORK ORE	DER: K	ige 2	of 2
BB							Project N	lanager:					SHIPMENT INFORMATION						
	RAILWAY	Address:							Phone:						Shipment Method:				
CI	HAIN OF CUSTODY	City/State/ZIP				Fax:									Trackin	g Number	:		
BNS	F PROJECT INFORMATION	Project State o	if Origin:	CONSULTANT INFORMATION Project Number							lumber:								
BNSF Project Number: 683-067 Project City:					····	Company Farallon Consulting									Project Manager: Piste King Ann				
NSF Project Name:	BNSF staykomish	quart	Ely			Address:		5 5							Email:	okihi	iston @	farallon	nconsulty con
3NSF Contact:	. <u> </u>	BNSF Work O				City/State		- saqu		WA		802	7		Phone:	HS	5 - 29	5 TO JAC	n consulty con
	TURNAROUND TIME		ELIVERABLES	C	] Other D	eliverable							OR ANA	LYSIS			T		1
1-day Rush S- to 8-day Rush						······	<b> </b>	1		1	Τ				1				
2-day Rush	Standard 10-Day	Level III			] EDD Re	q, Format	?				*								
3-day Rush	Other	Level IV			<u></u>			<u></u>	×	774-24 Million Market									
		MPLE INFORM	ATION						, d										
	e na na 1959 a mana ao amin'ny faritr'i Altain ao amin'ny faritr'o amin'ny faritr'o amin'ny faritr'o amin'ny fa		Samp	le Collection		Filtered	Туре		NWTPH		****					1			
	Sample Identification	Containers	Date	Time	Sampler	τ γ/N	(Comp Grab)	/ Matrix	Ne l								0	MENTS	LAB USE
1C-W-	7-061914	2	6/19/19	1007	CB	N	6	Uber				1	1						LAB USE
GW-4-		2	6/19/19	1135	CB	N	Ġ	Whoter			-				1		1		
	4-061919	2	6/19/19	1300	CB	N	6	Whater	X				1	1	1	1	1		
	-1-061919	2	6/19/19	1407		+	6	Wooter		T		1	1	1					
	- 8 - 06/9/9	2	6/19/19	1500	L .	N	6	liber	X					1	1				
	-9-061919	2	6/19/19	1621		N	6	Watt	X			-							
	10-061919	1	6/19/19	1640	1	1	6	ilate	X										
	4 - 061919	2	6/19/19	1248	E		6	Wedr	K										
	- 06/9/9		6/18/19	1640			6	wat											
mw-4		2	6/19/19	1747			6	Waster		1		1	1				<b>†</b>		
	55-061919	2	6/19/19	1825		N	6	Weter	X			+	f		İ				
2														1					
3			~																
4	and the second		02		1									<u> </u>					
5	A	***	A		<u>+</u>	<b></b>													
elinguished By:	DA	Date/Time: 6/	19/19 2043	Received By:	1-	<u></u>	<u> </u>		<u> </u>	L	Date/Time	14 14	05	Comme	nts and	Special	Analytical	Requirement	1
elinquished By:	T T	Date/Time:	11-1-12	Received By:							Date/Time.	- <u>()</u>	·						
elinquished By:		Date/Time:		Received By:							Date/Time:								
eceived by Laboratory:		Date/Time:		Lab Remarks:							Lab: Custo	dy Intact?		Custody S	eal No.			BNSF COC No	

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

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TAL-1001 (0912)

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Document any problems or discrepancies and the actions taken to resolve them in an NCM

Ensure any bulk soil jars for VOAs which will require MeOH preservation. Take ASAP to VOA extractions. Ensure any Encores or Stir bar VOAs are placed in the freezer. Note date and time placed in freezer in logbook.

If there are any VOA analysis on the COC:

Initials.

1

Is an NCM required for coolers outside required limits?
 Were the samples sampled on the same day as receipt?

Sample Control to Complete This Section:

TALS Project #: Special Instructions:

Plo 39

Sample Archive Required:

⊔∛

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If YES:

Freeze

Refrigerate

8

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Sites & Events:

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Initials.

PM/PMA to Complete This Section at Cooler Greet:

Company Name & Sampling Site:

Farallon

514

at,

Date/Time Received:

6 holig

5041

SHORT HOLD

Standard

Priority Level:

RUSH

<sup>TestAmerica Seattle</sup> Sample Receiving Triage Guide

7/

10

Time Zone: • Guam • Hawaii • Alaska • PDT/PST • MDT/MST • CDT/CST • EDT/EST • OTHER

Comments:

If yes to question 1 and no to question 2 above take a confirmation temperature

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State:

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(NOTE IF NOT ON ICE)

Items that must be checked at triage:

Client: Farallon Consulting LLC

#### Login Number: 87064 List Number: 1

Creator: Vallelunga, Diana L

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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	
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?	False	Not requested on COC.
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	N/A	Insufficient volume received for MS/MSD.
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

List Source: Eurofins TestAmerica, Seattle

# 🛟 eurofins

# Environment Testing TestAmerica

### **ANALYTICAL REPORT**

Eurofins TestAmerica, Seattle 5755 8th Street East Tacoma, WA 98424 Tel: (253)922-2310

#### Laboratory Job ID: 580-89409-1

Client Project/Site: BNSF Skykomish Ground Water Sampling Event: Skykomish HCC System

### For:

..... Links

Review your project results through

**Total** Access

Have a Question?

Ask-

The

www.testamericainc.com

Visit us at:

Expert

Farallon Consulting LLC 975 5th Avenue NW Suite 100 Issaquah, Washington 98027

Attn: Peter Kingston

Knistine D. allen

Authorized for release by: 10/10/2019 1:10:35 PM Kristine Allen, Manager of Project Management (253)248-4970 kristine.allen@testamericainc.com

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.

# **Table of Contents**

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Client Sample Results	5
QC Sample Results	55
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Sample Summary	71
Chain of Custody	72
Receipt Checklists	77

#### Job ID: 580-89409-1

#### Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-89409-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/20/2019 2:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 10 coolers at receipt time were 0.0° C, 0.3° C, 0.3° C, 0.6° C, 0.6° C, 1.0° C, 1.0° C, 1.1° C, 1.3° C and 1.6° C.

#### GC Semi VOA

Method(s) NWTPH-Dx: The %D of surrogate (o-Terphenyl) for CCVRT associated with batch 580-313207 was outside the lower control limits. All associated sample surrogate fell within acceptance criteria; therefore, the data have been reported. (CCV 580-313207/14), (CCV 580-313207/25), (CCV 580-313207/31) and (CCVRT 580-313207/3)

Method(s) NWTPH-Dx: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: 5-W-51-091719 (580-89409-9), 5-W-55-091719 (580-89409-12) and 5-W-56-091719 (580-89409-13).

Method(s) NWTPH-Dx: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: MW-38R-091719 (580-89409-15), GW-3-091819 (580-89409-32) and GW-30-091819 (580-89409-33).

Method(s) NWTPH-Dx: The following samples and QC were re-analyzed due to failing CCVs in the initial analysis. 1C-W-3-091719 (580-89409-14), MW-38R-091719 (580-89409-15), 1C-W-7-091719 (580-89409-16), 2A-W-40-091719 (580-89409-17), S3-AU-091719 (580-89409-18), GW-3-091819 (580-89409-32), GW-30-091819 (580-89409-33), S3-CU-091819 (580-89409-34), S3-AD-091819 (580-89409-35), S3-CD-091819 (580-89409-36), S3-BD-091819 (580-89409-37), S3-BU-091819 (580-89409-38), S4-AD-091819 (580-89409-39), S4-CD-091819 (580-89409-40), S4-BD-091819 (580-89409-41), S4-BU-091819 (580-89409-42), S4-CU-091819 (580-89409-43), S4-AU-091819 (580-89409-44), (CCV 580-313798/14), (CCV 580-313798/25), (CCV 580-313798/35), (CCVRT 580-313798/3), (LCS 580-312933/2-A), (LCS 580-312933/2-B), (LCSD 580-312933/3-A), (LCSD 580-312933/3-B), (MB 580-312933/1-A), (MB 580-312933/1-B) and (RTC 580-313798/2)

Method(s) NWTPH-Dx: Surrogate recovery for the following samples were outside control limits: 1C-W-7-091719 (580-89409-16), GW-3-091819 (580-89409-32) and GW-30-091819 (580-89409-33). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) NWTPH-Dx: The laboratory control sample duplicate (LCSD) for preparation batch 580-312969 and 580-313085 and analytical batch 580-313202 recovered outside control limits for the following analytes: Motor Oil (>C24-C36). These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method(s) NWTPH-Dx: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: 2A-W-40-091719 (580-89409-17), GW-3-091819 (580-89409-32), GW-30-091819 (580-89409-33) and S4-BU-091819 (580-89409-42).

Method(s) NWTPH-Dx: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: 2A-W-42-091819 (580-89409-19), MW-4-091819 (580-89409-24), 2A-W-9-091819 (580-89409-25), 2A-W-41-091819 (580-89409-30) and 2A-W-410-091819 (580-89409-31).

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

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

#### Qualifiers

GC Semi VC	ΟΑ	
Qualifier	Qualifier Description	4
*	LCS or LCSD is outside acceptance limits.	
х	Surrogate is outside control limits	5

#### 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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

#### Client Sample ID: 5-W-19-091719 Date Collected: 09/17/19 09:25

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/01/19 08:21	10/03/19 05:57	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 08:21	10/03/19 05:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78		50 - 150				10/01/19 08:21	10/03/19 05:57	1

Job ID: 580-89409-1

Matrix: Water 5

10/10/2019

Lab Sample ID: 580-89409-1

#### Client Sample ID: EW-2A-091719 Date Collected: 09/17/19 09:25

Date Received: 09/20/19 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		10/01/19 08:21	10/03/19 06:37	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 08:21	10/03/19 06:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	92		50 - 150				10/01/19 08:21	10/03/19 06:37	1

Job ID: 580-89409-1

Lab Sample ID: 580-89409-2

Matrix: Water

Eurofins TestAmerica, Seattle

#### Client Sample ID: 5-W-18-091719 Date Collected: 09/17/19 09:28

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/01/19 08:21	10/03/19 06:57	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 08:21	10/03/19 06:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	90		50 - 150				10/01/19 08:21	10/03/19 06:57	1

Lab Sample ID: 580-89409-3

Job ID: 580-89409-1

Matrix: Water

#### Client Sample ID: 5-W-17-091719 Date Collected: 09/17/19 10:30

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/01/19 08:21	10/03/19 07:18	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 08:21	10/03/19 07:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	95		50 - 150				10/01/19 08:21	10/03/19 07:18	1

Job ID: 580-89409-1

Matrix: Water

Lab Sample ID: 580-89409-4

#### Client Sample ID: GW-4-091719 Date Collected: 09/17/19 10:49

Date Received: 09/20/19 14:15

hod: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)	
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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/01/19 08:21	10/03/19 07:38	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 08:21	10/03/19 07:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	93		50 _ 150				10/01/19 08:21	10/03/19 07:38	1

Job ID: 580-89409-1

10/10/2019

Lab Sample ID: 580-89409-5 Matrix: Water

#### Client Sample ID: 5-W-16-091719 Date Collected: 09/17/19 10:50

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/01/19 08:21	10/03/19 07:58	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		10/01/19 08:21	10/03/19 07:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	99		50 - 150				10/01/19 08:21	10/03/19 07:58	1

Lab Sample ID: 580-89409-6

Job ID: 580-89409-1

# 2 3 4 5 6 7

Eurofins TestAmerica, Seattle

ed <u>Dil Fac</u> <u>77:58</u> <u>1</u>

#### Client Sample ID: 5-W-14-091719 Date Collected: 09/17/19 11:38

Date Received: 09/20/19 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		10/01/19 08:21	10/03/19 08:18	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 08:21	10/03/19 08:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150				10/01/19 08:21	10/03/19 08:18	1

Lab Sample ID: 580-89409-7

Matrix: Water

Job ID: 580-89409-1

Eurofins TestAmerica, Seattle

### Client Sample ID: 1C-W-1-091719 Date Collected: 09/17/19 11:53

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		10/01/19 08:21	10/03/19 08:38	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 08:21	10/03/19 08:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150				10/01/19 08:21	10/03/19 08:38	1

Job ID: 580-89409-1

#### Lab Sample ID: 580-89409-8 Matrix: Water

Matrix: water

Eurofins TestAmerica, Seattle

#### Client Sample ID: 5-W-51-091719 Date Collected: 09/17/19 12:05

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.48		0.062	0.062	mg/L		10/01/19 08:21	10/03/19 08:58	1
Motor Oil (>C24-C36)	0.62		0.091	0.091	mg/L		10/01/19 08:21	10/03/19 08:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	83		50 - 150				10/01/19 08:21	10/03/19 08:58	1

Job ID: 580-89409-1

Matrix: Water

# Lab Sample ID: 580-89409-9

Eurofins TestAmerica, Seattle

#### Client Sample ID: 1C-W-8-091719 Date Collected: 09/17/19 12:49

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		10/01/19 08:21	10/03/19 09:19	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 08:21	10/03/19 09:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150				10/01/19 08:21	10/03/19 09:19	1

Job ID: 580-89409-1

#### Lab Sample ID: 580-89409-10 Matrix: Water

matrix. Water

Eurofins TestAmerica, Seattle

## Client Sample ID: 1C-W-4-091719 Date Collected: 09/17/19 13:43

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		10/01/19 08:21	10/03/19 09:39	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 08:21	10/03/19 09:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	94		50 - 150				10/01/19 08:21	10/03/19 09:39	1

Lab Sample ID: 580-89409-11

Matrix: Water

Job ID: 580-89409-1

10/10/2019

#### Client Sample ID: 5-W-55-091719 Date Collected: 09/17/19 14:23

Date Received: 09/20/19 14:15

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)
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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.065		0.062	0.062	mg/L		10/01/19 08:21	10/03/19 10:19	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 08:21	10/03/19 10:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	86		50 - 150				10/01/19 08:21	10/03/19 10:19	1

Job ID: 580-89409-1

Matrix: Water

Lab Sample ID: 580-89409-12

#### Client Sample ID: 5-W-56-091719 Date Collected: 09/17/19 14:27

Date Received: 09/20/19 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.89		0.062	0.062	mg/L		10/01/19 08:21	10/03/19 10:39	1
Motor Oil (>C24-C36)	0.71		0.092	0.092	mg/L		10/01/19 08:21	10/03/19 10:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	77		50 - 150				10/01/19 08:21	10/03/19 10:39	1

Job ID: 580-89409-1

Matrix: Water

Lab Sample ID: 580-89409-13

#### Client Sample ID: 1C-W-3-091719 Date Collected: 09/17/19 14:39 Date Received: 09/20/19 14:15

#### Lab Sample ID: 580-89409-14 Matrix: Water

.nation water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 15:08	10/03/19 18:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78		50 - 150				10/01/19 15:08	10/03/19 18:54	1
Method: NWTPH-Dx - Northwe	st - Semi-Volatile	Petroleum	Products (GC)	- RA					
		Qualifian	ы	MDI	Unit	D	Prepared	Analvzed	Dil Fac
Analyte	Result	Qualifier	RL	NIDL	Unit	0	Flepaleu	Analyzeu	DIFAC

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# Client Sample ID: MW-38R-091719 Date Collected: 09/17/19 15:42

Date Received: 09/20/19 14:15

#### Lab Sample ID: 580-89409-15 Matrix: Water

matrix. Water

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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	0.12		0.091	0.091	mg/L		10/01/19 15:08	10/03/19 19:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	75		50 - 150				10/01/19 15:08	10/03/19 19:16	1
Method: NWTPH-Dx - Northwe	st - Semi-Volatile	e Petroleum	Products (GC)	- <b>RA</b>					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			0.062		mg/L		10/01/19 15:08	10/09/19 19:14	

#### Client Sample ID: 1C-W-7-091719 Date Collected: 09/17/19 15:54 Date Received: 09/20/19 14:15

#### Lab Sample ID: 580-89409-16 Matrix: Water

	0.091	0.091	mg/L		10/01/19 15:08	10/03/19 19:39	1
y Qualifier	Limits				Prepared	Analyzed	Dil Fac
5 X	50 - 150				10/01/19 15:08	10/03/19 19:39	1
	y Qualifier 5 X		·	<u>-</u>	<u> </u>		

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# Client Sample ID: 2A-W-40-091719 Date Collected: 09/17/19 16:18

Date Received: 09/20/19 14:15

#### Lab Sample ID: 580-89409-17 Matrix: Water

matrix. Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	ND		0.090	0.090	mg/L		10/01/19 15:08	10/03/19 20:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	64		50 - 150				10/01/19 15:08	10/03/19 20:24	1

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### Client Sample ID: S3-AU-091719 Date Collected: 09/17/19 16:37

Date Received: 09/20/19 14:15

#### Lab Sample ID: 580-89409-18 Matrix: Water

Date Received: 09/20/19 14:15									
Method: NWTPH-Dx - Northwest -	Semi-Volatile	Petroleum	Products (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 15:08	10/03/19 20:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	83		50 - 150				10/01/19 15:08	10/03/19 20:47	1
Method: NWTPH-Dx - Northwest -	Semi-Volatile	Petroleum	Products (GC)	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/01/19 15:08	10/09/19 20:35	1

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Matrix: Water

Lab Sample ID: 580-89409-19

# Client Sample ID: 2A-W-42-091819 Date Collected: 09/18/19 09:11

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
#2 Diesel (C10-C24)	0.099		0.062	0.062	mg/L		10/02/19 05:27	10/03/19 18:31	1	
Motor Oil (>C24-C36)	0.11		0.091	0.091	mg/L		10/02/19 05:27	10/03/19 18:31	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
o-Terphenyl	64		50 - 150				10/02/19 05:27	10/03/19 18:31	1	

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### Client Sample ID: 1B-W-3-091819 Date Collected: 09/18/19 09:15

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 05:27	10/03/19 18:54	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 05:27	10/03/19 18:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	53		50 _ 150				10/02/19 05:27	10/03/19 18:54	1

Job ID: 580-89409-1

Matrix: Water

Lab Sample ID: 580-89409-20

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#### Client Sample ID: MW-16-091819 Date Collected: 09/18/19 09:57

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 05:27	10/03/19 19:16	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		10/02/19 05:27	10/03/19 19:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	69		50 - 150				10/02/19 05:27	10/03/19 19:16	1

Lab Sample ID: 580-89409-21

Job ID: 580-89409-1

Matrix: Water

#### Client Sample ID: 1B-W-2-091819 Date Collected: 09/18/19 10:22

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 05:27	10/03/19 20:02	1
Motor Oil (>C24-C36)	0.095		0.091	0.091	mg/L		10/02/19 05:27	10/03/19 20:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	71		50 _ 150				10/02/19 05:27	10/03/19 20:02	1

10/10/2019

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Job ID: 580-89409-1

Matrix: Water

Lab Sample ID: 580-89409-22

Matrix: Water

Lab Sample ID: 580-89409-23

# Client Sample ID: 1B-W-23-091819 Date Collected: 09/18/19 10:41

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		10/02/19 05:27	10/03/19 20:24	1
Motor Oil (>C24-C36)	0.12		0.091	0.091	mg/L		10/02/19 05:27	10/03/19 20:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	73		50 - 150				10/02/19 05:27	10/03/19 20:24	1

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Matrix: Water

Lab Sample ID: 580-89409-24

### Client Sample ID: MW-4-091819 Date Collected: 09/18/19 11:17

Date Received: 09/20/19 14:15

Date Received: 09/20/19 14:18	5								
Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC)	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.11		0.062	0.062	mg/L		10/02/19 05:27	10/03/19 20:47	1
Motor Oil (>C24-C36)	0.11		0.092	0.092	mg/L		10/02/19 05:27	10/03/19 20:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	80		50 - 150				10/02/19 05:27	10/03/19 20:47	1

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Limits

50 - 150

#### Client Sample ID: 2A-W-9-091819 Date Collected: 09/18/19 11:57

Date Received: 09/20/19 14:15

Surrogate

o-Terphenyl

Method: NWTPH-Dx - Northwest -	Semi-Volatile	Petroleum	<b>Products (GC)</b>					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed
#2 Diesel (C10-C24)	0.13		0.062	0.062	mg/L		10/02/19 05:27	10/03/19 21:10
Motor Oil (>C24-C36)	0.13		0.091	0.091	mg/L		10/02/19 05:27	10/03/19 21:10

%Recovery Qualifier

65

Job ID: 580-89409-1

Analyzed

10/03/19 21:10

Prepared

10/02/19 05:27

# Lab Sample ID: 580-89409-25 Matrix: Water

Dil Fac

Dil Fac

1

1

1

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#### Client Sample ID: 1A-W-4-091819 Date Collected: 09/18/19 12:20

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 05:27	10/03/19 21:32	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 05:27	10/03/19 21:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	77		50 - 150				10/02/19 05:27	10/03/19 21:32	1

Job ID: 580-89409-1

Matrix: Water

Lab Sample ID: 580-89409-26

#### Client Sample ID: 2B-W-4-091819 Date Collected: 09/18/19 12:27

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.063	0.063	mg/L		10/02/19 05:27	10/03/19 21:55	1
Motor Oil (>C24-C36)	ND		0.093	0.093	mg/L		10/02/19 05:27	10/03/19 21:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	68		50 - 150				10/02/19 05:27	10/03/19 21:55	1

Job ID: 580-89409-1

Matrix: Water

Lab Sample ID: 580-89409-27

Matrix: Water

Lab Sample ID: 580-89409-28

# Client Sample ID: 2A-W-10-091819 Date Collected: 09/18/19 13:00

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		10/02/19 05:27	10/03/19 22:17	1
Motor Oil (>C24-C36)	0.098		0.091	0.091	mg/L		10/02/19 05:27	10/03/19 22:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	61		50 - 150				10/02/19 05:27	10/03/19 22:17	1

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Matrix: Water

Lab Sample ID: 580-89409-29

# Client Sample ID: 2A-W-100-091819 Date Collected: 09/18/19 13:10

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062			10/02/19 05:27	10/03/19 22:40	1
Motor Oil (>C24-C36)	0.13		0.091		mg/L		10/02/19 05:27	10/03/19 22:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	71		50 - 150				10/02/19 05:27	10/03/19 22:40	1

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#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

Job ID: 580-89409-1

Lab Sample ID: 580-89409-30

# Client Sample ID: 2A-W-41-091819 Date Collected: 09/18/19 13:24

Date Received: 09/20/19 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.26		0.061	0.061	mg/L		10/02/19 05:27	10/03/19 23:03	1
Motor Oil (>C24-C36)	0.23		0.091	0.091	mg/L		10/02/19 05:27	10/03/19 23:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	67		50 - 150				40/00/40 05:07	10/03/19 23:03	
		Products by		Silica Ge	l Cleanup		10/02/19 05:27	10/03/19 23.03	
Method: NWTPH-Dx - Semi-	-Volatile Petroleum	Products by Qualifier		Silica Ge MDL	I Cleanup Unit	D	Prepared	Analyzed	Dil Fac
Method: NWTPH-Dx - Semi- Analyte	-Volatile Petroleum	-	y NWTPH with S						Dil Fac
Method: NWTPH-Dx - Semi- Analyte #2 Diesel (C10-C24)	-Volatile Petroleum Result	Qualifier	y NWTPH with \$	MDL	Unit		Prepared	Analyzed	Dil Fac
Method: NWTPH-Dx - Semi- Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36)	-Volatile Petroleum Result 0.085	Qualifier *	<b>/ NWTPH with </b> <b>RL</b> 0.061 0.091	<b>MDL</b> 0.061	Unit mg/L		Prepared	Analyzed	1
Method: NWTPH-Dx - Semi- Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate	-Volatile Petroleum Result 0.085	Qualifier *	<b>NWTPH with </b> 	<b>MDL</b> 0.061	Unit mg/L		Prepared	Analyzed	Dil Fac

Matrix: Water

Lab Sample ID: 580-89409-31

# Client Sample ID: 2A-W-410-091819 Date Collected: 09/18/19 13:30

Date Received: 09/20/19 14:15

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

			· · · ·						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.26		0.061	0.061	mg/L		10/02/19 05:27	10/03/19 23:25	1
Motor Oil (>C24-C36)	0.24		0.091	0.091	mg/L		10/02/19 05:27	10/03/19 23:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	71		50 - 150				10/02/19 05:27	10/03/19 23:25	1
	#2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate	#2 Diesel (C10-C24)         0.26           Motor Oil (>C24-C36)         0.24           Surrogate         %Recovery	#2 Diesel (C10-C24)         0.26           Motor Oil (>C24-C36)         0.24           Surrogate         %Recovery Qualifier	#2 Diesel (C10-C24)         0.26         0.061           Motor Oil (>C24-C36)         0.24         0.091           Surrogate         %Recovery Qualifier         Limits	#2 Diesel (C10-C24)         0.26         0.061         0.061           Motor Oil (>C24-C36)         0.24         0.091         0.091           Surrogate         %Recovery         Qualifier         Limits	#2 Diesel (C10-C24)         0.26         0.061         0.061         mg/L           Motor Oil (>C24-C36)         0.24         0.091         0.091         mg/L           Surrogate         %Recovery         Qualifier         Limits	#2 Diesel (C10-C24)         0.26         0.061         0.061 mg/L           Motor Oil (>C24-C36)         0.24         0.091         0.091 mg/L           Surrogate         %Recovery         Qualifier         Limits	#2 Diesel         (C10-C24)         0.26         0.061         0.061         mg/L         10/02/19 05:27           Motor Oil (>C24-C36)         0.24         0.091         0.091         mg/L         10/02/19 05:27           Surrogate         %Recovery         Qualifier         Limits         Prepared	#2 Diesel         (C10-C24)         0.26         0.061         0.061         mg/L         10/02/19 05:27         10/03/19 23:25           Motor Oil (>C24-C36)         0.24         0.091         0.091         mg/L         10/02/19 05:27         10/03/19 23:25           Surrogate         %Recovery         Qualifier         Limits         Prepared         Analyzed

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# **Client Sample Results**

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

Client Sample ID: GW-3-091819 Date Collected: 09/18/19 14:41

Date Received: 09/20/19 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	0.15		0.091	0.091	mg/L		10/01/19 15:08	10/03/19 21:10	1
Surrogate %	Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	29	X	50 - 150				10/01/19 15:08	10/03/19 21:10	1
Method: NWTPH-Dx - Northwest - Semi	-Volatile	Petroleum	Products (GC)	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.12		0.062	0.062	mg/L		10/01/19 15:08	10/09/19 20:55	1
Method: NWTPH-Dx - Semi-Volatile Pet	roleum l	Products by	y NWTPH with S	Silica Gel	l Cleanup				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 15:08	10/03/19 18:31	1
Surrogate %	Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	32	X	50 - 150				10/01/19 15:08	10/03/19 18:31	1

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND	0.062	0.062	mg/L		10/01/19 15:08	10/09/19 18:34	1

Job ID: 580-89409-1

Matrix: Water

Lab Sample ID: 580-89409-32

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water Job ID: 580-89409-1

# Client Sample ID: GW-30-091819 Date Collected: 09/18/19 15:00

#### Lab Sample ID: 580-89409-33 Matrix: Water

Date Received: 09/20/19 14:15

	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
0.16		0.091	0.091	mg/L		10/01/19 15:08	10/03/19 21:32	1
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
43	X	50 - 150				10/01/19 15:08	10/03/19 21:32	1
	%Recovery	0.16 <u>%Recovery</u> Qualifier <u>43</u> X	%Recovery Qualifier Limits Prepared	%Recovery Qualifier Limits Prepared Analyzed				

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### Client Sample ID: S3-CU-091819 Date Collected: 09/18/19 14:52

Date Received: 09/20/19 14:15

#### Lab Sample ID: 580-89409-34 Matrix: Water

Date Received. 09/20/19 14.15									
Method: NWTPH-Dx - Northwest	- Semi-Volatile	e Petroleum	n Products (GC)	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	ND		0.093	0.093	mg/L		10/01/19 15:08	10/03/19 21:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	77		50 - 150				10/01/19 15:08	10/03/19 21:55	1
Method: NWTPH-Dx - Northwest	- Semi-Volatile	e Petroleum	n Products (GC)	- <b>RA</b>					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.063	0.063	mg/L		10/01/19 15:08	10/09/19 21:35	1

#### Client Sample ID: S3-AD-091819 Date Collected: 09/18/19 14:53

Date Received: 09/20/19 14:15

#### Lab Sample ID: 580-89409-35 Matrix: Water

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		10/01/19 15:08	10/03/19 22:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	70		50 - 150				10/01/19 15:08	10/03/19 22:17	1
- Method: NWTPH-Dx - Nort	hwest - Semi-Volatile	Petroleum	Products (GC)	- <b>RA</b>					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			0.062		mg/L		10/01/19 15:08	10/09/19 21:56	

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

Result Qualifier

ND

%Recovery Qualifier

75

#### Client Sample ID: S3-CD-091819 Date Collected: 09/18/19 15:02

Date Received: 09/20/19 14:15

Analyte

Surrogate

o-Terphenyl

Motor Oil (>C24-C36)

#### Lab Sample ID: 580-89409-36 Matrix: Water

MDL	Unit	D	Prepared	Analyzed	Dil Fac	5
0.091	mg/L		10/01/19 15:08	10/03/19 22:40	1	
			Prepared	Analyzed	Dil Fac	
			10/01/19 15:08	10/03/19 22:40	1	

Method: NWTPH-Dx - Northwest -	Semi-Volatile	Petroleum	Products (G	iC) - RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		10/01/19 15:08	10/09/19 22:16	1

RL

0.091

Limits

50 - 150

#### Client Sample ID: S3-BD-091819 Date Collected: 09/18/19 15:30

Date Received: 09/20/19 14:15

#### Lab Sample ID: 580-89409-37 Matrix: Water

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 15:08	10/03/19 23:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	51		50 - 150				10/01/19 15:08	10/03/19 23:03	1
- Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	n Products (GC)	) - RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	ND		0.062		mg/L		10/01/19 15:08	10/09/19 22:36	

# Client Sample ID: S3-BU-091819 Date Collected: 09/18/19 15:30

Date Received: 09/20/19 14:15

# Lab Sample ID: 580-89409-38 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		10/01/19 15:08	10/03/19 23:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 _ 150				10/01/19 15:08	10/03/19 23:25	1
Method: NWTPH-Dx - Nortl	hwest - Semi-Volatile	e Petroleum	Products (GC)	- <b>RA</b>					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062			10/01/19 15:08	10/09/19 22:56	

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Job ID: 580-89409-1

# Client Sample ID: S4-AD-091819 Date Collected: 09/18/19 16:06

Date Received: 09/20/19 14:15

# Lab Sample ID: 580-89409-39 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 15:08	10/03/19 23:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	77		50 - 150				10/01/19 15:08	10/03/19 23:48	1
- Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC)	- <b>RA</b>					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

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# Client Sample ID: S4-CD-091819 Date Collected: 09/18/19 16:07

Date Received: 09/20/19 14:15

# Lab Sample ID: 580-89409-40 Matrix: Water

5

5	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aotor Oil (>C24-C36)	ND		0.092	0.092	mg/L		10/01/19 15:08	10/04/19 00:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	68		50 - 150				10/01/19 15:08	10/04/19 00:33	1

Job ID: 580-89409-1

# Client Sample ID: S4-BD-091819 Date Collected: 09/18/19 16:09

Date Received: 09/20/19 14:15

# Lab Sample ID: 580-89409-41 Matrix: Water

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 15:08	10/04/19 00:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	80		50 - 150				10/01/19 15:08	10/04/19 00:55	1
☐ Method: NWTPH-Dx - North	nwest - Semi-Volatile	Petroleum	Products (GC)	- <b>RA</b>					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	ND		0.062		mg/L		10/01/19 15:08	10/10/19 00:17	

# Client Sample ID: S4-BU-091819 Date Collected: 09/18/19 16:16

Date Received: 09/20/19 14:15

# Lab Sample ID: 580-89409-42 Matrix: Water

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	0.67		0.092	0.092	mg/L		10/01/19 15:08	10/04/19 01:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	61		50 - 150				10/01/19 15:08	10/04/19 01:18	1
- Method: NWTPH-Dx - Northwest - \$	Semi-Volatile	Petroleum	Products (GC)	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

# Client Sample ID: S4-CU-091819 Date Collected: 09/18/19 16:29

Date Received: 09/20/19 14:15

# Lab Sample ID: 580-89409-43 Matrix: Water

Date Received: 09/20/19 14:15									
Method: NWTPH-Dx - Northwest -	Semi-Volatile	Petroleum	Products (GC)	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 15:08	10/04/19 01:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150				10/01/19 15:08	10/04/19 01:40	1
Method: NWTPH-Dx - Northwest -	Semi-Volatile	e Petroleum	Products (GC)	) - RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/01/19 15:08	10/10/19 00:57	1

Job ID: 580-89409-1

# Client Sample ID: S4-AU-091819 Date Collected: 09/18/19 16:30

Date Received: 09/20/19 14:15

# Lab Sample ID: 580-89409-44 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/01/19 15:08	10/04/19 02:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78		50 - 150				10/01/19 15:08	10/04/19 02:03	1
- Method: NWTPH-Dx - Nort	hwest - Semi-Volatile	e Petroleum	Products (GC)	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	ND		0.062		mg/L		10/01/19 15:08	10/10/19 01:17	

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# Client Sample ID: S1-AU-091919 Date Collected: 09/19/19 09:55

Date Received: 09/20/19 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 05:27	10/04/19 00:10	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 05:27	10/04/19 00:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	64		50 - 150				10/02/19 05:27	10/04/19 00:10	1

Job ID: 580-89409-1

Matrix: Water

# Lab Sample ID: 580-89409-45

5

# Client Sample ID: S1-AD-091919 Date Collected: 09/19/19 09:57

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 05:27	10/04/19 00:33	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 05:27	10/04/19 00:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	79		50 - 150				10/02/19 05:27	10/04/19 00:33	1

Job ID: 580-89409-1

Matrix: Water

Lab Sample ID: 580-89409-46

# Client Sample ID: S1-BD-091919 Date Collected: 09/19/19 10:46

Date Received: 09/20/19 14:15

Analyte		Qualifier	Products (GC) RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	Kesuit	Quaimer			Unit		Flepaleu	Analyzeu	Dirrac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 05:27	10/04/19 00:55	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 05:27	10/04/19 00:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				10/02/19 05:27	10/04/19 00:55	1

Job ID: 580-89409-1

Matrix: Water

Lab Sample ID: 580-89409-47

# Client Sample ID: S1-BU-091919 Date Collected: 09/19/19 11:02

Date Received: 09/20/19 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		10/02/19 05:27	10/04/19 01:18	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 05:27	10/04/19 01:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78		50 - 150				10/02/19 05:27	10/04/19 01:18	1

Lab Sample ID: 580-89409-48

Job ID: 580-89409-1

Matrix: Water

# Client Sample ID: 5-W-180-091719 Date Collected: 09/19/19 09:30

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		10/02/19 05:27	10/04/19 01:40	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 05:27	10/04/19 01:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150				10/02/19 05:27	10/04/19 01:40	1

Job ID: 580-89409-1

Matrix: Water

Lab Sample ID: 580-89409-49

# Client Sample ID: MW-555-091919 Date Collected: 09/19/19 12:00

Date Received: 09/20/19 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.086		0.062	0.062	mg/L		10/02/19 05:27	10/04/19 02:03	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 05:27	10/04/19 02:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	72		50 - 150				10/02/19 05:27	10/04/19 02:03	1

Lab Sample ID: 580-89409-50

# Job ID: 580-89409-1

Matrix: Water

Eurofins TestAmerica, Seattle

Lab Sample ID: MB 580-312841/1-A

Lab Sample ID: LCS 580-312841/2-A

Matrix: Water

#2 Diesel (C10-C24)

Motor Oil (>C24-C36)

Analyte

Surrogate

Analyte

Surrogate

Surrogate

o-Terphenyl

Matrix: Water

#2 Diesel (C10-C24)

Motor Oil (>C24-C36)

Analysis Batch: 313030

Analysis Batch: 313030

RL

0.065

0.096

Limits 50 - 150

Spike

Added

0.500

0.500

Limits

Limits

MDL Unit

0.065 mg/L

0.096 mg/L

LCS LCS

0.470

0.524

Result Qualifier

Unit

mg/L

mg/L

Prep Type: Total/NA

Prep Batch: 312841

Dil Fac

1

1

**Client Sample ID: Method Blank** 

Analyzed

10/03/19 04:56

10/03/19 04:56

Prepared

10/01/19 08:21

10/01/19 08:21

D

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Dil Fac	Analyzed	repared	P
1	03/19 04:56	1/19 08:21	10/0
Sample	ab Control	Sample I	Client
otal/NA	rep Type: T		
312841	rep Batch:		
	с.		
	ts	%Rec	D
	120	94	
	120	105	

o-Terphenyl	79	50 - 150								
Lab Sample ID: LCSD 580-312841/3 Matrix: Water	3-A				Clie	ent Sam	ple ID:	Lab Contro Prep T	l Sampl ype: To	
Analysis Batch: 313030		• "						Prep I	Batch: 3	12841
		Spike	LCSD	LCSD				%Rec.		RPD
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
#2 Diesel (C10-C24)		0.500	0.470		mg/L		94	50 - 120	0	26
Motor Oil (>C24-C36)		0.500	0.514		mg/L		103	64 - 120	2	24
	LCSD LCSD									

o-Terphenyl	76		50 - 150						
_ Lab Sample ID: MB 580-31293	3/1-A						Client Sa	mple ID: Metho	d Blank
Matrix: Water								Prep Type: 1	Total/NA
Analysis Batch: 313207								Prep Batch:	312933
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.065	0.065	mg/L		10/01/19 15:08	10/03/19 17:23	1
Motor Oil (>C24-C36)	ND		0.096	0.096	mg/L		10/01/19 15:08	10/03/19 17:23	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	81		50 _ 150				10/01/19 15:08	10/03/19 17:23	1
Lab Sample ID: LCS 580-3129	33/2-A					c	lient Sample I	D: Lab Control	Sample
Matrix: Water								Prep Type: 1	Total/NA
Analysis Batch: 313207								Prep Batch:	312933
-			Spike	LCS LCS	;			%Rec.	

	Spike	LCS	LCS			%Rec.	
Analyte	Added	Result	Qualifier	Unit D	%Rec	Limits	
#2 Diesel (C10-C24)	0.500	0.408		mg/L	82	50 - 120	
Motor Oil (>C24-C36)	0.500	0.476		mg/L	95	64 - 120	

Eurofins TestAmerica, Seattle

MB MB Result Qualifier

> MB MB Qualifier

ND

ND

79

%Recovery

LCS LCS %Recovery Qualifier

%Recovery Qualifier

Lab Sample ID: LCS 580-3129	33/2-A								Clien	t Sample	ID: Lab C	ontrol S	Sample
Matrix: Water												Гуре: То	
Analysis Batch: 313207											Prep	Batch: 3	312933
	LCS	LCS											
Surrogate	%Recovery	Qual	ifier	Limits									
o-Terphenyl	76			50 - 150									
Lab Sample ID: LCSD 580-312	0022/2 A							Clie	nt Sou		Lob Contro	al Comp	
Matrix: Water	2933/3-A							Cile	ni Sai	inple ID.	Lab Contro Prop 1	Гуре: To	-
Analysis Batch: 313207												Batch: 3	
				Spike	LCSD	LCSD					%Rec.		RPD
Analyte				Added	Result	Qualifi	er	Unit	D	%Rec	Limits	RPD	Limit
#2 Diesel (C10-C24)				0.500	0.396			mg/L		79	50 - 120	3	26
Motor Oil (>C24-C36)				0.500	0.464		I	mg/L		93	64 - 120	2	24
	LCSD	LCSI	C										
Surrogate	%Recovery			Limits									
p-Terphenyl	78			50 - 150									
Lab Sample ID: MB 580-31296	59/1-A									Client S	Sample ID:		
Matrix: Water												Гуре: То	
Analysis Batch: 313202		мв	MB								Prep	Batch: 3	312969
Analyte	Re		Qualifier	F	8L	MDL U	Init	ſ		Prepared	Analyz	zed	Dil Fac
#2 Diesel (C10-C24)		ND		0.06		0.065 m				02/19 05:27			1
Notor Oil (>C24-C36)		ND		0.09		0.096 m	-		10/	02/19 05:27	7 10/03/19	17:00	1
		ΜВ	МВ										
Surrogate	%Reco		Qualifier	Limits						Prepared	Analyz	zod	Dil Fac
p-Terphenyl		64	quanner	50 - 150						/02/19 05:2			1
Lab Sample ID: LCS 580-3129	69/2-A								Clien	it Sample	D: Lab C		
Matrix: Water												Type: To	
Analysis Batch: 313202				Spike	LCS	LCS					%Rec.	Batch: 3	312909
Analyte				Added		Qualifi	er	Unit	D	%Rec	Limits		
#2 Diesel (C10-C24)				0.500	0.420			mg/L		84	50 - 120		
Motor Oil (>C24-C36)				0.500	0.495			mg/L		99	64 - 120		
Surrogata	LCS % Basevery		ifior	Limito									
Surrogate p-Terphenyl	%Recovery 84	Qual		Limits 50 - 150									
- тырненуі	04			50 - 150									
Lab Sample ID: LCSD 580-312	2969/3-A							Clie	nt Sai	mple ID:	Lab Contro	ol Samp	le Dup
Matrix: Water												Гуре: То	
Analysis Batch: 313202												Batch: 3	
				Spike		LCSD			_		%Rec.	_	RPD
Analyte				Added		Qualifi		Unit	D	%Rec	Limits	RPD	Limit
				0.500	0.468		I	mg/L		94	50 - 120	11	26
2 Diesel (C10-C24)				0 500	0 540			ma/l		100	64 400	0	~ 4
2 Diesel (C10-C24)				0.500	0.543		I	mg/L		109	64 - 120	9	24
#2 Diesel (C10-C24) Motor Oil (>C24-C36)	LCSD	LCSI	D	0.500	0.543		I	mg/L		109	64 <sub>-</sub> 120	9	24

Motor Oil (>C24-C36)

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

Lab Sample ID: MB 580-312933/1-A										<b>Client Sa</b>	ample ID: Metho	od Blank
Matrix: Water											Prep Type: <sup>-</sup>	Total/NA
Analysis Batch: 313798											Prep Batch	: 312933
	MB	MB										
Analyte	Result	Qualifier	F	RL	MDL U	Init		D	P	repared	Analyzed	Dil Fac
#2 Diesel (C10-C24) - RA	ND		0.06	35	0.065 m	ng/L			10/0	1/19 15:08	10/09/19 17:33	1
Lab Sample ID: LCS 580-312933/2-A								С	lient	Sample	ID: Lab Control	Sample
Matrix: Water											Prep Type: <sup>-</sup>	Total/NA
Analysis Batch: 313798											Prep Batch	: 312933
			Spike	LCS	LCS						%Rec.	
Analyte			Added	Result	Qualifi	er	Unit		D	%Rec	Limits	
#2 Diesel (C10-C24) - RA			0.500	0.487			mg/L			97	50 - 120	
Lab Sample ID: LCSD 580-312933/3-A							C	lient	Sam	ple ID: L	ab Control Sam	ple Dup
Matrix: Water										•	Prep Type: <sup>-</sup>	Total/NA

Analysis Batch: 313798							Prep	Batch: 3	12933	
	Spike	LCSD	LCSD				%Rec.		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
#2 Diesel (C10-C24) - RA	0.500	0.475		mg/L		95	50 - 120	3	26	

# Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Lab Sample ID: MB 580-31293 Matrix: Water	3/1-B									Client Sa	ample ID: Prep T	Method Type: To	
Analysis Batch: 313207												Batch: 3	
	ME	B MB											
Analyte	Resul	t Qualifier	RL		MDL	Unit		D	Р	repared	Analyz	zed	Dil Fac
#2 Diesel (C10-C24)	NE	)	0.065	(	0.065	mg/L			10/0	1/19 15:08	10/03/19	16:15	1
Motor Oil (>C24-C36)	NE	)	0.096	(	0.096	mg/L			10/0	1/19 15:08	10/03/19	16:15	1
	ME	B MB											
Surrogate	%Recovery	/ Qualifier	Limits						Р	repared	Analyz	zed	Dil Fac
o-Terphenyl	8	5	50 - 150						10/0	1/19 15:08	10/03/19	16:15	1
Lab Sample ID: LCS 580-3129 Matrix: Water Analysis Batch: 313207	33/2-В							C	lient	Sample		ontrol S Type: To Batch: 3	otal/NA
			Spike	LCS	LCS						%Rec.		
Analyte			Added	Result	Qual	ifier	Unit		D	%Rec	Limits		
#2 Diesel (C10-C24)			0.500	0.422			mg/L			84	50 _ 120		
Motor Oil (>C24-C36)			0.500	0.489			mg/L			98	64 - 120		
	LCS LC	s											
Surrogate	%Recovery Qu	alifier	Limits										
o-Terphenyl	81		50 - 150										
_ Lab Sample ID: LCSD 580-312	933/3-B						С	lient	Sam	nple ID: L	ab Contro	ol Samp	le Dup
Matrix: Water												ype: To	
Analysis Batch: 313207												Batch: 3	
-			Spike	LCSD	LCS	D					%Rec.		RPD
Analyte			Added	Result	Qual	ifier	Unit		D	%Rec	Limits	RPD	Limit
#2 Diesel (C10-C24)			0.500	0.411			mg/L			82	50 - 120	3	26

Eurofins TestAmerica, Seattle

64 - 120

97

0.486

mg/L

0.500

1

Continued)		troleum	Products b	by NWTP	PH with S	ilica Ge	l Clea	anup			
Lab Sample ID: LCSD 580-31	I2933/3-B					Clie	nt San	nple ID: L	ab Control		
Matrix: Water									Prep Ty		
Analysis Batch: 313207									Prep Ba	atch: 3	512933
	LCSD L	CSD									
Surrogate	%Recovery	Qualifier	Limits								
o-Terphenyl	82		50 - 150								
Lab Sample ID: MB 580-3129	)69/1-B							Client Sa	ample ID: M	ethod	Blank
Matrix: Water									Prep Ty	pe: To	tal/NA
Analysis Batch: 313202									Prep Ba	atch: 3	31 <mark>296</mark> 9
	I	AB MB									
Analyte		ult Qualifi		RL	MDL Unit			repared	Analyze		Dil Fac
#2 Diesel (C10-C24)		ND			0.065 mg/L			2/19 05:27	10/03/19 15		1
Motor Oil (>C24-C36)	I	ND	0.0	096	0.096 mg/L		10/0	2/19 05:27	10/03/19 15	5:53	1
	I	NB MB									
Surrogate	%Recove	ery Qualifi	er Limits	;			P	repared	Analyze	d	Dil Fac
o-Terphenyl		65	50 - 15	50			10/0	2/19 05:27	10/03/19 15	5:53	1
Lab Sample ID: LCS 580-312 Matrix: Water	969/2-B						Client	Sample	ID: Lab Cor Prep Ty		
Matrix: Water Analysis Batch: 313202	969/2-В		Spike		LCS		Client	·	Prep Ty Prep Ba %Rec.	pe: To	tal/NA
Matrix: Water Analysis Batch: 313202 Analyte	969/2-B 		Added	Result	Qualifier	Unit		%Rec	Prep Ty Prep Ba %Rec. Limits	pe: To	tal/NA
Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24)	969/2-B 		Added	<b>Result</b> 0.458	Qualifier	mg/L		%Rec	Prep Ty Prep Ba %Rec. Limits 50 - 120	pe: To	tal/NA
Matrix: Water Analysis Batch: 313202 Analyte	969/2-B 		Added	Result	Qualifier			%Rec	Prep Ty Prep Ba %Rec. Limits	pe: To	tal/NA
Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24)	969/2-B	cs	Added	<b>Result</b> 0.458	Qualifier	mg/L		%Rec	Prep Ty Prep Ba %Rec. Limits 50 - 120	pe: To	tal/NA
Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24)	LCS L	CS Qualifier	Added	<b>Result</b> 0.458	Qualifier	mg/L		%Rec	Prep Ty Prep Ba %Rec. Limits 50 - 120	pe: To	tal/NA
Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36)	LCS L		Added 0.500 0.500	<b>Result</b> 0.458	Qualifier	mg/L		%Rec	Prep Ty Prep Ba %Rec. Limits 50 - 120	pe: To	tal/NA
Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate	LCS L %Recovery C 88		Added 0.500 0.500 Limits	<b>Result</b> 0.458	Qualifier	mg/L mg/L	<u>D</u>	%Rec 92 113	Prep Ty Prep Ba %Rec. Limits 50 - 120 64 - 120	pe: To atch: 3	otal/NA 312969
Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl	LCS L %Recovery C 88		Added 0.500 0.500 Limits	<b>Result</b> 0.458	Qualifier	mg/L mg/L	<u>D</u>	%Rec 92 113	Prep Ty Prep Ba %Rec. Limits 50 - 120	pe: To atch: 3 	le Dup
Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terpheny/ Lab Sample ID: LCSD 580-31	LCS L %Recovery C 88		Added 0.500 0.500 Limits	<b>Result</b> 0.458	Qualifier	mg/L mg/L	<u>D</u>	%Rec 92 113	Prep Ty Prep Ba %Rec. Limits 50 - 120 64 - 120 ab Control	pe: To atch: 3  Sampl pe: To	le Dup
Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: LCSD 580-31 Matrix: Water	LCS L %Recovery C 88		Added 0.500 0.500 Limits	<b>Result</b> 0.458 0.564	Qualifier	mg/L mg/L	<u>D</u>	%Rec 92 113	Prep Ty Prep Ba %Rec. Limits 50 - 120 64 - 120 ab Control Prep Ty	pe: To atch: 3  Sampl pe: To	etal/NA 312969  le Dup otal/NA 312969
Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: LCSD 580-31 Matrix: Water Analysis Batch: 313202 Analyte	LCS L %Recovery C 88		Added 0.500 0.500 <i>Limits</i> 50 - 150 Spike Added	Result 0.458 0.564 LCSD Result	Qualifier LCSD Qualifier	mg/L mg/L Clie	<u>D</u>	%Rec 92 113 nple ID: L %Rec	Prep Ty Prep Ba %Rec. Limits 50 - 120 64 - 120 64 - 120 ab Control Prep Ty Prep Ba %Rec. Limits	pe: To atch: 3 Sampl pe: To atch: 3 	le Dup otal/NA bital/NA bital/NA bital/NA bital/NA bital/NA bital/NA bital/NA bital/NA
Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: LCSD 580-31 Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24)	LCS L %Recovery C 88		Added           0.500           0.500           Limits           50 - 150           Spike           Added           0.500	Result           0.458           0.564           LCSD           Result           0.512	Qualifier LCSD Qualifier	mg/L mg/L Clie Unit mg/L	D_	%Rec         92         113         nple ID: L         %Rec         102	Prep Ty Prep Ba %Rec. Limits 50 - 120 64 - 120 64 - 120 ab Control Prep Ty Prep Ba %Rec. Limits 50 - 120	pe: To atch: 3 Sampl pe: To atch: 3 <u>RPD</u> 11	le Dup stal/NA 12969 le Dup stal/NA 12969 RPD Limit 26
Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: LCSD 580-31 Matrix: Water Analysis Batch: 313202	LCS L %Recovery C 88		Added 0.500 0.500 <i>Limits</i> 50 - 150 Spike Added	Result 0.458 0.564 LCSD Result	Qualifier LCSD Qualifier	mg/L mg/L Clie	D_	%Rec 92 113 nple ID: L %Rec	Prep Ty Prep Ba %Rec. Limits 50 - 120 64 - 120 64 - 120 ab Control Prep Ty Prep Ba %Rec. Limits	pe: To atch: 3 Sampl pe: To atch: 3 	le Dup stal/NA 312969 le Dup stal/NA 312969 RPD Limit 26
Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: LCSD 580-31 Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24)	LCS L %Recovery C 88	Qualifier	Added           0.500           0.500           Limits           50 - 150           Spike           Added           0.500	Result           0.458           0.564           LCSD           Result           0.512	Qualifier LCSD Qualifier	mg/L mg/L Clie Unit mg/L	D_	%Rec         92         113         nple ID: L         %Rec         102	Prep Ty Prep Ba %Rec. Limits 50 - 120 64 - 120 64 - 120 ab Control Prep Ty Prep Ba %Rec. Limits 50 - 120	pe: To atch: 3 Sampl pe: To atch: 3 <u>RPD</u> 11	le Dup
Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: LCSD 580-31 Matrix: Water Analysis Batch: 313202 Analyte #2 Diesel (C10-C24)	LCS L %Recovery C 88	CSD	Added           0.500           0.500           Limits           50 - 150           Spike           Added           0.500	Result           0.458           0.564           LCSD           Result           0.512	Qualifier LCSD Qualifier	mg/L mg/L Clie Unit mg/L	D_	%Rec         92         113         nple ID: L         %Rec         102	Prep Ty Prep Ba %Rec. Limits 50 - 120 64 - 120 64 - 120 ab Control Prep Ty Prep Ba %Rec. Limits 50 - 120	pe: To atch: 3 Sampl pe: To atch: 3 <u>RPD</u> 11	le Dup stal/NA 312969 le Dup stal/NA 312969 RPD Limit 26

# Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup - RA

Lab Sample ID: MB 580-312933/1-B Matrix: Water Analysis Batch: 313798	MB N	МВ				Client Sa	mple ID: Metho Prep Type: 1 Prep Batch:	Total/NA
Analyte F #2 Diesel (C10-C24) - RA	Result OND	Qualifier	RL 0.065	MDL 0.065	 <u>D</u>	Prepared 10/01/19 15:08	Analyzed 10/09/19 16:33	Dil Fac

6

### Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup - RA (Continued) Lab Sample ID: LCS 580-312933/2-B **Client Sample ID: Lab Control Sample** Matrix: Water Analysis Batch: 313798 LCS LCS Spike %Rec. Limits Analyte Added Result Qualifier Unit D %Rec #2 Diesel (C10-C24) - RA 0.500 0.494 mg/L 99 50 - 120 Lab Sample ID: LCSD 580-312933/3-B Client Sample ID: Lab Control Sample Dup

Matrix: Water							Prep 1	· Type: Tot	tal/NA	
Analysis Batch: 313798							Prep	Batch: 3	12933	
	Spike	LCSD	LCSD				%Rec.		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
#2 Diesel (C10-C24) - RA	0.500	0.462		mg/L		92	50 - 120	7	26	

Prep Type: Total/NA Prep Batch: 312933

Batch

Туре

Prep

Client Sample ID: EW-2A-091719

Analysis

Batch

Method

3510C

NWTPH-Dx

Client Sample ID: 5-W-19-091719

Date Collected: 09/17/19 09:25

Date Received: 09/20/19 14:15

Prep Type

Total/NA

Total/NA

Matrix: Water

# Lab Sample ID: 580-89409-2 Matrix: Water

Lab Sample ID: 580-89409-1

## Date Collected: 09/17/19 09:25 Date Received: 09/20/19 14:15

_								
	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312841	10/01/19 08:21		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313030	10/03/19 06:37	T1W	TAL SEA

Dilution

Factor

1

Run

Batch

Number

312841

313030

Prepared

or Analyzed

10/01/19 08:21

10/03/19 05:57

Analyst

T1W

Lab

TAL SEA

TAL SEA

# Client Sample ID: 5-W-18-091719

Lab Sample ID: 580-89409-3 Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Lab Sample ID: 580-89409-4

Lab Sample ID: 580-89409-5

Lab Sample ID: 580-89409-6

## Date Collected: 09/17/19 09:28 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C		·	312841	10/01/19 08:21		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313030	10/03/19 06:57	T1W	TAL SEA

# Client Sample ID: 5-W-17-091719

Date Collected: 09/17/19 10:30

## Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312841	10/01/19 08:21		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313030	10/03/19 07:18	T1W	TAL SEA

# Client Sample ID: GW-4-091719

## Date Collected: 09/17/19 10:49 Date Received: 09/20/19 14:15

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312841	10/01/19 08:21		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313030	10/03/19 07:38	T1W	TAL SEA

# Client Sample ID: 5-W-16-091719 Date Collected: 09/17/19 10:50 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312841	10/01/19 08:21		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313030	10/03/19 07:58	T1W	TAL SEA

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Lab Sample ID: 580-89409-7

Lab Sample ID: 580-89409-8

# Client Sample ID: 5-W-14-091719 Date Collected: 09/17/19 11:38 Date Received: 09/20/19 14:15

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312841	10/01/19 08:21		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313030	10/03/19 08:18	T1W	TAL SEA

# Client Sample ID: 1C-W-1-091719 Date Collected: 09/17/19 11:53 Date Received: 09/20/19 14:15

ſ	-	Batch	Batch		Dilution	Batch	Prepared		
	Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
	Total/NA	Prep	3510C			312841	10/01/19 08:21		TAL SEA
	Total/NA	Analysis	NWTPH-Dx		1	313030	10/03/19 08:38	T1W	TAL SEA

# Client Sample ID: 5-W-51-091719

Lab Sample ID: 580-89409-9 Matrix: Water

Lab Sample ID: 580-89409-10

Lab Sample ID: 580-89409-11

Lab Sample ID: 580-89409-12

Date Collected: 09/17/19 12:05 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312841	10/01/19 08:21		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313030	10/03/19 08:58	T1W	TAL SEA

# Client Sample ID: 1C-W-8-091719

Date Collected: 09/17/19 12:49

Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C		·	312841	10/01/19 08:21		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313030	10/03/19 09:19	T1W	TAL SEA

# Client Sample ID: 1C-W-4-091719

Date Collected: 09/17/19 13:43 Date Received: 09/20/19 14:15

Г								
	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312841	10/01/19 08:21		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313030	10/03/19 09:39	T1W	TAL SEA

# Client Sample ID: 5-W-55-091719 Date Collected: 09/17/19 14:23 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312841	10/01/19 08:21		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313030	10/03/19 10:19	T1W	TAL SEA

	E	Batch	Batch		Dilution	Batch	Prepared		
Prep Ty	уре Т	уре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/N	A F	Prep	3510C			312841	10/01/19 08:21		TAL SEA
Total/N	A A	Analysis	NWTPH-Dx		1	313030	10/03/19 10:39	T1W	TAL SEA

# Client Sample ID: 1C-W-3-091719 Date Collected: 09/17/19 14:39 Date Received: 09/20/19 14:15

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/03/19 18:54	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/09/19 18:54	T1W	TAL SEA

# Client Sample ID: MW-38R-091719 Date Collected: 09/17/19 15:42

# Date Received: 09/20/19 14:15

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/03/19 19:16	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/09/19 19:14	T1W	TAL SEA

# Client Sample ID: 1C-W-7-091719

## Date Collected: 09/17/19 15:54 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/03/19 19:39	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/09/19 19:34	T1W	TAL SEA

# Client Sample ID: 2A-W-40-091719 Date Collected: 09/17/19 16:18

Date	<b>Received:</b>	09/20/19	14:15
Duit	Received.	00/20/10	17.10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/03/19 20:24	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/09/19 20:15	T1W	TAL SEA

# Lab Sample ID: 580-89409-13 Matrix: Water

Lab Sample ID: 580-89409-14

Matrix: Water

# Lab Sample ID: 580-89409-15

Lab Sample ID: 580-89409-16

Lab Sample ID: 580-89409-17

Matrix: Water

Matrix: Water

Matrix: Water

Dilution

Factor

1

1

Dilution

Factor

1

Run

RA

RA

Run

Batch

Number

312933

313207

312933

313798

Batch

Number

312969

313202

Prepared

or Analyzed

10/01/19 15:08

10/03/19 20:47

10/01/19 15:08

10/09/19 20:35

Prepared

or Analyzed

10/02/19 05:27

10/03/19 18:31

Analyst

PRO

W1T

PRO

T1W

Analyst

W1T

Lab

TAL SEA

TAL SEA

TAL SEA

TAL SEA

Lab

Batch

Туре

Prep

Prep

Client Sample ID: 2A-W-42-091819

Analysis

Analysis

Batch

Туре

Prep

Analysis

Batch

Method

3510C

3510C

Batch

Method

3510C

NWTPH-Dx

NWTPH-Dx

NWTPH-Dx

Client Sample ID: S3-AU-091719

Date Collected: 09/17/19 16:37

Date Received: 09/20/19 14:15

Date Collected: 09/18/19 09:11

Date Received: 09/20/19 14:15

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Matrix: Water

# 9-19 /ater

Lab Sample ID: 580-89409-19 Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

 	Matrix: V	1

Lab Sample ID: 580-89409-18

 TAL SEA	
TAL SEA	

Lab Sample ID: 580-89409-20

Lab Sample ID: 580-89409-21

Lab Sample ID: 580-89409-22

Lab Sample ID: 580-89409-23

# Client Sample ID: 1B-W-3-091819 Date Collected: 09/18/19 09:15

# Date Received: 09/20/19 14:15

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313202	10/03/19 18:54	W1T	TAL SEA

# Client Sample ID: MW-16-091819

Date Collected: 09/18/19 09:57 Date Received: 09/20/19 14:15

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313202	10/03/19 19:16	W1T	TAL SEA

# Client Sample ID: 1B-W-2-091819

Date Collected: 09/18/19 10:22

Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313202	10/03/19 20:02	W1T	TAL SEA

# Client Sample ID: 1B-W-23-091819

### Date Collected: 09/18/19 10:41 Date Received: 09/20/19 14:15

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313202	10/03/19 20:24	W1T	TAL SEA

Dilution

Factor

1

Run

Batch

Number

312969

313202

Prepared

or Analyzed

10/02/19 05:27

10/03/19 20:47

Analyst

W1T

Lab

TAL SEA

TAL SEA

Batch

Туре

Prep

Client Sample ID: 2A-W-9-091819

Analysis

Batch

Туре

Prep

Client Sample ID: 1A-W-4-091819

Analysis

Batch

Туре

Prep

Analysis

Batch

Method

3510C

Batch

Method

3510C

Batch

Method

3510C

NWTPH-Dx

NWTPH-Dx

NWTPH-Dx

Client Sample ID: MW-4-091819

Date Collected: 09/18/19 11:17

Date Received: 09/20/19 14:15

Date Collected: 09/18/19 11:57

Date Received: 09/20/19 14:15

Date Collected: 09/18/19 12:20

Date Received: 09/20/19 14:15

Prep Type

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Lab Sample ID: 580-89409-24

Lab Sample ID: 580-89409-25

Lab Sample ID: 580-89409-27

Lab Sample ID: 580-89409-28

Lab Sample ID: 580-89409-29

### Dilution Batch Prepared Number Lab Run Factor or Analyzed Analyst TAL SEA 312969 10/02/19 05:27 313202 10/03/19 21:10 W1T TAL SEA 1 Lab Sample ID: 580-89409-26 Matrix: Water Dilution Batch Prepared Number or Analyzed Run Factor Lab Analyst 312969 TAL SEA 10/02/19 05:27 313202 10/03/19 21:32 W1T TAL SEA 1

# Client Sample ID: 2B-W-4-091819

## Date Collected: 09/18/19 12:27 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313202	10/03/19 21:55	W1T	TAL SEA

# Client Sample ID: 2A-W-10-091819

## Date Collected: 09/18/19 13:00 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313202	10/03/19 22:17	W1T	TAL SEA

# Client Sample ID: 2A-W-100-091819 Date Collected: 09/18/19 13:10 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313202	10/03/19 22:40	W1T	TAL SEA

# Client Sample ID: 2A-W-41-091819 Date Collected: 09/18/19 13:24 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
Total/NA	Cleanup	3630C			313085	10/02/19 14:50	FCG	TAL SEA
Fotal/NA	Analysis	NWTPH-Dx		1	313202	10/03/19 18:08	W1T	TAL SEA
Fotal/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
Fotal/NA	Analysis	NWTPH-Dx		1	313202	10/03/19 23:03	W1T	TAL SEA

## Client Sample ID: 2A-W-410-091819 Date Collected: 09/18/19 13:30 Date Received: 09/20/19 14:15

ſ	_	Batch	Batch		Dilution	Batch	Prepared		
	Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
				Kull				Analyst	
	Total/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
	Total/NA	Analysis	NWTPH-Dx		1	313202	10/03/19 23:25	W1T	TAL SEA

# Client Sample ID: GW-3-091819 Date Collected: 09/18/19 14:41 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Cleanup	3630C			313124	10/02/19 22:36	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/03/19 18:31	W1T	TAL SEA
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/03/19 21:10	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Cleanup	3630C	RA		313124	10/02/19 22:36	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/09/19 18:34	T1W	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/09/19 20:55	T1W	TAL SEA

# Client Sample ID: GW-30-091819 Date Collected: 09/18/19 15:00

# Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/03/19 21:32	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/09/19 21:15	T1W	TAL SEA

Job ID: 580-89409-1

# Lab Sample ID: 580-89409-32

Lab Sample ID: 580-89409-33

Matrix: Water

Matrix: Water

Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/03/19 21:55	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/09/19 21:35	T1W	TAL SEA

# Client Sample ID: S3-AD-091819 Date Collected: 09/18/19 14:53 Date Received: 09/20/19 14:15

Ргер Туре	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/03/19 22:17	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/09/19 21:56	T1W	TAL SEA

# Client Sample ID: S3-CD-091819 Date Collected: 09/18/19 15:02

# Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/03/19 22:40	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/09/19 22:16	T1W	TAL SEA

# Client Sample ID: S3-BD-091819 Date Collected: 09/18/19 15:30 Date Received: 09/20/19 14:15

-	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/03/19 23:03	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/09/19 22:36	T1W	TAL SEA

# Client Sample ID: S3-BU-091819

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Date Collected: 09/18/19 15:30
Date Received: 09/20/19 14:15
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	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/03/19 23:25	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/09/19 22:56	T1W	TAL SEA

# Job ID: 580-89409-1

# Lab Sample ID: 580-89409-34 Matrix: Water

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)	TAL SEA
Г	TAL SEA

# Lab Sample ID: 580-89409-35 Matrix: Water

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# Lab Sample ID: 580-89409-36

Matrix: Water

# Lab Sample ID: 580-89409-37

Matrix: Water

Lab Sample ID: 580-89409-38

Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/03/19 23:48	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/09/19 23:16	T1W	TAL SEA

# Client Sample ID: S4-CD-091819 Date Collected: 09/18/19 16:07 Date Received: 09/20/19 14:15

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/04/19 00:33	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/09/19 23:56	T1W	TAL SEA

# Client Sample ID: S4-BD-091819 Date Collected: 09/18/19 16:09

# Date Received: 09/20/19 14:15

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/04/19 00:55	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/10/19 00:17	T1W	TAL SEA

# Client Sample ID: S4-BU-091819 Date Collected: 09/18/19 16:16 Date Received: 09/20/19 14:15

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/04/19 01:18	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/10/19 00:37	T1W	TAL SEA

# Client Sample ID: S4-CU-091819

Date Collected: 09/18/19 16:29	Э
Date Received: 09/20/19 14:15	5

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313207	10/04/19 01:40	W1T	TAL SEA
Total/NA	Prep	3510C	RA		312933	10/01/19 15:08	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx	RA	1	313798	10/10/19 00:57	T1W	TAL SEA

# Lab Sample ID: 580-89409-39

Matrix: Water

Matrix: Water

# Lab Sample ID: 580-89409-41

Lab Sample ID: 580-89409-40

Matrix: Water

# Lab Sample ID: 580-89409-42

Matrix: Water

# Lab Sample ID: 580-89409-43

Matrix: Water

Dilution

Factor

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Run

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Batch

Number

312933

313207

312933

313798

Prepared

or Analyzed

10/01/19 15:08

10/04/19 02:03

10/01/19 15:08

10/10/19 01:17 T1W

Batch

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Prep

Prep

Client Sample ID: S1-AU-091919

Date Collected: 09/19/19 09:55

Date Received: 09/20/19 14:15

Analysis

Analysis

Batch

Method

3510C

3510C

NWTPH-Dx

NWTPH-Dx

Client Sample ID: S4-AU-091819

Date Collected: 09/18/19 16:30

Date Received: 09/20/19 14:15

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

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Matrix: Water

Lab Sample ID: 580-89409-44

Lab Sample ID: 580-89409-46

Lab Sample ID: 580-89409-47

Lab Sample ID: 580-89409-48

Lab Sample ID: 580-89409-49

# Lab Sample ID: 580-89409-45 Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

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	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313202	10/04/19 00:10	W1T	TAL SEA

## Client Sample ID: S1-AD-091919 Date Collected: 09/19/19 09:57

## Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313202	10/04/19 00:33	W1T	TAL SEA

# Client Sample ID: S1-BD-091919

Date Collected: 09/19/19 10:46

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313202	10/04/19 00:55	W1T	TAL SEA

# Client Sample ID: S1-BU-091919

Date Collected: 09/19/19 11:02

Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313202	10/04/19 01:18	W1T	TAL SEA

# Client Sample ID: 5-W-180-091719

# Date Collected: 09/19/19 09:30

## Date Received: 09/20/19 14:15

_	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313202	10/04/19 01:40	W1T	TAL SEA

# Client Sample ID: MW-555-091919 Date Collected: 09/19/19 12:00 Date Received: 09/20/19 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			312969	10/02/19 05:27		TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313202	10/04/19 02:03	W1T	TAL SEA

### Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Lab Sample ID: 580-89409-50 Matrix: Water

# Accreditation/Certification Summary

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

# Job ID: 580-89409-1

# Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-19
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-05-19
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

# **Sample Summary**

Collected

09/17/19 09:25

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09/17/19 09:28

09/17/19 10:30

09/17/19 10:49

09/17/19 10:50

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09/17/19 11:53

09/17/19 12:05

09/17/19 12:49

09/17/19 13:43

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09/17/19 15:42

09/17/19 15:54

09/17/19 16:18

09/17/19 16:37

09/18/19 09:11

09/18/19 09:15

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Asset ID

Matrix

Water

# Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

Lab Sample ID 580-89409-1

580-89409-2

580-89409-3

580-89409-4

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580-89409-50

**Client Sample ID** 

5-W-19-091719

EW-2A-091719

5-W-18-091719

5-W-17-091719

5-W-16-091719

5-W-14-091719

1C-W-1-091719

5-W-51-091719

1C-W-8-091719

1C-W-4-091719

5-W-55-091719

5-W-56-091719

1C-W-3-091719

MW-38R-091719

1C-W-7-091719

2A-W-40-091719

2A-W-42-091819

1B-W-3-091819

MW-16-091819

1B-W-2-091819

1B-W-23-091819

MW-4-091819

2A-W-9-091819

1A-W-4-091819

2B-W-4-091819

2A-W-10-091819

2A-W-100-091819

2A-W-41-091819

2A-W-410-091819

GW-3-091819

GW-30-091819

S3-CU-091819

S3-AD-091819

S3-CD-091819

S3-BD-091819

S3-BU-091819

S4-AD-091819

S4-CD-091819

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S4-BU-091819

S4-CU-091819

S4-AU-091819

S1-AU-091919

S1-AD-091919

S1-BD-091919

S1-BU-091919

5-W-180-091719

MW-555-091919

S3-AU-091719

GW-4-091719

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Page 1 of 4

														LAB WORK ORDER:				
BRISF	Laboratory:							Project Mana	ger:		SHIPMENT INFORMATION							
RAILWAY	Address:							Phone:			ş	hipment Mel	thod:					
CHAIN OF CUSTODY	City/State/ZIP:							Fax:			T	racking Num	iber:					
BNSF PROJECT INFORMATION	Project State of	f Origin:			Γ		с	ONSULTAN	T INFORMATION	4	P	roject Number	6	83-067				
BNSF Project Number: 683-067	Project City:	Skykom	sh		Company	FA	palle	SW .			P	roject Manage		te kingst	bn			
BNSF Project Name: BNSF SKykomsh - Ser					Address:				e ne	,,	E	mail: PE	ingsto	m Ofarallo	n con	sulling com		
BNSF Contact:	BNSF Work On	der No.:			City/State				NA 980	227	P	hone 425	5-21	95-0800	ax:			
TURNAROUND TIME	a	ELIVERABLES		] Other De	liverables		1	T		DS FOR ANAL			T		Í			
1-day Rush 5- to 8-day Rush	BNSF SI	andard (Level II)																
2-day Rush 🔀 Standard 10-Day	Level III		C	] EDD Red	a. Format	?		×										
3-day Rush Other	Level IV							A										
	LE INFORM	ATION																
		Samp	ole Collection		Filtered	Type		HALLMN										
Sample Identification	Containers	Date	Time	Sampler	Y/N	(Comp/ Grab)	Matrix	3						COMMENTS		LAB USE		
5-W-19-091719	2	9/17/19	0925	MG	N	6	W	X				····		COMMENT				
2 EW-2A-091719	1	}		GP	1	1	1	X										
5-W-18-091719			· • • · · · · · · · · · · · · · · · · ·	EB				X						- <u> </u>	1			
· 5-W-17-091719				MG				X					****					
6 GW-4-091719			1049	GP				X										
5-W-16-091719			1050	LB		- Carrier		K										
· 5-W-14-091719			1138	MG				X										
· 10-W-1-091719			1153	GP		-		X										
· 5-W-61-091719			1205	CB				X							Ī	<u> </u>		
10 IC-W-8-091719			1249	GP				X										
11 1C-W-4-091719			1343	GP				X										
12 5-W-55-091719			1423	MG				X										
13 5-W-56-091719			1427	CB				χ		-	530-894	09 Chain		siday				
1C-W-3-09,719		ļ	1439	GP			Sector States	X										
15 MW - 38 R - 991719 Relinquished By:	$\vee$	V	1542			$\vee$	$\vee$	X										
Relinquished By:	Date/Time: <b>9</b>	20190730	Received By:	Jall		SEY	t MA		Date/Time: 9-26 + 1 Date/Time:	9 1415	Comments	s and Spec	ial Ana	alytical Require	ments:			
Relinquished By:	Date/Time:		Received By:						Date/Time:									
Received by Laboratory:	Date/Time:		Lab Remarks:	<del></del>					Lab: Custody la		Custody Seal	No.		BNSF C	COC No			

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

																	Page	2 of 4
					L	ABORA	TORY IN	FORMAT		·					LAB WO	RK ORD		
BRIS	Labor	ratory:							Project N	lånager:							SHIPMENT INFORMA	TION
RAILWA	Addre Addre	255:							Phone:						Shipment	Method		
CHAIN OF CUSTODY	C#y/S	State/ZIP:							Fax:						Tracking	Number:		
BNSF PROJECT INFORMATION		ct State of						С	ONSULT	ANT INF	ORMAT	ON			Project Nu	<sup>nber:</sup> 6	685-067	
NSF Project Number: 683-667	Projec	cl City.	Skykon	ush		Compan	Far	allo	n						Project Ma	-	Peter Knyste	*~
ISF Project Number: 683-667 ISF Project Name: BNSF Skykon	ish Semi	Anr	mart			Address	975	5 54	"h Al	IE ,	Va				Email:	king)	ang forallon.	Consetty com
SF Contact:	BNSF	Work Ord	ier No.:			City/Stat	973 e/ZIP: /	ssage	ah						Phone:	415.	ingtaigton	
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] 1-day Rush 5- to 8-day Rush	R	BNSF Sta	andard (Level II)							Get (BAN								
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] 3-day Rush		Level IV							1	U V V								
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Sample Identification	Con	ntainers	Date	Time	Samplei	1 Y/N	(Comp/ Grab)	Matrix	X	N.							COMMENTS	LAB USE
1C-W-7-091719		2	9/17/19	1554	GP	N	6	W	X									
24-W-40-091719		2	9/17/19	1618	CB	N	6	Ŵ	K									
53-AU-091719	é		9/17/19	1637	MG	N	6	W	K									
24-04-42-091819			9/18/19	2911	GP				X		L							
1B-W-3-091819				0915	MG				X									
MW-16-09184				0957	CB				X									
1B-W-2-091819				1022					X									
1B-W-23-091819				1041	6P				X									
mw-4-091819				117	CB				X									
2A-W-9-091819			****	1157	MG				X									
1A-W-4-091819			and the second se	1220	GP				X									
28-W-4-091819				1227	СB		Habbarry		X									
24-W-10-091819				1300	m6				X									
2A-W-100-091819				1310	MG				X									
2A-W-41-091819		Y	V	1324	69	$\mathbb{V}$	$\mathbb{V}$	V	X	Х								
inquished By:	Date/T	<sup>ime:</sup> 9/2	0/90730	Regived By:	fell		EA	7i4			Date/Time:	9 14	15	Comme	nts and S	pecial /	Analytical Requirement	.s:
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linguished By:	Date/1	ime:		Received By:							Date/Time:							
sceived by Laboratory:	Date/Y	'ime:		Lab Remarks:							Lab: Custor	dy Intact? s		Custody Se	al No.		BNSF COC N	,

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

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															Page	2 3 of 4
BNSF	Laboratory:			LÆ	ABORA	FORY IN	IFORMA	Project M	anager:			t	LAB W	ORK ORDI	SHIPMENT INFORM	
RAILWAY	Address:							Phone:					Shipme	nt Method:		
CHAIN OF CUSTODY	City/State/ZIP							Fax:					Trackin	g Number:		
BNSF PROJECT INFORMATION	Project State of	əf Örigin:			Τ		c	ONSULT	ANT INF	ORMAT	ION		Project N	lumber:	83-067	
ISF Project Number: 683-67	Project City:				Compan	H	aval	lor-					Project N	Aanager:	Rek Kelyshu	- n Conseiltry : Con-
	Sem' An BNSF Work O	nnial			Address:	Ĝ	75	5th.	AVE	- 11	V		Email:	plings	Mr @ fouralle	" consulting on
ISF Contact:	BNSF Work O	rder No.:			City/Stat	e/ZIP:	Issaq	wah	· ~	N	N 980° HODS FOR A	27	Phòne:	\$25	-295-0800 Fax	
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2-day Rush Kandard 10-Day	Level III			] EDD Red	q, Formal	?		à	FIC							
3-day Rush Other	Level IV	·							J.							
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		Date	Time	Sampler		Grab)		-	N	1	<u> </u>				COMMENTS	LAB USE
24-W-40-091819	5	9118/19	1330			6	W	K								
GW-3+091819 GW-30-091819		<u> </u>	1441	1	++-			X	×							
		<u> </u>	1500					X		1						
<u>53-CU-091819</u>		<u>      </u>	1452	1				X							· · · · · · · · · · · · · · · · · · ·	
53-AD-091819			1453		$\left  \cdot \right $	+		$\frac{1}{X}$								
53 - CD - 091819			1530					$\frac{1}{X}$								-
53-BD - 091819 53-BU - 091819			1530		$\left  \right $	┼╌┟		X								
53 - BQ - 091819			1606	GP		+		K		1						
54 - CD - 091819			1607	MG		+	+ +	x X	1							
54 - BD - 091819				B			$\pm t$	X		1						
		<u>                                      </u>	1616	CB				K								
<u>54-BU - 091819</u> 54-CU - 091819			1629	MG				X								
54-AU-091819		1	1630	GP		$\square$		X								
SI- AU-091919	V	9119119	0955			$ \Psi $	V	X								
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cceived by Laboratory:	Date/Time:		Lab Remarks:							Lab: Custo		Custod	y Seal No.		BNSF COC	ND

10/10/2019

					BORAT	ORY INF	ORMAT	ION							DRK ORD	Page \$	of 4
BNSF	Laboratory:						Q. C. M. Z. C.	Project Ma	anager:							SHIPMENT INFORMAT	ION
RAILWAY	Address:							Phone:						Shipmer	nt Method	i:	
CHAIN OF CUSTODY	City/State/ZIP:							Fax:		*****				Tracking	Number:		
BNSF PROJECT INFORMATION	Project State o	f Origin:					C	ONSULT	ANT IN	FORMAT	ION			Project N			
BNSF Project Number: 683-067	Project City;	stykom	sh, u)	A	Company	- Fa	Nall	εM						Project M	anager:	Refe Kingstor	)
BNSF Project Name: BNSF Stykowish					Address:	a7	5 4	the A	112	NW				Email: P	tings	trapustion	mitterion
BNSF Contact:	BNSF Work Or	der No.:			City/State	a/ZIP	1550	qua	hic	SA	987	727		Phone:	425-	kk kingstor stræburduren 295-0500 Fax	J
TURNAROUND TIME	C	ELIVERABLES	Ĺ	] Other De	liverables	:?		Γ*		MET	HOD'S FO	DR ANAL	YSIS	·····			I
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S1-AD-091919	2	9/19/19	0957	CB	N	6	W	X						1		COMMENTS	LAB USE
251-BD-091919		11. 1. 1. 1.	1046	1				X					-	1			
SI-BU-091919			1102					x						1			
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ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

Them, ID: $M^2$ (ror: $0.6 \circ$ (no: $1.3 \circ$ Couler Die: $1.5 \circ 51 \circ$ FedEx: Cust. Sed: Ves $1.5 \circ$ Information Information Blue fee, in the provided interval interval in the provided interval interval interval in the p	Therm. ID: A Corr. 1.0 ° Unc: 1.7 ° Cooler Dsc: 7 B Corr. FedEx: Packing: B Courr. FedEx: Cust. Seal: Ves No UPS: Blue Ice (Met.) Dry, None Other:	Therm. ID: M2 Cor: 1.1 ° Unc. 6 ° Cooler Dsc: 1 Sl. FedEx: Packing: 5 5 1 Urp: FedEx: Cust. Seal: Yes × None Urps: Blue Ice, Web Dry, None Other:	Therm. ID:       MCorr.       O.O       Unc:       O.T       o         Cooler       Dsc:       I       Blue       FedEx:       FedEx:	Therm. ID: ML Cor: 1.0 ° Unc: 1.7 ° Cooler Dsc: 1.5 8/2 FedEx: Packing: Byb UPS: Cust. Seal: Yes XN0 Lab Cour: X Blue Ice, Vet Dry, None Other:	Therm. ID: <u>Mc</u> Cor: <u>0.3 °</u> Unc: <u>1.0 °</u> Cooler Dsc: <u>15 B1.4</u> FedEx: Packing: <u>1.4 B1.4</u> FedEx: Cust. Seal: <u>Ves <u>7.</u> ° Lab Cour: <u>6</u> Blue Ice, <u>(et)</u> Dry, None <u>Other:</u></u>	Therm. ID: <u>MAC</u> Cor: <u>1.3</u> ° (m: <u>2.0</u> ° Cooler Dsc: <u>1 ~ 6</u> <del>FedEx:</del> Packing: <u>B. 66 FedEx:</u> Cust. Seat: <u>Ves. Vo</u> UPS: Blue Ice, <u>Cor</u> Dry, None Other:	Therm. ID: <b>H2</b> <u>Cor:</u> 1. 6 ° Unc: 2.3 ° Cooler Dsc: 1/1 G <u>FedEx:</u> Packing: 3.6 FedEx: Cust. Seal: Ves 2 No UPS: Blue Ice, Wet, Dry, None Other:	Therm. ID:       A72       Cor:       U.3       °       Unc:       /.0       °         Cooler Dsc:       Lab       Grave       FedEx:       PedEx:       PedEx:	Therm. ID: At Cor: 0.6 ° Unc: 1.3 ° Cooler Dsc: 15 Green FedEx: Packing: 6.5 / UPS: Cust. Seal: Ves 5.0 Lab Cour: 7 Blue fee(We) Dry, None Other:	
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and the second

Client: Farallon Consulting LLC

# Login Number: 89409 List Number: 1

Creator: Vallelunga, Diana L

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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	
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 <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 580-89409-1

List Source: Eurofins TestAmerica, Seattle

# 🛟 eurofins

# Environment Testing TestAmerica

# **ANALYTICAL REPORT**

## Eurofins TestAmerica, Seattle 5755 8th Street East Tacoma, WA 98424 Tel: (253)922-2310

## Laboratory Job ID: 580-89413-1

Client Project/Site: BNSF Skykomish Ground Water

## For:

..... Links

Review your project results through

**Total** Access

Have a Question?

Ask-

The

www.testamericainc.com

Visit us at:

Expert

Farallon Consulting LLC 975 5th Avenue NW Suite 100 Issaquah, Washington 98027

Attn: Peter Kingston

Knittene D. allen

Authorized for release by: 10/4/2019 4:29:57 PM

Kristine Allen, Manager of Project Management (253)248-4970 kristine.allen@testamericainc.com

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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## Job ID: 580-89413-1

#### Laboratory: Eurofins TestAmerica, Seattle

#### Narrative

Job Narrative 580-89413-1

**Case Narrative** 

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/20/2019 2:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were -0.2° C and 1.0° C.

#### **Receipt Exceptions**

The container label for Sample 580-89413-6 did not match the information listed on the Chain-of-Custody (COC): The Sample label listed EW-100-091919, while the COC listed EW-10-091919.

#### GC Semi VOA

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.

## **Definitions/Glossary**

## Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

Glossary

Job ID: 5

580-89413-1	
560-69415-1	
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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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

## Client Sample ID: GW-1-091919 Date Collected: 09/19/19 08:20

Date Received: 09/20/19 14:15

Method: NWTPH-Dx - Northwest -			Products (GC)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	

Surrogate o-Terphenyl	%Recovery Qualified 84	<b>Fier</b> Limits 50 - 150			<b>Prepared</b> 10/02/19 12:48	Analyzed	Dil Fac
Motor Oil (>C24-C36)	ND	0.091	0.091	mg/L	10/02/19 12:48	10/03/19 15:37	1
#2 Diesel (C10-C24)	ND	0.062	0.062	mg/L	 10/02/19 12:48	10/03/19 15:37	1

Lab Sample ID: 580-89413-1 Matrix: Water

Dil Fac

Job ID: 580-89413-1

Analyzed

Prepared

Eurofins TestAmerica, Seattle

## Client Sample ID: 5-W-43-091919 Date Collected: 09/19/19 08:22

Date Received: 09/20/19 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 12:48	10/03/19 15:57	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		10/02/19 12:48	10/03/19 15:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	83		50 - 150				10/02/19 12:48	10/03/19 15:57	1

Job ID: 580-89413-1

## Lab Sample ID: 580-89413-2 Matrix: Water

vialrix. vvaler

5

## Client Sample ID: PZ-75-091919 Date Collected: 09/19/19 08:24

Date Received: 09/20/19 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 12:48	10/03/19 16:17	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 12:48	10/03/19 16:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	59		50 - 150				10/02/19 12:48	10/03/19 16:17	1

Job ID: 580-89413-1

Matrix: Water

Lab Sample ID: 580-89413-3

## Client Sample ID: PZ-8-091919 Date Collected: 09/19/19 09:20

Date Received: 09/20/19 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 12:48	10/03/19 16:37	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 12:48	10/03/19 16:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	73		50 - 150				10/02/19 12:48	10/03/19 16:37	1

Job ID: 580-89413-1

Matrix: Water

5

Lab Sample ID: 580-89413-4

## Client Sample ID: EW-1-091919 Date Collected: 09/19/19 09:21

Date Received: 09/20/19 14:15

 Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)											
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed			
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 12:48	10/03/19 16:58			
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 12:48	10/03/19 16:58			
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed			
o-Terphenyl	84		50 _ 150				10/02/19 12:48	10/03/19 16:58			

Job ID: 580-89413-1

Matrix: Water

Dil Fac

Dil Fac

1

1

1

Lab Sample ID: 580-89413-5

## Client Sample ID: EW-10-091919 Date Collected: 09/19/19 09:25

Date Received: 09/20/19 14:15

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

Analyte #2 Diesel (C10-C24)	ND	Qualifier	RL	MDL 0.062	mg/L	<u> </u>	Prepared 10/02/19 12:48	Analyzed	Dil Fac
Motor Oil (>C24-C36) Surrogate	ND % <b>Recovery</b>	Qualifier	0.091 <i>Limits</i>	0.091	mg/∟		10/02/19 12:48 Prepared	10/03/19 17:18 Analyzed	1 Dil Fac
o-Terphenyl	68		50 - 150				10/02/19 12:48	10/03/19 17:18	1

Job ID: 580-89413-1

## Lab Sample ID: 580-89413-6

Matrix: Water

5

## Client Sample ID: GW-2-091919 Date Collected: 09/19/19 09:21

Date Received: 09/20/19 14:15

Method: NWTPH-Dx - Northwest -	Semi-Volatile	Petroleum I	Products (GC)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 12:48	
Motor Oil (>C24-C36)	ND		0.091	0.091	ma/l		10/02/19 12:48	

Motor Oil (>C24-C36)	ND	0.091	0.091 mg/L	10/02/19 12:48	10/03/19 17:38
Surrogate o-Terphenyl	71 Qualifier	Limits 50 - 150		<b>Prepared</b> 10/02/19 12:48	Analyzed

Lab Sample ID: 580-89413-7

Analyzed 10/03/19 17:38

Eurofins TestAmerica, Seattle

680-89413-7 Matrix: Water

1

1

1

Dil Fac

## Client Sample ID: WG-WV-091919 Date Collected: 09/19/19 10:09

Date Received: 09/20/19 14:15

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)	
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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.24		0.062	0.062	mg/L		10/02/19 12:48	10/03/19 18:18	1
Motor Oil (>C24-C36)	0.14		0.091	0.091	mg/L		10/02/19 12:48	10/03/19 18:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	57		50 - 150				10/02/19 12:48	10/03/19 18:18	1

Job ID: 580-89413-1

# Lab Sample ID: 580-89413-8 Matrix: Water

5

Job ID: 580-89413-1

## Client Sample ID: FWG-WV-091919 Date Collected: 09/19/19 10:25

Date Received: 09/20/19 14:15

## Lab Sample ID: 580-89413-9 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 12:48	10/03/19 18:38	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 12:48	10/03/19 18:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	80		50 - 150				10/02/19 12:48	10/03/19 18:38	1

## Client Sample ID: WG-EV-091919 Date Collected: 09/19/19 10:25

Date Received: 09/20/19 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.47		0.062	0.062	mg/L		10/02/19 12:48	10/03/19 18:59	1
Motor Oil (>C24-C36)	0.23		0.091	0.091	mg/L		10/02/19 12:48	10/03/19 18:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				10/02/19 12:48	10/03/19 18:59	1

Lab Sample ID: 580-89413-10

Matrix: Water

## Client Sample ID: FWG-EV-091919 Date Collected: 09/19/19 10:47

Date Received: 09/20/19 14:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 12:48	10/03/19 19:19	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 12:48	10/03/19 19:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				10/02/19 12:48	10/03/19 19:19	1

Lab Sample ID: 580-89413-11

Job ID: 580-89413-1

Matrix: Water 5

## Client Sample ID: S2-AU-091919 Date Collected: 09/19/19 11:15

Date Received: 09/20/19 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 12:48	10/03/19 19:39	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 12:48	10/03/19 19:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	58		50 - 150				10/02/19 12:48	10/03/19 19:39	1

Lab Sample ID: 580-89413-12

Matrix: Water

Job ID: 580-89413-1

## Client Sample ID: S2-AD-091919 Date Collected: 09/19/19 11:22

Date Received: 09/20/19 14:15

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 12:48	10/03/19 19:59	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 12:48	10/03/19 19:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	88		50 - 150				10/02/19 12:48	10/03/19 19:59	1

10/4/2019

Job ID: 580-89413-1

Lab Sample ID: 580-89413-13

## Client Sample ID: S2-BD-091919 Date Collected: 09/19/19 11:28

Date Received: 09/20/19 14:15

Method: NWTPH-Dx - North Analyte		Petroleum Qualifier	Products (GC) RL		Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		10/02/19 12:48	10/03/19 20:19	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 12:48	10/03/19 20:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	85		50 - 150				10/02/19 12:48	10/03/19 20:19	1

10/4/2019

## Lab Sample ID: 580-89413-14 Matrix: Water

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## Client Sample ID: S2-BU-091919 Date Collected: 09/19/19 11:30

Date Received: 09/20/19 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.42		0.062	0.062	mg/L		10/02/19 12:48	10/03/19 20:39	1
Motor Oil (>C24-C36)	0.20		0.091	0.091	mg/L		10/02/19 12:48	10/03/19 20:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	87		50 - 150				10/02/19 12:48	10/03/19 20:39	1

Lab Sample ID: 580-89413-15 Matrix: Water

Job ID: 580-89413-1

## Client Sample ID: GW-20-091919 Date Collected: 09/19/19 16:30

Date Received: 09/20/19 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		10/02/19 12:48	10/03/19 21:00	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		10/02/19 12:48	10/03/19 21:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				10/02/19 12:48	10/03/19 21:00	1

Job ID: 580-89413-1

Matrix: Water

2 Lab Sample ID: 580-89413-16

5

10/4/2019

Lab Sample ID: MB 580-313064/1-A

Lab Sample ID: LCS 580-313064/2-A

Matrix: Water

#2 Diesel (C10-C24)

Motor Oil (>C24-C36)

Analyte

Surrogate

Analyte

Surrogate

o-Terphenyl

o-Terphenyl

Matrix: Water

#2 Diesel (C10-C24)

Motor Oil (>C24-C36)

Analysis Batch: 313198

Analysis Batch: 313198

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

MB MB

MB MB

Result

ND

ND

85

%Recovery

LCS LCS

%Recovery Qualifier

74

Prep Type: Total/NA

Prep Batch: 313064

**Client Sample ID: Method Blank** 

#### Qualifier RL MDL Unit Prepared Analyzed Dil Fac D 10/02/19 12:47 10/03/19 14:36 0.065 0.065 mg/L 1 0.096 0.096 mg/L 10/02/19 12:47 10/03/19 14:36 1 Qualifier Limits Prepared Analyzed Dil Fac 50 - 150 10/02/19 12:47 10/03/19 14:36 1 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA Prep Batch: 313064 LCS LCS Spike %Rec. Added Result Qualifier %Rec Limits Unit D 0.500 0.378 76 50 - 120 mg/L 0.500 0.506 101 mg/L 64 - 120 Limits 50 - 150

Lab Sample ID: LCSD 580-31 Matrix: Water Analysis Batch: 313198					Prep T	l Sampl ype: To Batch: 3	tal/NA				
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
#2 Diesel (C10-C24)			0.500	0.381		mg/L		76	50 - 120	1	26
Motor Oil (>C24-C36)			0.500	0.503		mg/L		101	64 - 120	1	24
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
o-Terphenyl	73		50 - 150								

Client Sample ID: GW-1-091919

Date Collected: 09/19/19 08:20

Date Received: 09/20/19 14:15

Lab Sample ID: 580-89413-1

# Lab Sample ID: 580-89413-2 Matrix: Water

Matrix: Water

	Batch	Batch
Prep Type	Туре	Method
Total/NA	Prep	3510C
Total/NA	Analysis	NWTPH-Dx

#### Client Sample ID: 5-W-43-091919 Date Collected: 09/19/19 08:22 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			313064	10/02/19 12:48	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313198	10/03/19 15:57	ERZ	TAL SEA

Dilution

Factor

1

Run

Batch

Number

313064

313198

Prepared

or Analyzed

10/02/19 12:48

10/03/19 15:37

Analyst

PRO

ERZ

Lab

TAL SEA

TAL SEA

## Client Sample ID: PZ-75-091919

Lab Sample ID: 580-89413-3 Matrix: Water

Lab Sample ID: 580-89413-4

Lab Sample ID: 580-89413-5

Lab Sample ID: 580-89413-6

Matrix: Water

Matrix: Water

Matrix: Water

#### Date Collected: 09/19/19 08:24 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			313064	10/02/19 12:48	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313198	10/03/19 16:17	ERZ	TAL SEA

## Client Sample ID: PZ-8-091919

## Date Collected: 09/19/19 09:20

Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			313064	10/02/19 12:48	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313198	10/03/19 16:37	ERZ	TAL SEA

## Client Sample ID: EW-1-091919

Date Collected: 09/19/19 09:21 Date Received: 09/20/19 14:15

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	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			313064	10/02/19 12:48	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313198	10/03/19 16:58	ERZ	TAL SEA

#### Client Sample ID: EW-10-091919 Date Collected: 09/19/19 09:25 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			313064	10/02/19 12:48	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313198	10/03/19 17:18	ERZ	TAL SEA

Client Sample ID: GW-2-091919

Lab Sample ID: 580-89413-7

	09/19/19 09:2								Matrix: Wate
ate Received:	09/20/19 14:1	5							
-	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			313064	10/02/19 12:48	PRO	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	313198	10/03/19 17:38	ERZ	TAL SEA	
Client Sample	e ID: WG-W	V-091919					La	b Sample I	D: 580-89413-
Date Collected:									Matrix: Wate
Date Received:									
-	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep				313064	10/02/19 12:48	PRO	TAL SEA	
	•			4					
Total/NA	Analysis	NWTPH-Dx		1	313198	10/03/19 18:18	ERZ	TAL SEA	
Client Sample	e ID: FWG-V	VV-091919					La	ab Sample I	D: 580-89413-
Date Collected:	09/19/19 10:2	5							Matrix: Wate
Date Received:	09/20/19 14:1	5							
-	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			313064	10/02/19 12:48	PRO	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	313198	10/03/19 18:38	ERZ	TAL SEA	
- Client Semple		/ 001010					Lak	Sampla IF	. 500 00/12 1
Client Sample							Lat	Sample IL	: 580-89413-1
Date Collected:	09/19/19 10:2	5							Matrix: Wate
		_							
Date Received:	09/20/19 14:1	5							
_	09/20/19 14:15 Batch	5 Batch		Dilution	Batch	Prepared			
Date Received:			Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab	
_	Batch	Batch	Run			-	Analyst PRO	- Lab TAL SEA	
Prep Type	Batch Type	Batch Method	Run		Number	or Analyzed			
Total/NA Total/NA	Batch Type Prep Analysis	Batch Method 3510C NWTPH-Dx	Run	Factor	Number 313064	or Analyzed	PRO ERZ	TAL SEA TAL SEA	): 580-89413-1
Prep Type Total/NA Total/NA Client Sample	Batch Type Prep Analysis e ID: FWG-E	Batch Method 3510C NWTPH-Dx EV-091919	Run	Factor	Number 313064	or Analyzed	PRO ERZ	TAL SEA TAL SEA	
Prep Type Total/NA Total/NA Client Sample Date Collected:	Batch Type Prep Analysis e ID: FWG-E 09/19/19 10:4'	Batch Method 3510C NWTPH-Dx EV-091919 7	Run	Factor	Number 313064	or Analyzed	PRO ERZ	TAL SEA TAL SEA	
Prep Type Total/NA Total/NA Client Sample Date Collected:	Batch Type Prep Analysis e ID: FWG-E 09/19/19 10:4 09/20/19 14:15	Batch Method 3510C NWTPH-Dx EV-091919 7 5	Run	1	Number 313064 313198	or Analyzed 10/02/19 12:48 10/03/19 18:59	PRO ERZ	TAL SEA TAL SEA	
Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received:	Batch Type Prep Analysis e ID: FWG-E 09/19/19 10:4 09/20/19 14:15 Batch	Batch Method 3510C NWTPH-Dx EV-091919 7 5 Batch		_ Factor1	Number 313064 313198 Batch	or Analyzed 10/02/19 12:48 10/03/19 18:59 Prepared	PRO ERZ	TAL SEA TAL SEA Sample ID	
Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type	Batch Type Prep Analysis e ID: FWG-E 09/19/19 10:4' 09/20/19 14:1! Batch Type	Batch Method 3510C NWTPH-Dx EV-091919 7 5 Batch Method	Run	1	Number 313064 313198 Batch Number	or Analyzed 10/02/19 12:48 10/03/19 18:59 Prepared or Analyzed	PRO ERZ Lat	TAL SEA TAL SEA <b>Sample ID</b>	
Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA	Batch Type Prep Analysis e ID: FWG-E 09/19/19 10:4' 09/20/19 14:1! Batch Type Prep	Batch Method 3510C NWTPH-Dx EV-091919 7 5 Batch Method 3510C		1	Number           313064           313198           Batch           Number           313064	or Analyzed 10/02/19 12:48 10/03/19 18:59 Prepared or Analyzed 10/02/19 12:48	PRO ERZ Lak Analyst PRO	TAL SEA TAL SEA D Sample ID	
Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type	Batch Type Prep Analysis e ID: FWG-E 09/19/19 10:4' 09/20/19 14:1! Batch Type	Batch Method 3510C NWTPH-Dx EV-091919 7 5 Batch Method		_ Factor1	Number 313064 313198 Batch Number	or Analyzed 10/02/19 12:48 10/03/19 18:59 Prepared or Analyzed	PRO ERZ Lat	TAL SEA TAL SEA <b>Sample ID</b>	
Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Total/NA	Batch Type Prep Analysis e ID: FWG-E 09/19/19 10:4' 09/20/19 14:1! Batch Type Prep Analysis e ID: S2-AU	Batch Method 3510C NWTPH-Dx <b>EV-091919</b> 7 5 Batch Method 3510C NWTPH-Dx -091919		1	Number           313064           313198           Batch           Number           313064	or Analyzed 10/02/19 12:48 10/03/19 18:59 Prepared or Analyzed 10/02/19 12:48	PRO ERZ Lat Analyst PRO ERZ	TAL SEA TAL SEA <b>Sample ID</b> <b>Lab</b> TAL SEA TAL SEA	9: 580-89413-1 Matrix: Wate 9: 580-89413-1
Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample	Batch Type Prep Analysis e ID: FWG-E 09/19/19 10:4' 09/20/19 14:1! Batch Type Prep Analysis e ID: S2-AU	Batch Method 3510C NWTPH-Dx <b>EV-091919</b> 7 5 Batch Method 3510C NWTPH-Dx -091919		1	Number           313064           313198           Batch           Number           313064	or Analyzed 10/02/19 12:48 10/03/19 18:59 Prepared or Analyzed 10/02/19 12:48	PRO ERZ Lat Analyst PRO ERZ	TAL SEA TAL SEA <b>Sample ID</b> <b>Lab</b> TAL SEA TAL SEA	Matrix: Wate
Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Total/NA Client Sample Date Collected:	Batch Type Prep Analysis e ID: FWG-E 09/19/19 10:4' 09/20/19 14:19 Batch Type Prep Analysis e ID: S2-AU 09/19/19 11:19	Batch Method 3510C NWTPH-Dx EV-091919 7 5 Batch Method 3510C NWTPH-Dx -091919 5		1	Number           313064           313198           Batch           Number           313064	or Analyzed 10/02/19 12:48 10/03/19 18:59 Prepared or Analyzed 10/02/19 12:48	PRO ERZ Lat Analyst PRO ERZ	TAL SEA TAL SEA <b>Sample ID</b> <b>Lab</b> TAL SEA TAL SEA	Matrix: Wat
Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Total/NA Client Sample Date Collected:	Batch Type Prep Analysis e ID: FWG-E 09/19/19 10:4' 09/20/19 14:19 Batch Type Prep Analysis e ID: S2-AU 09/19/19 11:19	Batch Method 3510C NWTPH-Dx EV-091919 7 5 Batch Method 3510C NWTPH-Dx -091919 5		1	Number           313064           313198           Batch           Number           313064	or Analyzed 10/02/19 12:48 10/03/19 18:59 Prepared or Analyzed 10/02/19 12:48	PRO ERZ Lat Analyst PRO ERZ	TAL SEA TAL SEA <b>Sample ID</b> <b>Lab</b> TAL SEA TAL SEA	Matrix: Wate
Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA	Batch Type Prep Analysis e ID: FWG-E 09/19/19 10:4' 09/20/19 14:1! Batch Type Prep Analysis e ID: S2-AU 09/19/19 11:1! 09/20/19 14:1!	Batch Method 3510C NWTPH-Dx EV-091919 7 5 Batch Method 3510C NWTPH-Dx -091919 5 5		Factor 1 Dilution Factor 1	Number           313064           313198           Batch           Number           313064           313198	or Analyzed 10/02/19 12:48 10/03/19 18:59 Prepared or Analyzed 10/02/19 12:48 10/03/19 19:19	PRO ERZ Lat Analyst PRO ERZ	TAL SEA TAL SEA <b>Sample ID</b> <b>Lab</b> TAL SEA TAL SEA	Matrix: Wate
Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Total/NA Client Sample Date Collected: Date Received:	Batch Type Prep Analysis e ID: FWG-E 09/19/19 10:4' 09/20/19 14:12 Batch Type Prep Analysis e ID: S2-AU 09/19/19 11:12 09/20/19 14:12	Batch Method 3510C NWTPH-Dx EV-091919 7 5 Batch Method 3510C NWTPH-Dx -091919 5 5 Batch Batch	Run	Factor 1 Dilution Factor 1 Dilution	Number           313064           313198           Batch           Number           313064           313198	or Analyzed 10/02/19 12:48 10/03/19 18:59 Prepared or Analyzed 10/02/19 12:48 10/03/19 19:19 Prepared	PRO ERZ Lak PRO ERZ Lak	TAL SEA TAL SEA <b>Sample ID</b> <b>Lab</b> TAL SEA TAL SEA <b>Sample ID</b>	Matrix: Wate

Matrix: Water

Matrix: Water

Lab Sample ID: 580-89413-13

Lab Sample ID: 580-89413-14

## Client Sample ID: S2-AD-091919 Date Collected: 09/19/19 11:22 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			313064	10/02/19 12:48	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313198	10/03/19 19:59	ERZ	TAL SEA

### Client Sample ID: S2-BD-091919 Date Collected: 09/19/19 11:28 Date Received: 09/20/19 14:15

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			313064	10/02/19 12:48	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313198	10/03/19 20:19	ERZ	TAL SEA

## Client Sample ID: S2-BU-091919

Lab Sample ID: 580-89413-15 Matrix: Water

#### Date Collected: 09/19/19 11:30 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			313064	10/02/19 12:48	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313198	10/03/19 20:39	ERZ	TAL SEA

## Client Sample ID: GW-20-091919

#### Lab Sample ID: 580-89413-16 Matrix: Water

#### Date Collected: 09/19/19 16:30 Date Received: 09/20/19 14:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			313064	10/02/19 12:48	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313198	10/03/19 21:00	ERZ	TAL SEA

#### Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

## Accreditation/Certification Summary

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

#### Job ID: 580-89413-1

#### Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-19
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-05-19
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

## Sample Summary

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-89413-1	GW-1-091919	Water	09/19/19 08:20	09/20/19 14:15	
580-89413-2	5-W-43-091919	Water	09/19/19 08:22	09/20/19 14:15	
580-89413-3	PZ-75-091919	Water	09/19/19 08:24	09/20/19 14:15	
580-89413-4	PZ-8-091919	Water	09/19/19 09:20	09/20/19 14:15	
580-89413-5	EW-1-091919	Water	09/19/19 09:21	09/20/19 14:15	
580-89413-6	EW-10-091919	Water	09/19/19 09:25	09/20/19 14:15	
580-89413-7	GW-2-091919	Water	09/19/19 09:21	09/20/19 14:15	
580-89413-8	WG-WV-091919	Water	09/19/19 10:09	09/20/19 14:15	
580-89413-9	FWG-WV-091919	Water	09/19/19 10:25	09/20/19 14:15	
580-89413-10	WG-EV-091919	Water	09/19/19 10:25	09/20/19 14:15	
580-89413-11	FWG-EV-091919	Water	09/19/19 10:47	09/20/19 14:15	
580-89413-12	S2-AU-091919	Water	09/19/19 11:15	09/20/19 14:15	
580-89413-13	S2-AD-091919	Water	09/19/19 11:22	09/20/19 14:15	
580-89413-14	S2-BD-091919	Water	09/19/19 11:28	09/20/19 14:15	
580-89413-15	S2-BU-091919	Water	09/19/19 11:30	09/20/19 14:15	
580-89413-16	GW-20-091919	Water	09/19/19 16:30	09/20/19 14:15	

						ORY IN		101		Loc: 580	Page 10F2		
BNSF				ABORAI		FORMAI	Project Ma	nager:	89413	VORK ORDER.			
	Address:	Address: Phone:								SHIPMENT INFORMATION			
RAILWAY	City/State/ZiP							Fax:		<b></b>	ant Method:		
CHAIN OF CUSTODY					-			1 04.		<b></b>	g Number:		
BNSF PROJECT INFORMATION	Project State o	of Origin: W J	4				с	ONSULTA	NT INFORMATION		ject Number: 683-067		
BNSF Project Number: 683-067	Project City:	Skykon	rish, w	A	Company	Far	all			Pro	ject Manager: Peter Kingston		
BNSF Project Name: BNSF Stytemsh - M	with	1			Address:	97	5	519 1	AVE NW	En	at Pkingston pavallen consulty com		
BNSF Contact:	BNSF Work O	der No.:			City/State	VZIP: L	85a	Jush	WA 981	Pho D77	iect Managar. Peter Kingston all Pkingston favallen Connelby com-		
TURNAROUND TIME		ELIVERABLES	C	] Other De	liverables			Í	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	OR ANALYSIS	The second second second second second second second second second second second second second second second s		
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3-day Rush Other	Level IV												
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GW-1-091919	2	9/19/19	0520	mG	N	6	$\omega$	X					
5-W-43-091919			0822	CB				X					
PZ-75-091919			osey	1			:	X					
PZ-8-091919			0920	1				R					
EW-1-091919			0921					K					
EW-10-091919	1		0925					X		530-894	113 Chain of Custody		
GW-2-091919				GP				X			······································		
WG-WV-091919			1	GP				K	·	The	rm. ID: M2 Cor: 1.C . Unc: 1.7 .		
FWG-WV-091919	<u> </u>			MG				X		Coo	rm. ID: <u>M2</u> Cor: <u>1.6</u> • Unc: <u>1.7</u> •		
· WG-EV- 091919	<u> </u>		1025	GP				X		Pac Cus	king: _ <b>12 = 2</b> UPS: t. Seal: Ves_ <u>7</u> No Lab Cour:		
FWG-EV-091919			1	CB				K			e Ice (Ver Dry, None Other:		
2 S2-AU-91919	<u> </u>		1047	1				X			<u> </u>		
3 S2 ~ AD- 091919			1115	MG				<u> </u>		The	Im. ID: #2 Cor:=0.2 ° Unc: 0.5 ° ler Dsc: 1r; Blee FedEx:		
			1	CB				$\rightarrow$		Coo	ler Dsc:FedEx:		
<u>. 32-BD-091919</u>	$-\sqrt{r}$		1128			$\forall$		X		Pac	king:_ <b>K-9</b> UPS: t. Seal: Yes <u>+</u> NoLab Cour:_ <u>*</u>		
5 52- BU-991919	Date/Time:		130 Received By:	MG M A				X	Date/Time:	Comn Blue	king:       B-5       FedEX:         UPS:       UPS:         t. Seal: Ves       No       Lab Cour:         e Ice, Vet Dry, None       Other:		
Relinquished By:	Date/Time.	00/90730	Received By:	Jall		3E	14 TR		Date/Time: 9-20-19-15 Date/Time:	H5			
Relinquished By:	Date/Time;		Received By:						Date/Time:				
Received by Laboratory:	Date/Time:		Lab Remarks:	. <u> </u>					Lab: Custody Intact?	Custody Seal No	BNSF COC No		
	1		l						🗌 Yes 🗌	No			

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

TAL-1001 (0912)

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BNSF	Laboratory:				ABORAI	OKT IN	FURMAT	Project M	anager:					LAB W	ORK ORD	SHIPMENT INFORMAT	TION
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CHAIN OF CUSTODY	City/State/ZIP:							Fax:						Trackin	g Number:	-	
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BNSF Project Number: 683-067	Project City:	Aukon	nsh		Company	Ta	ral	lon				• <u> </u>		Project N	Manager:	Pet Lingston	
BNSF PROJECT INFORMATION BNSF Project Number: 683-067 BNSF Project Name: BNSF Stykomish BNSF Contact:	- Mon BNSF Work O	they der No.:			Address: City/State	gi7	55	R AI	UE	NW F *	205.0			Email: Phone:	pling	653-067 fet Lingston Anotavalluce 195-0300 Fax	wsulfing. C-on
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A-day Rush Other	Level IV							1		****							
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Sample Identification	Containers	Samp	ole Collection		Filtered	Type (Comp/	Matrix	3			-						
		Dale	Time	Sampler	Y/N	Grab)		₹								COMMENTS	LAB USE
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Relinquished By:	Date/Time:		Received By:							Date/Time	:						
Received by Laboratory:	Date/Time <sup>-</sup>		Lab Remarks:							Lab: Custo	ody Intact? es	No	Custody S	eal No.		BNSF COC No	

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

Client: Farallon Consulting LLC

### Login Number: 89413 List Number: 1

Creator: McMorris, Regan

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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	
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.	False	IDs on containers do not match the COC. Logged in per COC.
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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 580-89413-1

List Source: Eurofins TestAmerica, Seattle

# 🛟 eurofins

# Environment Testing TestAmerica

# **ANALYTICAL REPORT**

Eurofins TestAmerica, Seattle 5755 8th Street East Tacoma, WA 98424 Tel: (253)922-2310

## Laboratory Job ID: 580-91663-1

Client Project/Site: BNSF Skykomish Ground Water Sampling Event: Skykomish HCC System

## For:

..... Links

Review your project results through

**Total** Access

Have a Question?

Ask-

The

www.testamericainc.com

Visit us at:

Expert

Farallon Consulting LLC 975 5th Avenue NW Suite 100 Issaquah, Washington 98027

Attn: Peter Kingston

Knistine D. allen

Authorized for release by: 1/7/2020 4:08:17 PM Kristine Allen, Manager of Project

Kristine Allen, Manager of Project Management (253)248-4970 kristine.allen@testamericainc.com

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.

# **Table of Contents**

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QC Sample Results	34
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Sample Summary	42
Chain of Custody	43
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Correspondence	48

## Job ID: 580-91663-1

### Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-91663-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 12/20/2019 4:51 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 10 coolers at receipt time were 0.6° C, 0.6° C, 0.8° C, 1.3° C, 1.3° C, 2.0° C, 2.2° C, 2.2° C, 2.3° C and 3.5° C.

#### **Receipt Exceptions**

Insufficient sample volume was provided for MS/ MSD or Duplicates.

The Chain of Custody (COC) shows the following samples crossed out however we received containers for these three samples and have logged them for NWTPH-Dx analysis pending client notification. 5-W-180-121719 (580-91663-27), GW-30-121919 (580-91663-28) and GW-3-121919 (580-91663-29) The client requested we analyze these three samples.

#### GC Semi VOA

Method NWTPH-Dx: Continuing calibration verification (CCV) standard associated with batch 580-319961 recovered outside %Drift acceptance criteria for o-Terphenyl surrogate. The %Recovery is within acceptance criteria for the surrogate in the CCV and associated samples; therefore, the data are qualified and reported. (CCV 580-319961/14) and (CCV 580-319961/36)

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.

## **Definitions/Glossary**

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

Percent Recovery

Contains Free Liquid

Contains No Free Liquid

Glossary Abbreviation

¤

%R CFL

CNF

Job

DID: 580-91663-1	
	4
	5
	8
	9

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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

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

## Client Sample ID: 5-W-19-121719 Date Collected: 12/17/19 11:57

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/30/19 09:37	01/03/20 14:34	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/30/19 09:37	01/03/20 14:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	60		50 - 150				12/30/19 09:37	01/03/20 14:34	1

Lab Sample ID: 580-91663-1

Matrix: Water

Job ID: 580-91663-1

Job ID: 580-91663-1

Matrix: Water

Lab Sample ID: 580-91663-2

## Client Sample ID: 2A-W-41-121719 Date Collected: 12/17/19 11:10

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.31		0.062	0.062	mg/L		12/30/19 09:37	01/03/20 14:56	1
Motor Oil (>C24-C36)	0.28		0.092	0.092	mg/L		12/30/19 09:37	01/03/20 14:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	85		50 - 150				12/30/19 09:37	01/03/20 14:56	1

Job ID: 580-91663-1

Matrix: Water

5

Lab Sample ID: 580-91663-3

## Client Sample ID: 2A-W-410-121719 Date Collected: 12/17/19 11:05

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.49		0.064	0.064	mg/L		12/30/19 09:37	01/03/20 15:18	1
Motor Oil (>C24-C36)	0.39		0.094	0.094	mg/L		12/30/19 09:37	01/03/20 15:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150				12/30/19 09:37	01/03/20 15:18	1

#### Client Sample ID: EW-2A-121719 Date Collected: 12/17/19 15:55

Date Received: 12/20/19 16:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.063	0.063	mg/L		12/30/19 09:37	01/03/20 15:40	1
Motor Oil (>C24-C36)	ND		0.094	0.094	mg/L		12/30/19 09:37	01/03/20 15:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150				12/30/19 09:37	01/03/20 15:40	1

Job ID: 580-91663-1

# Lab Sample ID: 580-91663-4

5

Matrix: Water

#### Client Sample ID: 5-W-56-121719 Date Collected: 12/17/19 17:08

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.45		0.062	0.062	mg/L		12/30/19 09:37	01/03/20 16:01	1
Motor Oil (>C24-C36)	1.3		0.091	0.091	mg/L		12/30/19 09:37	01/03/20 16:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150				12/30/19 09:37	01/03/20 16:01	1

Lab Sample ID: 580-91663-5

Job ID: 580-91663-1

Matrix: Water

#### Client Sample ID: 1B-W-23-121719 Date Collected: 12/17/19 14:35

Date Received: 12/20/19 16:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.064	0.064	mg/L		12/31/19 09:35	01/02/20 15:12	1
Motor Oil (>C24-C36)	ND		0.095	0.095	mg/L		12/31/19 09:35	01/02/20 15:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	71		50 - 150				12/31/19 09:35	01/02/20 15:12	1

Job ID: 580-91663-1

Lab Sample ID: 580-91663-6

Matrix: Water

#### Client Sample ID: 5-W-55-121719 Date Collected: 12/17/19 16:18

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.10		0.062	0.062	mg/L		12/31/19 09:35	01/02/20 15:34	1
Motor Oil (>C24-C36)	0.13		0.091	0.091	mg/L		12/31/19 09:35	01/02/20 15:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	71		50 - 150				12/31/19 09:35	01/02/20 15:34	1

Lab Sample ID: 580-91663-7

Job ID: 580-91663-1

Matrix: Water

#### Client Sample ID: 5-W-14-121719 Date Collected: 12/17/19 15:33

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:35	01/02/20 15:56	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:35	01/02/20 15:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	65		50 - 150				12/31/19 09:35	01/02/20 15:56	1

Matrix: Water

5

Lab Sample ID: 580-91663-8

#### Client Sample ID: 5-W-17-121719 Date Collected: 12/17/19 10:46

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:35	01/02/20 16:18	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:35	01/02/20 16:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	68		50 - 150				12/31/19 09:35	01/02/20 16:18	1

Job ID: 580-91663-1

Matrix: Water

Lab Sample ID: 580-91663-9

#### Client Sample ID: 5-W-16-121719 Date Collected: 12/17/19 12:00

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:35	01/02/20 16:39	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:35	01/02/20 16:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	77		50 - 150				12/31/19 09:35	01/02/20 16:39	1

Job ID: 580-91663-1

Matrix: Water

Lab Sample ID: 580-91663-10

# Client Sample ID: 2A-W-40-121719

Date Collected: 12/17/19 09:50 Date Received: 12/20/19 16:51

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

						_			
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.063	0.063	mg/L		12/31/19 09:35	01/02/20 17:01	1
Motor Oil (>C24-C36)	ND		0.094	0.094	mg/L		12/31/19 09:35	01/02/20 17:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	65		50 - 150				12/31/19 09:35	01/02/20 17:01	1

Lab Sample ID: 580-91663-11

Job ID: 580-91663-1

Matrix: Water

# 1 2 3 4 5 6 7 8

#### Client Sample ID: 5-W-18-121719 Date Collected: 12/17/19 14:31

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:35	01/02/20 17:23	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:35	01/02/20 17:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	68		50 - 150				12/31/19 09:35	01/02/20 17:23	1

Lab Sample ID: 580-91663-12

Matrix: Water

Job ID: 580-91663-1

#### Job ID: 580-91663-1

#### Client Sample ID: 2A-W-42-121819 Date Collected: 12/18/19 14:23

Date Received: 12/20/19 16:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.15		0.062	0.062	mg/L		12/31/19 09:35	01/02/20 18:06	1
Motor Oil (>C24-C36)	0.13		0.091	0.091	mg/L		12/31/19 09:35	01/02/20 18:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	75		50 - 150				12/31/19 09:35	01/02/20 18:06	1

Lab Sample ID: 580-91663-13 Matrix: Water

#### Client Sample ID: 1C-W-8-121819 Date Collected: 12/18/19 09:43

Date Received: 12/20/19 16:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:35	01/02/20 18:28	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:35	01/02/20 18:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	73		50 - 150				12/31/19 09:35	01/02/20 18:28	1

Job ID: 580-91663-1

Matrix: Water

Lab Sample ID: 580-91663-14

#### Client Sample ID: GW-4-121819 Date Collected: 12/18/19 13:20

Date Received: 12/20/19 16:51

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:35	01/02/20 18:50	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:35	01/02/20 18:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	69		50 - 150				12/31/19 09:35	01/02/20 18:50	1

Lab Sample ID: 580-91663-15

Job ID: 580-91663-1

#### 0-91663-15 Matrix: Water

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#### Client Sample ID: 2A-W-9-121819 Date Collected: 12/18/19 17:00

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.18		0.061	0.061	mg/L		12/31/19 09:35	01/02/20 19:11	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:35	01/02/20 19:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150				12/31/19 09:35	01/02/20 19:11	1

Lab Sample ID: 580-91663-16

Job ID: 580-91663-1

Matrix: Water 4

Job ID: 580-91663-1

#### Client Sample ID: 2A-W-10-121819 Date Collected: 12/18/19 15:55

Date Received: 12/20/19 16:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.14		0.062	0.062	mg/L		12/31/19 09:35	01/02/20 19:33	1
Motor Oil (>C24-C36)	0.41		0.091	0.091	mg/L		12/31/19 09:35	01/02/20 19:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150				12/31/19 09:35	01/02/20 19:33	1

Lab Sample ID: 580-91663-17 Matrix: Water

Job ID: 580-91663-1

Matrix: Water

Lab Sample ID: 580-91663-18

### Client Sample ID: 2A-W-100-121819 Date Collected: 12/18/19 16:05

Date Received: 12/20/19 16:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.13		0.062	0.062	mg/L		12/31/19 09:35	01/02/20 19:55	1
Motor Oil (>C24-C36)	0.36		0.092	0.092	mg/L		12/31/19 09:35	01/02/20 19:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	74		50 - 150				12/31/19 09:35	01/02/20 19:55	1

#### Client Sample ID: 1C-W-7-121819 Date Collected: 12/18/19 12:12

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.12		0.061	0.061	mg/L		12/31/19 09:35	01/02/20 20:17	1
Motor Oil (>C24-C36)	0.14		0.091	0.091	mg/L		12/31/19 09:35	01/02/20 20:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78		50 - 150				12/31/19 09:35	01/02/20 20:17	1

Job ID: 580-91663-1

Matrix: Water

Lab Sample ID: 580-91663-19

#### Client Sample ID: 1C-W-1-121819 Date Collected: 12/18/19 10:47

Date Received: 12/20/19 16:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.063	0.063	mg/L		12/31/19 09:35	01/02/20 20:38	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		12/31/19 09:35	01/02/20 20:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150				12/31/19 09:35	01/02/20 20:38	1

Job ID: 580-91663-1

Matrix: Water

Lab Sample ID: 580-91663-20

#### Client Sample ID: 1B-W-3-121819 Date Collected: 12/18/19 11:50

Date Received: 12/20/19 16:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		12/31/19 09:35	01/02/20 21:00	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:35	01/02/20 21:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	74		50 - 150				12/31/19 09:35	01/02/20 21:00	1

Job ID: 580-91663-1

# Lab Sample ID: 580-91663-21

Matrix: Water

#### Client Sample ID: 5-W-51-121819 Date Collected: 12/18/19 10:42

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.42		0.062	0.062	mg/L		12/31/19 09:35	01/02/20 21:22	1
Motor Oil (>C24-C36)	0.33		0.091	0.091	mg/L		12/31/19 09:35	01/02/20 21:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	82		50 - 150				12/31/19 09:35	01/02/20 21:22	1

Job ID: 580-91663-1

Matrix: Water

Lab Sample ID: 580-91663-22

Job ID: 580-91663-1

Lab Sample ID: 580-91663-23

#### Client Sample ID: MW-3-121919 Date Collected: 12/19/19 10:45

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.77		0.062	0.062	mg/L		12/31/19 09:35	01/02/20 22:05	1
Motor Oil (>C24-C36)	1.8		0.092	0.092	mg/L		12/31/19 09:35	01/02/20 22:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	69		50 - 150				12/31/19 09:35	01/02/20 22:05	1

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Matrix: Water

Job ID: 580-91663-1

#### Client Sample ID: MW-4-121919 Date Collected: 12/19/19 11:50

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.16		0.062	0.062	mg/L		12/31/19 09:35	01/02/20 22:27	1
Motor Oil (>C24-C36)	0.44		0.091	0.091	mg/L		12/31/19 09:35	01/02/20 22:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	72		50 - 150				12/31/19 09:35	01/02/20 22:27	1

Lab Sample ID: 580-91663-24 Matrix: Water

#### Client Sample ID: 2B-W-4-121919 Date Collected: 12/19/19 09:38

Date Received: 12/20/19 16:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:53	01/02/20 14:51	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		12/31/19 09:53	01/02/20 14:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	74		50 - 150				12/31/19 09:53	01/02/20 14:51	1

Job ID: 580-91663-1

Matrix: Water

Lab Sample ID: 580-91663-25

#### **Client Sample ID: MW-555** Date Collected: 12/19/19 11:25

Date Received: 12/20/19 16:51

Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	Products (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:53	01/02/20 15:12	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:53	01/02/20 15:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	62		50 - 150				12/31/19 09:53	01/02/20 15:12	1

1/7/2020

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Job ID: 580-91663-1

# Lab Sample ID: 580-91663-26

Matrix: Water

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:35	01/02/20 22:49	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:35	01/02/20 22:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150				12/31/19 09:35	01/02/20 22:49	1

Lab Sample ID: 580-91663-27

Matrix: Water

#### Client Sample ID: GW-30-121919 Date Collected: 12/19/19 13:00

Date Received: 12/20/19 16:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.10		0.062	0.062	mg/L		12/31/19 09:53	01/02/20 15:34	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:53	01/02/20 15:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	85		50 - 150				12/31/19 09:53	01/02/20 15:34	1

# Lab Sample ID: 580-91663-28

Matrix: Water

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Job ID: 580-91663-1

Job ID: 580-91663-1

## Client Sample ID: GW-3-121919

Date Collected: 12/19/19 12:50 Date Received: 12/20/19 16:51

#### Lab Sample ID: 580-91663-29 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.091		0.062	0.062	mg/L		12/31/19 09:53	01/02/20 15:56	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		12/31/19 09:53	01/02/20 15:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150				12/31/19 09:53	01/02/20 15:56	1

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

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Lab Sample ID: MB 580-3198	307/1-A								Client Sa	ample ID: Meth	od Blank
Matrix: Water										Prep Type:	Total/NA
Analysis Batch: 319981										Prep Batch	: 319807
		B MB					_	_			
Analyte	Resu				Unit		D		repared	Analyzed	Dil Fac
#2 Diesel (C10-C24) Motor Oil (>C24-C36)	N	D	0.065 0.096		mg/L mg/L				80/19 09:37 80/19 09:37	01/03/20 13:07 01/03/20 13:07	1
NOLOT OII (~C24-C30)			0.090	0.090	IIIg/L			12/3	0/19/09.37	01/03/20 13.0/	1
Surrogate	M %Recove	B MB ry Qualifier	Limits					P	repared	Analyzed	Dil Fac
o-Terphenyl		01	50 - 150						30/19 09:37	01/03/20 13:07	1
Lab Sample ID: LCS 580-319	807/2-A						С	lient	Sample	ID: Lab Contro	I Sample
Matrix: Water									. oumpro	Prep Type:	
Analysis Batch: 319981										Prep Batch	
·			Spike	LCS LCS	;					%Rec.	
Analyte			Added	Result Qua	lifier	Unit		D	%Rec	Limits	
#2 Diesel (C10-C24)			0.500	0.490		mg/L			98	50 - 120	
Motor Oil (>C24-C36)			0.500	0.499		mg/L			100	64 - 120	
	LCS L	cs									
Surrogate	%Recovery Q	ualifier	Limits								
o-Terphenyl	115		50 - 150								
- Lab Sample ID: LCSD 580-3 <sup>4</sup>	19807/3-A					CI	ient	San	nple ID: L	ab Control San	nple Dup
Matrix: Water										Prep Type:	
Analysis Batch: 319981										Prep Batch	: 319807
			Spike	LCSD LCS						%Rec.	RPD
Analyte			Added	Result Qua	lifier	Unit			%Rec	Limits RP	
#2 Diesel (C10-C24)			0.500	0.447		mg/L			89	50 - 120	9 26
Motor Oil (>C24-C36)			0.500	0.463		mg/L			93	64 - 120	8 24
	LCSD LO	CSD									
Surrogate	%Recovery Q	ualifier	Limits								
o-Terphenyl 	106		50 - 150								
Lab Sample ID: MB 580-3199	907/1-A								Client Sa	ample ID: Meth	od Blank
Matrix: Water										Prep Type:	Total/NA
Analysis Batch: 319961										Prep Batch	: 319907
	Μ	в мв									
Analyte		It Qualifier	RL		Unit		D		repared	Analyzed	Dil Fac
#2 Diesel (C10-C24)		D	0.065		mg/L				1/19 09:35	01/02/20 14:07	1
Motor Oil (>C24-C36)	N	D	0.096	0.096	mg/L			12/3	31/19 09:35	01/02/20 14:07	1
		B MB									
Surrogate		ry Qualifier	Limits						repared	Analyzed	Dil Fac
o-Terphenyl 	7	79	50 - 150					12/3	81/19 09:35	01/02/20 14:07	1
Lab Sample ID: LCS 580-319	907/2-A						С	lient	Sample	ID: Lab Contro	I Sample
Matrix: Water										Prep Type:	Total/NA
Analysis Batch: 319961										Prep Batch	: 319907
			Spike	LCS LCS	;					%Rec.	
Analyte			Added	Result Qua	lifier	Unit		D	%Rec	Limits	
#2 Diesel (C10-C24)			0.500	0.442		mg/L			88	50 - 120	
Motor Oil (>C24-C36)			0.500	0.478		mg/L			96	64 - 120	

Lab Sample ID: LCS 580-319	9907/2-A							Cli	ient	Sample	ID: Lab C	ontrol S	ample
Matrix: Water												Type: To	
Analysis Batch: 319961											Prep	Batch: 3	319907
	LCS	LCS											
Surrogate	%Recovery	Quali	ifier	Limits									
o-Terphenyl	80			50 - 150									
Lab Sample ID: LCSD 580-3	19907/3-A						с	lient S	Sam	ple ID: L	ab Contro	ol Samp	le Dur
Matrix: Water												Type: To	
Analysis Batch: 319961											Prep	Batch: 3	31 <mark>990</mark>
				Spike	LCSD	LCSD					%Rec.		RPI
Analyte				Added		Qualifier	Unit		D	%Rec	Limits	RPD	Limi
#2 Diesel (C10-C24)				0.500	0.428		mg/L			86	50 - 120	3	2
Motor Oil (>C24-C36)				0.500	0.480		mg/L			96	64 - 120	0	24
	LCSD	LCSE	0										
Surrogate	%Recovery	Quali	ifier	Limits									
o-Terphenyl	79			50 - 150									
Lab Sample ID: MB 580-319	908/1-A									Client Sa	ample ID:	Method	Blanl
Matrix: Water												Type: To	
Analysis Batch: 319958												Batch: 3	
		МВ	МВ										
Analyte	Re		Qualifier	RL		MDL Unit		D		repared	Analy		Dil Fa
#2 Diesel (C10-C24)		ND		0.065		0.065 mg/l				1/19 09:53	01/02/20		
Motor Oil (>C24-C36)		ND		0.096	(	0.096 mg/l	-		12/3	1/19 09:53	01/02/20	13:45	1
			МВ						_				
Surrogate	%Reco		Qualifier	Limits				-		repared	Analy		Dil Fac
o-Terphenyl		81		50 - 150					12/3	1/19 09:53	01/02/20	13:45	1
Lab Sample ID: LCS 580-319	9908/2-A							Cli	ient	Sample	ID: Lab C	ontrol S	ample
Matrix: Water											Prep 1	Type: To	otal/NA
Analysis Batch: 319958											Prep	Batch: 3	31 <mark>990</mark> 8
				Spike		LCS					%Rec.		
Analyte				Added		Qualifier	Unit		D	%Rec	Limits		
#2 Diesel (C10-C24)				0.500	0.448		mg/L			90	50 - 120		
Motor Oil (>C24-C36)				0.500	0.493		mg/L			99	64 - 120		
	LCS	LCS											
Surrogate	%Recovery	Quali	ifier	Limits									
o-Terphenyl	107			50 - 150									
Lab Sample ID: LCSD 580-3	19908/3-4						<b>^</b>	liont 9	Sam		ab Contro	ol Samo	
Matrix: Water							Ŭ		Jan	.p.o.id. E		Type: To	-
Analysis Batch: 319958												Batch:	
				Spike	LCSD	LCSD					%Rec.		RPD
Analyte				Added	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limi
#2 Diesel (C10-C24)				0.500	0.456		mg/L		_	91	50 - 120	2	20
				0.500	0.483		mg/L			97	64 _ 120	2	24
Motor Oil (>C24-C36)				0.000	0.400		ing/L			51	04 - 120	2	2-
Motor Oil (>C24-C36)	LCSD	LCSE	)	0.000	0.400		ing/L			51	04 - 120	L	2-
Motor Oil (>C24-C36) Surrogate	LCSD %Recovery			Limits	0.400					31	04 - 120	L	27

 o-Terphenyl
 108
 50 - 150

Client Sample ID: 5-W-19-121719

Date Collected: 12/17/19 11:57

Date Received: 12/20/19 16:51

Matrix: Water

Lab Sample ID: 580-91663-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab	
Total/NA		3510C	Kuii		319807	12/30/19 09:37	NRF	TAL SEA	
	Prep			4					
Total/NA	Analysis	NWTPH-Dx		1	319981	01/03/20 14:34	T1W	TAL SEA	
lient Sampl	e ID: 2A-W-	41-121719					La	ab Sample	D: 580-91663-
ate Collected:	12/17/19 11:1	0							Matrix: Wate
ate Received:	12/20/19 16:5 <sup>°</sup>	1							
-	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			319807	12/30/19 09:37	NRF	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	319981	01/03/20 14:56	T1W	TAL SEA	
liont Sampl		410 424740						ah Samala I	D: 590 04662
Client Sample							Lo	an Sample	D: 580-91663-
ate Collected: ate Received:									Matrix: Wate
	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C	Kuii		319807	12/30/19 09:37	NRF	TAL SEA	
Total/INA	•	NWTPH-Dx		1	319981	01/03/20 15:18	T1W	TAL SEA	
	Analysis							ah Camala I	D. 590 04002
	e ID: EW-2A	-121719					La	ab Sample	
- Client Sample Date Collected:	e ID: EW-2A 12/17/19 15:5	A-121719 5					La	ab Sample	
Client Sample Date Collected:	e ID: EW-2A 12/17/19 15:5	A-121719 5		Dilution	Batch	Prepared	La	ab Sample	
Client Sample Date Collected:	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5	A- <b>121719</b> 5 1	Run	Dilution Factor	Batch Number	Prepared or Analyzed	La	ab Sample	
Client Sample Date Collected: Date Received:	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5 <sup>-</sup> Batch	A-121719 5 1 Batch	Run			•			
Client Sample Date Collected: Date Received: Prep Type	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5 <sup>-</sup> Batch Type	A-121719 5 1 Batch Method	<u>Run</u>		Number	or Analyzed	Analyst	Lab	
Client Sample Date Collected: Date Received: Date R	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5 Batch Type Prep Analysis	A-121719 5 1 Batch Method 3510C NWTPH-Dx	Run	Factor	Number 319807	or Analyzed	Analyst NRF T1W	Lab TAL SEA TAL SEA	Matrix: Wate
Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5 Batch Type Prep Analysis e ID: 5-W-56	A-121719 5 1 Batch Method 3510C NWTPH-Dx 5-121719	Run	Factor	Number 319807	or Analyzed	Analyst NRF T1W	Lab TAL SEA TAL SEA	Matrix: Wate
Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected:	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5 Batch Type Prep Analysis e ID: 5-W-56 12/17/19 17:0	A-121719 5 1 Batch Method 3510C NWTPH-Dx 6-121719 8	Run	Factor	Number 319807	or Analyzed	Analyst NRF T1W	Lab TAL SEA TAL SEA	Matrix: Wate
Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected:	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5 Batch Type Prep Analysis e ID: 5-W-56 12/17/19 17:0	A-121719 5 1 Batch Method 3510C NWTPH-Dx 6-121719 8	Run	Factor	Number 319807	or Analyzed	Analyst NRF T1W	Lab TAL SEA TAL SEA	Matrix: Wate
Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received:	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5 Batch Type Prep Analysis e ID: 5-W-56 12/17/19 17:0 12/20/19 16:5 Batch	A-121719 5 1 Batch Method 3510C NWTPH-Dx 6-121719 8 1	Run	1	Number 319807 319981	or Analyzed 12/30/19 09:37 01/03/20 15:40 Prepared	Analyst NRF T1W	Lab TAL SEA TAL SEA	Matrix: Wate
Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected:	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5 Batch Type Prep Analysis e ID: 5-W-56 12/17/19 17:0 12/20/19 16:5 Batch Type	A-121719 5 1 Batch Method 3510C NWTPH-Dx 5-121719 8 1 Batch		1	Number 319807 319981 Batch	or Analyzed 12/30/19 09:37 01/03/20 15:40	Analyst NRF T1W	TAL SEA TAL SEA TAL SEA	Matrix: Wate
Client Sample Date Collected: Date Received: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5 Batch Type Prep Analysis e ID: 5-W-56 12/17/19 17:0 12/20/19 16:5 Batch	A-121719 5 1 Batch Method 3510C NWTPH-Dx 6-121719 8 1 Batch Method		1	Number 319807 319981 Batch Number	or Analyzed 12/30/19 09:37 01/03/20 15:40 Prepared or Analyzed	Analyst NRF T1W La	Lab TAL SEA TAL SEA TAL SEA TAL SEA	D: 580-91663- Matrix: Wate D: 580-91663- Matrix: Wate
Client Sample ate Collected: ate Received: Prep Type Total/NA Total/NA Client Sample ate Collected: pate Received: Prep Type Total/NA Total/NA	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5 Batch Type Prep Analysis e ID: 5-W-56 12/17/19 17:0 12/20/19 16:5 Batch Type Prep Analysis	A-121719 5 1 Batch Method 3510C NWTPH-Dx 5-121719 8 1 Batch Method 3510C NWTPH-Dx		1	Number           319807           319981           Batch           Number           319807	or Analyzed 12/30/19 09:37 01/03/20 15:40 Prepared or Analyzed 12/30/19 09:37	Analyst NRF T1W La Analyst NRF T1W	Lab TAL SEA TAL SEA Ab Sample I Ab TAL SEA TAL SEA	Matrix: Wate
Client Sample Date Collected: Date Received: Date Received: Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Total/NA	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5 Batch Type Prep Analysis e ID: 5-W-56 12/17/19 17:0 12/20/19 16:5 Batch Type Prep Analysis e ID: 1B-W-2	A-121719 5 1 Batch Method 3510C NWTPH-Dx 6-121719 8 1 Batch Method 3510C NWTPH-Dx 23-121719		1	Number           319807           319981           Batch           Number           319807	or Analyzed 12/30/19 09:37 01/03/20 15:40 Prepared or Analyzed 12/30/19 09:37	Analyst NRF T1W La Analyst NRF T1W	Lab TAL SEA TAL SEA Ab Sample I Ab TAL SEA TAL SEA	Matrix: Wate D: 580-91663- Matrix: Wate D: 580-91663-
Client Sample Date Collected: Date Received: Total/NA Total/NA Client Sample Date Collected: Date Received: Date Received: Date Received: Date Collected: Date Collected: Date Collected: Date Collected: Date Collected:	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5 Batch Type Prep Analysis e ID: 5-W-56 12/17/19 16:5 Batch Type Prep Analysis e ID: 1B-W-1 12/17/19 14:3	A-121719 5 1 Batch Method 3510C NWTPH-Dx 6-121719 8 1 Batch Method 3510C NWTPH-Dx 23-121719 5		1	Number           319807           319981           Batch           Number           319807	or Analyzed 12/30/19 09:37 01/03/20 15:40 Prepared or Analyzed 12/30/19 09:37	Analyst NRF T1W La Analyst NRF T1W	Lab TAL SEA TAL SEA Ab Sample I Ab TAL SEA TAL SEA	Matrix: Wate D: 580-91663- Matrix: Wate D: 580-91663-
Client Sample Date Collected: Date Received: Total/NA Total/NA Client Sample Date Collected: Date Received: Date Received: Date Received: Date Collected: Date Collected: Date Collected: Date Collected: Date Collected:	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5 Batch Type Prep Analysis e ID: 5-W-56 12/17/19 16:5 Batch Type Prep Analysis e ID: 1B-W-1 12/17/19 14:3 12/20/19 16:5	A-121719 5 1 Batch Method 3510C NWTPH-Dx 6-121719 8 1 Batch Method 3510C NWTPH-Dx 23-121719 5 1		1 	Number           319807           319981           Batch           Number           319807           319808	or Analyzed 12/30/19 09:37 01/03/20 15:40 Prepared or Analyzed 12/30/19 09:37 01/03/20 16:01	Analyst NRF T1W La Analyst NRF T1W	Lab TAL SEA TAL SEA Ab Sample I Ab TAL SEA TAL SEA	Matrix: Wate D: 580-91663- Matrix: Wate D: 580-91663-
Client Sample Date Collected: Date Received: Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sample Date Collected: Date Collected: Date Collected: Date Collected: Date Collected:	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5 Batch Type Prep Analysis e ID: 5-W-56 12/17/19 16:5 Batch Type Prep Analysis e ID: 1B-W-7 12/17/19 14:3 12/20/19 16:5 Batch	A-121719 5 1 Batch Method 3510C NWTPH-Dx 5 1 Batch Method 3510C NWTPH-Dx 23-121719 5 1 Batch Batch	Run	Pactor 1 Dilution Factor 1 Dilution	Number           319807           319981           Batch           Number           319807           319807           319808           Batch           Batch	or Analyzed 12/30/19 09:37 01/03/20 15:40 Prepared or Analyzed 12/30/19 09:37 01/03/20 16:01 Prepared	Analyst NRF T1W La Analyst NRF T1W	Lab TAL SEA TAL SEA Ab Sample I Lab TAL SEA TAL SEA TAL SEA	Matrix: Wate D: 580-91663- Matrix: Wate D: 580-91663-
Client Sample Date Collected: Date Received: Date Received: Total/NA Total/NA Client Sample Date Collected: Date Received: Prep Type Total/NA Total/NA	e ID: EW-2A 12/17/19 15:5 12/20/19 16:5 Batch Type Prep Analysis e ID: 5-W-56 12/17/19 16:5 Batch Type Prep Analysis e ID: 1B-W-1 12/17/19 14:3 12/20/19 16:5	A-121719 5 1 Batch Method 3510C NWTPH-Dx 6-121719 8 1 Batch Method 3510C NWTPH-Dx 23-121719 5 1		1 	Number           319807           319981           Batch           Number           319807           319808	or Analyzed 12/30/19 09:37 01/03/20 15:40 Prepared or Analyzed 12/30/19 09:37 01/03/20 16:01	Analyst NRF T1W La Analyst NRF T1W	Lab TAL SEA TAL SEA Ab Sample I Ab TAL SEA TAL SEA	Matrix: Wate

Client Sample ID: 5-W-55-121719

Date Collected: 12/17/19 16:18

Date Received: 12/20/19 16:51

Matrix: Water

Lab Sample ID: 580-91663-7

	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			319907	12/31/19 09:35	NRF	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	319961	01/02/20 15:34	T1W	TAL SEA	
Client Samp	le ID: 5-W-14	1-121719					La	ab Sample I	D: 580-91663
Date Collected									Matrix: Wat
Date Received: -		-							
	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			319907	12/31/19 09:35	NRF	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	319961	01/02/20 15:56	T1W	TAL SEA	
Client Samp	le ID: 5-W-17	7-121719					La	ab Sample I	D: 580-91663
Date Collected	: 12/17/19 10:4	6							Matrix: Wat
Date Received:	12/20/19 16:5	1							
	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			319907	12/31/19 09:35	NRF	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	319961	01/02/20 16:18	T1W	TAL SEA	
- Client Samp Date Collected	le ID: 5-W-16 : 12/17/19 12:0	0					Lat	o Sample ID	
- Client Samp Date Collected	le ID: 5-W-16 : 12/17/19 12:0	0					Lat	o Sample ID	
- Client Samp Date Collected: Date Received: -	le ID: 5-W-16 : 12/17/19 12:0 : 12/20/19 16:5 <sup>-</sup> Batch	0 1 Batch		Dilution	Batch	Prepared			
Client Samp Date Collected Date Received: Prep Type	le ID: 5-W-16 : 12/17/19 12:0 : 12/20/19 16:5 <sup>-</sup> Batch Type	0 1 Batch Method	Run	Dilution	Number	or Analyzed	Analyst	Lab	
- Client Samp Date Collected: Date Received: -	le ID: 5-W-16 : 12/17/19 12:0 : 12/20/19 16:5 <sup>-</sup> Batch	0 1 Batch	Run			-			
Client Samp Date Collected Date Received: Prep Type	le ID: 5-W-16 : 12/17/19 12:0 : 12/20/19 16:5 <sup>-</sup> Batch Type	0 1 Batch Method	Run		Number	or Analyzed	Analyst	Lab	
Client Sampl Date Collected Date Received: Date Received: Total/NA Total/NA	le ID: 5-W-16 : 12/17/19 12:0 12/20/19 16:5 Batch Type Prep Analysis	0 1 Batch Method 3510C NWTPH-Dx	Run	Factor	Number 319907	or Analyzed	Analyst NRF T1W	Lab TAL SEA TAL SEA	Matrix: Wat
Prep Type Total/NA Total/NA Client Samp Date Collected	le ID: 5-W-16 : 12/17/19 12:0 12/20/19 16:5 Batch Type Prep Analysis le ID: 2A-W-4 : 12/17/19 09:5	0 1 Batch Method 3510C NWTPH-Dx 40-121719 0	Run	Factor	Number 319907	or Analyzed	Analyst NRF T1W	Lab TAL SEA TAL SEA	Matrix: Wat
Prep Type Total/NA Total/NA Client Samp Date Collected	le ID: 5-W-16 : 12/17/19 12:0 12/20/19 16:5 Batch Type Prep Analysis le ID: 2A-W-4 : 12/17/19 09:5 12/20/19 16:5	0 1 Batch Method 3510C NWTPH-Dx 40-121719 0 1	Run	1	Number 319907 319961	or Analyzed 12/31/19 09:35 01/02/20 16:39	Analyst NRF T1W	Lab TAL SEA TAL SEA	Matrix: Wat
Prep Type Total/NA Total/NA Client Sampl Date Collected: Date Received:	le ID: 5-W-16 : 12/17/19 12:0 12/20/19 16:5 Batch Type Prep Analysis le ID: 2A-W-4 : 12/17/19 09:5 12/20/19 16:5 Batch	0 1 Batch Method 3510C NWTPH-Dx 40-121719 0 1 Batch		1	Number 319907 319961 Batch	or Analyzed 12/31/19 09:35 01/02/20 16:39 Prepared	Analyst NRF T1W	TAL SEA TAL SEA TAL SEA D Sample ID	Matrix: Wat
Client Sampl Date Collected: Date Received: Prep Type Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type	le ID: 5-W-16 : 12/17/19 12:0 12/20/19 16:5 Batch Type Prep Analysis le ID: 2A-W-4 : 12/17/19 09:5 12/20/19 16:5 Batch Type	0 1 Batch Method 3510C NWTPH-Dx 40-121719 0 1 Batch Method	Run	1	Number 319907 319961 Batch Number	or Analyzed 12/31/19 09:35 01/02/20 16:39 Prepared or Analyzed	Analyst NRF T1W Lat	Lab TAL SEA TAL SEA D Sample ID	Matrix: Wat
Prep Type Total/NA Client Sampl Total/NA Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA	le ID: 5-W-16 : 12/17/19 12:0 12/20/19 16:5 Batch Type Prep Analysis le ID: 2A-W-4 : 12/17/19 09:5 : 12/20/19 16:5 Batch Type Prep Prep	0 1 Batch Method 3510C NWTPH-Dx 40-121719 0 1 Batch Method 3510C		1	Number           319907           319961           Batch           Number           319907	or Analyzed 12/31/19 09:35 01/02/20 16:39 Prepared or Analyzed 12/31/19 09:35	Analyst NRF T1W Lat	- Lab TAL SEA TAL SEA D Sample ID	Matrix: Wat
Prep Type Total/NA Total/NA Client Samp Date Collected: Date Collected: Date Received:	le ID: 5-W-16 : 12/17/19 12:0 12/20/19 16:5 Batch Type Prep Analysis le ID: 2A-W-4 : 12/17/19 09:5 12/20/19 16:5 Batch Type	0 1 Batch Method 3510C NWTPH-Dx 40-121719 0 1 Batch Method		1	Number 319907 319961 Batch Number	or Analyzed 12/31/19 09:35 01/02/20 16:39 Prepared or Analyzed 12/31/19 09:35	Analyst NRF T1W Lat	Lab TAL SEA TAL SEA D Sample ID	Matrix: Wat
Client Sampl Date Collected Date Received: Prep Type Total/NA Total/NA Client Sampl Date Collected Date Received: Prep Type Total/NA Total/NA	le ID: 5-W-16 : 12/17/19 12:0 12/20/19 16:5 Batch Type Prep Analysis le ID: 2A-W-4 : 12/17/19 09:5 12/20/19 16:5 Batch Type Prep Analysis	0 1 Batch Method 3510C NWTPH-Dx 40-121719 0 1 Batch Method 3510C NWTPH-Dx		1	Number           319907           319961           Batch           Number           319907	or Analyzed 12/31/19 09:35 01/02/20 16:39 Prepared or Analyzed 12/31/19 09:35	Analyst NRF T1W Lat Analyst NRF T1W	- Lab TAL SEA TAL SEA D Sample ID - Lab TAL SEA TAL SEA	Matrix: Wat
Prep Type Total/NA Total/NA Total/NA Date Collected: Date Collected: Date Received: Date Received: Date Received: Date Collected: Date Collected: Date Collected: Date Collected: Date Collected: Date Collected: Date Collected: Date Collected:	le ID: 5-W-16 : 12/17/19 12:0 12/20/19 16:5 Batch Type Prep Analysis le ID: 2A-W-4 : 12/17/19 09:5 12/20/19 16:5 Batch Type Prep Analysis le ID: 5-W-18 : 12/17/19 14:3	0 1 Batch Method 3510C NWTPH-Dx 40-121719 0 1 Batch Method 3510C NWTPH-Dx 3510C NWTPH-Dx 3510C NWTPH-Dx		1	Number           319907           319961           Batch           Number           319907	or Analyzed 12/31/19 09:35 01/02/20 16:39 Prepared or Analyzed 12/31/19 09:35	Analyst NRF T1W Lat Analyst NRF T1W	- Lab TAL SEA TAL SEA D Sample ID - Lab TAL SEA TAL SEA	Matrix: Wat
Prep Type Total/NA Total/NA Total/NA Date Collected: Date Collected: Date Received: Date Received: Date Received: Date Collected: Date Collected: Date Collected: Date Collected: Date Collected: Date Collected: Date Collected: Date Collected:	le ID: 5-W-16 : 12/17/19 12:0 12/20/19 16:5 Batch Type Prep Analysis le ID: 2A-W-4 : 12/17/19 09:5 12/20/19 16:5 Batch Type Prep Analysis le ID: 5-W-18 : 12/17/19 14:3 12/20/19 16:5	0 1 Batch Method 3510C NWTPH-Dx 40-121719 0 1 Batch Method 3510C NWTPH-Dx 3-121719 1		1	Number           319907           319961           Batch           Number           319907           319907           319907	or Analyzed 12/31/19 09:35 01/02/20 16:39 Prepared or Analyzed 12/31/19 09:35 01/02/20 17:01	Analyst NRF T1W Lat Analyst NRF T1W	- Lab TAL SEA TAL SEA D Sample ID - Lab TAL SEA TAL SEA	Matrix: Wat
Client Sampl Date Collected Date Received: Prep Type Total/NA Total/NA Client Sampl Date Collected Date Received: Prep Type Total/NA Total/NA Client Sampl Date Collected Date Collected	le ID: 5-W-16 : 12/17/19 12:0 12/20/19 16:5 Batch Type Prep Analysis le ID: 2A-W-4 : 12/17/19 09:5 12/20/19 16:5 Batch Type Prep Analysis le ID: 5-W-18 : 12/17/19 14:3 12/20/19 16:5 Batch	0 1 Batch Method 3510C NWTPH-Dx 40-121719 0 1 Batch Method 3510C NWTPH-Dx 3-121719 1 1 Batch Batch	Run	11111	Number           319907           319961           Batch           Number           319907           319907           319907           319907           319907           319907           Batch	or Analyzed 12/31/19 09:35 01/02/20 16:39 Prepared or Analyzed 12/31/19 09:35 01/02/20 17:01 Prepared	Analyst NRF T1W Lat Analyst NRF T1W Lat	- Lab TAL SEA TAL SEA D Sample ID TAL SEA TAL SEA D Sample ID	Matrix: Wat
Prep Type Total/NA Total/NA Total/NA Client Samp Date Collected: Date Received: Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	le ID: 5-W-16 : 12/17/19 12:0 12/20/19 16:5 Batch Type Prep Analysis le ID: 2A-W-4 : 12/17/19 09:5 12/20/19 16:5 Batch Type Prep Analysis le ID: 5-W-18 : 12/17/19 14:3 12/20/19 16:5	0 1 Batch Method 3510C NWTPH-Dx 40-121719 0 1 Batch Method 3510C NWTPH-Dx 3-121719 1 1 Batch Method		1	Number           319907           319961           Batch           Number           319907           319907           319907           319907           319907           Batch           Number           Number           Number           Number	or Analyzed 12/31/19 09:35 01/02/20 16:39 Prepared or Analyzed 12/31/19 09:35 01/02/20 17:01 Prepared or Analyzed	Analyst NRF T1W Lat NRF T1W Lat Analyst	Lab TAL SEA TAL SEA D Sample IC TAL SEA TAL SEA D Sample IC	9: 580-91663-1 Matrix: Wate 9: 580-91663-1 Matrix: Wate 9: 580-91663-1 Matrix: Wate
Prep Type Total/NA Total/NA Total/NA Client Sampl Date Collected: Date Received: Total/NA Total/NA Total/NA Total/NA	le ID: 5-W-16 : 12/17/19 12:0 12/20/19 16:5 Batch Type Prep Analysis le ID: 2A-W-4 : 12/17/19 09:5 12/20/19 16:5 Batch Type Prep Analysis le ID: 5-W-18 : 12/17/19 14:3 12/20/19 16:5 Batch	0 1 Batch Method 3510C NWTPH-Dx 40-121719 0 1 Batch Method 3510C NWTPH-Dx 3-121719 1 1 Batch Batch	Run	 Tactor  Dilution  1  Dilution	Number           319907           319961           Batch           Number           319907           319907           319907           319907           319907           319907           Batch	or Analyzed 12/31/19 09:35 01/02/20 16:39 Prepared or Analyzed 12/31/19 09:35 01/02/20 17:01 Prepared	Analyst NRF T1W Lat Analyst NRF T1W Lat	- Lab TAL SEA TAL SEA D Sample ID TAL SEA TAL SEA D Sample ID	Matrix: Wat

Dilution

Factor

Dilution

Factor

1

1

Run

Run

Batch

Number

319907

319961

Batch

Number

319907

319961

Prepared

or Analyzed

12/31/19 09:35

01/02/20 18:06

Prepared

or Analyzed

12/31/19 09:35

01/02/20 18:28

Analyst

Analyst

NRF

T1W

NRF

T1W

Lab

Lab

TAL SEA

TAL SEA

TAL SEA

TAL SEA

Client Sample ID: 2A-W-42-121819

Batch

Туре

Prep

Batch

Туре

Prep

Analysis

Client Sample ID: 1C-W-8-121819

Analysis

Batch

Method

3510C

Batch

Method

3510C

NWTPH-Dx

NWTPH-Dx

Date Collected: 12/18/19 14:23

Date Received: 12/20/19 16:51

Date Collected: 12/18/19 09:43

Date Received: 12/20/19 16:51

Prep Type

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Matrix: Water

Lab Sample ID: 580-91663-13

# Lab Sample ID: 580-91663-14 Matrix: Water

#### Client Sample ID: GW-4-121819 Date Collected: 12/18/19 13:20

Matrix: Water

Lab Sample ID: 580-91663-15

Lab Sample ID: 580-91663-16

Lab Sample ID: 580-91663-17

Lab Sample ID: 580-91663-18

Matrix: Water

Matrix: Water

Matrix: Water

#### Date Received: 12/20/19 16:51

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319907	12/31/19 09:35	NRF	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319961	01/02/20 18:50	T1W	TAL SEA

#### Client Sample ID: 2A-W-9-121819

Date Collected: 12/18/19 17:00 Date Received: 12/20/19 16:51

Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab Prep TAL SEA Total/NA 3510C 319907 12/31/19 09:35 NRF Total/NA TAL SEA Analysis NWTPH-Dx 1 319961 01/02/20 19:11 T1W

#### Client Sample ID: 2A-W-10-121819

Date Collected: 12/18/19 15:55 Date Received: 12/20/19 16:51

Prep T	уре	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/N	IA	Prep	3510C			319907	12/31/19 09:35	NRF	TAL SEA
Total/N	IA	Analysis	NWTPH-Dx		1	319961	01/02/20 19:33	T1W	TAL SEA

#### Client Sample ID: 2A-W-100-121819 Date Collected: 12/18/19 16:05 Date Received: 12/20/19 16:51

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319907	12/31/19 09:35	NRF	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319961	01/02/20 19:55	T1W	TAL SEA

Client Sample ID: 1C-W-7-121819

Lab Sample ID: 580-91663-19

Date Received:	12/18/19 12:1 12/20/19 16:5								Matrix: Wate
-				Dilution	Detab	Durana			
D	Batch	Batch	<b>D</b>	Dilution	Batch	Prepared	A	1 - 1-	
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst		
Total/NA	Prep	3510C			319907	12/31/19 09:35	NRF	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	319961	01/02/20 20:17	T1W	TAL SEA	
lient Sampl	e ID: 1C-W-	1-121819					Lab	Sample I	): 580-91663-2
ate Collected:	12/18/19 10:4	7							Matrix: Wat
ate Received:	12/20/19 16:5	1							
-	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			319907	12/31/19 09:35	NRF	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	319961	01/02/20 20:38	T1W	TAL SEA	
-	-								
lient Sampl							Lab	o Sample II	): 580-91663-2
Date Collected:									Matrix: Wat
Date Received:	12/20/19 16:5	1							
	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			319907	12/31/19 09:35	NRF	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	319961	01/02/20 21:00	T1W	TAL SEA	
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Prep

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Method

3510C

Batch

Method

3510C

NWTPH-Dx

NWTPH-Dx

Client Sample ID: 2B-W-4-121919

Date Collected: 12/19/19 09:38

Date Received: 12/20/19 16:51

Client Sample ID: MW-555

Date Collected: 12/19/19 11:25

Date Received: 12/20/19 16:51

Prep Type

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Matrix: Water

Lab Sample ID: 580-91663-25

# Lab Sample ID: 580-91663-26 Matrix: Water

Matrix: Water

Matrix: Water

#### Client Sample ID: 5-W-180-121719

Lab Sample ID: 580-91663-27 Matrix: Water

Lab Sample ID: 580-91663-28

Lab Sample ID: 580-91663-29

#### Date Collected: 12/17/19 14:41 Date Received: 12/20/19 16:51

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319907	12/31/19 09:35	NRF	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319961	01/02/20 22:49	T1W	TAL SEA

#### Client Sample ID: GW-30-121919

Date Collected: 12/19/19 13:00

Date Received: 12/20/19 16:51

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319908	12/31/19 09:53	JCM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319958	01/02/20 15:34	T1W	TAL SEA

#### Client Sample ID: GW-3-121919 Date Collected: 12/19/19 12:50

#### Date Received: 12/20/19 16:51

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319908	12/31/19 09:53	JCM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319958	01/02/20 15:56	T1W	TAL SEA

#### Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

#### Accreditation/Certification Summary

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

#### Job ID: 580-91663-1

#### Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-20
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-06-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

#### Sample Summary

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-91663-1	5-W-19-121719	Water	12/17/19 11:57	12/20/19 16:51
580-91663-2	2A-W-41-121719	Water	12/17/19 11:10	12/20/19 16:51
580-91663-3	2A-W-410-121719	Water	12/17/19 11:05	12/20/19 16:51
580-91663-4	EW-2A-121719	Water	12/17/19 15:55	12/20/19 16:51
580-91663-5	5-W-56-121719	Water	12/17/19 17:08	12/20/19 16:51
580-91663-6	1B-W-23-121719	Water	12/17/19 14:35	12/20/19 16:51
580-91663-7	5-W-55-121719	Water	12/17/19 16:18	12/20/19 16:51
580-91663-8	5-W-14-121719	Water	12/17/19 15:33	12/20/19 16:51
580-91663-9	5-W-17-121719	Water	12/17/19 10:46	12/20/19 16:51
580-91663-10	5-W-16-121719	Water	12/17/19 12:00	12/20/19 16:51
580-91663-11	2A-W-40-121719	Water	12/17/19 09:50	12/20/19 16:51
580-91663-12	5-W-18-121719	Water	12/17/19 14:31	12/20/19 16:51
580-91663-13	2A-W-42-121819	Water	12/18/19 14:23	12/20/19 16:51
580-91663-14	1C-W-8-121819	Water	12/18/19 09:43	12/20/19 16:51
580-91663-15	GW-4-121819	Water	12/18/19 13:20	12/20/19 16:51
580-91663-16	2A-W-9-121819	Water	12/18/19 17:00	12/20/19 16:51
580-91663-17	2A-W-10-121819	Water	12/18/19 15:55	12/20/19 16:51
580-91663-18	2A-W-100-121819	Water	12/18/19 16:05	12/20/19 16:51
580-91663-19	1C-W-7-121819	Water	12/18/19 12:12	12/20/19 16:51
580-91663-20	1C-W-1-121819	Water	12/18/19 10:47	12/20/19 16:51
580-91663-21	1B-W-3-121819	Water	12/18/19 11:50	12/20/19 16:51
580-91663-22	5-W-51-121819	Water	12/18/19 10:42	12/20/19 16:51
580-91663-23	MW-3-121919	Water	12/19/19 10:45	12/20/19 16:51
580-91663-24	MW-4-121919	Water	12/19/19 11:50	12/20/19 16:51
580-91663-25	2B-W-4-121919	Water	12/19/19 09:38	12/20/19 16:51
580-91663-26	MW-555	Water	12/19/19 11:25	12/20/19 16:51
580-91663-27	5-W-180-121719	Water	12/17/19 14:41	12/20/19 16:51
580-91663-28	GW-30-121919	Water	12/19/19 13:00	12/20/19 16:51
580-91663-29	GW-3-121919	Water	12/19/19 12:50	12/20/19 16:51

Eurofins TestAmerica, Seattle

5755 8th Street East Tacoma, WA 98424 Phone: 253-922-2310 Fax: 253-922-5047

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E R R Re

## **Chain of Custody Record**

TestAmerica

Ver: 01/16/2019

Client Information	Sampler (C. B.	anfield			PM: en, Kris	stine I	5			****									COC No: 580-36968-11852.1		
Client Contact: Peter Kingston	Phone: 425	3914 4	146	E-M kris		len@	testam	ericair	30 001	 n								Page:			
Company: Farallon Consulting LLC			<u> </u>		Τ		(Cottanna				l				······			Page 1 of 3 Job #:			
Address: 975 5th Avenue NW Suite 100	Due Date Reque	sted:					ТТ	Т	Anai	lysis	Req	ues	ted				1200	Preservation	Codes		
Dity:	TAT Requested (	(days):			$\left  \right $													A - HCL		Hexane	
ssaquah tate, Zip:	- STAN	STANDARD				õ												B - NaOH C - Zn Acetate		None AsNaO2	
VA, 98027	PO#					44TW												D - Nitric Acid E - NaHSO4	Q-	Na2O4S Na2SO3	
none: 425 295 - 0800	TT0100-Q11					for N												F - MeOH G - Amchlor	S - I	Na2S2O3 H2SO4	
kingston@farallonconsulting.com	WO #: Tax Code 880	0 BF1000721	5		e (Yas or No es or No)	reporting list for NWTPH-Dx												H - Ascorbic Ac I - Ice	Ų-/	TSP Dodecahj Acetone	ydrate
oject Name: NSF Skykomish NPDES	Project #: 58005923				10	portir									Ì		200	J - DI Water K - EDTA	W -	MCAA pH 4-5	
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ample Identification			(C=comp,	S=solid, O=waste/oil,	eld F	NWTPH											al Nu				ľ
	Sample Date	Time		BT=Tissue, A=Air) ation Code:	WHY STORY	≩ A							10.5500 x800	55/0 <b>4</b> 6656	88 - 83 G	1.2.1 1948524	Total	Specia	l Instruc	tions/Note	):
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5-10-56-121719		1708		Water				+	╉╌╴╢												
1B-W-23-121719		1435	- [ ]	Water		+			┟╌┥												
5-6-55-121719		1619		Water		+			┨───┤												
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				Page 4	3 of 7	49		******											Vor 0	1/1//2020	<u> </u>

Eurofins TestAmerica, Seattle

5755 8th Street East Tacoma, WA 98424 Phone: 253-922-2310 Fax: 253-922-5047

## Chain of Custody Record

🔅 eurofins	Environe
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Environment Testing TestAmerica

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Client Information	Sampler:	Brint	ıld	A	ib PM: Ilen, Kris	stine	D					Car	Carrier Tracking No(s):					COC No: 580-36968-11852.2			
Peter Kingston	Phone: 42	5 39	4 41	LIC K					1							Page: Page 2 of 3					
Company: Farallon Consulting LLC		<u> </u>	<u> </u>																		
ddress:	Due Date Reques	sted:	·		Analysis Req				que	uested											
175 5th Avenue NW Suite 100	TATO															Preservation (					
ssaquah	TAT Requested (	days):																	A - HCL B - NaOH	M - Hexan N - None	e
tate, Zip. VA, 98027	I DIA	STANDARD				D-H-													C - Zn Acetate D - Nitric Acid	O - AsNaO P - Na2O4	
	PO#:	<u> </u>	1 01-1		_	EMA			ľ										E - NaHSO4 F - MeOH	Q - Na2SO	3
hone: 425-295-0800	TT0100-Q11				tor											l		G - Amchior	R - Na2S20 S - H2SO4	ł	
kingston@farallonconsulting.com				No. No	g list												H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone				
oject Name: NSF Skykomish NPDES	Project #:				Ves.													218	J - DI Water K - EDTA	V - MCAA W - pH 4-5	
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ample Identification	Sample Date	Sample Time	(C=comp, G≡grab)	O=waste/oil, BT=Tissue, A=A	Be	Hdtwn			ĺ												
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#### Eurofins TestAmerica, Seattle

## **Chain of Custody Record**

#### 🔅 eurofins

Environment Testing TestAmerica

Tacoma, WA 98424 Phone: 253-922-2310 Fax: 253-922-5047

5755 8th Street East

Ca.

Client Information	Sampler	antie	0 el		PM: en, Krist	tine D					Carri	er Traci	king No	(5):			COC No: 580-36968-11	950.0	
Client Contact: Peter Kingston	Phone:	12530	74/11		lail:		stameric				1						Page:	052.5	
Company: Farallon Consulting LLC			44	40		snite	Stamerik			_	L						Page 3 of 3 Job #:		
Address:	Due Date Reque	sted:						An	nalysi	s Red	ques	ted			<del></del>		Preservation C	odes:	
975 5th Avenue NW Suite 100 City:	TAT Requested (	(davs):			-												A - HCL	M - Hexane	3
issaquah State, Zip:		SDA	20			ă											B - NaOH C - Zn Acetate	N - None O - AsNaO2	2
WA, 98027	JIM	NOT	KU			НЦ											D - Nitric Acid E - NaHSO4	P - Na2O4S Q - Na2SO3	
Phone: 425-295-0800	PO#: TT0100-Q11				1	or NV											F - MeOH G - Amchior	R - Na2S2C S - H2SO4	)3
Email: pkingston@farallonconsulting.com	WO #:				N.	i list				ĺ						1	H - Ascorbic Acid I - Ice	T - TSP Doc U - Acetone	
Project Name:	Tax Code 8800 Project #:	0 BF100072	15		Yes or or No)	reporting list for NWTPH-Dx										5	J - DI Water K - EDTA	V - MCAA W - pH 4-5	
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Client: Farallon Consulting LLC

#### Login Number: 91663 List Number: 1

Creator: Vallelunga, Diana L

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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	
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.	False	Refer to Job Narrative for details.
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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

List Source: Eurofins TestAmerica, Seattle

## 1 2 3 4 5 6 7 8 9 10 11 12

#### Presley, Kim

From: Sent:	Peter Kingston <pkingston@farallonconsulting.com> Monday, December 23, 2019 6:22 PM</pkingston@farallonconsulting.com>
То:	Presley, Kim
Cc:	Jeanette Mullin; Allen, Kristine; Matthew Bowser
Subject:	Re: REPLY REQUESTED**Eurofins TestAmerica Sample Login Confirmation files from 580-91663 BNSF Skykomish Ground Water

#### -External Email-

We want the last three samples analyzed
 the sample ID should not include the date.

Thanks Kim!

On Dec 23, 2019 5:20 PM, Kim Presley <<u>kim.presley@testamericainc.com</u>> wrote:

Please confirm the following:

1.) The last three samples were crossed off the COC however containers were provided for analysis. Do you want these analyzed?

2.) The sample ID for one sample does not include the sample date as it does on the rest of the samples. It has been logged per the COC for now. Is this sample ID correct?

Attached, please find the Sample Confirmation files for job 580-91663; BNSF Skykomish Ground Water

Please feel free to contact me or your PM, Kristine Allen, if you have any questions.

Thank you.

**Kim A Presley** Project Manager Assistant

Eurofins TestAmerica, Seattle Phone: 253-922-2310

E-mail: <u>kim.presley@testamericainc.com</u> www.eurofinsus.com | www.testamericainc.com



Reference: [580-317175] Attachments: 2

Please let us know if we met your expectations by rating the service you received from Eurofins TestAmerica on this project by visiting our website at: <u>Project Feedback</u>

# 🛟 eurofins

# Environment Testing TestAmerica

## **ANALYTICAL REPORT**

Eurofins TestAmerica, Seattle 5755 8th Street East Tacoma, WA 98424 Tel: (253)922-2310

#### Laboratory Job ID: 580-91663-2

Client Project/Site: BNSF Skykomish Ground Water Sampling Event: Skykomish HCC System

### For:

..... Links

Review your project results through

**Total** Access

Have a Question?

Ask-

The

www.testamericainc.com

Visit us at:

Expert

Farallon Consulting LLC 975 5th Avenue NW Suite 100 Issaquah, Washington 98027

Attn: Peter Kingston

Knistine D. allen

Authorized for release by: 1/17/2020 1:55:02 PM

Kristine Allen, Manager of Project Management (253)248-4970 kristine.allen@testamericainc.com

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.

# **Table of Contents**

Cover Page	1
Table of Contents	
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QC Sample Results	7
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Certification Summary	9
Sample Summary	10
Receipt Checklists	11

#### Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-91663-2

#### Comments

No additional comments.

#### Receipt

The samples were received on 12/20/2019 4:51 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 10 coolers at receipt time were 0.6° C, 0.6° C, 0.8° C, 1.3° C, 1.3° C, 2.0° C, 2.2° C, 2.2° C, 2.3° C and 3.5° C.

#### **Receipt Exceptions**

The following samples were activated for Silica Gell Clean up by the client on 1-8-20: 2A-W-41-121719 (580-91663-2) and GW-3-121919 (580-91663-29). This analysis was not originally requested on the chain-of-custody (COC).

#### GC Semi VOA

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.

#### **Definitions/Glossary**

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

Job ID: 580-91663-2

4
5
8
9

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

#### Client Sample ID: 2A-W-41-121719 Date Collected: 12/17/19 11:10

Date Received: 12/20/19 16:51

#### Lab Sample ID: 580-91663-2 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.098		0.062	0.062	mg/L		12/30/19 09:37	01/15/20 21:40	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		12/30/19 09:37	01/15/20 21:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	86		50 - 150				12/30/19 09:37	01/15/20 21:40	1

#### Client Sample ID: GW-3-121919 Date Collected: 12/19/19 12:50

Date Received: 12/20/19 16:51

Job ID: 580-91663-2

Lab Sample ID: 580-91663-29 Matrix: Water

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:53	01/15/20 21:18	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		12/31/19 09:53	01/15/20 21:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	69		50 - 150				12/31/19 09:53	01/15/20 21:18	1

RL

0.065

0.096

Limits

50 - 150

MDL Unit

0.065 mg/L

0.096 mg/L

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

MB MB

MB MB Qualifier

ND

ND

84

%Recovery

Result Qualifier

Lab Sample ID: MB 580-319908/1-B

Lab Sample ID: LCS 580-319908/2-B

Matrix: Water

#2 Diesel (C10-C24)

Motor Oil (>C24-C36)

Analyte

Surrogate

o-Terphenyl

Matrix: Water

Analysis Batch: 320760

Prep Type: Total/NA

Prep Batch: 319908

Dil Fac

Dil Fac

1

1

**Client Sample ID: Method Blank** 

Analyzed

01/15/20 20:13

01/15/20 20:13

Analyzed

6	
8	
9	

12/31/19 09:53	01/15/20 20:13	1
Client Sample I	D: Lab Control	Sample

Prepared

12/31/19 09:53

12/31/19 09:53

Prepared

D

#### Prep Type: Total/NA Prop Batch: 319908

Analysis Batch: 320760							Prep	Batch: 319908
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
#2 Diesel (C10-C24)	0.500	0.462		mg/L		92	50 _ 120	
Motor Oil (>C24-C36)	0.500	0.516		mg/L		103	64 _ 120	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
o-Terphenyl	113		50 - 150

Lab Sample ID: LCSD 580-319908/3-B Matrix: Water Analysis Batch: 320760					Clie	ent San	nple ID:		ol Sampl ype: To Batch: 3	tal/NA
		Spike	LCSD	LCSD				%Rec.		RPD
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
#2 Diesel (C10-C24)		0.500	0.479		mg/L		96	50 - 120	4	26
Motor Oil (>C24-C36)		0.500	0.511		mg/L		102	64 - 120	1	24
L	CSD LCSD									
Surrogate %Peco	vory Qualifior	l imite								

Surrogate	%Recovery	Qualifier	Limits
o-Terphenyl	108		50 - 150

Matrix: Water

Matrix: Water

Lab Sample ID: 580-91663-2

Lab Sample ID: 580-91663-29

## 2 3 4 5 6 7

#### Client Sample ID: 2A-W-41-121719 Date Collected: 12/17/19 11:10 Date Received: 12/20/19 16:51

Γ								
	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319807	12/30/19 09:37	NRF	TAL SEA
Total/NA	Cleanup	3630C			319866	01/14/20 18:19	NRF	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	320760	01/15/20 21:40	JCM	TAL SEA

#### Client Sample ID: GW-3-121919 Date Collected: 12/19/19 12:50 Date Received: 12/20/19 16:51

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319908	12/31/19 09:53	JCM	TAL SEA
Total/NA	Cleanup	3630C			320652	01/14/20 18:18	PRO	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	320760	01/15/20 21:18	JCM	TAL SEA

#### Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

### Accreditation/Certification Summary

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

#### Job ID: 580-91663-2

#### Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-20
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-06-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

Sample Summary

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-91663-2	2A-W-41-121719	Water	12/17/19 11:10	12/20/19 16:51	
580-91663-29	GW-3-121919	Water	12/19/19 12:50	12/20/19 16:51	

Client: Farallon Consulting LLC

#### Login Number: 91663 List Number: 1

Creator: Vallelunga, Diana L

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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	
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.	False	Refer to Job Narrative for details.
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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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List Source: Eurofins TestAmerica, Seattle

# 🛟 eurofins

# Environment Testing TestAmerica

## **ANALYTICAL REPORT**

Eurofins TestAmerica, Seattle 5755 8th Street East Tacoma, WA 98424 Tel: (253)922-2310

#### Laboratory Job ID: 580-91664-1

Client Project/Site: BNSF Skykomish Former Maintenance Sampling Event: Skykomish HCC System

### For:

Farallon Consulting LLC 975 5th Avenue NW Suite 100 Issaquah, Washington 98027

Attn: Peter Kingston

Knistine D. allen

Authorized for release by: 1/6/2020 1:39:51 PM

Kristine Allen, Manager of Project Management (253)248-4970 kristine.allen@testamericainc.com

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The

Expert

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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#### Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-91664-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 12/20/2019 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.6° C, 2.0° C and 2.2° C.

#### GC Semi VOA

Method NWTPH-Dx: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern were later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: WG-WV-121819 (580-91664-8) and PZ-7S-121819 (580-91664-13).

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.

Job ID: 580-91664-1

#### **Definitions/Glossary**

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Former Maintenance

Percent Recovery

Glossary Abbreviation

¤ %R

Job ID: 590 01664 1	
Job ID: 580-91664-1	2
	3
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	10

CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

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

#### Client Sample ID: PZ-80-121819

Date Collected: 12/18/19 11:25 Date Received: 12/20/19 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.063	0.063	mg/L		12/31/19 09:53	01/02/20 16:18	1
Motor Oil (>C24-C36)	ND		0.093	0.093	mg/L		12/31/19 09:53	01/02/20 16:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	71		50 - 150				12/31/19 09:53	01/02/20 16:18	1

Lab Sample ID: 580-91664-1

Job ID: 580-91664-1

Matrix: Water

#### Client Sample ID: S2-AU-121819

Date Collected: 12/18/19 13:32 Date Received: 12/20/19 10:00

Analyte	Result	Qualifier	Products (GC) RL		Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:53	01/02/20 16:39	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:53	01/02/20 16:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	70		50 - 150				12/31/19 09:53	01/02/20 16:39	1

Job ID: 580-91664-1

Matrix: Water

#### Client Sample ID: GW-1-121819 Date Collected: 12/18/19 13:55

Date Received: 12/20/19 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:53	01/02/20 17:01	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		12/31/19 09:53	01/02/20 17:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	85		50 - 150				12/31/19 09:53	01/02/20 17:01	1

Lab Sample ID: 580-91664-3

Matrix: Water

Job ID: 580-91664-1

2 3 4

#### Client Sample ID: S2-AD-121819

Date Collected: 12/18/19 11:38 Date Received: 12/20/19 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:53	01/02/20 17:44	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:53	01/02/20 17:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	81		50 - 150				12/31/19 09:53	01/02/20 17:44	1

Lab Sample ID: 580-91664-4

Job ID: 580-91664-1

Matrix: Water

Eurofins TestAmerica, Seattle

#### Client Sample ID: EW-1-121819 Date Collected: 12/18/19 10:30

Date Received: 12/20/19 10:00

#### Lab Sample ID: 580-91664-5 Matrix: Water

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.063	0.063	mg/L		12/31/19 09:53	01/02/20 18:06	1
Motor Oil (>C24-C36)	ND		0.093	0.093	mg/L		12/31/19 09:53	01/02/20 18:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78		50 - 150				12/31/19 09:53	01/02/20 18:06	1

#### Client Sample ID: S2-BD-121819

Date Collected: 12/18/19 09:47 Date Received: 12/20/19 10:00

Method: NWTPH-Dx - North	nwest - Semi-Volatile	Petroleum	Products (GC)	1				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:53	01/02/20 18:28
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:53	01/02/20 18:28
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed
o-Terphenyl	80		50 - 150				12/31/19 09:53	01/02/20 18:28

Job ID: 580-91664-1

Matrix: Water

Dil Fac 1

Dil Fac

Lab Sample ID: 580-91664-6

Client Sample ID: 5-W-43-121819 Date Collected: 12/18/19 09:28

Date Received: 12/20/19 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:53	01/02/20 18:50	1
Motor Oil (>C24-C36)	ND		0.092	0.092	mg/L		12/31/19 09:53	01/02/20 18:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	82		50 - 150				12/31/19 09:53	01/02/20 18:50	1

Job ID: 580-91664-1

Matrix: Water

5

Lab Sample ID: 580-91664-7

#### Client Sample ID: WG-WV-121819 Date Collected: 12/18/19 13:54

Date Received: 12/20/19 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.061	0.061	mg/L		12/31/19 09:53	01/02/20 19:11	1
Motor Oil (>C24-C36)	0.17		0.091	0.091	mg/L		12/31/19 09:53	01/02/20 19:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	93		50 - 150				12/31/19 09:53	01/02/20 19:11	1

Job ID: 580-91664-1

Matrix: Water

Lab Sample ID: 580-91664-8

Matrix: Water

Lab Sample ID: 580-91664-9

#### Client Sample ID: FWG-EV-121819 Date Collected: 12/18/19 14:35

Date Received: 12/20/19 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:53	01/02/20 19:33	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:53	01/02/20 19:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				12/31/19 09:53	01/02/20 19:33	1

#### Client Sample ID: S2-BU-121819

Date Collected: 12/18/19 10:18 Date Received: 12/20/19 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.11		0.062	0.062	mg/L		12/31/19 09:53	01/02/20 19:55	1
Motor Oil (>C24-C36)	0.10		0.091	0.091	mg/L		12/31/19 09:53	01/02/20 19:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				12/31/19 09:53	01/02/20 19:55	1

Lab Sample ID: 580-91664-10

Matrix: Water

Lab Sample ID: 580-91664-11

#### Client Sample ID: FWG-WV-121819 Date Collected: 12/18/19 15:00

Date Received: 12/20/19 10:00

Analyte

#### Matrix: Water Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) Result Qualifier RL MDL Unit Dil Fac D Prepared Analyzed

#2 Diesel (C10-C24)	ND	0.062	0.062 mg/L	12/31/19 09:53	01/02/20 20:17	1
Motor Oil (>C24-C36)	ND	0.091	0.091 mg/L	12/31/19 09:53	01/02/20 20:17	1
Surrogate	%Recovery Qualifier	Limits		Prepared	Analyzed	Dil Fac

5

Matrix: Water

Lab Sample ID: 580-91664-12

#### Client Sample ID: WG-EV-121819 Date Collected: 12/18/19 10:49

Date Received: 12/20/19 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.45		0.061	0.061	mg/L		12/31/19 09:53	01/02/20 20:38	1
Motor Oil (>C24-C36)	0.45		0.091	0.091	mg/L		12/31/19 09:53	01/02/20 20:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150				12/31/19 09:53	01/02/20 20:38	1

Matrix: Water

Lab Sample ID: 580-91664-13

## Client Sample ID: PZ-7S-121819

Date Collected: 12/18/19 14:52 Date Received: 12/20/19 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.063	0.063	mg/L		12/31/19 09:53	01/02/20 21:00	1
Motor Oil (>C24-C36)	0.11		0.092	0.092	mg/L		12/31/19 09:53	01/02/20 21:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	83		50 - 150				12/31/19 09:53	01/02/20 21:00	1

#### Client Sample ID: GW-2-121819 Date Collected: 12/18/19 15:48

Date Received: 12/20/19 10:00

 Method: NWTPH-Dx - Northwest	t - Semi-Volatile	Petroleum	Products (GC)	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:53	01/02/20 21:43	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:53	01/02/20 21:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	79		50 _ 150				12/31/19 09:53	01/02/20 21:43	1

Job ID: 580-91664-1

Lab Sample ID: 580-91664-14

Matrix: Water

5

#### Client Sample ID: GW-20-121819 Date Collected: 12/18/19 15:55

Date Received: 12/20/19 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.062	0.062	mg/L		12/31/19 09:53	01/02/20 22:05	1
Motor Oil (>C24-C36)	ND		0.091	0.091	mg/L		12/31/19 09:53	01/02/20 22:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	87		50 - 150				12/31/19 09:53	01/02/20 22:05	1

Job ID: 580-91664-1

Lab Sample ID: 580-91664-15

Matrix: Water

Lab Sample ID: MB 580-319908/1-A

Matrix: Water

Analyte

Analysis Batch: 319958

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

MB MB

Result Qualifier

RL

MDL Unit

Prep Type: Total/NA

Prep Batch: 319908

Dil Fac

**Client Sample ID: Method Blank** 

Analyzed

Prepared

D

6

#2 Diesel (C10-C24)	N	D	0.065	(	0.065 mg	g/L	12/3	31/19 09:53	01/02/20 1	13:45	1
Motor Oil (>C24-C36)	Ν	D	0.096	(	0.096 mg	g/L	12/3	31/19 09:53	01/02/20 1	13:45	1
	м	B MB									
Surrogate	%Recover	ry Qualifier	Limits				F	Prepared	Analyz	ed	Dil Fac
o-Terphenyl	٤	31	50 - 150				12/3	31/19 09:53	3 01/02/20 1	13:45	1
_ Lab Sample ID: LCS 580-31	9908/2-A						Client	t Sample	ID: Lab Co	ontrol S	ample
Matrix: Water										ype: To	
Analysis Batch: 319958										Batch: 3	
-			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifie	r Unit	D	%Rec	Limits		
#2 Diesel (C10-C24)			0.500	0.448		mg/L		90	50 - 120		
Motor Oil (>C24-C36)			0.500	0.493		mg/L		99	64 - 120		
	LCS LC	cs									
Surrogate	%Recovery Q	ualifier	Limits								
o-Terphenyl	107		50 - 150								
- Lab Sample ID: LCSD 580-3	319908/3-A					CI	ient San	nple ID: I	Lab Control	I Samp	le Dup
Matrix: Water										ype: To	
Analysis Batch: 319958										Batch: 3	
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifie	r Unit	D	%Rec	Limits	RPD	Limit
#2 Diesel (C10-C24)			0.500	0.456		mg/L		91	50 - 120	2	26
Motor Oil (>C24-C36)			0.500	0.483		mg/L		97	64 - 120	2	24

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
o-Terphenyl	108		50 - 150

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Former Maintenance

Job ID: 580-91664-1

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Lab Sample ID: 580-91664-1

Lab Sample ID: 580-91664-2

Lab Sample ID: 580-91664-3

Lab Sample ID: 580-91664-4

Lab Sample ID: 580-91664-5

Lab Sample ID: 580-91664-6

Client Sample ID: PZ-80-121819
Date Collected: 12/18/19 11:25
Date Received: 12/20/19 10:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319908	12/31/19 09:53	JCM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319958	01/02/20 16:18	T1W	TAL SEA

#### Client Sample ID: S2-AU-121819 Date Collected: 12/18/19 13:32 Date Received: 12/20/19 10:00

_	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319908	12/31/19 09:53	JCM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319958	01/02/20 16:39	T1W	TAL SEA

#### Client Sample ID: GW-1-121819

Date Collected: 12/18/19 13:55

Date Received: 12/20/19 10:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C		· ·	319908	12/31/19 09:53	JCM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319958	01/02/20 17:01	T1W	TAL SEA

# Client Sample ID: S2-AD-121819

Date Collected: 12/18/19 11:38 Date Received: 12/20/19 10:00

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319908	12/31/19 09:53	JCM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319958	01/02/20 17:44	T1W	TAL SEA

# Client Sample ID: EW-1-121819

Date Collected: 12/18/19 10:30 Date Received: 12/20/19 10:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319908	12/31/19 09:53	JCM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319958	01/02/20 18:06	T1W	TAL SEA

#### Client Sample ID: S2-BD-121819 Date Collected: 12/18/19 09:47 Date Received: 12/20/19 10:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319908	12/31/19 09:53	JCM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319958	01/02/20 18:28	T1W	TAL SEA

Dilution

Factor

Dilution

Factor

1

1

Run

Run

Batch

Number

319908

319958

Batch

Number

319908

319958

Prepared

or Analyzed

12/31/19 09:53

01/02/20 18:50

Prepared

or Analyzed

12/31/19 09:53

01/02/20 19:11

Analyst

Analyst

JCM

T1W

JCM

T1W

Lab

Lab

TAL SEA

TAL SEA

TAL SEA

TAL SEA

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Former Maintenance

Client Sample ID: 5-W-43-121819

Batch

Туре

Prep

Batch

Туре

Prep

Client Sample ID: WG-WV-121819

Analysis

Batch

Method

3510C

Batch

Method

3510C

NWTPH-Dx

Date Collected: 12/18/19 09:28

Date Received: 12/20/19 10:00

Date Collected: 12/18/19 13:54

Date Received: 12/20/19 10:00

Prep Type

Total/NA

Total/NA

Prep Type

Total/NA

Job ID: 580-91664-1

Lab Sample ID: 580-91664-7 Matrix: Water Lab Sample ID: 580-91664-8 Matrix: Water

Total/NA	Analysis	NWTPH-Dx

#### Client Sample ID: FWG-EV-121819

Lab Sample ID: 580-91664-9 Matrix: Water

Lab Sample ID: 580-91664-10

Lab Sample ID: 580-91664-11

Lab Sample ID: 580-91664-12

Matrix: Water

Matrix: Water

Matrix: Water

#### Date Collected: 12/18/19 14:35 Date Received: 12/20/19 10:00

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319908	12/31/19 09:53	JCM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319958	01/02/20 19:33	T1W	TAL SEA

### Client Sample ID: S2-BU-121819

Date Collected: 12/18/19 10:18 Date Received: 12/20/19 10:00

Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab Prep TAL SEA Total/NA 3510C JCM 319908 12/31/19 09:53 Total/NA T1W TAL SEA Analysis NWTPH-Dx 1 319958 01/02/20 19:55

#### Client Sample ID: FWG-WV-121819

Date Collected: 12/18/19 15:00 Date Received: 12/20/19 10:00

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319908	12/31/19 09:53	JCM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319958	01/02/20 20:17	T1W	TAL SEA

#### Client Sample ID: WG-EV-121819 Date Collected: 12/18/19 10:49 Date Received: 12/20/19 10:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319908	12/31/19 09:53	JCM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319958	01/02/20 20:38	T1W	TAL SEA

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Former Maintenance

Matrix: Water

Matrix: Water

Lab Sample ID: 580-91664-13

Lab Sample ID: 580-91664-14

#### Client Sample ID: PZ-7S-121819 Date Collected: 12/18/19 14:52 Date Received: 12/20/19 10:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319908	12/31/19 09:53	JCM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319958	01/02/20 21:00	T1W	TAL SEA

#### Client Sample ID: GW-2-121819 Date Collected: 12/18/19 15:48 Date Received: 12/20/19 10:00

	В	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	т	уре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	P	rep	3510C			319908	12/31/19 09:53	JCM	TAL SEA
Total/NA	A	nalysis	NWTPH-Dx		1	319958	01/02/20 21:43	T1W	TAL SEA

### Client Sample ID: GW-20-121819

Lab Sample ID: 580-91664-15 Matrix: Water

Date Collected: 12/18/19 15:55 Date Received: 12/20/19 10:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			319908	12/31/19 09:53	JCM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	319958	01/02/20 22:05	T1W	TAL SEA

#### Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

# Accreditation/Certification Summary

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Former Maintenance

#### Job ID: 580-91664-1

#### Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-20
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-06-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

Eurofins TestAmerica, Seattle

# Sample Summary

#### Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Former Maintenance

Job ID: 580-91664-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-91664-1	PZ-80-121819	Water	12/18/19 11:25	12/20/19 10:00	
580-91664-2	S2-AU-121819	Water	12/18/19 13:32	12/20/19 10:00	
580-91664-3	GW-1-121819	Water	12/18/19 13:55	12/20/19 10:00	
580-91664-4	S2-AD-121819	Water	12/18/19 11:38	12/20/19 10:00	
580-91664-5	EW-1-121819	Water	12/18/19 10:30	12/20/19 10:00	
580-91664-6	S2-BD-121819	Water	12/18/19 09:47	12/20/19 10:00	
580-91664-7	5-W-43-121819	Water	12/18/19 09:28	12/20/19 10:00	
580-91664-8	WG-WV-121819	Water	12/18/19 13:54	12/20/19 10:00	
580-91664-9	FWG-EV-121819	Water	12/18/19 14:35	12/20/19 10:00	
580-91664-10	S2-BU-121819	Water	12/18/19 10:18	12/20/19 10:00	
580-91664-11	FWG-WV-121819	Water	12/18/19 15:00	12/20/19 10:00	
580-91664-12	WG-EV-121819	Water	12/18/19 10:49	12/20/19 10:00	
580-91664-13	PZ-7S-121819	Water	12/18/19 14:52	12/20/19 10:00	
580-91664-14	GW-2-121819	Water	12/18/19 15:48	12/20/19 10:00	
580-91664-15	GW-20-121819	Water	12/18/19 15:55	12/20/19 10:00	

Eurofins TestAmerica, Seattle

		LABORATORY INFORMATION	L	AB WORK ORDER:	
BNSF		Project Manager KALA KASTIV	2-922-23(0°	SHIPMENT INFORMA	
RAILWAY	Address: 5755 9 th ST 5	Phone: 25	3-922-23(05	hipment Method: CWR136	2
CHAIN OF CUSTODY	City/State/ZIP: TACOMA, WA °	18424 Fax:	<u>ت</u>	racking Number	
BNSF PROJECT INFORMATION	Project State of Origin:	CONSULTANT IN	FORMATION	roject Number: 603-067	-
BNSF Project Number: 603-067	Project City: Skykemign	Company: Farallon Cons	sitis-	roject Manager PETE KINGE mall: Plinyston Pforally hone: 425295082	ton
INSF Project Name: BUSF FORMER	MAITENANG	Address: 975 5th AVR	NID "	mall: plinyston Ptaralli	unconsulting, con
INSF Contact:	BNSF Work Order No.:	City/State/ZIP KSQGVahi	A 98027 "	home: 425295080	>
TURNAROUND TIME	DELIVERABLES Other	Deliverables?	METHODS FOR ANALYSIS		
1-day Rush	BNSF Standard (Level II)				
2-day Rush Standard 10-Day	Level III EDD R	Reg. Format?			
3-day Rush Other	_ Levet IV				
S/	MPLE INFORMATION	F			
Sample Identification	Sample Collection	Filtered Type Y/N Grab) Matrix			
Запре основой	Date Time Sampl	ler Y/N Grab) Matrix 2		COMMENTS	LAB USE
PZ-8-12-1819	1 12/18/19/125 CD	NGW			
52-AU-121819	1 133.2				
GW-1-121819	(355				
52-AD-121819	1138				-
EW-1-121819	1030				**************************************
52-BD-121819	0947				
5-10-43-121819	0928				
WG-WV-121819	1354		···		
FWG-EV	1435				
52-00-121919	1018		المراجع المراجع		
FWG-WV-121819	ISW ISW				<b>[</b> ]
WG-EV-121019	1049				
PZ-75-121819	1452				
GW-2-121919	1548		530-91664 Cha	ain of Clistopy	
4W-20-121819	1555 4			<u></u>	
nquished By:	Date/Time:		Date/Time: Comments	and Special Analytical Requirements	
naushen By O D I D I D C	Date/Time Date/Time	Gipan 1	Lz-zuil 10:30 Comments		
B Q. Poue ()	Date/Time: Received By:		Date/Time:		
eived by Laboratory:	Date/Time: Lab Remarks:		Lab: Custody Intact? Custody Seal N	No. BNSF COC No	
			Yes No		

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

Packing: Packing: Cust. Seal: Yes_No_ Blue Ice, Wet, Dry, None Other: 20-14 Tw Lab Cour: Other:	A Diy, N	Therm. ID: A1 Cor: Kan C Unc: 1.1 Cooler Dsc: 12.1 A1 Cor: Kan A1004 Packing: FedEx: 20 - 1A an A1004 Cust. Seal: Yes No Lab Cour: 4 Blue Ice, Wet, Dry, None Other: 4	Therm. ID:       ACor:       Cort:       Out:       Ou	herm. ID: <u>AL</u> Cor: <u>L2</u> • Unc: <u>L3</u> • sooler Dsc: "acking: FedEx: BNJF 911114 lust. Seal: <u>Ves</u> No UPS: BNJF 91114 Hue Ice, Wet, Dry, None Other: FURMER WANDER	Therm. ID:       MCor:       1.3       unc:       1.4         Cooler Dsc:	Therm. ID: A L Cor: 2.6 ° Unc: 0.7 °         Cooler Dsc:         Packing:         Packing:         Cust. Scal: Ves         No         UPS:         Blue Ice, Wet, Dry, None         Other:			
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LAB WORK ORDER: SHIPMENT INFORMATION	Shipment Method: Curling	Tracking Number:	Project Number: 693-04-2	Project Manager (P. T. D. I. M. A.	Harrison and the	Month Himmin Charles China Home								COMMENIS LABUSE												AN (ION IOS) WA WIN ON MALAN Dein of Custody	580-91664 Criani or Concert		Comments and Special Analytical Requirements:		II No. BNGE COCINO	
ae, Allon	-922-231	<u> </u>	CONSULTANT INFORMATION	Const Hilling	2	A GUADA	- 22																				580-91664 0		Date/Time: Date/Time:	1-2	Lab: Custody Intex? Custody Seal No.	Ŷ
LABORATORY INFORMATION	M ST CL	a. WA 98424 F	•	Company: FLL (Par [] [V	Address: 935 Sth	acred	Cother Deliverables?		EDD Rad, Format?		- HI	Type	Time Sampler V/N Grab) Matrix	1125 CANE (1)	133.3 /	(355	1138	1030	0947	C428	(354	1435	610	isw	10149	1423 /	IS48	4 1 1 X 4 SSSI		Received By: Received By:	Lab Remarks:	DUPLICATE - CONSULTANT
Laboratory: EUM PINS	AURIENE 5755 91	UNYSIATAZIP: TOUDANA	of Origin	Project Cily: SLUKON LA	MATTEN AN E		DELIVERABLES	BNSF Standard (Level II)			SAMPLE INFORMATION		Containers	1 12/18/14														4	12DE qu	DataATmes DataATmes	Data/Time:	-
<b>BNSF</b>	RAILWAY	CHAIN OF CUSTODY	BNSF PROJECT INFORMATION	BNSF Project Number 683-067	Ame: BUST FOOMER		TURNAROUND TIME	1-day Rush	2-day Rush	🗋 3-day Rush			Sample Identification	P2-9-12-1819	52 -AU-12(819	G121-1-1019	52-AD-121019	EW-1-121819	52-80-121819	S-W-43-121819	WG-WV-121819	ting trV	"52 -bu-121819	FWG-WV-121819	* WG-EV- 121819	plois-27-27 :	" (Sho-2-1218)	" 4W-30-121819	Keiniquished by: Cutci Seco	Relinquished By:	Received try Laboratory:	ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

Blue Ice, Wet, Dry, None Daher:	
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ar yet bit, 14006 Other:	
ue Ice, Wet, Dry, None Other: Port Court	
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Page 29 of 30	

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Login Sample Receipt C	hecklis	t		2
			lah Number 500 04004 4	3
Client: Farallon Consulting LLC			Job Number: 580-91664-1	
Login Number: 91664			List Source: Eurofins TestAmerica, Seattle	4
List Number: 1 Creator: Vallelunga, Diana L				5
	swer	Comment	<u> </u>	0
Radioactivity wasn't checked or is = background as measured by a survey<br meter.				7
The cooler's custody seal, if present, is intact.				
Sample custody seals, if present, are intact.				8
The cooler or samples do not appear to have been compromised or tampered with.				9
Samples were received on ice.				4.0
Cooler Temperature is acceptable.				10
Cooler Temperature is recorded.				11
COC is present.				
COC is filled out in ink and legible.				
COC is filled out with all pertinent information.				
Is the Field Sampler's name present on COC?				
There are no discrepancies between the containers received and the COC.				
Samples are received within Holding Time (excluding tests with immediate HTs)				
Sample containers have legible labels.				
Containers are not broken or leaking.				
Sample collection date/times are provided.				
Appropriate sample containers are used.				
Sample bottles are completely filled.				
Sample Preservation Verified.				
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs				
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").				
Multiphasic samples are not present.				l
Samples do not require splitting or compositing.				
Residual Chlorine Checked.				

# APPENDIX B DATA VALIDATION REPORTS

# 2019 SITE-WIDE GROUNDWATER MONITORING REPORT BNSF Former Maintenance and Fueling Facility Skykomish, Washington Consent Decree No. 07-2-33672-9 SEA

Farallon PN: 683-067



cari.say@saylerdata.com

# DATA VALIDATION REPORT

Skykomish Groundwater Monitoring March 2019 Data

Prepared for: Farallon Consulting, LLC 975 5<sup>th</sup> Avenue NW Issaquah, Washington 98027

April 23, 2019

#### 1.0 Introduction

Data validation was performed on the following water samples:

Sample ID	Sample Date/Time	Lab ID	Analyses
1A-W-4-032019	03/20/2019 16:30	580-84853-5	TPH-Dx
1B-W-2-032119	03/21/2019 14:18	580-84853-32	TPH-Dx
1B-W-23-032019	03/20/2019 14:30	580-84853-8	TPH-Dx
1B-W-3-032119	03/21/2019 15:05	580-84853-35	TPH-Dx
1C-W-1-032119	03/21/2019 12:30	580-84853-29	TPH-Dx
1C-W-3-032119	03/21/2019 15:00	580-84853-34	TPH-Dx
1C-W-4-032119	03/21/2019 15:05	580-84853-33	TPH-Dx
1C-W-7-032119	03/21/2019 10:45	580-84853-26	TPH-Dx
1C-W-8-032119	03/21/2019 12:40	580-84853-30	TPH-Dx
2A-W-10-032119	03/21/2019 09:54	580-84853-20	TPH-Dx
2A-W-40-032019	03/20/2019 17:55	580-84853-11	TPH-Dx
2A-W-410-032019	03/20/2019 16:20	580-84853-10	TPH-Dx
2A-W-41-032019	03/20/2019 15:55	580-84853-9	TPH-Dx, TPHSG
2A-W-42-032119	03/21/2019 11:05	580-84853-27	TPH-Dx
2A-W-9-032119	03/21/2019 09:54	580-84853-25	TPH-Dx
2B-W-4-032119	03/21/2019 12:04	580-84853-22	TPH-Dx
5-W-14-032019	03/20/2019 12:54	580-84853-18	TPH-Dx
5-W-16-032019	03/20/2019 11:59	580-84853-19	TPH-Dx
5-W-170-032019	03/20/2019 12:16	580-84853-4	TPH-Dx
5-W-17-032019	03/20/2019 12:14	580-84853-3	TPH-Dx
5-W-18-032019	03/20/2019 11:04	580-84853-1	TPH-Dx
5-W-19-032019	03/20/2019 11:11	580-84853-2	TPH-Dx
5-W-51-032019	03/20/2019 13:54	580-84853-12	TPH-Dx
5-W-55-032019	03/20/2019 15:21	580-84853-15	TPH-Dx
5-W-560-032019	03/20/2019 15:20	580-84853-14	TPH-Dx
5-W-56-032019	03/20/2019 15:09	580-84853-13	TPH-Dx
EW-2A-032119	03/21/2019 09:50	580-84853-24	TPH-Dx
GW-30-032019	03/20/2019 14:45	580-84853-7	TPH-Dx
GW-3-032019	03/20/2019 14:35	580-84853-6	TPH-Dx, TPHSG
GW-4-032119	03/21/2019 09:50	580-84853-23	TPH-Dx

Sample ID	Sample Date/Time	Lab ID	Analyses
MW-16-032119	03/21/2019 13:00	580-84853-31	TPH-Dx
MW-30-032119	03/21/2019 11:28	580-84853-53	TPH-Dx
MW-3-032119	03/21/2019 11:21	580-84853-28	TPH-Dx
MW-380R-032019	03/20/2019 17:02	580-84853-17	TPH-Dx
MW-38R-032019	03/20/2019 17:04	580-84853-16	TPH-Dx
MW-4-032119	03/21/2019 10:56	580-84853-21	TPH-Dx
MW-555-032219	03/22/2019 11:05	580-84853-51	TPH-Dx
S1-AD-032119	03/21/2019 16:10	580-84853-39	TPH-Dx
S1-AU-032119	03/21/2019 16:10	580-84853-37	TPH-Dx
S1-BD-032119	03/21/2019 16:05	580-84853-36	TPH-Dx
S1-BU-032119	03/21/2019 16:05	580-84853-38	TPH-Dx
S3-AD-032219	03/22/2019 08:55	580-84853-50	TPH-Dx
S3-AU-032219	03/22/2019 08:55	580-84853-44	TPH-Dx
S3-BD-032219	03/22/2019 08:55	580-84853-49	TPH-Dx
S3-BU-032219	03/22/2019 08:58	580-84853-45	TPH-Dx
S3-CD-0322219	03/22/2019 09:30	580-84853-52	TPH-Dx
S3-CU-032219	03/22/2019 09:30	580-84853-47	TPH-Dx
S4-AD-032219	03/22/2019 10:05	580-84853-46	TPH-Dx
S4-AU-032219	03/22/2019 10:05	580-84853-48	TPH-Dx
S4-BD-032219	03/22/2019 09:37	580-84853-42	TPH-Dx
S4-BU-032219	03/22/2019 09:37	580-84853-43	TPH-Dx
S4-CD-032219	03/22/2019 10:09	580-84853-41	TPH-Dx
S4-CU-032219	03/22/2019 10:06	580-84853-40	TPH-Dx

Samples were analyzed by Test America, Tacoma, Washington.

A stage 2A summary validation was performed on the analytical results including both the hardcopy (portable document format) and electronic data deliverable, earning EPA OSWER validation label code S2AVEM. Validation was performed by Cari Sayler.

Data qualifiers are assigned based only on the criteria reviewed and do not include calibration or instrument performance issues unless noted in the laboratory narrative.

No qualifiers were assigned during this review.

# 2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

<u>Sample analysis frequencies:</u> Quarterly sampling includes 25 water sample locations, and semiannual sampling includes an additional 29 water sample locations. Additionally, 20 of the 29 semi-annual locations are sentry wells which must be sampled if the HCC system has been down for more than 48 hours in the previous quarter. Finally, 4 of the quarterly locations and 4 of the semi-annual locations are undergoing monthly sampling as part of a pilot study. For this round of sampling, quarterly locations were required. Samples were collected from all required locations and the required analysis was completed by the laboratory for each collected sample.

<u>Analysis methods</u>: Each sample was analyzed by method NWTPH-Dx and prepared by method SW3510C. These methods are approved EPA methods and therefore meet comparability requirements. Additionally, samples 2A-W-41-032019 and GW-3-032019 were prepared with method SW3510C a second time, cleaned up with method SW3630C (silica gel) and analyzed by NWTPH-Dx.

<u>Precision, accuracy and completeness:</u> Accuracy and precision measurements were within control limits. A data completeness of 100% was calculated based on 54 of 54 intended sample analyses completed. Please note that this data completeness percentage includes the samples for the 8 locations included the pilot study which were validated separately. The project goal of 90% was met.

# 3.0 Diesel Range Petroleum Hydrocarbon Analysis

<u>Quality control analysis frequencies:</u> The method specifies that a method blank must be analyzed one per analytical batch or one per twenty samples, whichever is more frequent, and a laboratory duplicate must be analyzed one per ten samples. In addition, surrogate compounds must be measured in each field and quality control sample.

Each batch included a method blank, laboratory control sample (LCS), and LCS duplicate (LCSD), as well as appropriate surrogates. Data qualifiers are not required due to a lack of laboratory duplicate results.

<u>Holding times:</u> Unpreserved water samples must be extracted within 7 days of collection. Preserved water samples must be extracted within 14 days of collection. Extracts must be analyzed within 40 days of extraction. These criteria were met.

<u>Laboratory and field blank results</u>: Criteria for blanks are that analyte concentrations must be below the PQL, or below 5% of the lowest associated sample concentration. No target compounds were detected in the method or field blanks.

<u>Surrogate recoveries:</u> Laboratory control limits were 50-150%. Surrogate recoveries were within limits.

<u>LCS recoveries:</u> Laboratory control limits were 50-120% and 64-120%. LCS recoveries were within limits.

<u>LCS/LCSD RPDs:</u> The laboratory control limit ranged from <24 to <26%. LCS/LCSD RPD values were within limits.

<u>Field duplicate RPDs:</u> For concentrations above five times the reporting limit, RPDs were below 50%. For concentrations below five times the reporting limits, concentrations were within +/- two times the reporting limit.

<u>Reporting limits</u>: The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met.

<u>Laboratory narrative and flags:</u> No qualifiers were added based on a review of the laboratory narrative.

Diesel and oil range petroleum hydrocarbon data are acceptable for use as reported.

### 4.0 Abbreviations and Definitions

<u>DV Qualifier</u> U J	<u>Definition</u> The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample reporting limit or the amount of contaminant detected in the sample. The analyte was positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.
Ν	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.
UJ	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The sample result is rejected. The presence or absence of the analyte cannot be verified and data are not usable.
R1	The sample result has been replaced by a more reliable or more conservative result.
R2	The sample result has been replaced by a result from a different analysis method.
Abbreviation DV LCS LCSD MS MSD RL RPD RSD	Definition Data Validation Laboratory control sample Laboratory control sample duplicate Matrix spike Matrix spike duplicate Reporting limit Relative percent difference Relative standard deviation

#### 5.0 References

- USEPA National Functional Guidelines for Organic Superfund Methods Data Review, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency. January 2017, EPA-540-R-2017-002.
- USEPA Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, January 2009, EPA 540-R-08-005.



# DATA VALIDATION REPORT

Skykomish Groundwater Monitoring June 2019 Data

Prepared for: Farallon Consulting, LLC 975 5<sup>th</sup> Avenue NW Issaquah, Washington 98027

September 20, 2019

#### 1.0 Introduction

Data validation was performed on the following water samples:

Sample ID	Sample Date/Time	Lab ID	Analyses
2A-W-41-061819	06/18/2019 11:06	580-87064-1	TPH-Dx, TPHSG
5-W-17-061919	06/19/2019 10:44	580-87064-10	TPH-Dx
5-W-56-061919	06/19/2019 12:16	580-87064-11	TPH-Dx
5-W-55-061919	06/19/2019 13:11	580-87064-12	TPH-Dx
5-W-51-061919	06/19/2019 14:09	580-87064-13	TPH-Dx
5-W-14-061919	06/19/2019 15:06	580-87064-14	TPH-Dx
1B-W-3-161919	06/19/2019 08:48	580-87064-15	TPH-Dx
1C-W-7-061919	06/19/2019 10:07	580-87064-16	TPH-Dx
GW-4-061919	06/19/2019 11:35	580-87064-17	TPH-Dx
EW-2A-061919	06/19/2019 13:00	580-87064-18	TPH-Dx
1C-W-1-061919	06/19/2019 14:07	580-87064-19	TPH-Dx
2A-W-410-061819	06/18/2019 11:07	580-87064-2	TPH-Dx
1C-W-8-061919	06/19/2019 15:00	580-87064-20	TPH-Dx
2A-W-9-061919	06/19/2019 16:21	580-87064-21	TPH-Dx
2A-W-10-061919	06/19/2019 16:40	580-87064-22	TPH-Dx
2B-W-4-061919	06/19/2019 17:48	580-87064-23	TPH-Dx
MW-3-061919	06/19/2019 16:40	580-87064-24	TPH-Dx
MW-4-061919	06/19/2019 17:47	580-87064-25	TPH-Dx
MW-555-061919	06/19/2019 18:25	580-87064-26	TPH-Dx
1B-W-23-061819	06/18/2019 14:35	580-87064-3	TPH-Dx
GW-3-061819	06/18/2019 16:01	580-87064-4	TPH-Dx, TPHSG
GW-30-061819	06/18/2019 16:05	580-87064-5	TPH-Dx
2A-W-42-061819	06/18/2019 17:45	580-87064-6	TPH-Dx
5-W-19-061819	06/18/2019 18:52	580-87064-7	TPH-Dx
5-W-18-061919	06/19/2019 08:42	580-87064-8	TPH-Dx
5-W-16-061919	06/19/2019 09:40	580-87064-9	TPH-Dx

Samples were analyzed by Test America, Tacoma, Washington.

A stage 2A summary validation was performed on the analytical results including both the hardcopy (portable document format) and electronic data deliverable, earning EPA OSWER validation label code S2AVEM. Validation was performed by Cari Sayler.

Data qualifiers are assigned based only on the criteria reviewed and do not include calibration or instrument performance issues unless noted in the laboratory narrative.

No qualifiers were assigned during this review.

# 2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

<u>Sample analysis frequencies:</u> Quarterly sampling includes 25 water sample locations, and semiannual sampling includes an additional 29 water sample locations. Additionally, 20 of the 29 semi-annual locations are sentry wells which must be sampled if the HCC system has been down for more than 48 hours in the previous quarter. Finally, 4 of the quarterly locations and 4 of the semi-annual locations are undergoing monthly sampling as part of a pilot study. For this round of sampling, quarterly locations were required. Samples were collected from all required locations except 2A-W-40. The required analysis was completed by the laboratory for each collected sample.

<u>Analysis methods</u>: Each sample was analyzed by method NWTPH-Dx and prepared by method SW3510C. These methods are approved EPA methods and therefore meet comparability requirements. Additionally, samples 2A-W-41-061819 and GW-3-061819 were prepared with method SW3510C a second time, cleaned up with method SW3630C (silica gel) and analyzed by NWTPH-Dx.

<u>Precision, accuracy and completeness:</u> Accuracy and precision measurements were within control limits. A data completeness of 96% was calculated based on 24 of 25 intended sample analyses completed. Please note that this data completeness percentage includes the samples for the 4 locations included the pilot study, which were validated separately. The project goal of 90% was met.

# 3.0 Diesel Range Petroleum Hydrocarbon Analysis

<u>Quality control analysis frequencies:</u> The method specifies that a method blank must be analyzed one per analytical batch or one per twenty samples, whichever is more frequent, and a laboratory duplicate must be analyzed one per ten samples. In addition, surrogate compounds must be measured in each field and quality control sample.

Each batch included a method blank, laboratory control sample (LCS), and LCS duplicate (LCSD), as well as appropriate surrogates. Data qualifiers are not required due to a lack of laboratory duplicate results.

<u>Holding times:</u> Unpreserved water samples must be extracted within 7 days of collection. Preserved water samples must be extracted within 14 days of collection. Extracts must be analyzed within 40 days of extraction. These criteria were met.

<u>Laboratory and field blank results</u>: Criteria for blanks are that analyte concentrations must be below the PQL, or below 5% of the lowest associated sample concentration. No target compounds were detected in the method or field blanks.

<u>Surrogate recoveries:</u> Laboratory control limits were 50-150%. Surrogate recoveries were within limits with one exception:

Sample ID	Surrogate	% Recovery	Lab Control Limit
GW-3-061819	o-Terphenyl	288	50 - 150

The laboratory noted matrix interference, and no qualifiers are assigned.

<u>LCS recoveries:</u> Laboratory control limits were 50-120% and 64-120%. LCS recoveries were within limits.

<u>LCS/LCSD RPDs:</u> The laboratory control limit ranged from <24 to <26%. LCS/LCSD RPD values were within limits.

<u>Field duplicate RPDs:</u> For concentrations above five times the reporting limit, RPDs were below 50%. For concentrations below five times the reporting limits, concentrations were within +/- two times the reporting limit.

<u>Reporting limits</u>: The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met.

<u>Laboratory narrative and flags:</u> No qualifiers were added based on a review of the laboratory narrative.

Diesel and oil range petroleum hydrocarbon data are acceptable for use as reported.

#### 4.0 Abbreviations and Definitions

<u>DV Qualifier</u> U	<u>Definition</u> The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample reporting limit or the amount of contaminant detected in the sample.
J	The analyte was positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.
Ν	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.
UJ	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The sample result is rejected. The presence or absence of the analyte cannot be verified and data are not usable.
R1	The sample result has been replaced by a more reliable or more conservative result.
R2	The sample result has been replaced by a result from a different analysis method.
Abbreviation DV LCS LCSD MS MSD	<u>Definition</u> Data Validation Laboratory control sample Laboratory control sample duplicate Matrix spike Matrix spike duplicate

Abbreviation	<u>Definition</u>
RL	Reporting limit
RPD	Relative percent difference
RSD	Relative standard deviation

#### 5.0 References

- USEPA National Functional Guidelines for Organic Superfund Methods Data Review, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency. January 2017, EPA-540-R-2017-002.
- USEPA Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, January 2009, EPA 540-R-08-005.



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# DATA VALIDATION REPORT

Skykomish Groundwater Monitoring September 2019 Data

Prepared for: Farallon Consulting, LLC 975 5<sup>th</sup> Avenue NW Issaquah, Washington 98027

October 16, 2019

#### 1.0 Introduction

Data validation was performed on the following water samples:

Sample ID	Sample Date/Time	Lab ID	Analyses
5-W-19-091719	09/17/2019 09:25	580-89409-1	TPH-Dx
EW-2A-091719	09/17/2019 09:25	580-89409-2	TPH-Dx
5-W-18-091719	09/17/2019 09:28	580-89409-3	TPH-Dx
5-W-17-091719	09/17/2019 10:30	580-89409-4	TPH-Dx
GW-4-091719	09/17/2019 10:49	580-89409-5	TPH-Dx
5-W-16-091719	09/17/2019 10:50	580-89409-6	TPH-Dx
5-W-14-091719	09/17/2019 11:38	580-89409-7	TPH-Dx
1C-W-1-091719	09/17/2019 11:53	580-89409-8	TPH-Dx
5-W-51-091719	09/17/2019 12:05	580-89409-9	TPH-Dx
1C-W-8-091719	09/17/2019 12:49	580-89409-10	TPH-Dx
1C-W-4-091719	09/17/2019 13:43	580-89409-11	TPH-Dx
5-W-55-091719	09/17/2019 14:23	580-89409-12	TPH-Dx
5-W-56-091719	09/17/2019 14:27	580-89409-13	TPH-Dx
1C-W-3-091719	09/17/2019 14:39	580-89409-14	TPH-Dx
MW-38R-091719	09/17/2019 15:42	580-89409-15	TPH-Dx
1C-W-7-091719	09/17/2019 15:54	580-89409-16	TPH-Dx
2A-W-40-091719	09/17/2019 16:18	580-89409-17	TPH-Dx
S3-AU-091719	09/17/2019 16:37	580-89409-18	TPH-Dx
2A-W-42-091819	09/18/2019 09:11	580-89409-19	TPH-Dx
1B-W-3-091819	09/18/2019 09:15	580-89409-20	TPH-Dx
MW-16-091819	09/18/2019 09:57	580-89409-21	TPH-Dx
1B-W-2-091819	09/18/2019 10:22	580-89409-22	TPH-Dx
1B-W-23-091819	09/18/2019 10:41	580-89409-23	TPH-Dx
MW-4-091819	09/18/2019 11:17	580-89409-24	TPH-Dx
2A-W-9-091819	09/18/2019 11:57	580-89409-25	TPH-Dx
1A-W-4-091819	09/18/2019 12:20	580-89409-26	TPH-Dx
2B-W-4-091819	09/18/2019 12:27	580-89409-27	TPH-Dx
2A-W-10-091819	09/18/2019 13:00	580-89409-28	TPH-Dx
2A-W-100-091819	09/18/2019 13:10	580-89409-29	TPH-Dx
2A-W-41-091819	09/18/2019 13:24	580-89409-30	TPH-Dx, TPHSG

Sample ID	Sample Date/Time	Lab ID	Analyses
2A-W-410-091819	09/18/2019 13:30	580-89409-31	TPH-Dx
GW-3-091819	09/18/2019 14:41	580-89409-32	TPH-Dx, TPHSG
GW-30-091819	09/18/2019 15:00	580-89409-33	TPH-Dx
S3-CU-091819	09/18/2019 14:52	580-89409-34	TPH-Dx
S3-AD-091819	09/18/2019 14:53	580-89409-35	TPH-Dx
S3-CD-091819	09/18/2019 15:02	580-89409-36	TPH-Dx
S3-BD-091819	09/18/2019 15:30	580-89409-37	TPH-Dx
S3-BU-091819	09/18/2019 15:30	580-89409-38	TPH-Dx
S4-AD-091819	09/18/2019 16:06	580-89409-39	TPH-Dx
S4-CD-091819	09/18/2019 16:07	580-89409-40	TPH-Dx
S4-BD-091819	09/18/2019 16:09	580-89409-41	TPH-Dx
S4-BU-091819	09/18/2019 16:16	580-89409-42	TPH-Dx
S4-CU-091819	09/18/2019 16:29	580-89409-43	TPH-Dx
S4-AU-091819	09/18/2019 16:30	580-89409-44	TPH-Dx
S1-AU-091919	09/19/2019 09:55	580-89409-45	TPH-Dx
S1-AD-091919	09/19/2019 09:57	580-89409-46	TPH-Dx
S1-BD-091919	09/19/2019 10:46	580-89409-47	TPH-Dx
S1-BU-091919	09/19/2019 11:02	580-89409-48	TPH-Dx
5-W-180-091719	09/19/2019 09:30	580-89409-49	TPH-Dx
MW-555-091919	09/19/2019 12:00	580-89409-50	TPH-Dx

Samples were analyzed by Test America, Tacoma, Washington.

A stage 2A summary validation was performed on the analytical results including both the hardcopy (portable document format) and electronic data deliverable, earning EPA OSWER validation label code S2AVEM. Validation was performed by Cari Sayler.

Data qualifiers are assigned based only on the criteria reviewed and do not include calibration or instrument performance issues unless noted in the laboratory narrative.

Data qualifiers are summarized in section 4.0 below.

### 2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

<u>Sample analysis frequencies:</u> Quarterly sampling includes 25 water sample locations, and semiannual sampling includes an additional 29 water sample locations. Additionally, 20 of the 29 semi-annual locations are sentry wells which must be sampled if the HCC system has been down for more than 48 hours in the previous quarter. Finally, 4 of the quarterly locations and 4 of the semi-annual locations are undergoing monthly sampling as part of a pilot study. For this round of sampling, quarterly and semi-annual locations were required. Samples were collected from all required locations except MW-3. The required analysis was completed by the laboratory for each collected sample.

<u>Analysis methods</u>: Each sample was extracted by method SW2510C and analyzed by method NWTPH-Dx. These methods are approved EPA methods and therefore meet comparability requirements. Additionally, sample extracts 2A-W-41-091819 and GW-3-091819 were split and the second portion was with cleaned up with method SW3630C (silica gel) and analyzed by NWTPH-Dx.

<u>Precision, accuracy and completeness:</u> Accuracy and precision measurements were within control limits. A data completeness of 98% was calculated based on 53 of 54 intended sample

analyses completed. Please note that this data completeness percentage includes the samples for the 8 locations included the pilot study, which were validated separately. The project goal of 90% was met.

### 3.0 Diesel Range Petroleum Hydrocarbon Analysis

<u>Quality control analysis frequencies:</u> The method specifies that a method blank must be analyzed one per analytical batch or one per twenty samples, whichever is more frequent, and a laboratory duplicate must be analyzed one per ten samples. In addition, surrogate compounds must be measured in each field and quality control sample.

Each batch included a method blank, laboratory control sample (LCS), and LCS duplicate (LCSD), as well as appropriate surrogates. Data qualifiers are not required due to a lack of laboratory duplicate results.

<u>Holding times:</u> Unpreserved water samples must be extracted within 7 days of collection. Preserved water samples must be extracted within 14 days of collection. Extracts must be analyzed within 40 days of extraction. These criteria were met.

<u>Laboratory and field blank results</u>: Criteria for blanks are that analyte concentrations must be below the PQL, or below 5% of the lowest associated sample concentration. No target compounds were detected in the method blanks. The field blank contained #2 Diesel as follows:

Blank ID	Analyte	Concentration (mg/L)	RL (mg/L)
MW-555-091919	#2 Diesel (C10-C24)	0.086	0.062

Sample results in associated samples below five times this level are qualified 'U' and should be considered not detected at the reported concentration. Sample results in associated samples between five and ten times this level are qualified as estimated. Sample results above ten times this level are considered unaffected.

<u>Surrogate recoveries:</u> Laboratory control limits were 50-150%. Surrogate recoveries were within limits with one exception:

Sample ID	Surrogate	% Recovery	Lab Control Limit
1C-W-7-091719	o-Terphenyl	35	50 - 150
GW-30-091819	o-Terphenyl	43	50 - 150
GW-3-091819	o-Terphenyl	29	50 - 150
GW-3-091819	o-Terphenyl (TPHSG)	32	50 - 150

The laboratory noted matrix interference, and no qualifiers are assigned.

<u>LCS recoveries:</u> Laboratory control limits were 50-120% and 64-120%. LCS recoveries were within limits with the following exception:

QC ID	Analyte	% Recovery	Lab Control Limit
LCSD 580-312969/3-B	Motor Oil (>C24-C36)	124	64 - 120

Motor Oil was not detected in the associated samples, and no qualifiers are required.

<u>LCS/LCSD RPDs:</u> The laboratory control limit ranged from <24 to <26%. LCS/LCSD RPD values were within limits.

<u>Field duplicate RPDs:</u> For concentrations above five times the reporting limit, RPDs were below 50%. For concentrations below five times the reporting limits, concentrations were within +/- two times the reporting limit.

<u>Reporting limits</u>: The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met by the laboratory. However, field blank qualification resulted in elevated reporting limits in the following samples:

Sample ID	Analyte	Value (mg/L)	Validation Qualifier
2A-W-410-091819	#2 Diesel (C10-C24)	0.26	U
2A-W-41-091819	#2 Diesel (C10-C24)	0.26	U
2A-W-9-091819	#2 Diesel (C10-C24)	0.13	U
GW-3-091819	#2 Diesel (C10-C24)	0.12	U
MW-4-091819	#2 Diesel (C10-C24)	0.11	U
S4-BU-091819	#2 Diesel (C10-C24)	0.26	U

No additional qualifiers are assigned to elevated reporting limit results.

<u>Laboratory narrative and flags:</u> No qualifiers were added based on a review of the laboratory narrative.

Diesel and oil range petroleum hydrocarbon data are acceptable for use as qualified.

#### 4.0 Validation Qualifiers

Client ID	Analyte(s)	Qualifier	Reason
2A-W-40-091719	#2 Diesel (C10-C24)	U	Field blank contamination
2A-W-410-091819	#2 Diesel (C10-C24)	U	Field blank contamination
2A-W-41-091819	#2 Diesel (C10-C24)	U	Field blank contamination
2A-W-42-091819	#2 Diesel (C10-C24)	U	Field blank contamination
2A-W-9-091819	#2 Diesel (C10-C24)	U	Field blank contamination
5-W-51-091719	#2 Diesel (C10-C24)	J	Field blank contamination
5-W-55-091719	#2 Diesel (C10-C24)	U	Field blank contamination
GW-30-091819	#2 Diesel (C10-C24)	U	Field blank contamination
GW-3-091819	#2 Diesel (C10-C24)	U	Field blank contamination
MW-38R-091719	#2 Diesel (C10-C24)	U	Field blank contamination
MW-4-091819	#2 Diesel (C10-C24)	U	Field blank contamination
S4-BU-091819	#2 Diesel (C10-C24)	U	Field blank contamination

#### 5.0 Abbreviations and Definitions

<u>DV Qualifier</u> U	<u>Definition</u> The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample reporting limit
	or the amount of contaminant detected in the sample.
J	The analyte was positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.
Ν	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.
UJ	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

<u>DV Qualifier</u> R R1	<u>Definition</u> The sample result is rejected. The presence or absence of the analyte cannot be verified and data are not usable. The sample result has been replaced by a more reliable or more conservative result.
R2	The sample result has been replaced by a result from a different analysis method.
Abbreviation DV LCS LCSD MS MSD RL RPD RSD	Definition Data Validation Laboratory control sample Laboratory control sample duplicate Matrix spike Matrix spike duplicate Reporting limit Relative percent difference Relative standard deviation

#### 6.0 References

- USEPA National Functional Guidelines for Organic Superfund Methods Data Review, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency. January 2017, EPA-540-R-2017-002.
- USEPA Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, January 2009, EPA 540-R-08-005.



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# DATA VALIDATION REPORT

Skykomish Groundwater Monitoring, December 2019 Data

Prepared for: Farallon Consulting, LLC 975 5<sup>th</sup> Avenue NW Issaquah, Washington 98027

January 13, 2020

#### 1.0 Introduction

Data validation was performed on the following water samples:

Sample ID	Sample Date/Time	Lab ID	Analyses
5-W-19-121719	12/17/2019 11:57	580-91663-1	TPH-Dx
2A-W-41-121719	12/17/2019 11:10	580-91663-2	TPH-Dx
2A-W-410-121719	12/17/2019 11:05	580-91663-3	TPH-Dx
EW-2A-121719	12/17/2019 15:55	580-91663-4	TPH-Dx
5-W-56-121719	12/17/2019 17:08	580-91663-5	TPH-Dx
1B-W-23-121719	12/17/2019 14:35	580-91663-6	TPH-Dx
5-W-55-121719	12/17/2019 16:18	580-91663-7	TPH-Dx
5-W-14-121719	12/17/2019 15:33	580-91663-8	TPH-Dx
5-W-17-121719	12/17/2019 10:46	580-91663-9	TPH-Dx
5-W-16-121719	12/17/2019 12:00	580-91663-10	TPH-Dx
2A-W-40-121719	12/17/2019 09:50	580-91663-11	TPH-Dx
5-W-18-121719	12/17/2019 14:31	580-91663-12	TPH-Dx
2A-W-42-121819	12/18/2019 14:23	580-91663-13	TPH-Dx
1C-W-8-121819	12/18/2019 09:43	580-91663-14	TPH-Dx
GW-4-121819	12/18/2019 13:20	580-91663-15	TPH-Dx
2A-W-9-121819	12/18/2019 17:00	580-91663-16	TPH-Dx
2A-W-10-121819	12/18/2019 15:55	580-91663-17	TPH-Dx
2A-W-100-121819	12/18/2019 16:05	580-91663-18	TPH-Dx
1C-W-7-121819	12/18/2019 12:12	580-91663-19	TPH-Dx
1C-W-1-121819	12/18/2019 10:47	580-91663-20	TPH-Dx
1B-W-3-121819	12/18/2019 11:50	580-91663-21	TPH-Dx
5-W-51-121819	12/18/2019 10:42	580-91663-22	TPH-Dx
MW-3-121919	12/19/2019 10:45	580-91663-23	TPH-Dx
MW-4-121919	12/19/2019 11:50	580-91663-24	TPH-Dx
2B-W-4-121919	12/19/2019 09:38	580-91663-25	TPH-Dx
MW-555	12/19/2019 11:25	580-91663-26	TPH-Dx
5-W-180-121719	12/17/2019 14:41	580-91663-27	TPH-Dx
GW-30-121919	12/19/2019 13:00	580-91663-28	TPH-Dx
GW-3-121919	12/19/2019 12:50	580-91663-29	TPH-Dx

Samples were analyzed by Test America, Tacoma, Washington.

A stage 2A summary validation was performed on the analytical results including both the hardcopy (portable document format) and electronic data deliverable, earning EPA OSWER validation label code S2AVEM. Validation was performed by Cari Sayler.

Data qualifiers are assigned based only on the criteria reviewed and do not include calibration or instrument performance issues unless noted in the laboratory narrative.

Data qualifiers are summarized in section 4.0 below.

### 2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

<u>Sample analysis frequencies:</u> Quarterly sampling includes 25 water sample locations, and semiannual sampling includes an additional 29 water sample locations. Additionally, 20 of the 29 semi-annual locations are sentry wells which must be sampled if the HCC system has been down for more than 48 hours in the previous quarter. Finally, 4 of the quarterly locations and 4 of the semi-annual locations are undergoing monthly sampling as part of a pilot study. For this round of sampling, quarterly locations were required. Samples were collected from all required locations. The required analysis was completed by the laboratory for each collected sample.

<u>Analysis methods</u>: Each sample was extracted by method SW2510C and analyzed by method NWTPH-Dx. These methods are approved EPA methods and therefore meet comparability requirements.

<u>Precision, accuracy and completeness:</u> Accuracy and precision measurements were within control limits. A data completeness of 100% was calculated based on 25 of 25 intended sample analyses completed. Please note that this data completeness percentage includes the samples for the 4 locations included the pilot study, which were validated separately. The project goal of 90% was met.

# 3.0 Diesel Range Petroleum Hydrocarbon Analysis

<u>Quality control analysis frequencies:</u> The method specifies that a method blank must be analyzed one per analytical batch or one per twenty samples, whichever is more frequent, and a laboratory duplicate must be analyzed one per ten samples. In addition, surrogate compounds must be measured in each field and quality control sample.

Each batch included a method blank, laboratory control sample (LCS), and LCS duplicate (LCSD), as well as appropriate surrogates. Data qualifiers are not required due to a lack of laboratory duplicate results.

<u>Holding times:</u> Unpreserved water samples must be extracted within 7 days of collection. Preserved water samples must be extracted within 14 days of collection. Extracts must be analyzed within 40 days of extraction. These criteria were met.

<u>Laboratory and field blank results</u>: Criteria for blanks are that analyte concentrations must be below the PQL, or below 5% of the lowest associated sample concentration. No target compounds were detected in the method or field blanks.

<u>Surrogate recoveries:</u> Laboratory control limits were 50-150%. Surrogate recoveries were within limits.

<u>LCS recoveries:</u> Laboratory control limits were 50-120% and 64-120%. LCS recoveries were within limits.

<u>LCS/LCSD RPDs:</u> The laboratory control limit ranged from <24 to <26%. LCS/LCSD RPD values were within limits.

<u>Field duplicate RPDs:</u> For concentrations above five times the reporting limit, RPDs were below 50%. For concentrations below five times the reporting limits, concentrations were within +/- two times the reporting limit, with the following exception:

FD ID	Analyte	FD Result (mg/L)	Sample Result (mg/L)	RL (mg/L)
2A-W-410-121719 / 2A-W-41-121719	#2 Diesel (C10-C24)	0.49	0.31	0.064

The diesel result is qualified as estimated in the sample and field duplicate.

<u>Reporting limits</u>: The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met.

<u>Laboratory narrative and flags:</u> No qualifiers were added based on a review of the laboratory narrative.

Diesel and oil range petroleum hydrocarbon data are acceptable for use as qualified.

#### 4.0 Validation Qualifiers

Client ID	Analyte(s)	Qualifier	Reason
2A-W-410-121719	#2 Diesel (C10-C24)	J	High FD Difference
2A-W-41-121719	#2 Diesel (C10-C24)	J	High FD Difference

#### 5.0 Abbreviations and Definitions

DV Qualifier	Definition
U	The material was analyzed for, but was not detected above the level of the
	associated value. The associated value is either the sample reporting limit or the amount of contaminant detected in the sample.
J	The analyte was positively identified. The associated numerical value is the
	approximate concentration of the analyte in the sample.
Ν	The analysis indicates the presence of an analyte for which there is
	presumptive evidence to make a tentative identification.
UJ	The material was analyzed for, but was not detected. The associated value
	is an estimate and may be inaccurate or imprecise.
R	The sample result is rejected. The presence or absence of the analyte
	cannot be verified and data are not usable.
R1	The sample result has been replaced by a more reliable or more
	conservative result.

<u>DV Qualifier</u> R2	<u>Definition</u> The sample result has been replaced by a result from a different analysis method.
Abbreviation	Definition
DV	Data Validation
LCS	Laboratory control sample
LCSD	Laboratory control sample duplicate
MS	Matrix spike
MSD	Matrix spike duplicate
RL	Reporting limit
RPD	Relative percent difference
RSD	Relative standard deviation

#### 6.0 References

- USEPA National Functional Guidelines for Organic Superfund Methods Data Review, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency. January 2017, EPA-540-R-2017-002.
- USEPA Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, January 2009, EPA 540-R-08-005.



# DATA VALIDATION REPORT

Skykomish Hydraulic Control and Containment Pilot Study March 2019 Data

Prepared for: Farallon Consulting, LLC 975 5<sup>th</sup> Avenue NW Issaquah, Washington 98027

April 22, 2019

#### 1.0 Introduction

Data validation was performed on the following water samples:

Sample ID*	Sample Date/Time	Lab ID	Analyses
5-W-43-031919	03/19/2019 17:07	580-84844-1	TPH-Dx
EW-1-031919	03/19/2019 16:36	580-84844-2	TPH-Dx
FGW-WV-031919	03/19/2019 15:00	580-84844-4	TPH-Dx
FWG-EV-031919	03/19/2019 14:38	580-84844-11	TPH-Dx
GW-1-031919	03/19/2019 17:20	580-84844-9	TPH-Dx
GW-2-031919	03/19/2019 17:54	580-84844-14	TPH-Dx
PZ-7S-031919	03/19/2019 16:11	580-84844-10	TPH-Dx
PZ-8-031919	03/19/2019 15:45	580-84844-3	TPH-Dx
S2-AD-031919	03/19/2019 11:40	580-84844-7	TPH-Dx
S2-AU-031919	03/19/2019 11:18	580-84844-8	TPH-Dx
S2-BD-031919	03/19/2019 12:18	580-84844-13	TPH-Dx
S2-BU-031919	03/19/2019 11:55	580-84844-6	TPH-Dx
WG-EV-031919	03/19/2019 14:25	580-84844-12	TPH-Dx
WG-WV-031919	03/19/2019 14:20	580-84844-5	TPH-Dx

\* Sample PZ-7S-031919 was reported by the laboratory as PZ-75-031919. The correct sample ID is used in the above table.

Samples were analyzed by Test America, Tacoma, Washington.

A stage 2A summary validation was performed on the analytical results including both the hardcopy (portable document format) and electronic data deliverable, earning EPA OSWER validation label code S2AVEM. Validation was performed by Cari Sayler.

Data qualifiers are assigned based only on the criteria reviewed and do not include calibration or instrument performance issues unless noted in the laboratory narrative. No qualifiers were assigned based on this review.

# 2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

<u>Sample analysis frequencies:</u> 14 locations are sampled monthly. Samples were collected from required locations and the required analysis was completed by the laboratory for each collected sample.

<u>Analysis methods</u>: Each sample was analyzed by method NWTPH-Dx and prepared by method SW3510C. These methods are approved EPA methods and therefore meet comparability requirements.

<u>Precision, accuracy and completeness:</u> Accuracy and precision measurements were within control limits. A data completeness of 100% was calculated based on 14 of 14 intended sample analyses completed. This meets the project goal of 90%.

#### 3.0 Diesel Range Petroleum Hydrocarbon Analysis

<u>Quality control analysis frequencies:</u> The method specifies that a method blank must be analyzed one per analytical batch or one per twenty samples, whichever is more frequent, and a laboratory duplicate must be analyzed one per ten samples. In addition, surrogate compounds must be measured in each field and quality control sample.

Each batch included a method blank, laboratory control sample (LCS), and LCS duplicate (LCSD), as well as appropriate surrogates. Data qualifiers are not required due to a lack of laboratory duplicate results.

<u>Holding times:</u> Unpreserved water samples must be extracted within 7 days of collection. Preserved water samples must be extracted within 14 days of collection. Extracts must be analyzed within 40 days of extraction. Samples were extracted and analyzed within holding times.

<u>Laboratory and field blank results</u>: Criteria for blanks are that analyte concentrations must be below the PQL, or below 5% of the lowest associated sample concentration. No target compounds were detected in the method or field blanks.

<u>Surrogate recoveries:</u> Laboratory control limits were 50-150%. Surrogate recoveries were within limits.

<u>LCS recoveries:</u> Laboratory control limits were 50-120% and 64-120%. LCS recoveries were within limits.

<u>LCS/LCSD RPDs:</u> The laboratory control limits were <24 and <26%. LCS/LCSD RPD values were within limits.

<u>Reporting limits</u>: The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met.

<u>Laboratory narrative and flags:</u> No qualifiers were added based on a review of the laboratory narrative.

Diesel and oil range petroleum hydrocarbon data are acceptable for use as reported.

### 4.0 Abbreviations and Definitions

<u>DV Qualifier</u> U J	<u>Definition</u> The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample reporting limit or the amount of contaminant detected in the sample. The analyte was positively identified. The associated numerical value is the
	approximate concentration of the analyte in the sample.
Ν	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.
UJ	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The sample result is rejected. The presence or absence of the analyte cannot be verified and data are not usable.
R1	The sample result has been replaced by a more reliable or more conservative result.
R2	The sample result has been replaced by a result from a different analysis method.
Abbreviation DV LCS LCSD MS MSD RL RPD RSD	Definition Data Validation Laboratory control sample Laboratory control sample duplicate Matrix spike Matrix spike duplicate Reporting limit Relative percent difference Relative standard deviation

#### 5.0 References

- USEPA National Functional Guidelines for Organic Superfund Methods Data Review, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency. January 2017, EPA-540-R-2017-002.
- USEPA Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, January 2009, EPA 540-R-08-005.



cari.say@saylerdata.com

# DATA VALIDATION REPORT

Skykomish Hydraulic Control and Containment Pilot Study June 2019 Data

Prepared for: Farallon Consulting, LLC 975 5<sup>th</sup> Avenue NW Issaquah, Washington 98027

July 19, 2019

#### 1.0 Introduction

Data validation was performed on the following water samples:

Sample ID	Sample Date/Time	Lab ID	Analyses
GW-1-061819	06/18/2019 09:51	580-87060-1	TPH-Dx
S2-BU-061819	06/18/2019 15:30	580-87060-10	TPH-Dx
S2-AD-061819	06/18/2019 15:39	580-87060-11	TPH-Dx
WG-WV-061819	06/18/2019 16:05	580-87060-12	TPH-Dx
WG-EV-061819	06/18/2019 16:10	580-87060-13	TPH-Dx
FWG-EV-061819	06/18/2019 16:48	580-87060-14	TPH-Dx
FWG-WV-061819	06/18/2019 16:52	580-87060-15	TPH-Dx
PZ-7S-061819	06/18/2019 10:00	580-87060-2	TPH-Dx
PZ-8-061819	06/18/2019 11:15	580-87060-3	TPH-Dx
5-W-43-061819	06/18/2019 11:16	580-87060-4	TPH-Dx
EW-1-061819	06/18/2019 14:18	580-87060-5	TPH-Dx
GW-2-061819	06/18/2019 14:35	580-87060-6	TPH-Dx
GW-20-061819	06/18/2019 14:45	580-87060-7	TPH-Dx
S2-BD-061819	06/18/2019 14:57	580-87060-8	TPH-Dx
S2-AU-061819	06/18/2019 15:12	580-87060-9	TPH-Dx

Samples were analyzed by Test America, Tacoma, Washington. A stage 2A summary validation was performed on the analytical results including both the hardcopy (portable document format) and electronic data deliverable, earning EPA OSWER validation label code S2AVEM. Validation was performed by Cari Sayler.

Data qualifiers are assigned based only on the criteria reviewed and do not include calibration or instrument performance issues unless noted in the laboratory narrative. No qualifiers were assigned based on this review.

# 2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

<u>Sample analysis frequencies:</u> 14 locations are sampled monthly. Samples were collected from required locations and the required analysis was completed by the laboratory for each collected sample. Sample identifiers matched the chain of custody with one exception: Sample 5-W-43-061819 was listed as S-W-43-061819. The corrected sample ID has been used in the above table.

<u>Analysis methods</u>: Each sample was analyzed by method NWTPH-Dx and prepared by method SW3510C. These methods are approved EPA methods and therefore meet comparability requirements.

<u>Precision, accuracy and completeness:</u> Accuracy and precision measurements were within control limits. A data completeness of 100% was calculated based on 14 of 14 intended sample analyses completed. This meets the project goal of 90%.

#### 3.0 Diesel Range Petroleum Hydrocarbon Analysis

<u>Quality control analysis frequencies:</u> The method specifies that a method blank must be analyzed one per analytical batch or one per twenty samples, whichever is more frequent, and a laboratory duplicate must be analyzed one per ten samples. In addition, surrogate compounds must be measured in each field and quality control sample.

This batch included a method blank, laboratory control sample (LCS), and LCS duplicate (LCSD), as well as appropriate surrogates. Data qualifiers are not required due to a lack of laboratory duplicate results.

<u>Holding times:</u> Unpreserved water samples must be extracted within 7 days of collection. Preserved water samples must be extracted within 14 days of collection. Extracts must be analyzed within 40 days of extraction. Samples were extracted and analyzed within holding times.

<u>Laboratory blank results</u>: Criteria for blanks are that analyte concentrations must be below the PQL, or below 5% of the lowest associated sample concentration. No target compounds were detected in the method blanks.

<u>Surrogate recoveries:</u> Laboratory control limits were 50-150%. Surrogate recoveries were within limits.

<u>LCS recoveries:</u> Laboratory control limits were 50-120% and 64-120%. LCS recoveries were within limits.

<u>LCS/LCSD RPDs:</u> The laboratory control limits were <24 and <26%. LCS/LCSD RPD values were within limits.

<u>Field duplicate variability:</u> Target analytes were not detected in the sample or field duplicate, showing good agreement.

<u>Reporting limits:</u> The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met.

<u>Laboratory narrative and flags:</u> No qualifiers were added based on a review of the laboratory narrative.

Diesel and oil range petroleum hydrocarbon data are acceptable for use as reported.

### 4.0 Abbreviations and Definitions

DV Qualifier U J N UJ R R1 R2	<ul> <li><u>Definition</u></li> <li>The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample reporting limit or the amount of contaminant detected in the sample.</li> <li>The analyte was positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.</li> <li>The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.</li> <li>The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.</li> <li>The sample result is rejected. The presence or absence of the analyte cannot be verified and data are not usable.</li> <li>The sample result has been replaced by a more reliable or more conservative result.</li> <li>The sample result has been replaced by a result from a different analysis method.</li> </ul>
Abbreviation	Definition
DV	Data Validation
LCS	Laboratory control sample
LCSD	Laboratory control sample duplicate
MS	Matrix spike
MSD	Matrix spike duplicate
RL	Reporting limit
RPD	Relative percent difference
RSD	Relative standard deviation

#### 5.0 References

- USEPA National Functional Guidelines for Organic Superfund Methods Data Review, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency. January 2017, EPA-540-R-2017-002.
- USEPA Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, January 2009, EPA 540-R-08-005.



# DATA VALIDATION REPORT

Skykomish Hydraulic Control and Containment Pilot Study September 2019 Data

Prepared for: Farallon Consulting, LLC 975 5<sup>th</sup> Avenue NW Issaquah, Washington 98027

October 14, 2019

#### 1.0 Introduction

Data validation was performed on the following water samples:

Sample ID	Sample Date/Time	Lab ID	Analyses
GW-1-091919	09/19/2019 08:20	580-89413-1	TPH-Dx
WG-EV-091919	09/19/2019 10:25	580-89413-10	TPH-Dx
FWG-EV-091919	09/19/2019 10:47	580-89413-11	TPH-Dx
S2-AU-091919	09/19/2019 11:15	580-89413-12	TPH-Dx
S2-AD-091919	09/19/2019 11:22	580-89413-13	TPH-Dx
S2-BD-091919	09/19/2019 11:28	580-89413-14	TPH-Dx
S2-BU-091919	09/19/2019 11:30	580-89413-15	TPH-Dx
GW-20-091919	09/19/2019 16:30	580-89413-16	TPH-Dx
5-W-43-091919	09/19/2019 08:22	580-89413-2	TPH-Dx
PZ-7S-091919	09/19/2019 08:24	580-89413-3	TPH-Dx
PZ-8-091919	09/19/2019 09:20	580-89413-4	TPH-Dx
EW-1-091919	09/19/2019 09:21	580-89413-5	TPH-Dx
EW-10-091919	09/19/2019 09:25	580-89413-6	TPH-Dx
GW-2-091919	09/19/2019 09:21	580-89413-7	TPH-Dx
WG-WV-091919	09/19/2019 10:09	580-89413-8	TPH-Dx
FWG-WV-091919	09/19/2019 10:25	580-89413-9	TPH-Dx

\*Please note that sample PZ-7S-091919 was reported by the laboratory as PZ-75-091919. The correct sample ID is used above.

Samples were analyzed by Test America, Tacoma, Washington.

A stage 2A summary validation was performed on the analytical results including both the hardcopy (portable document format) and electronic data deliverable, earning EPA OSWER validation label code S2AVEM. Validation was performed by Cari Sayler.

Data qualifiers are assigned based only on the criteria reviewed and do not include calibration or instrument performance issues unless noted in the laboratory narrative. No qualifiers were assigned based on this review.

#### 2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

<u>Sample analysis frequencies:</u> 14 locations are sampled monthly. Samples were collected from required locations and the required analysis was completed by the laboratory for each collected sample.

<u>Analysis methods</u>: Each sample was analyzed by method NWTPH-Dx and prepared by method SW3510C. These methods are approved EPA methods and therefore meet comparability requirements.

<u>Precision, accuracy and completeness:</u> Accuracy and precision measurements were within control limits. A data completeness of 100% was calculated based on 14 of 14 intended sample analyses completed. This meets the project goal of 90%.

#### 3.0 Diesel Range Petroleum Hydrocarbon Analysis

<u>Quality control analysis frequencies:</u> The method specifies that a method blank must be analyzed one per analytical batch or one per twenty samples, whichever is more frequent, and a laboratory duplicate must be analyzed one per ten samples. In addition, surrogate compounds must be measured in each field and quality control sample.

Each batch included a method blank, laboratory control sample (LCS), and LCS duplicate (LCSD), as well as appropriate surrogates. Data qualifiers are not required due to a lack of laboratory duplicate results.

<u>Holding times:</u> Unpreserved water samples must be extracted within 7 days of collection. Preserved water samples must be extracted within 14 days of collection. Extracts must be analyzed within 40 days of extraction. Samples were extracted and analyzed within holding times.

<u>Laboratory blank results</u>: Criteria for blanks are that analyte concentrations must be below the PQL, or below 5% of the lowest associated sample concentration. No target compounds were detected in the method blanks.

<u>Surrogate recoveries:</u> Laboratory control limits were 50-150%. Surrogate recoveries were within limits.

<u>LCS recoveries:</u> Laboratory control limits were 50-120% and 64-120%. LCS recoveries were within limits.

<u>LCS/LCSD RPDs:</u> The laboratory control limits were <24 and <26%. LCS/LCSD RPD values were within limits.

<u>Field duplicate RPDs:</u> For concentrations above five times the reporting limit, RPDs were below 50%. For concentrations below five times the reporting limits, concentrations were within +/- two times the reporting limit.

<u>Reporting limits</u>: The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met.

<u>Laboratory narrative and flags:</u> No qualifiers were added based on a review of the laboratory narrative.

Diesel and oil range petroleum hydrocarbon data are acceptable for use as reported.

#### 4.0 Abbreviations and Definitions

DV Qualifier U J N UJ R R1	Definition The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample reporting limit or the amount of contaminant detected in the sample. The analyte was positively identified. The associated numerical value is the approximate concentration of the analyte in the sample. The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification. The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. The sample result is rejected. The presence or absence of the analyte cannot be verified and data are not usable. The sample result has been replaced by a more reliable or more
R2	conservative result. The sample result has been replaced by a result from a different analysis method.
Abbreviation DV LCS LCSD MS MSD RL RPD RSD	Definition Data Validation Laboratory control sample Laboratory control sample duplicate Matrix spike Matrix spike duplicate Reporting limit Relative percent difference Relative standard deviation

#### 5.0 References

- USEPA National Functional Guidelines for Organic Superfund Methods Data Review, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency. January 2017, EPA-540-R-2017-002.
- USEPA Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, January 2009, EPA 540-R-08-005.



### DATA VALIDATION REPORT

Skykomish Hydraulic Control and Containment Pilot Study December 2019 Data

Prepared for: Farallon Consulting, LLC 975 5<sup>th</sup> Avenue NW Issaquah, Washington 98027

January 13, 2020

#### 1.0 Introduction

Data validation was performed on the following water samples:

Sample ID	Sample Date/Time	Lab ID	Analyses
PZ-80-121819	12/18/2019 11:25	580-91664-1	TPH-Dx
S2-AU-121819	12/18/2019 13:32	580-91664-2	TPH-Dx
GW-1-121819	12/18/2019 13:55	580-91664-3	TPH-Dx
S2-AD-121819	12/18/2019 11:38	580-91664-4	TPH-Dx
EW-1-121819	12/18/2019 10:30	580-91664-5	TPH-Dx
S2-BD-121819	12/18/2019 09:47	580-91664-6	TPH-Dx
5-W-43-121819	12/18/2019 09:28	580-91664-7	TPH-Dx
WG-WV-121819	12/18/2019 13:54	580-91664-8	TPH-Dx
FWG-EV-121819	12/18/2019 14:35	580-91664-9	TPH-Dx
S2-BU-121819	12/18/2019 10:18	580-91664-10	TPH-Dx
FWG-WV-121819	12/18/2019 15:00	580-91664-11	TPH-Dx
WG-EV-121819	12/18/2019 10:49	580-91664-12	TPH-Dx
PZ-7S-121819	12/18/2019 14:52	580-91664-13	TPH-Dx
GW-2-121819	12/18/2019 15:48	580-91664-14	TPH-Dx
GW-20-121819	12/18/2019 15:55	580-91664-15	TPH-Dx

Samples were analyzed by Test America, Tacoma, Washington.

Please note: Sample PZ-80-121819 was listed on the chain of custody as PZ-8-12-1819. Sample FWG-EV-121819 was listed on the chain of custody AS FWG-EV.

A stage 2A summary validation was performed on the analytical results including both the hardcopy (portable document format) and electronic data deliverable, earning EPA OSWER validation label code S2AVEM. Validation was performed by Cari Sayler.

Data qualifiers are assigned based only on the criteria reviewed and do not include calibration or instrument performance issues unless noted in the laboratory narrative. No qualifiers were assigned based on this review.

#### 2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

<u>Sample analysis frequencies:</u> 14 locations are sampled monthly. Samples were collected from required locations and the required analysis was completed by the laboratory for each collected sample.

<u>Analysis methods</u>: Each sample was analyzed by method NWTPH-Dx and prepared by method SW3510C. These methods are approved EPA methods and therefore meet comparability requirements.

<u>Precision, accuracy and completeness:</u> Accuracy and precision measurements were within control limits. A data completeness of 100% was calculated based on 14 of 14 intended sample analyses completed. This meets the project goal of 90%.

#### 3.0 Diesel Range Petroleum Hydrocarbon Analysis

<u>Quality control analysis frequencies:</u> The method specifies that a method blank must be analyzed one per analytical batch or one per twenty samples, whichever is more frequent, and a laboratory duplicate must be analyzed one per ten samples. In addition, surrogate compounds must be measured in each field and quality control sample.

This batch included a method blank, laboratory control sample (LCS), and LCS duplicate (LCSD), as well as appropriate surrogates. Data qualifiers are not required due to a lack of laboratory duplicate results.

<u>Holding times:</u> Unpreserved water samples must be extracted within 7 days of collection. Preserved water samples must be extracted within 14 days of collection. Extracts must be analyzed within 40 days of extraction. Samples were extracted and analyzed within holding times.

<u>Laboratory blank results</u>: Criteria for blanks are that analyte concentrations must be below the PQL, or below 5% of the lowest associated sample concentration. No target compounds were detected in the method blanks.

<u>Surrogate recoveries:</u> Laboratory control limits were 50-150%. Surrogate recoveries were within limits.

<u>LCS recoveries:</u> Laboratory control limits were 50-120% and 64-120%. LCS recoveries were within limits.

<u>LCS/LCSD RPDs:</u> The laboratory control limits were <24 and <26%. LCS/LCSD RPD values were within limits.

<u>Reporting limits</u>: The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met.

<u>Laboratory narrative and flags:</u> No qualifiers were added based on a review of the laboratory narrative or data flags.

Diesel and oil range petroleum hydrocarbon data are acceptable for use as reported.

#### 4.0 Abbreviations and Definitions

<u>DV Qualifier</u> U	<u>Definition</u> The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample reporting limit or the amount of contaminant detected in the sample.
J	The analyte was positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.
Ν	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.
UJ	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The sample result is rejected. The presence or absence of the analyte cannot be verified and data are not usable.
R1	The sample result has been replaced by a more reliable or more conservative result.
R2	The sample result has been replaced by a result from a different analysis method.
Abbreviation DV LCS LCSD MS MSD RL RPD RSD	Definition Data Validation Laboratory control sample Laboratory control sample duplicate Matrix spike Matrix spike duplicate Reporting limit Relative percent difference Relative standard deviation

#### 5.0 References

- USEPA National Functional Guidelines for Organic Superfund Methods Data Review, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency. January 2017, EPA-540-R-2017-002.
- USEPA Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, January 2009, EPA 540-R-08-005.

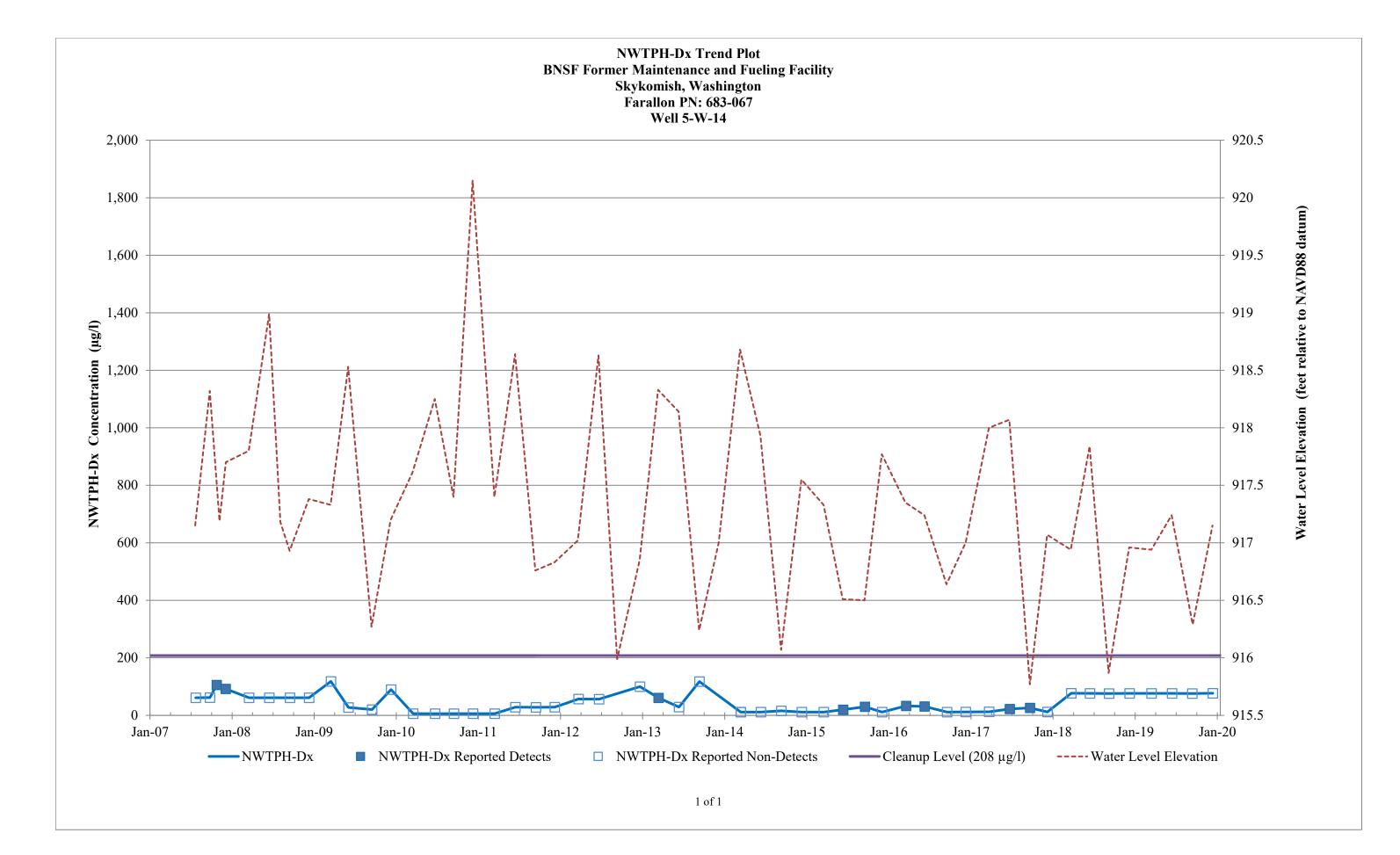
### APPENDIX C NWTPH-Dx TREND PLOTS

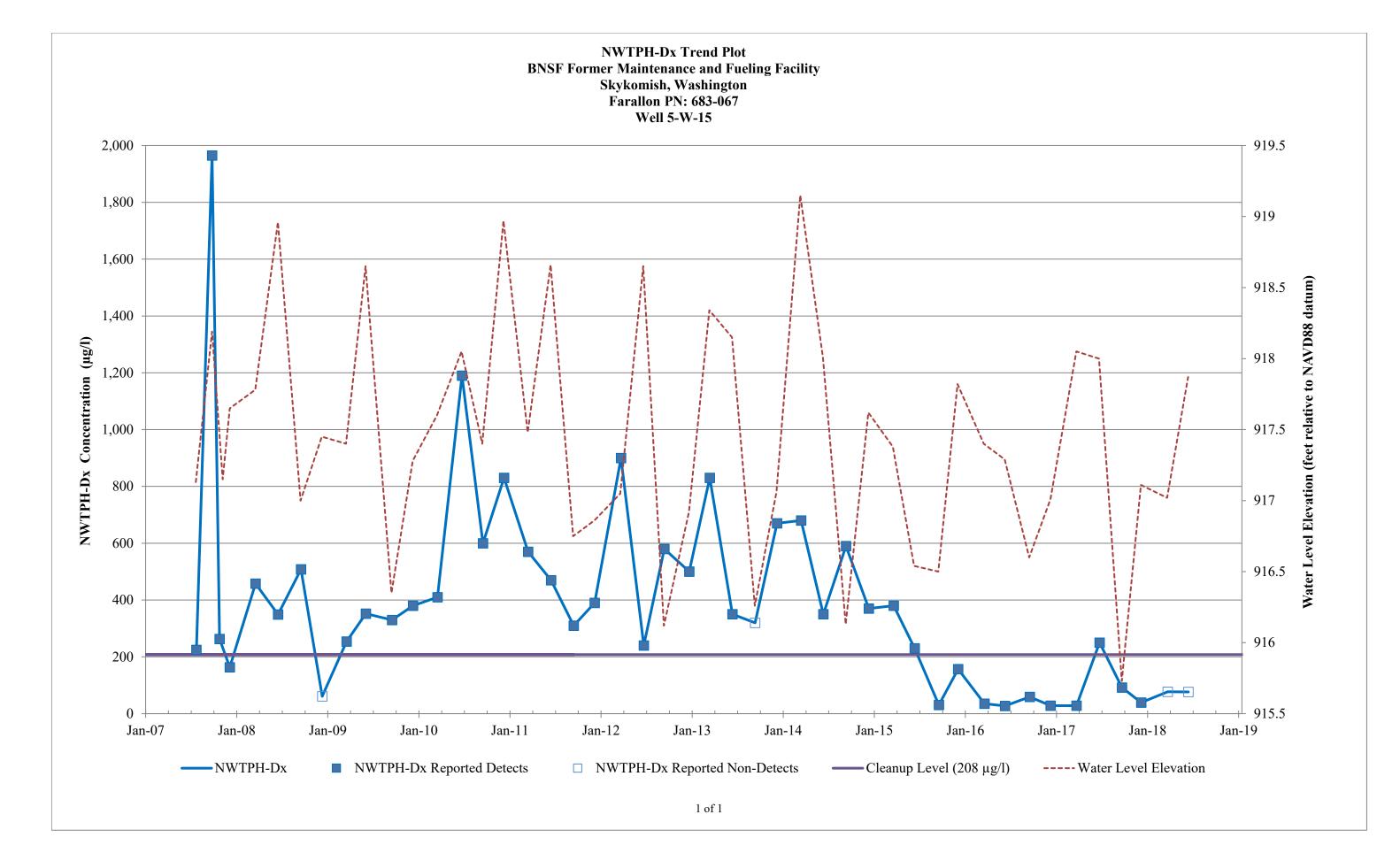
### 2019 SITE-WIDE GROUNDWATER MONITORING REPORT BNSF Former Maintenance and Fueling Facility Skykomish, Washington Consent Decree No. 07-2-33672-9 SEA

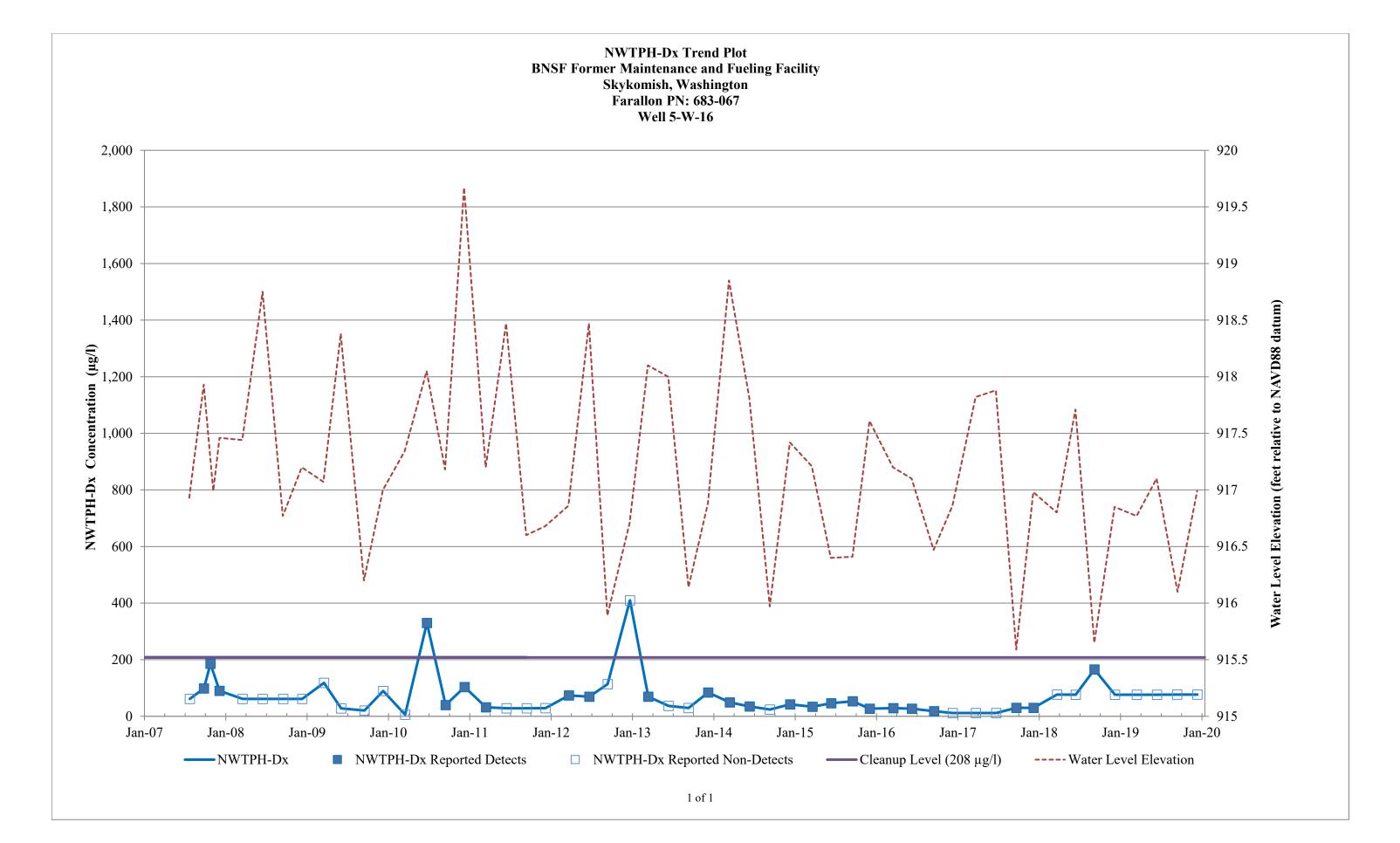
Farallon PN: 683-067

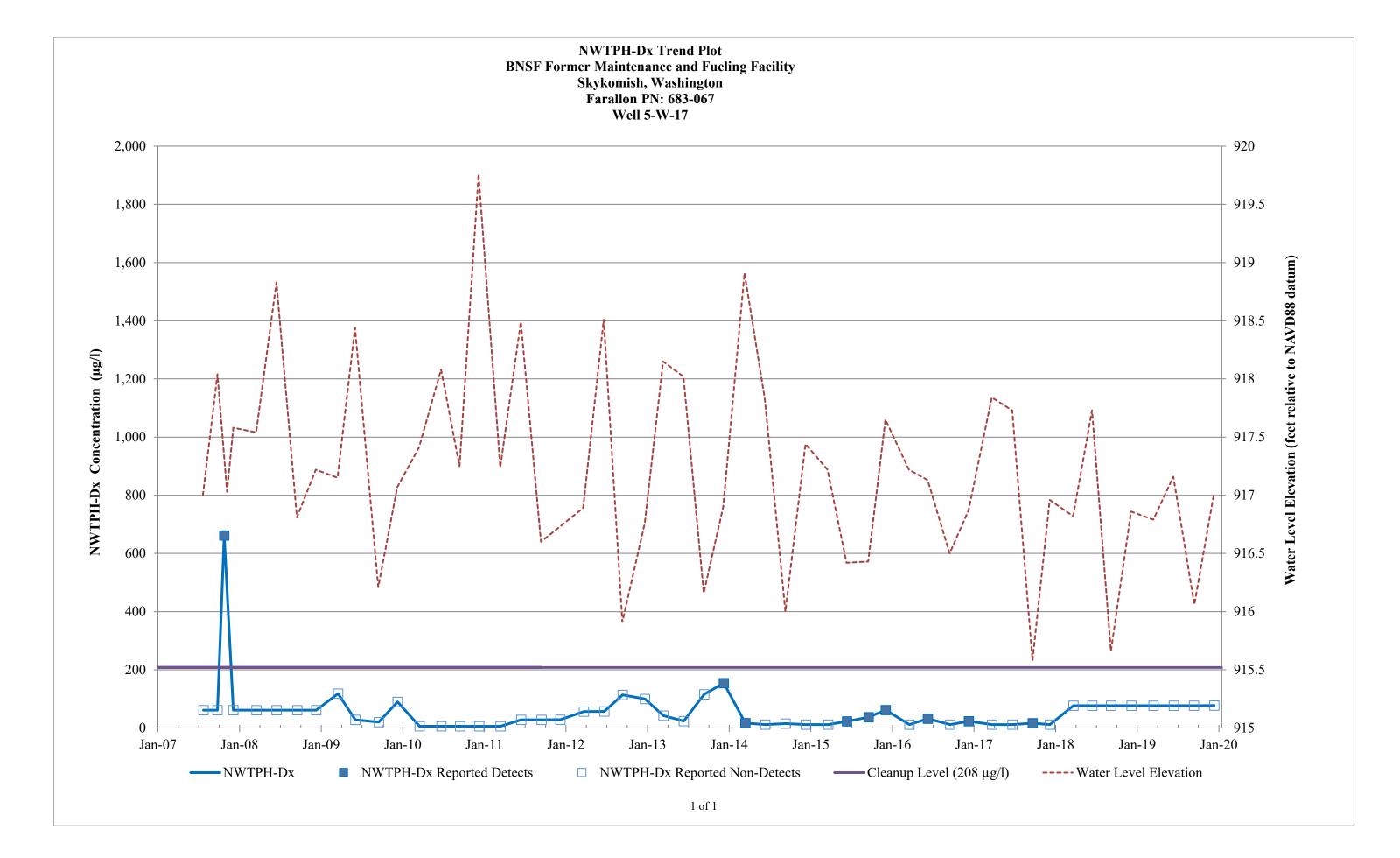
## Levee Zone Monitoring Wells

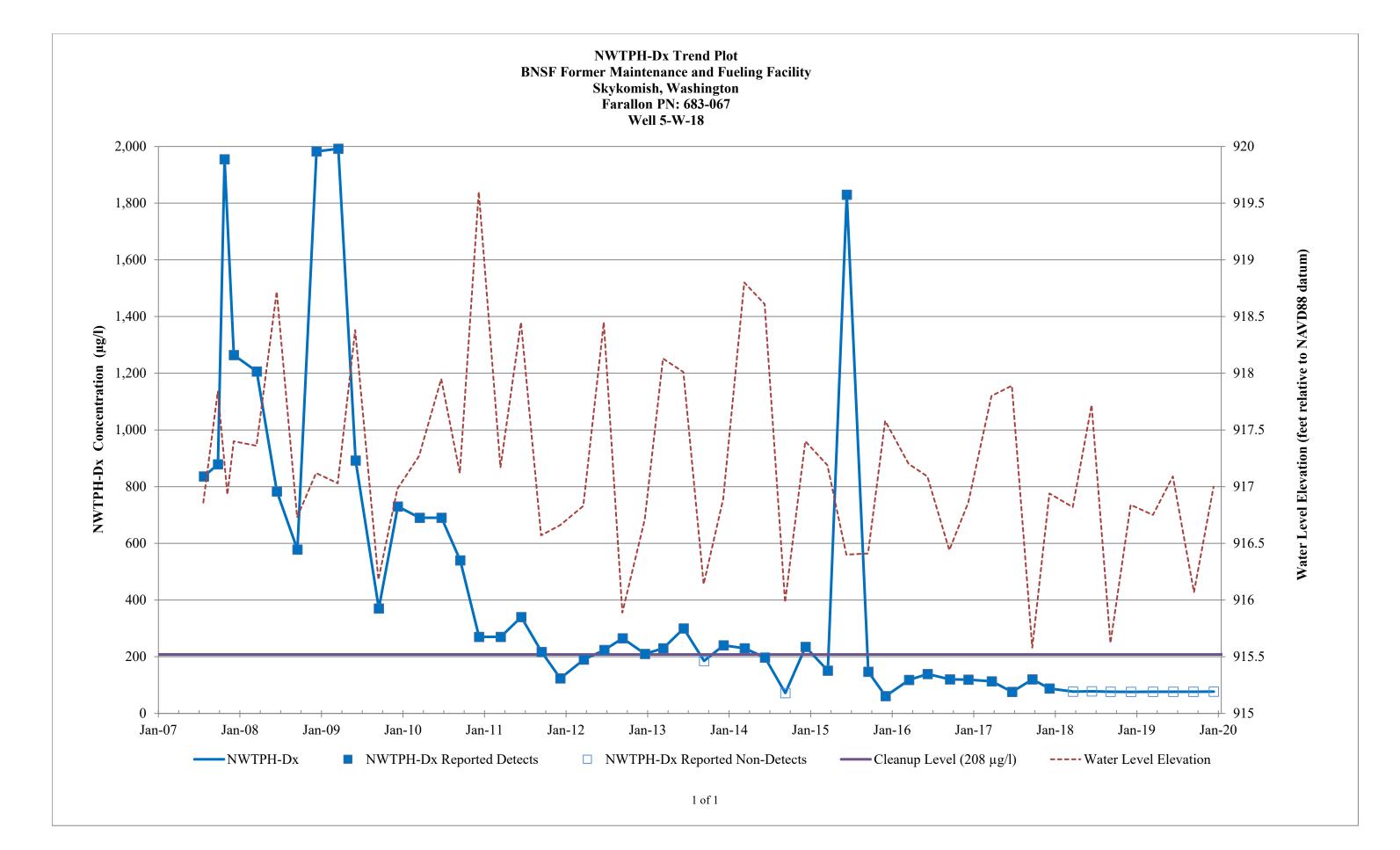
Note: Levee Zone monitoring well NWTPH-Dx groundwater results are compared to the Cleanup Level (CUL) of 208 micrograms per liter.



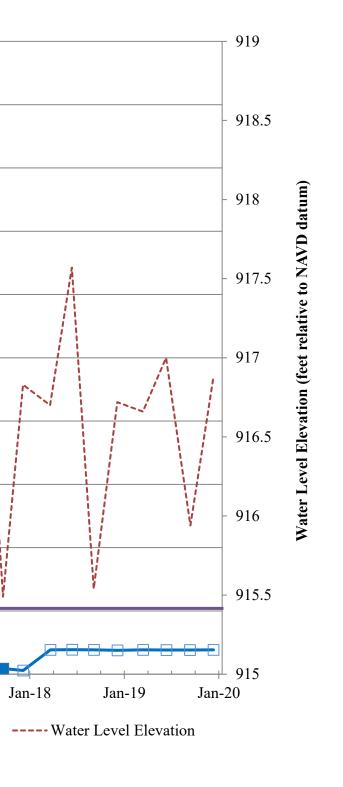






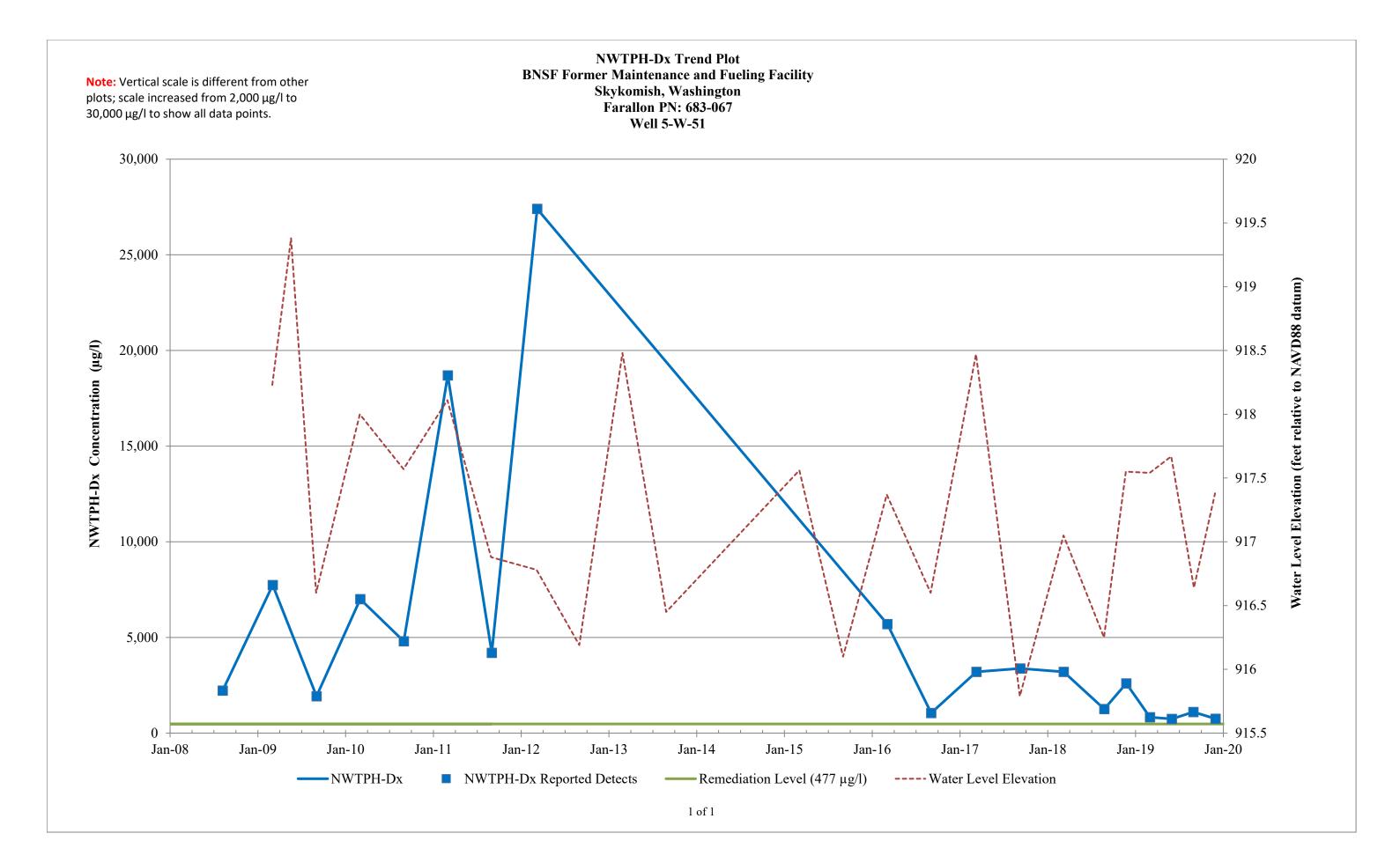


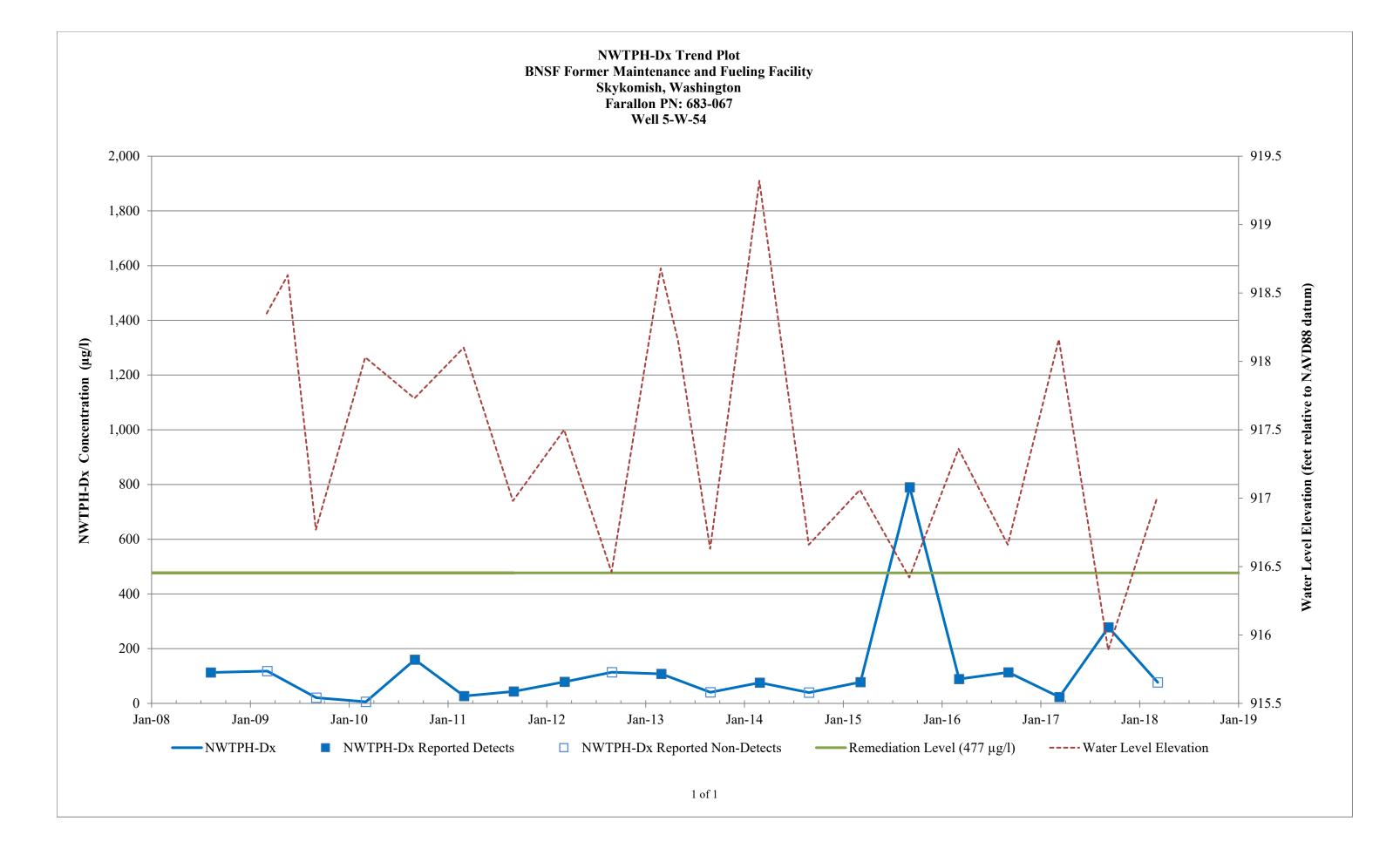
**NWTPH-Dx Trend Plot BNSF Former Maintenance and Fueling Facility** Skykomish, Washington Farallon PN: 683-067 Well 5-W-19 2,000 1,800 1,600 1,400 NWTPH-Dx Concentration (µg/l) 1'500 800 800 800 400 200 0 Jan-12 Jan-14 Jan-08 Jan-11 Jan-13 Jan-15 Jan-16 Jan-17 Jan-07 Jan-09 Jan-10 ■ NWTPH-Dx Reported Detects □ NWTPH-Dx Reported Non-Detects Cleanup Level (208 µg/l) 1 of 1

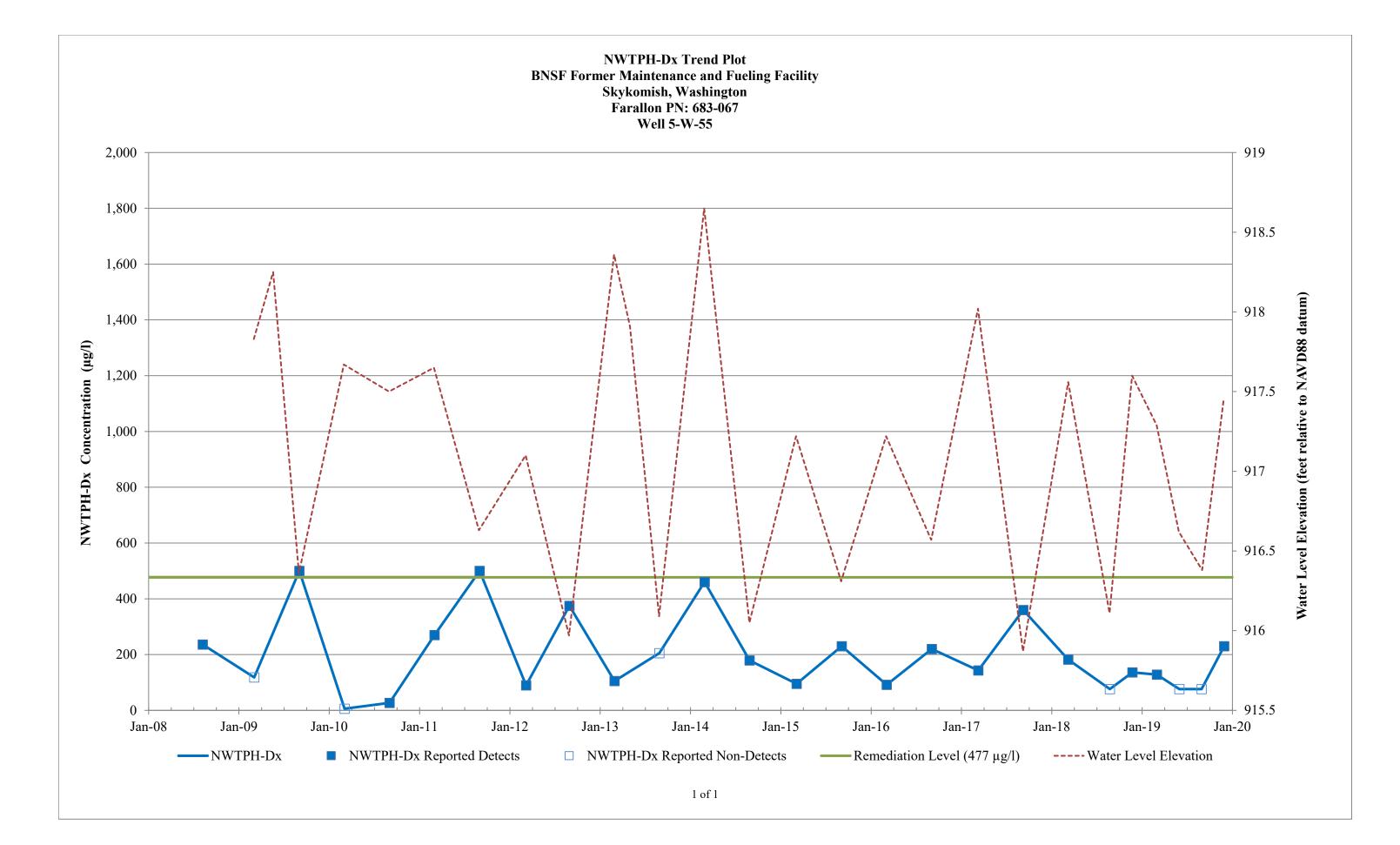


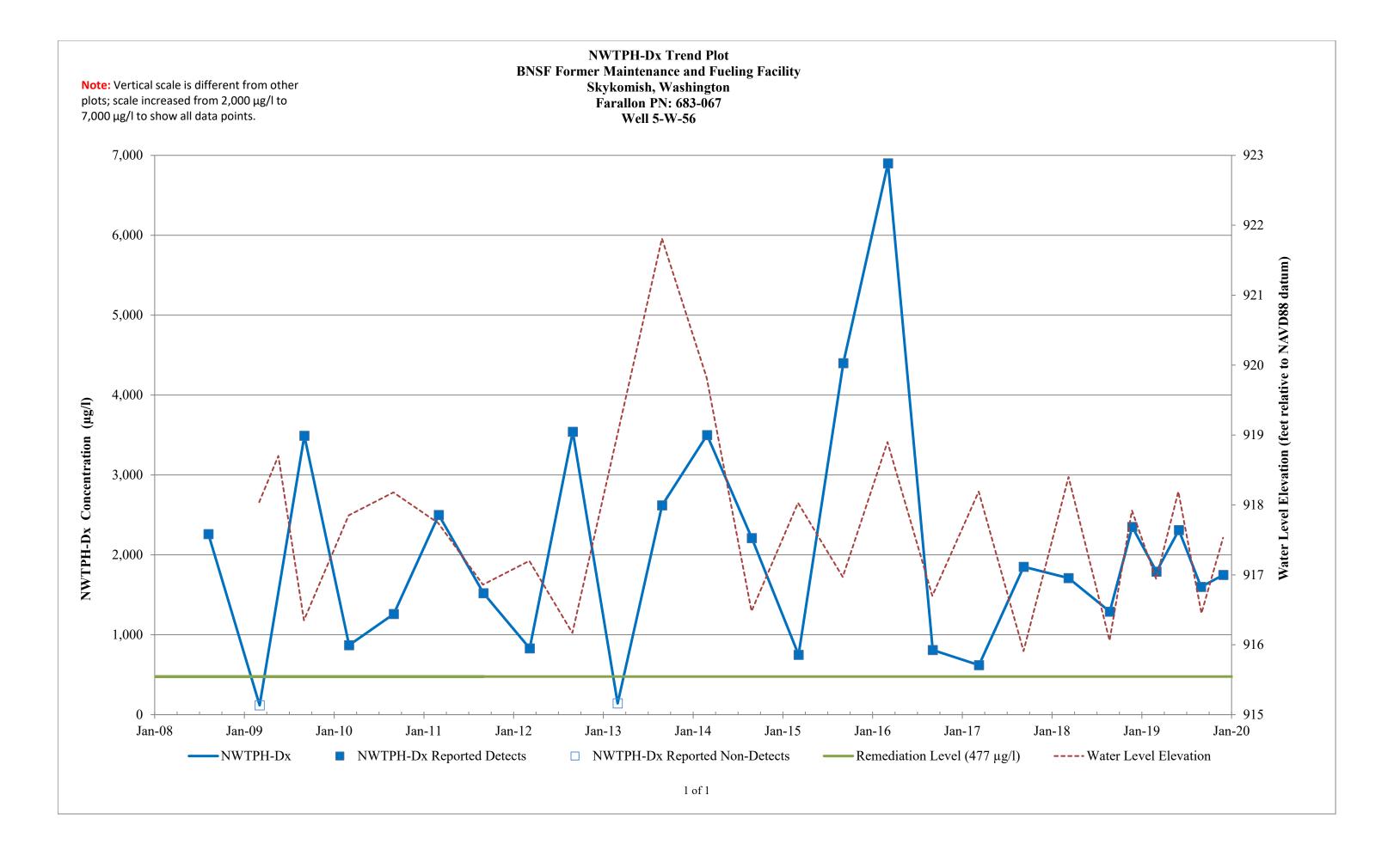
# Schoolyard Monitoring Wells

Note: Schoolyard monitoring well NWTPH-Dx groundwater results are compared to the Remediation Level (RL) of 477 micrograms per liter.



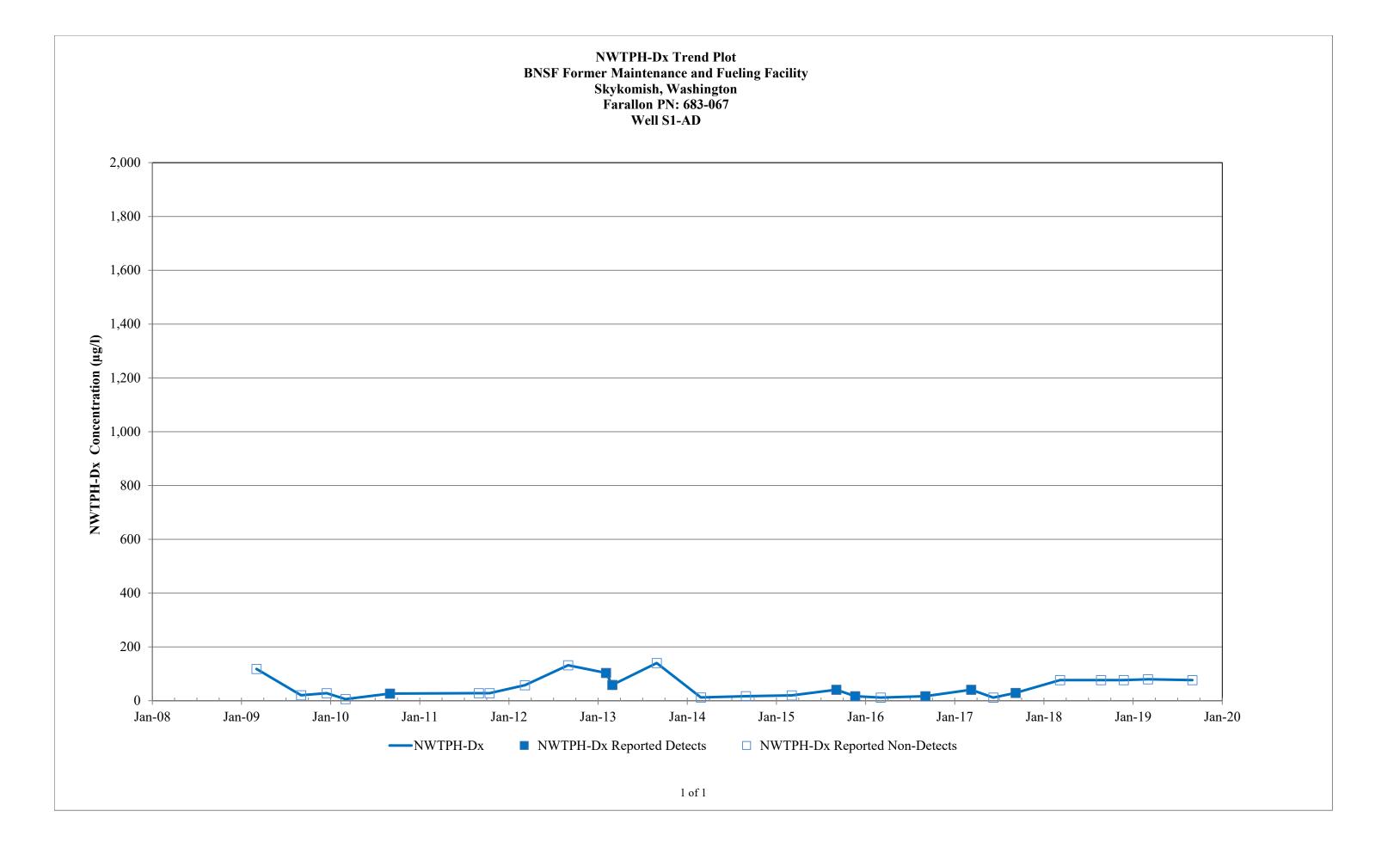


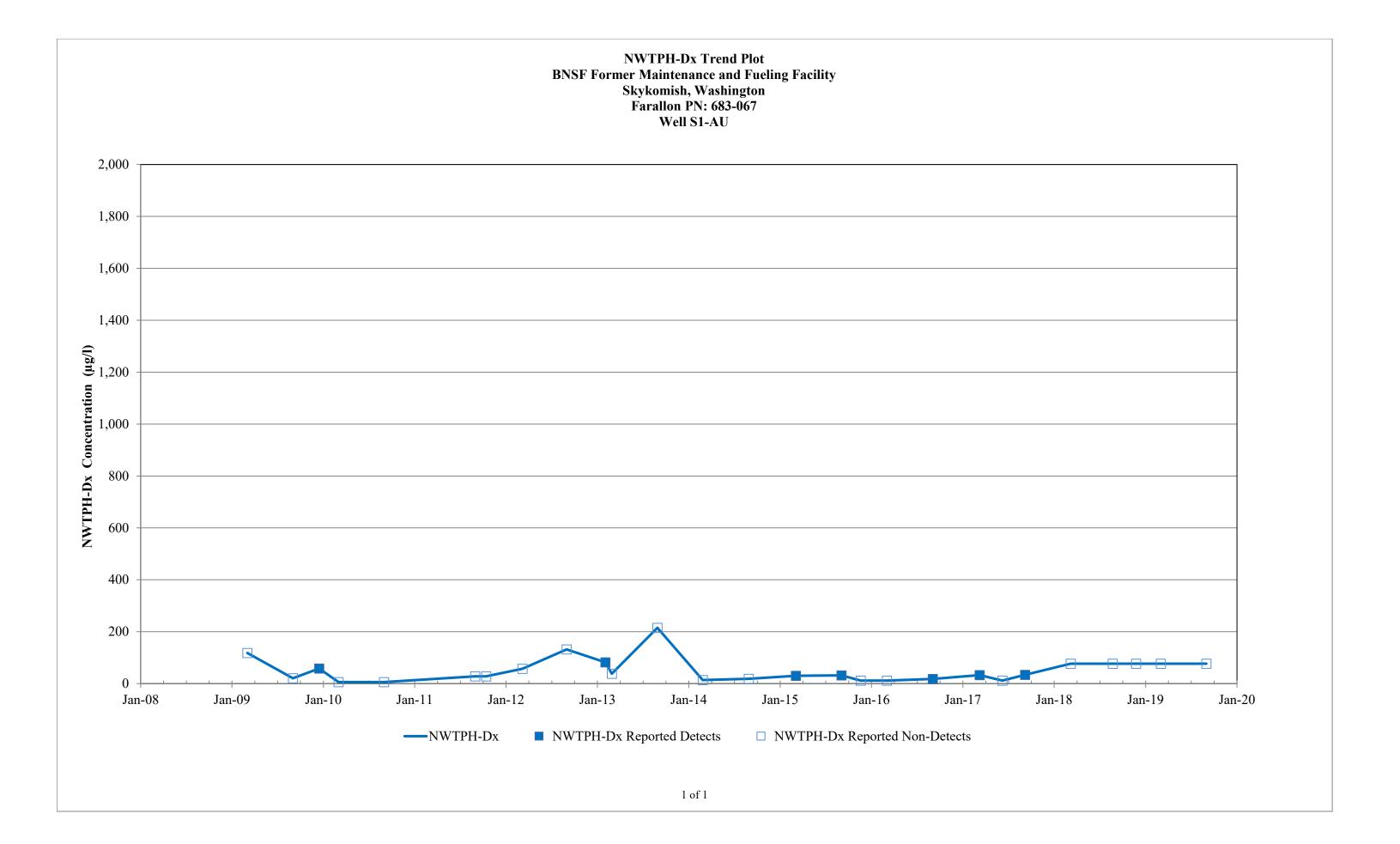


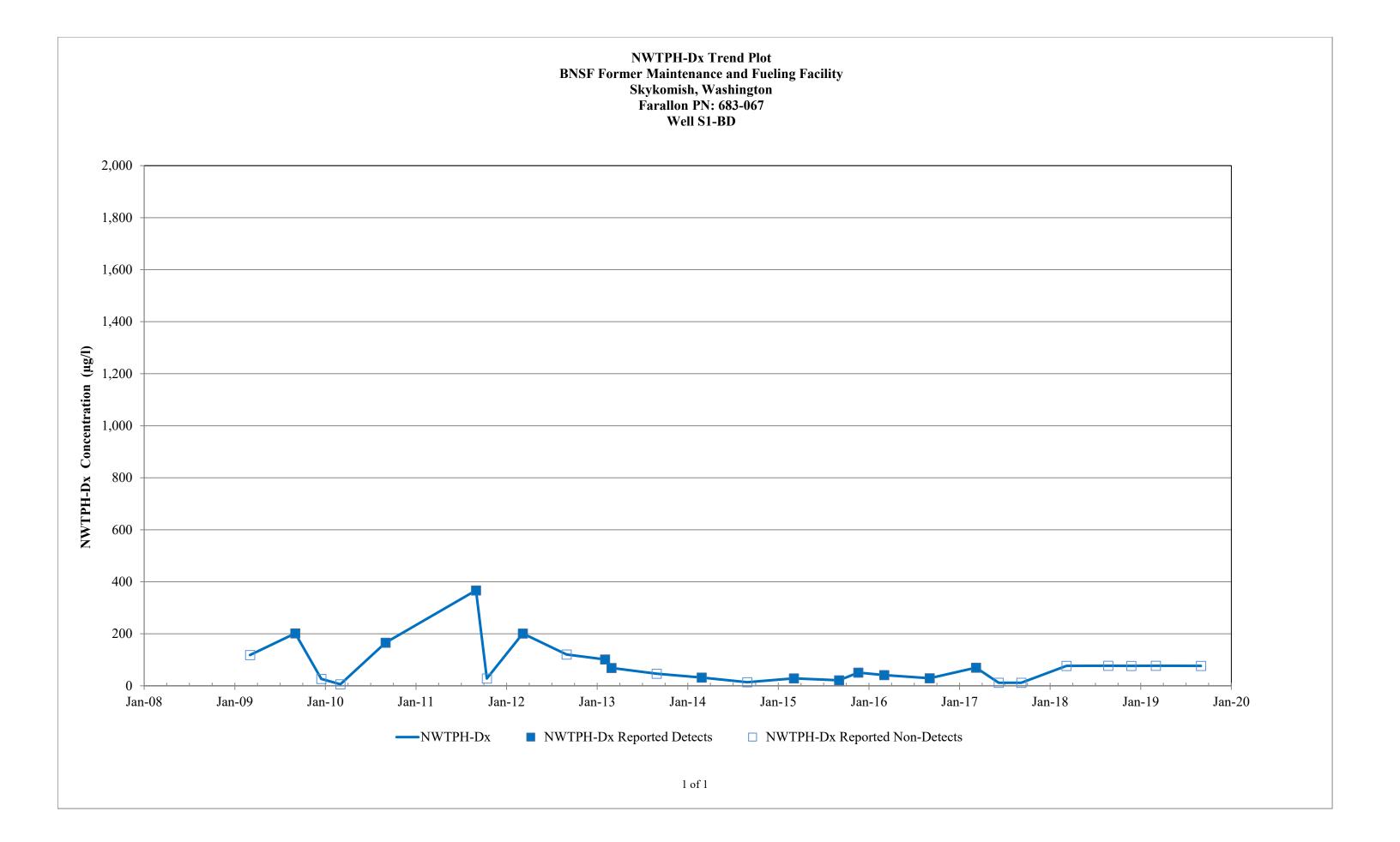


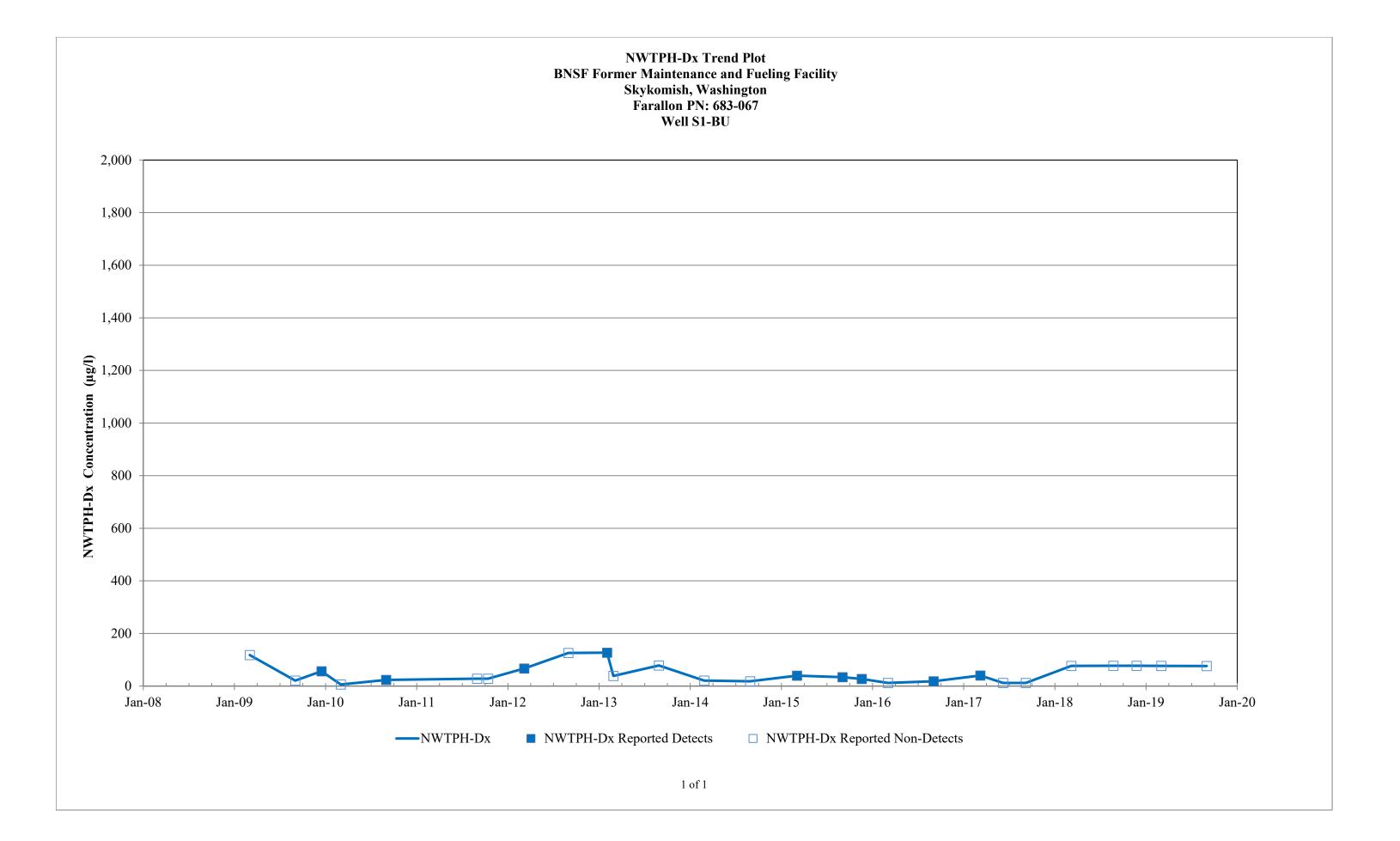
# Hydraulic Control and Containment System Sentry Wells and Monitoring Wells

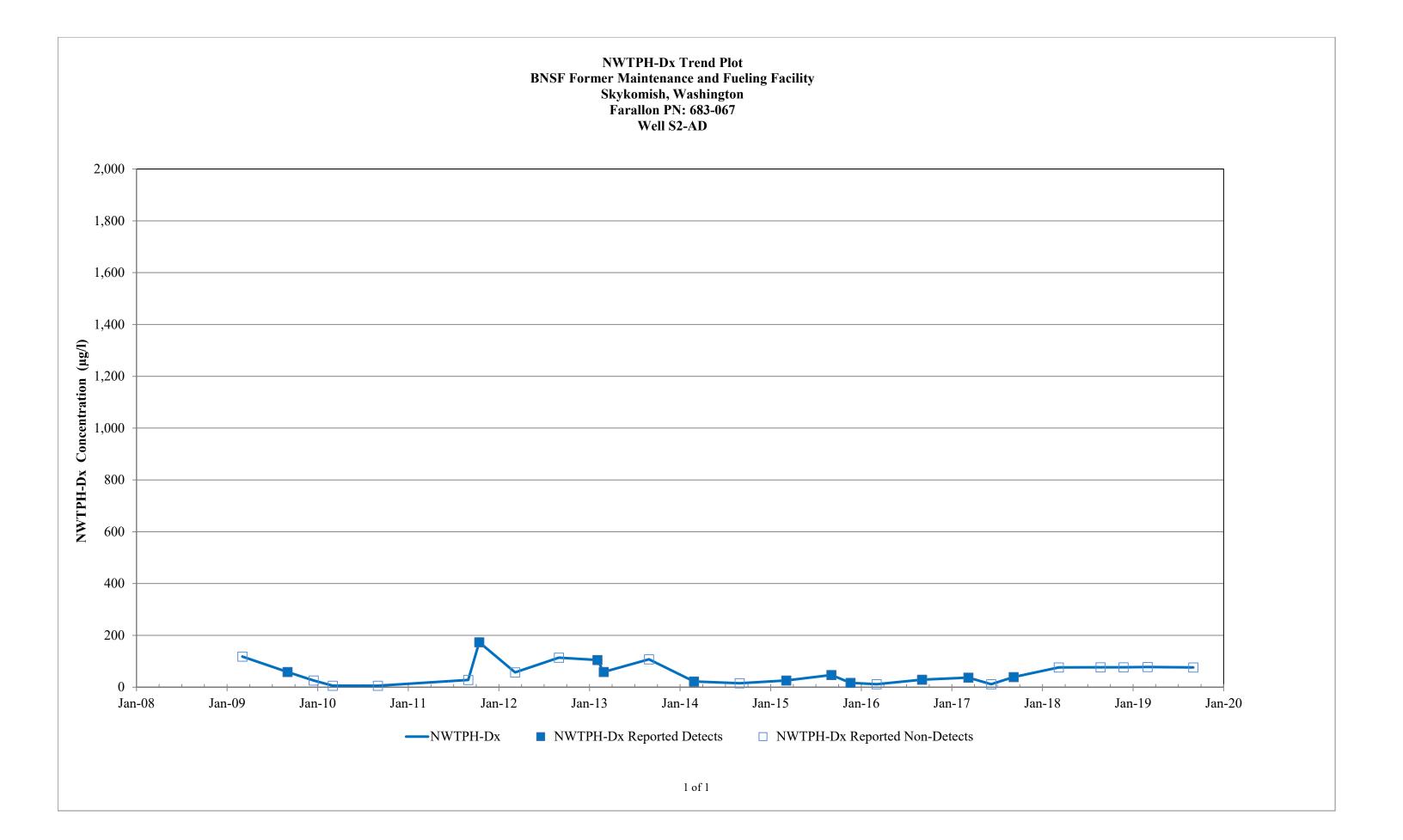
Note: Monitoring well NWTPH-Dx groundwater results from wells located north of the HCC barrier wall (i.e., downgradient of railyard) are compared to the RL of 477 micrograms per liter; NWTPH-Dx groundwater results from monitoring locations within and south of the HCC barrier wall (i.e., within the railyard) have no NWTPH-Dx target.

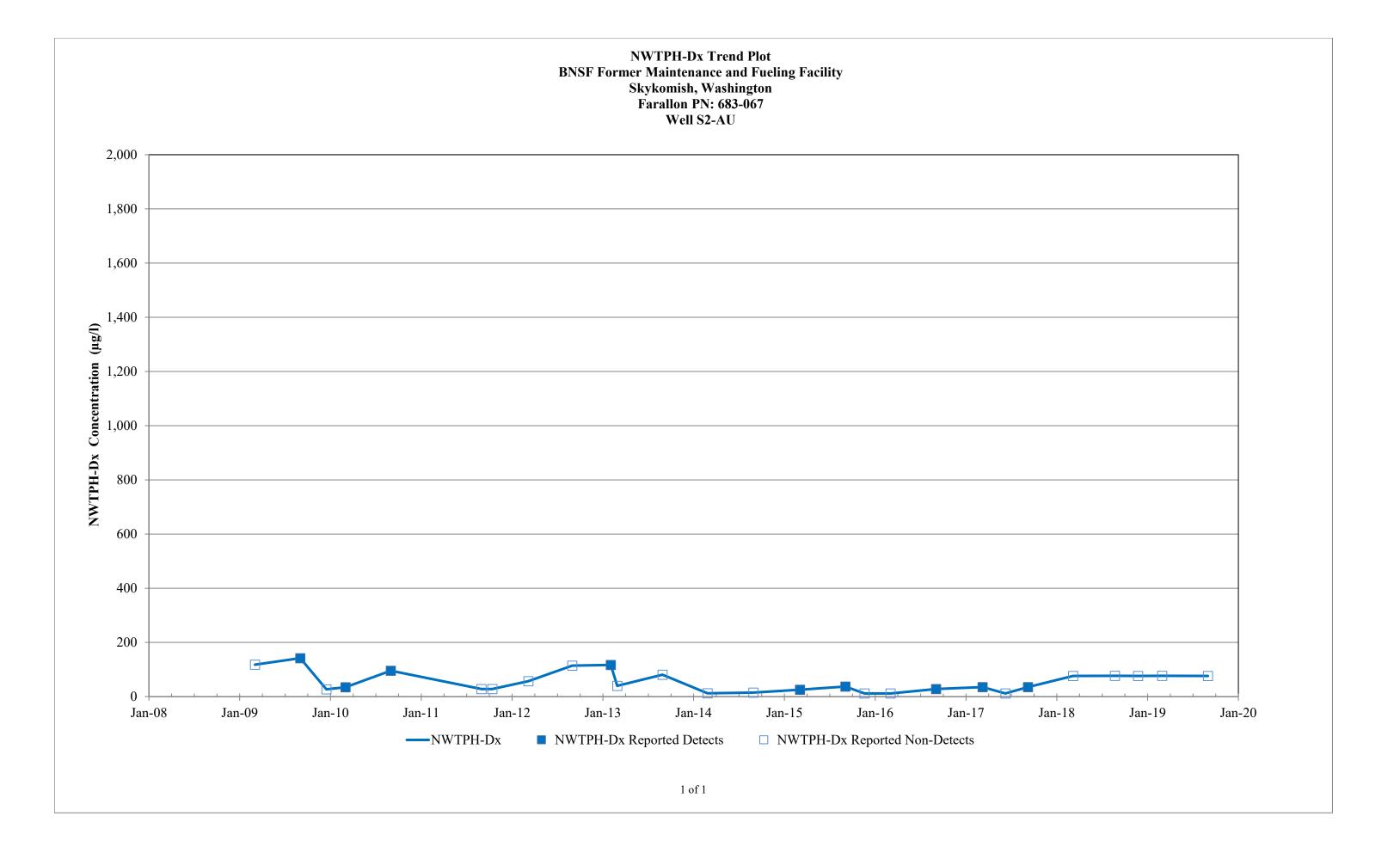


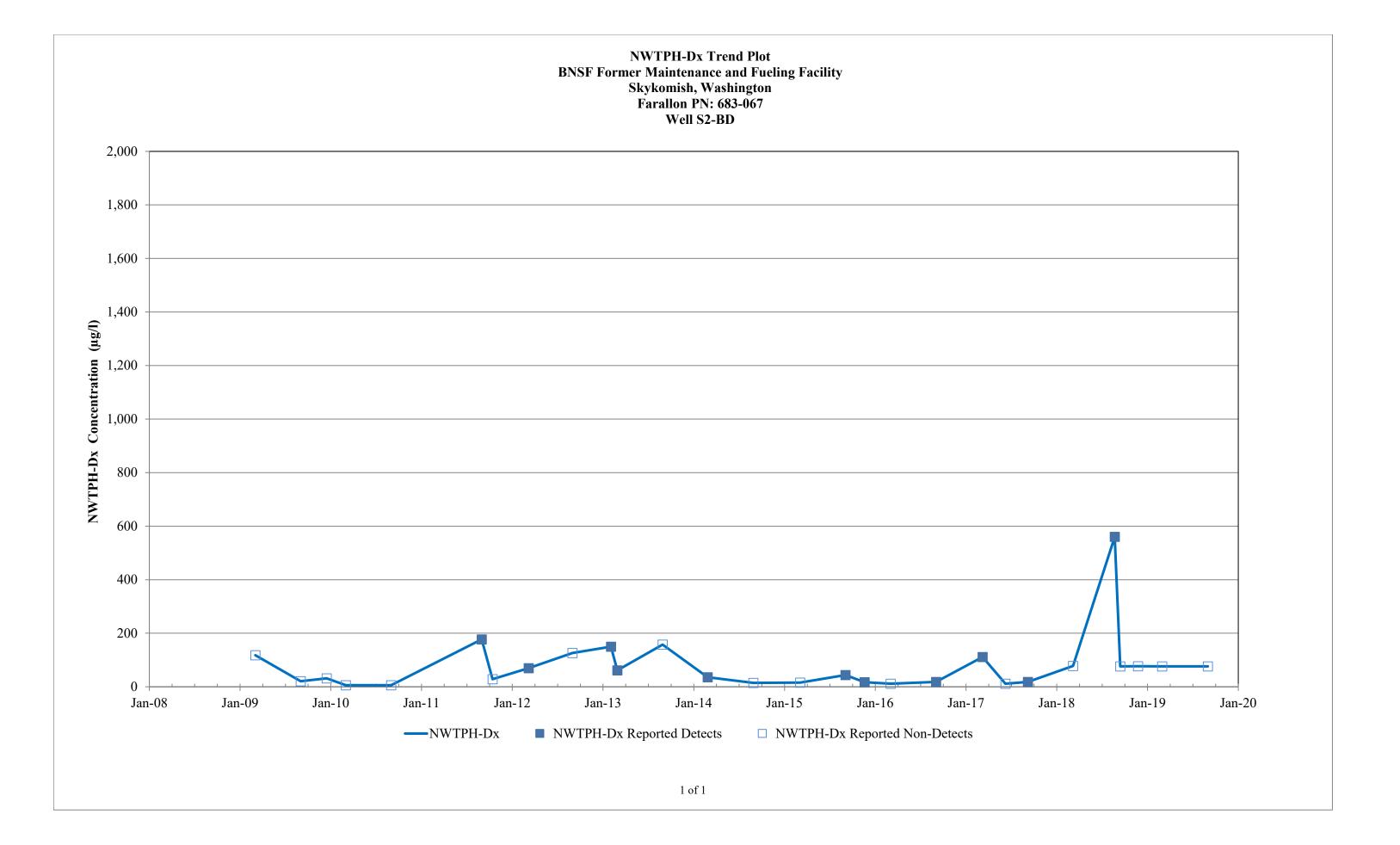


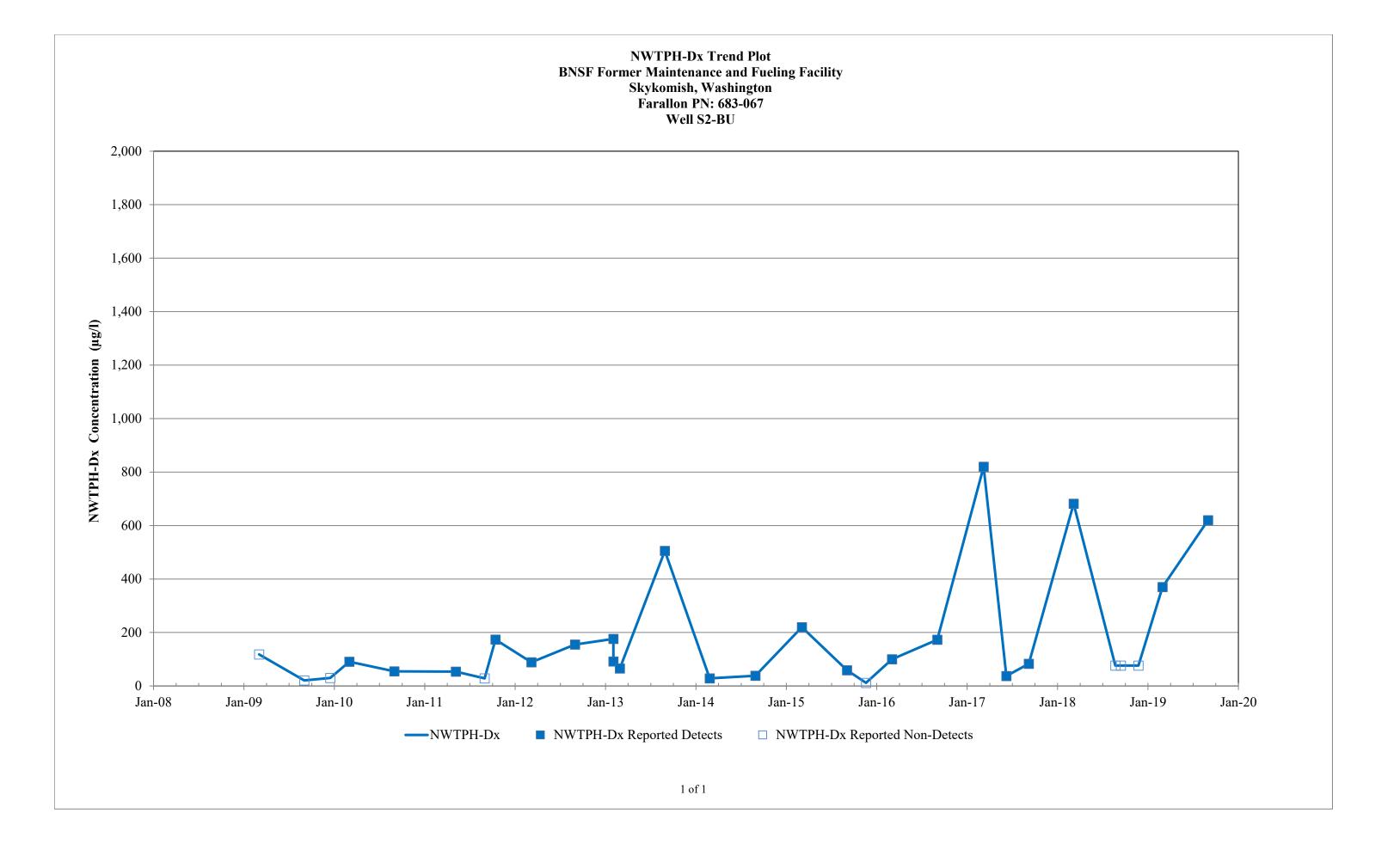


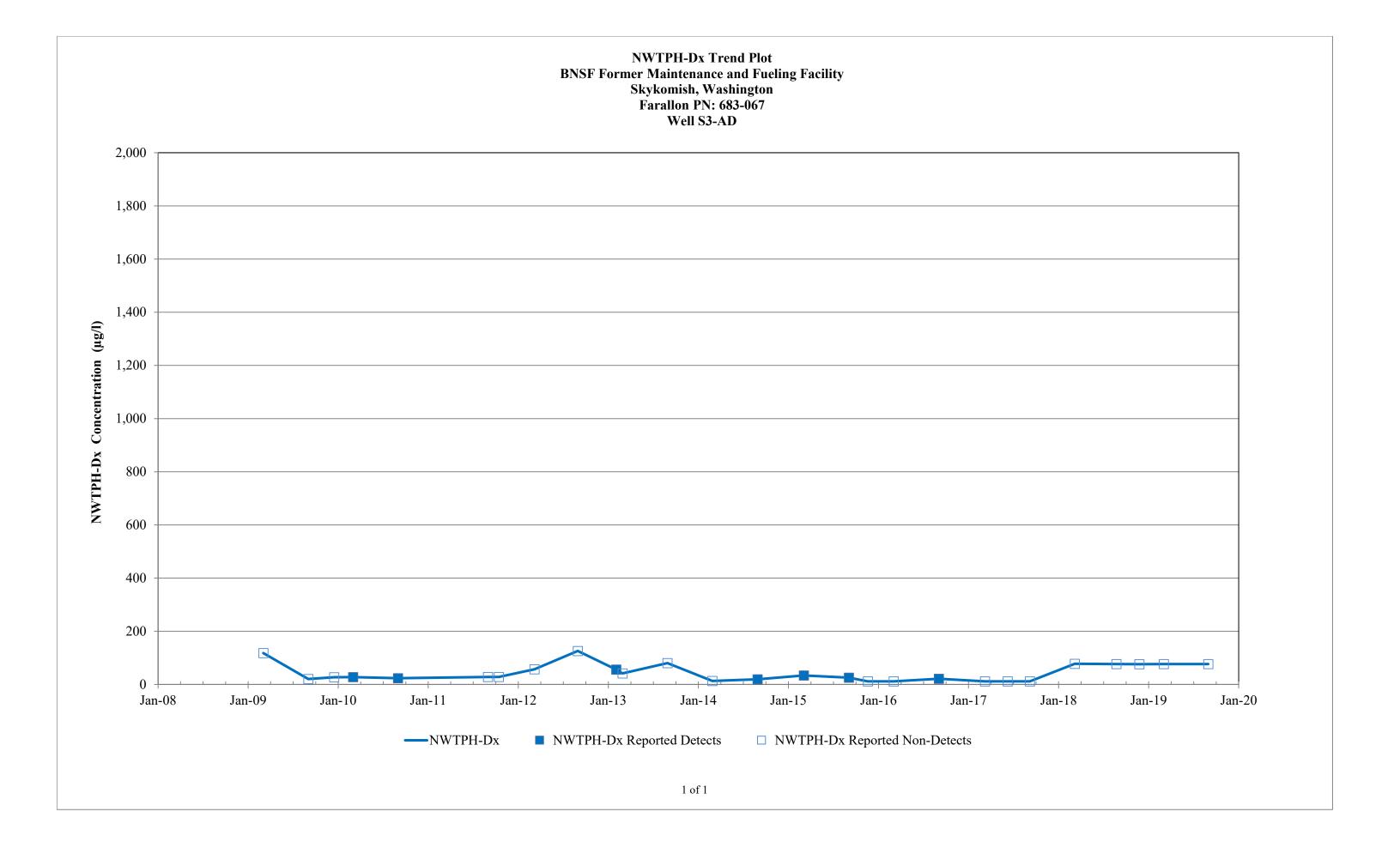


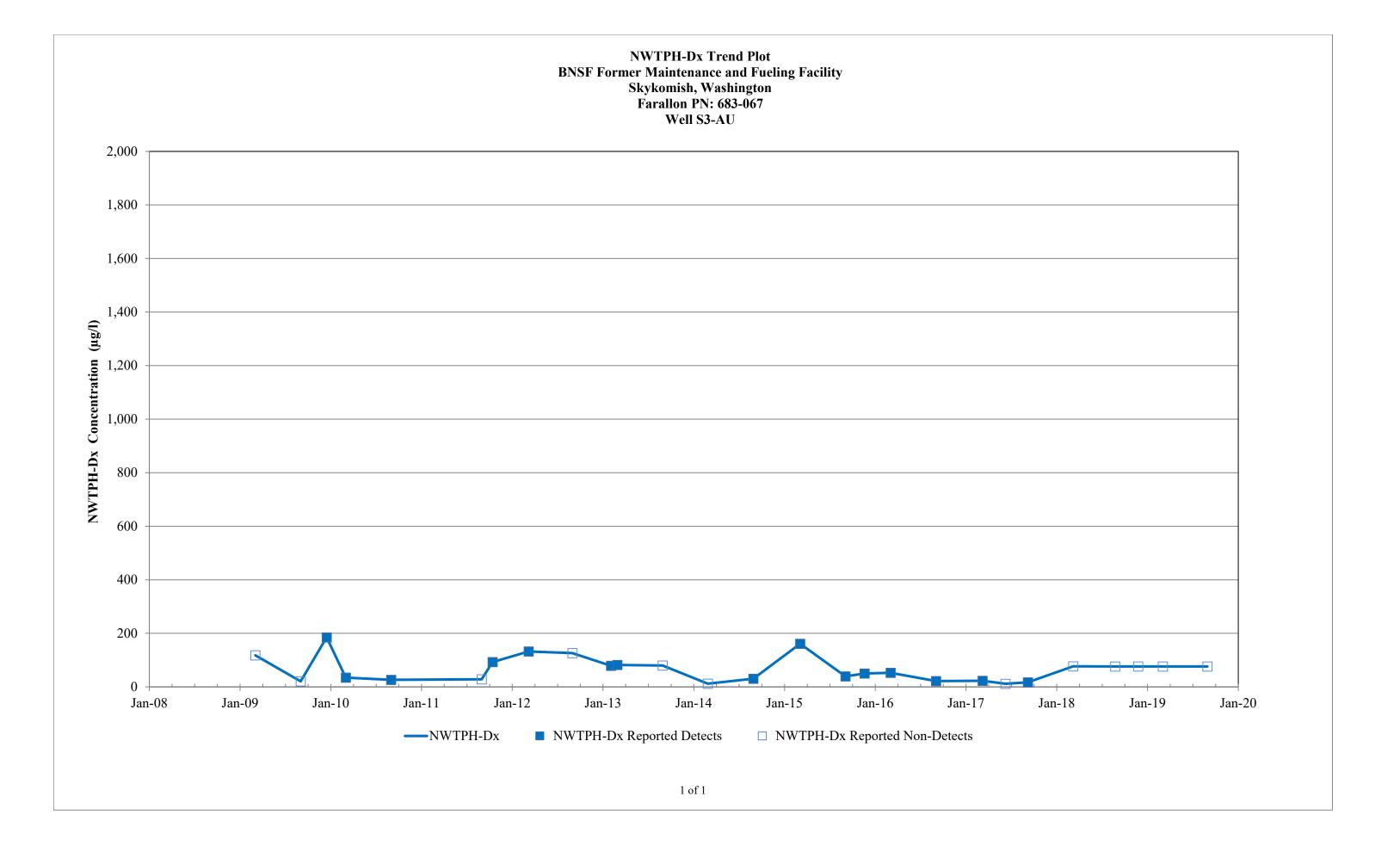


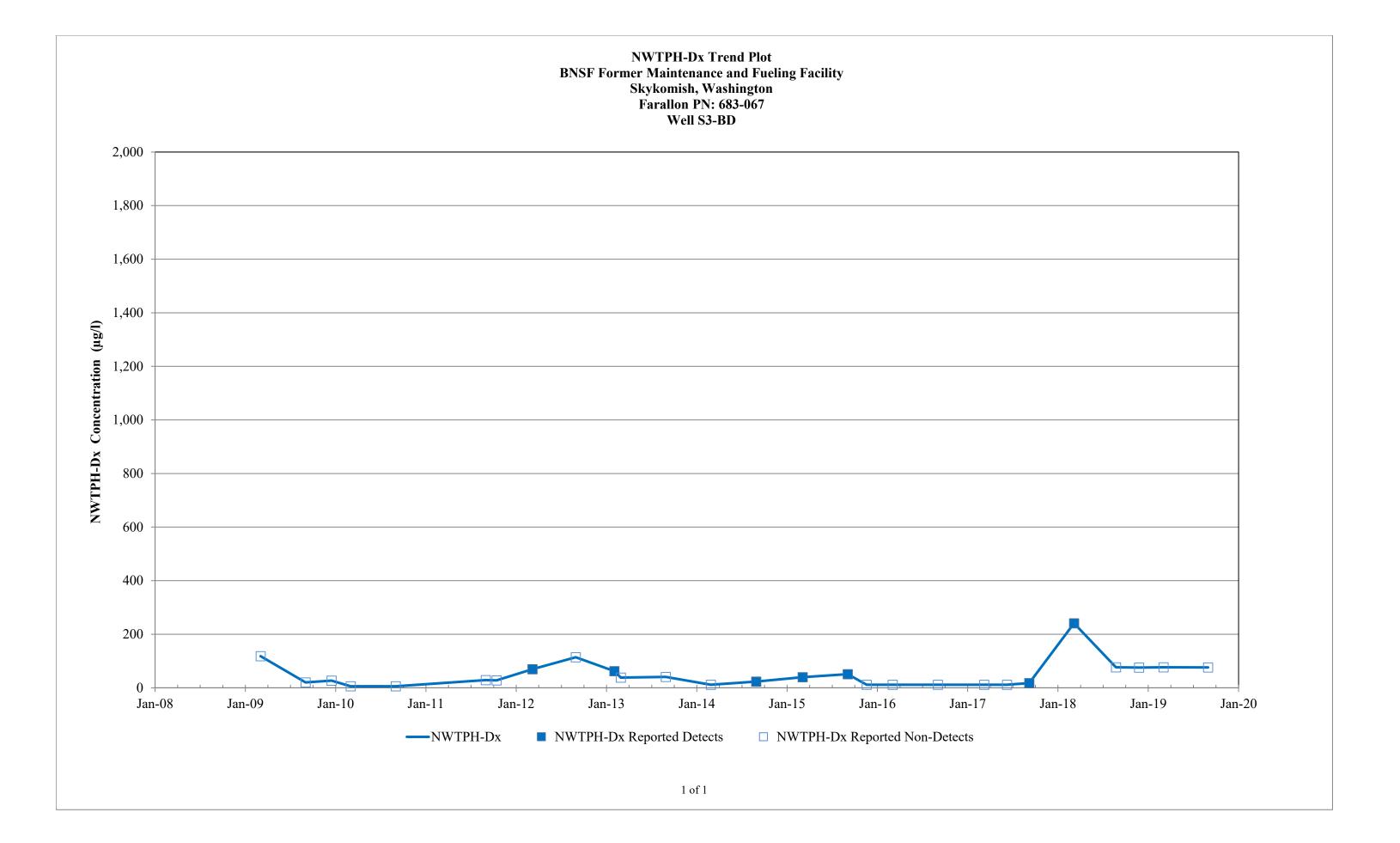


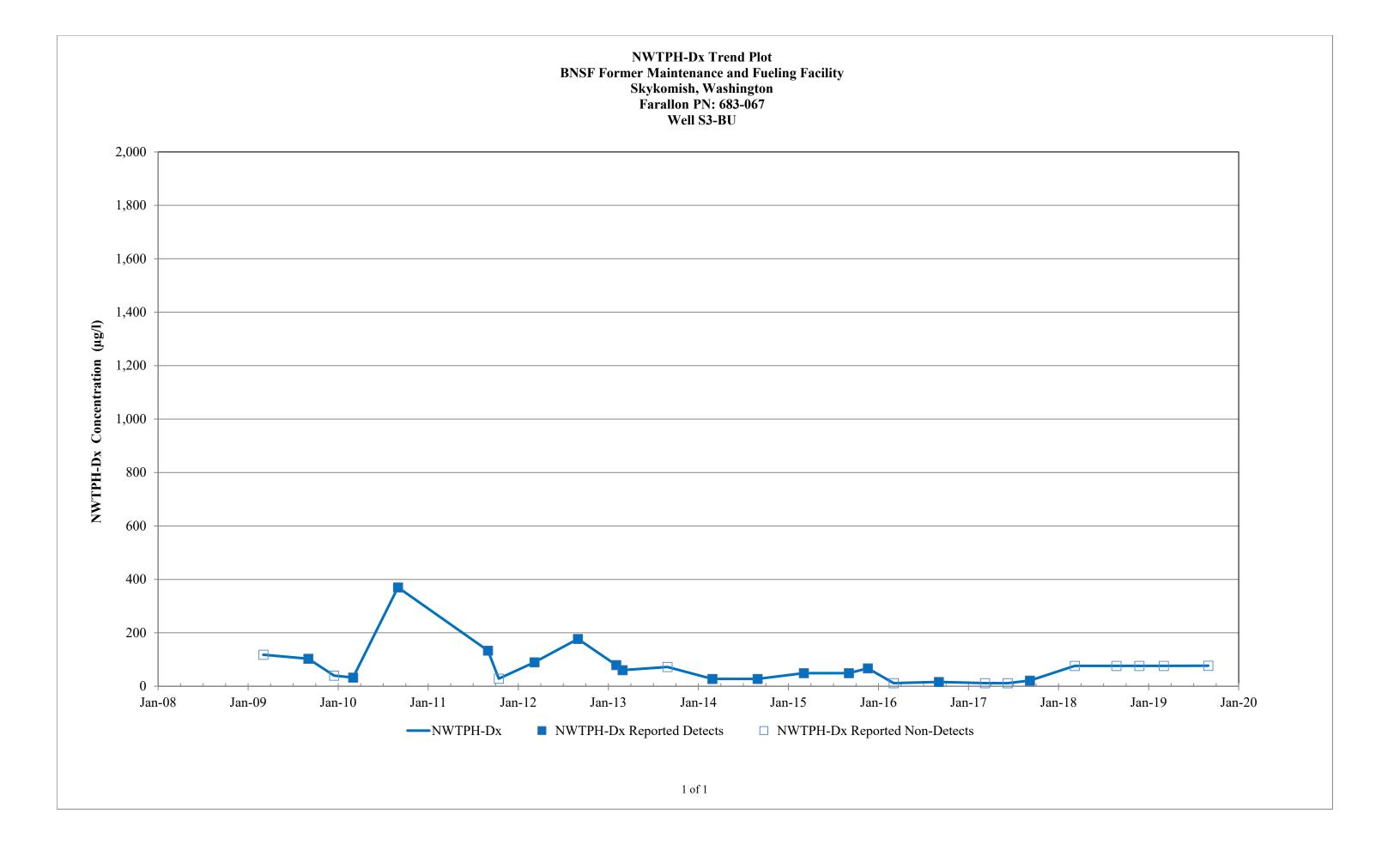


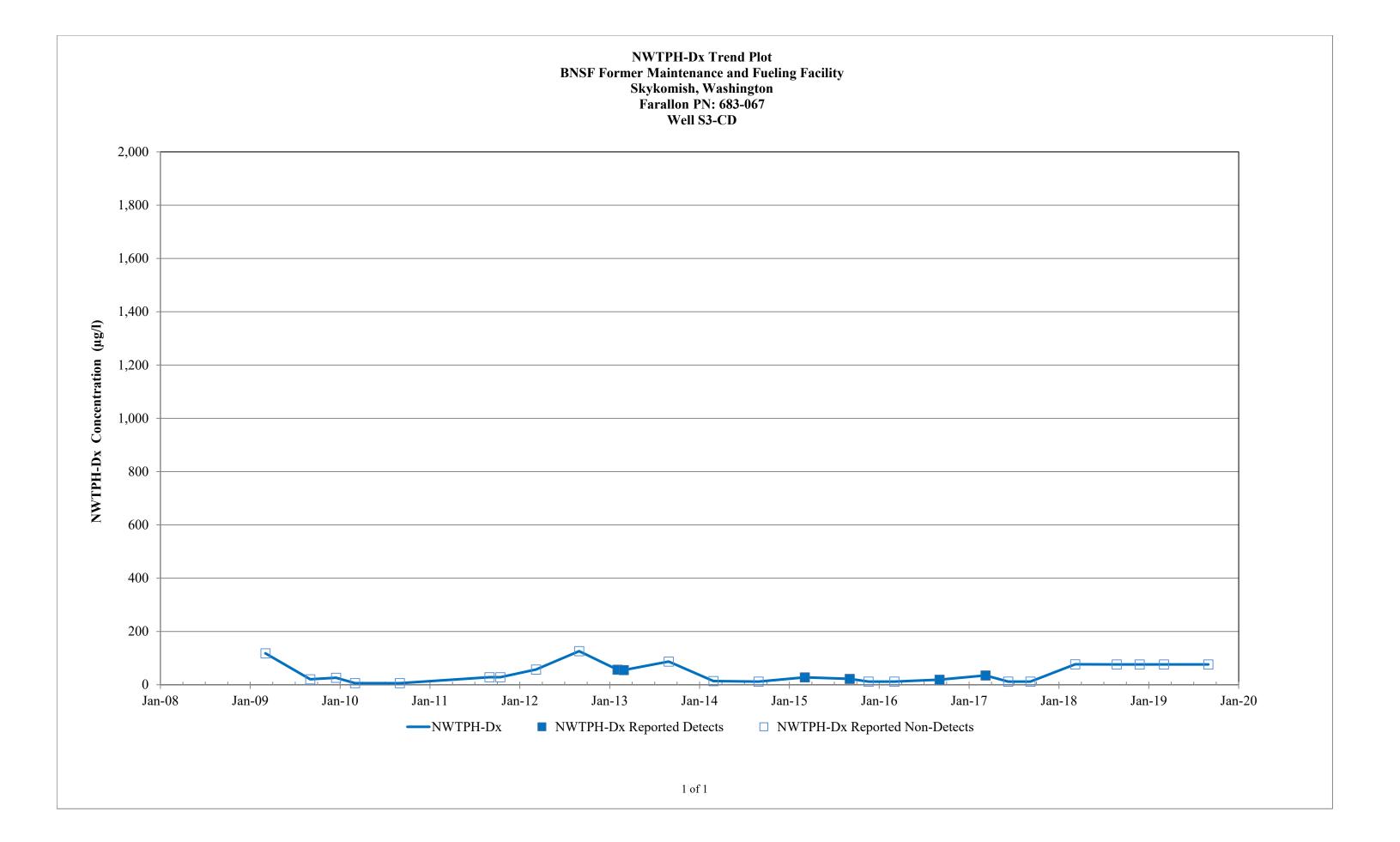


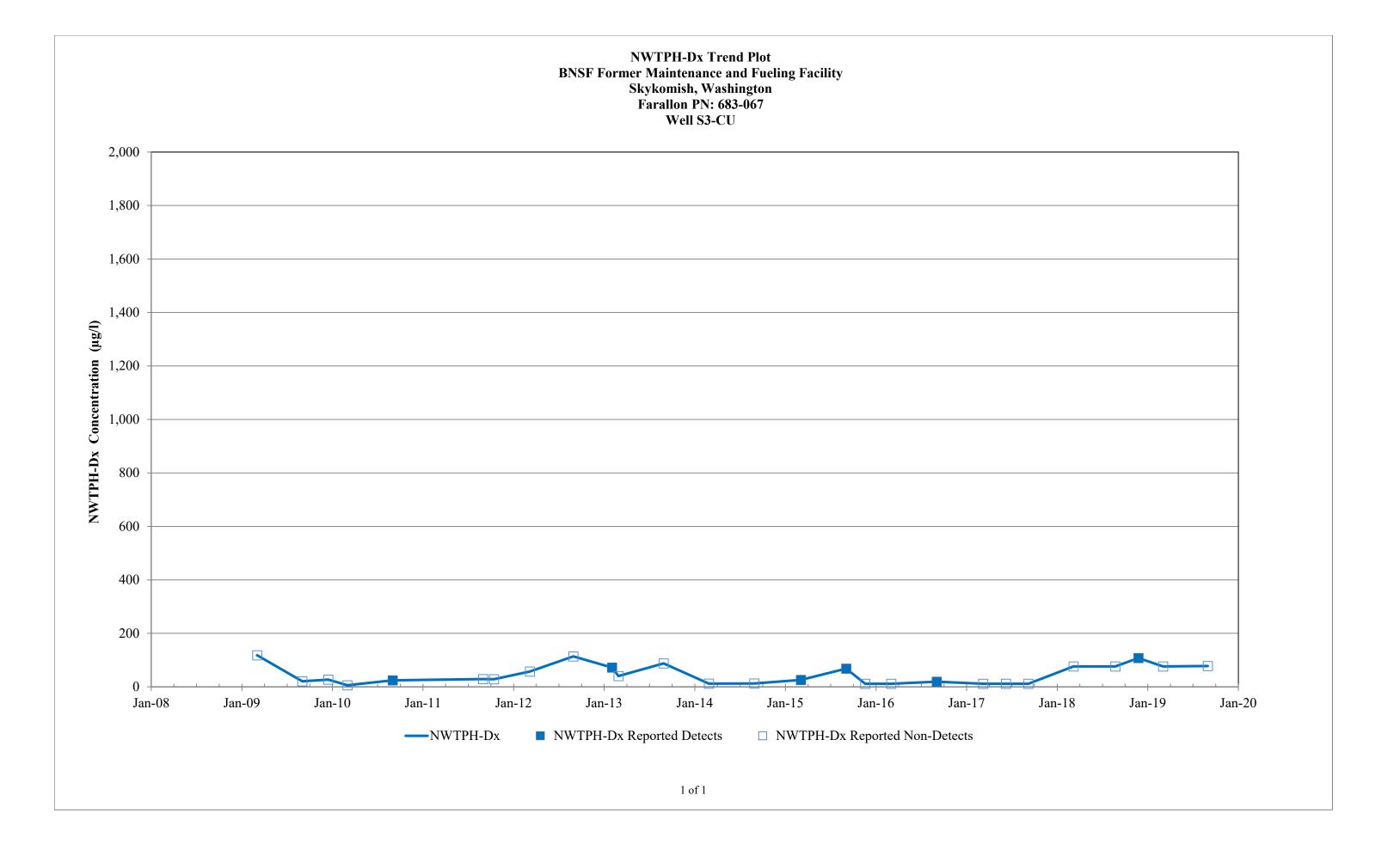


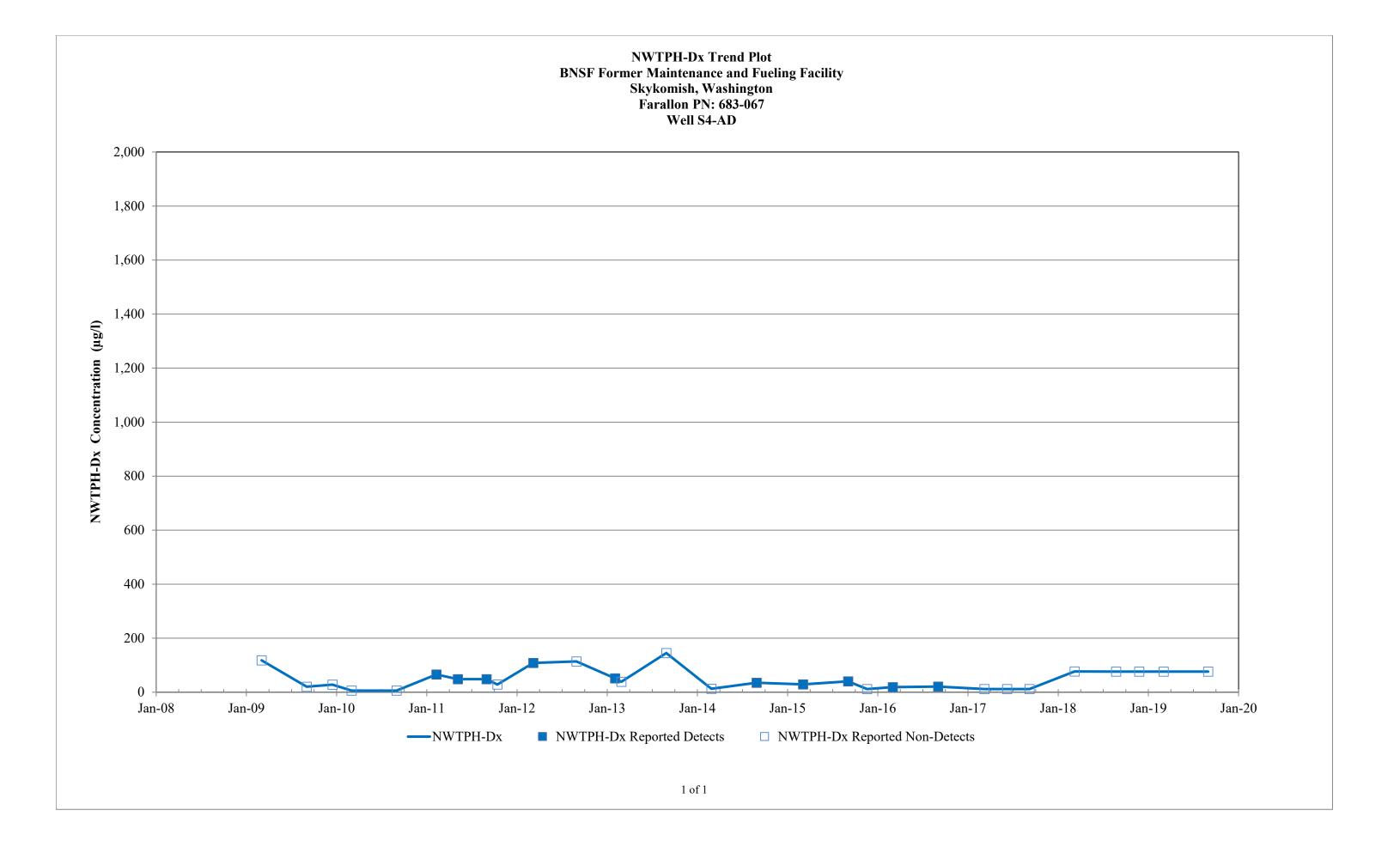


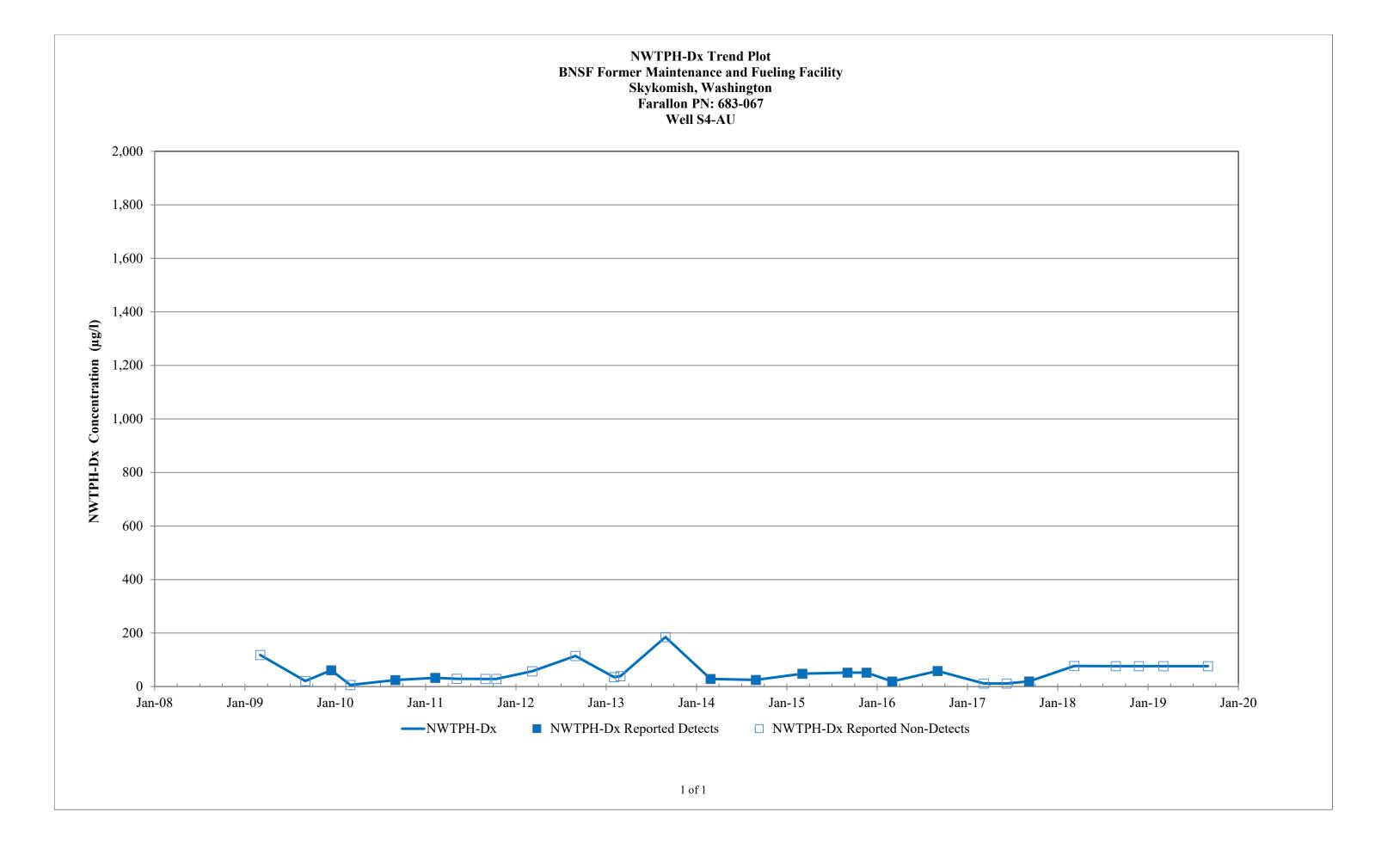


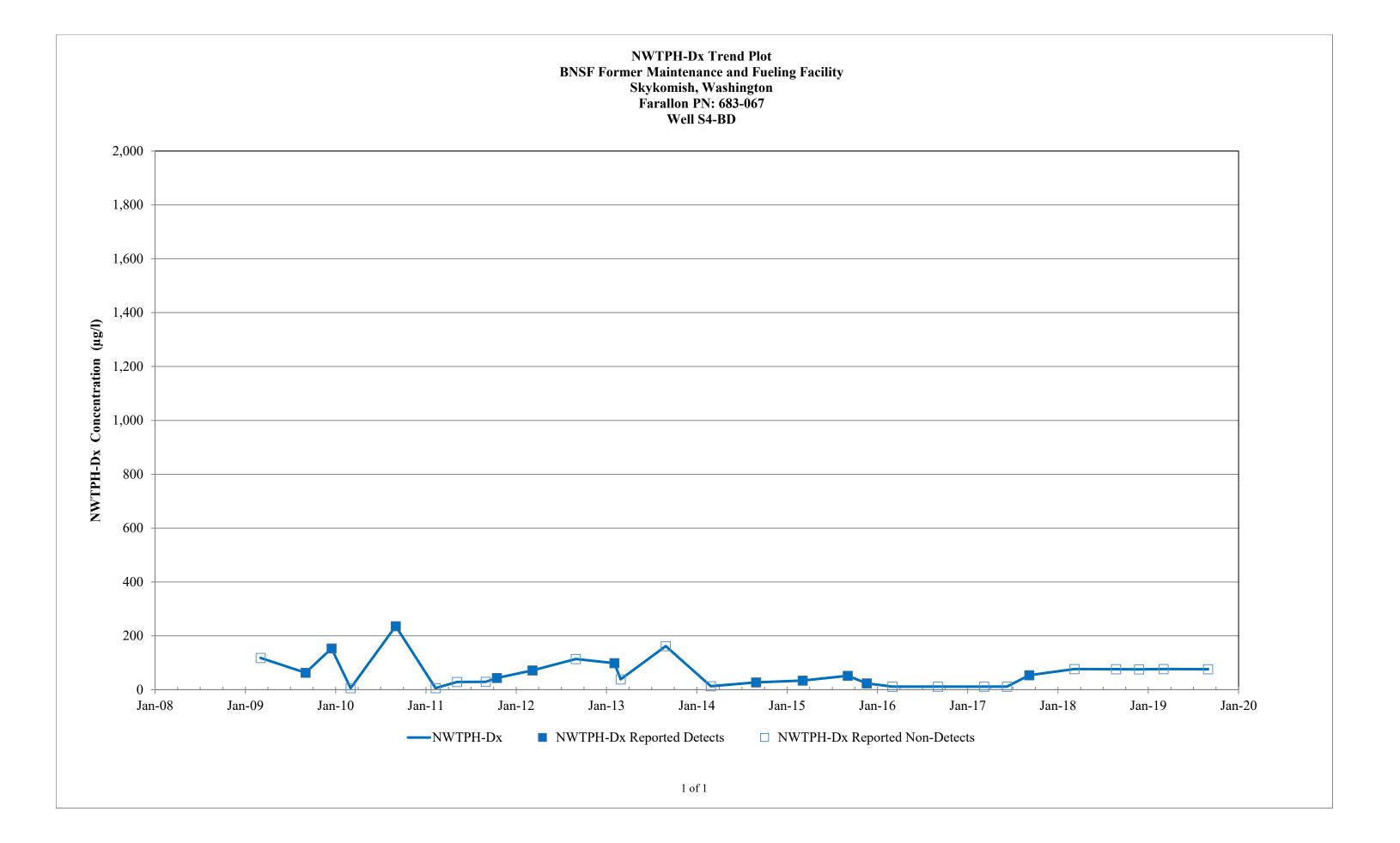


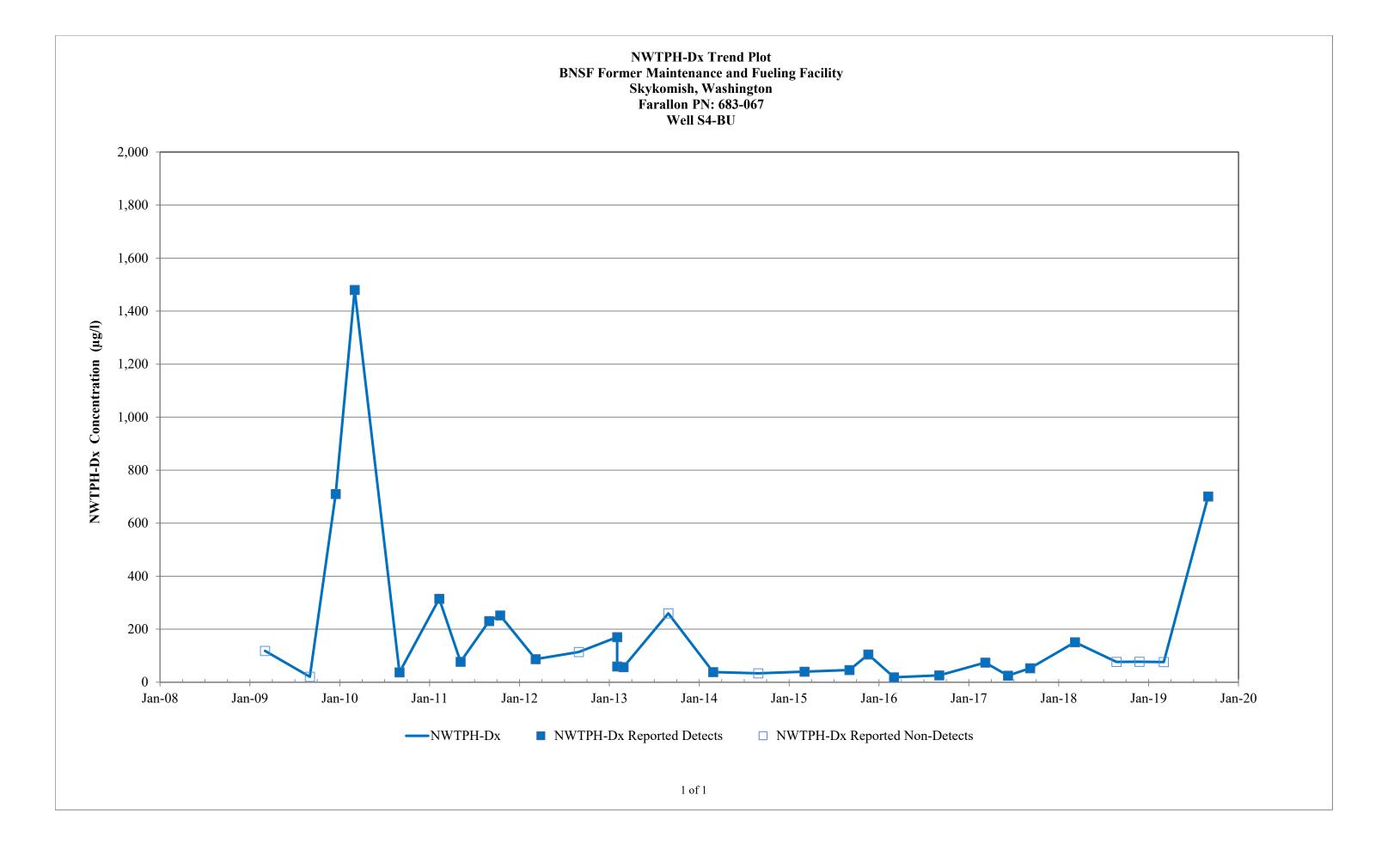


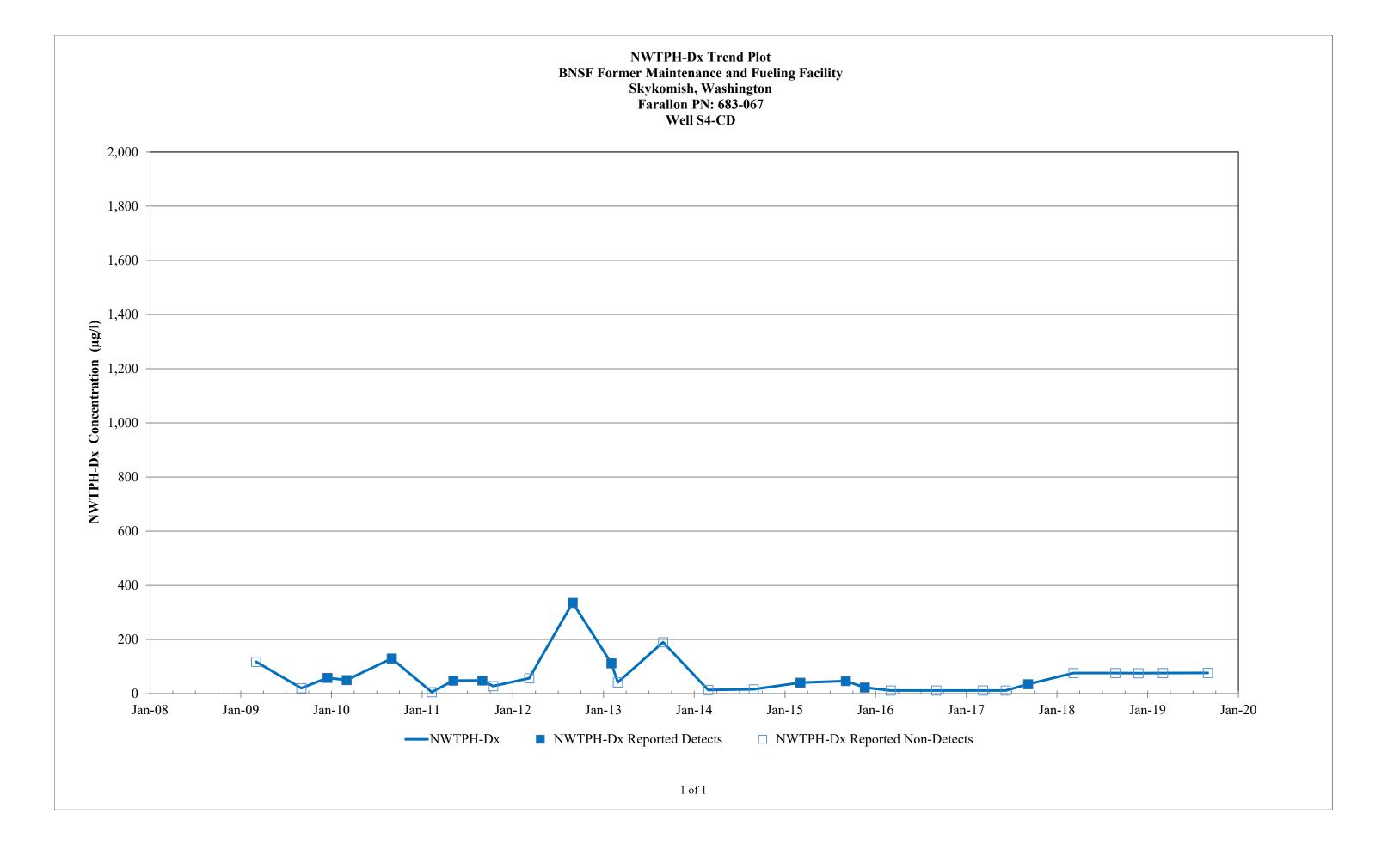


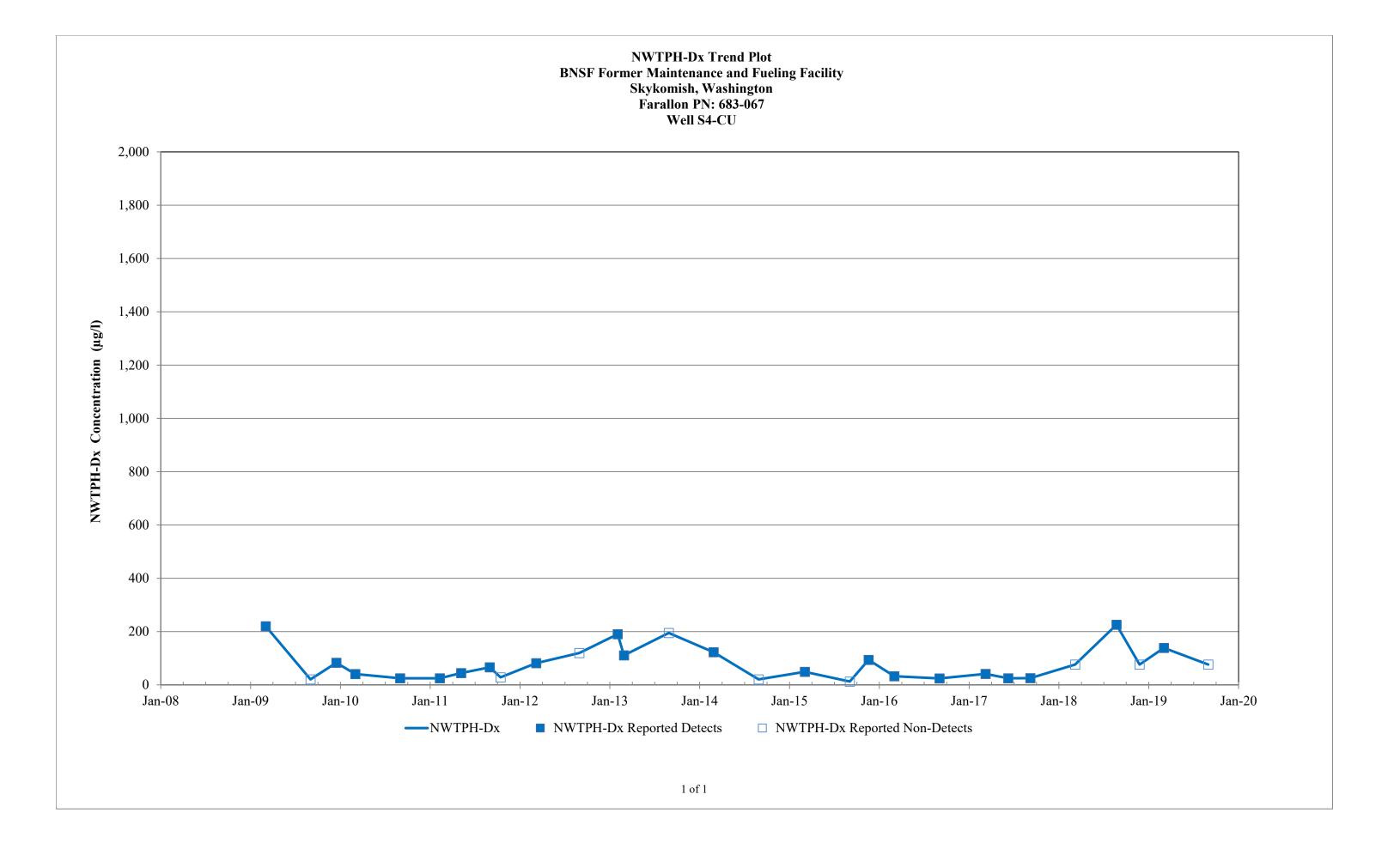




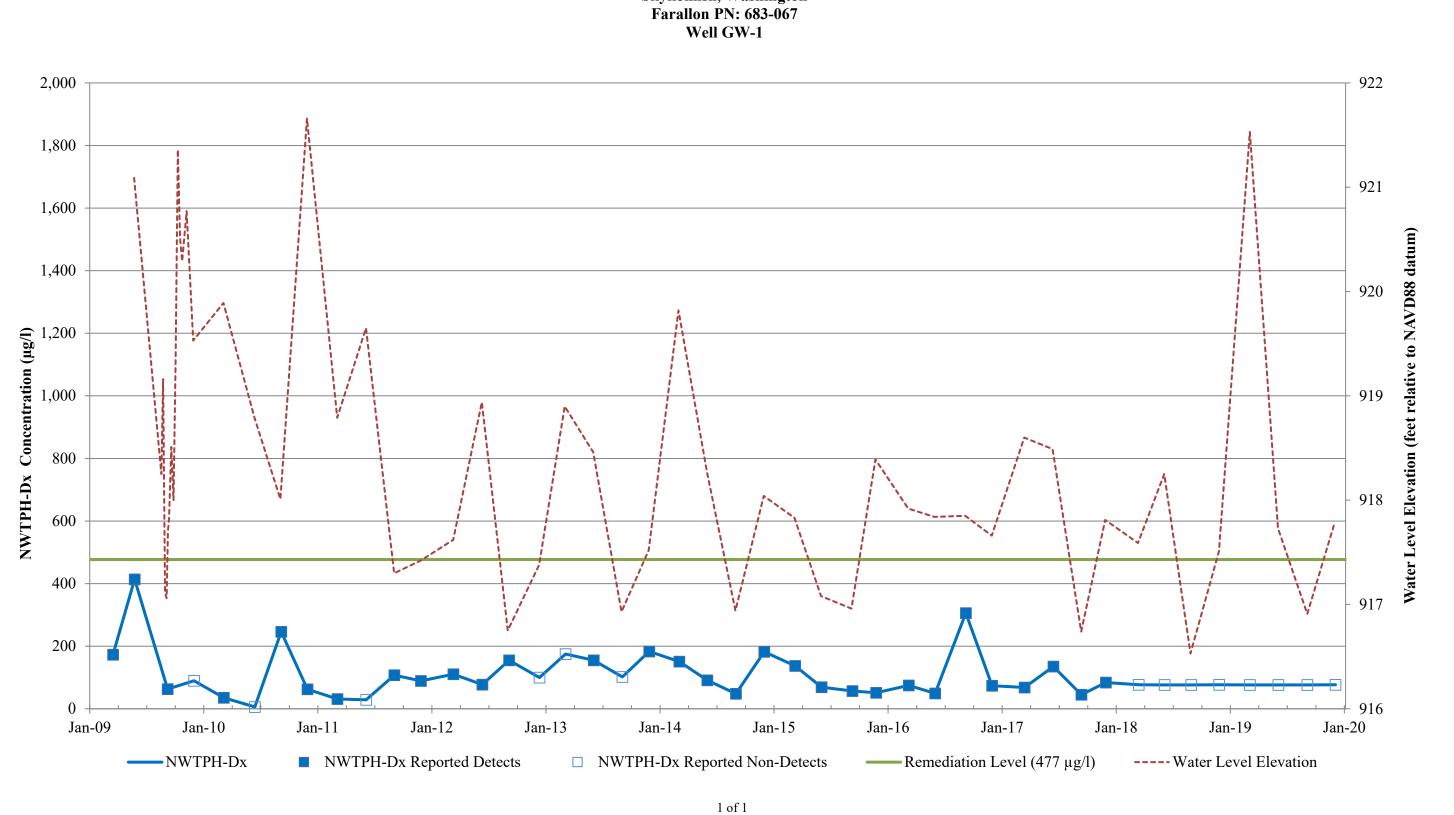




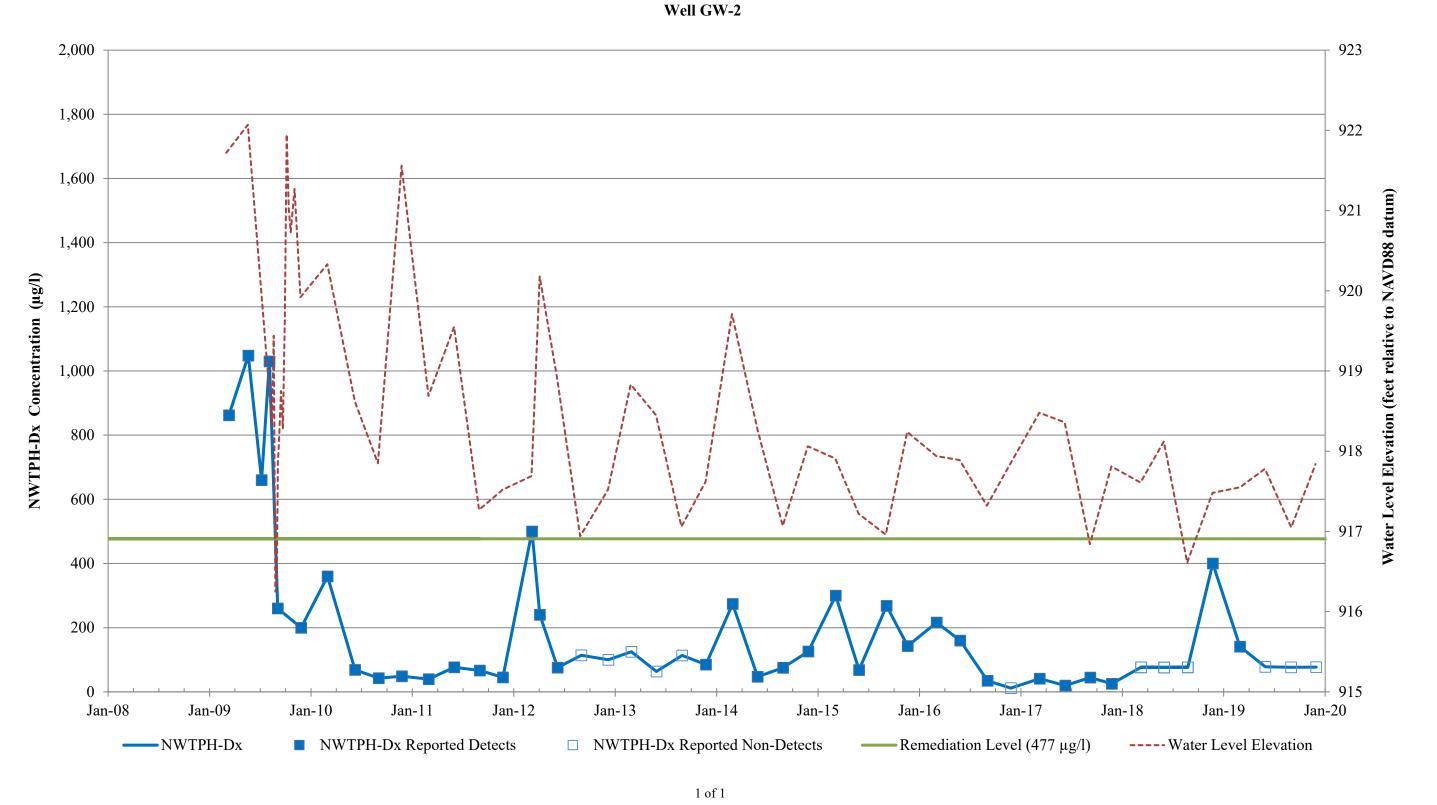




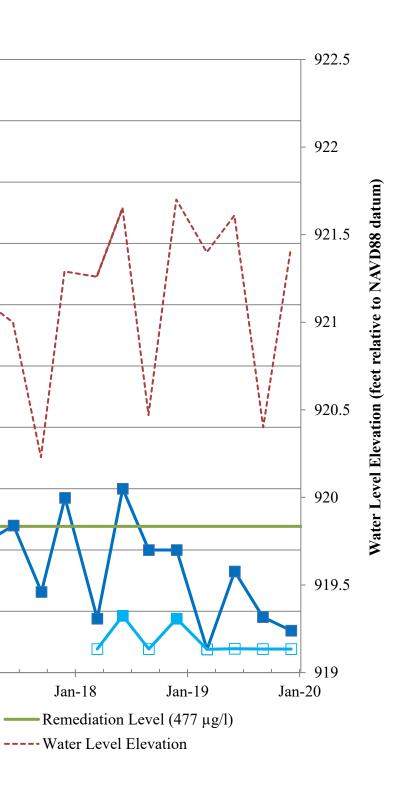
NWTPH-Dx Trend Plot BNSF Former Maintenance and Fueling Facility Skykomish, Washington Farallon PN: 683-067 Well GW-1

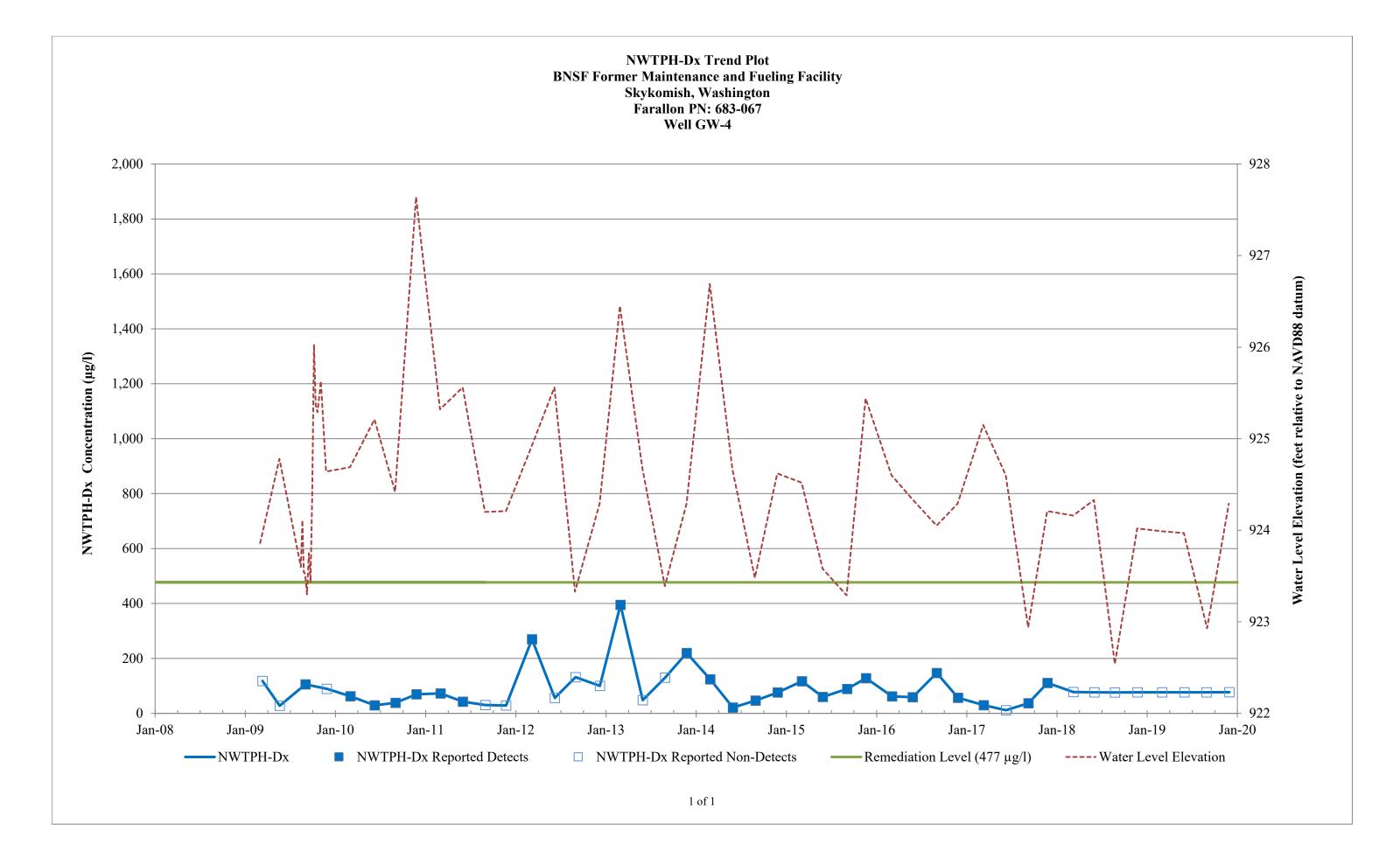


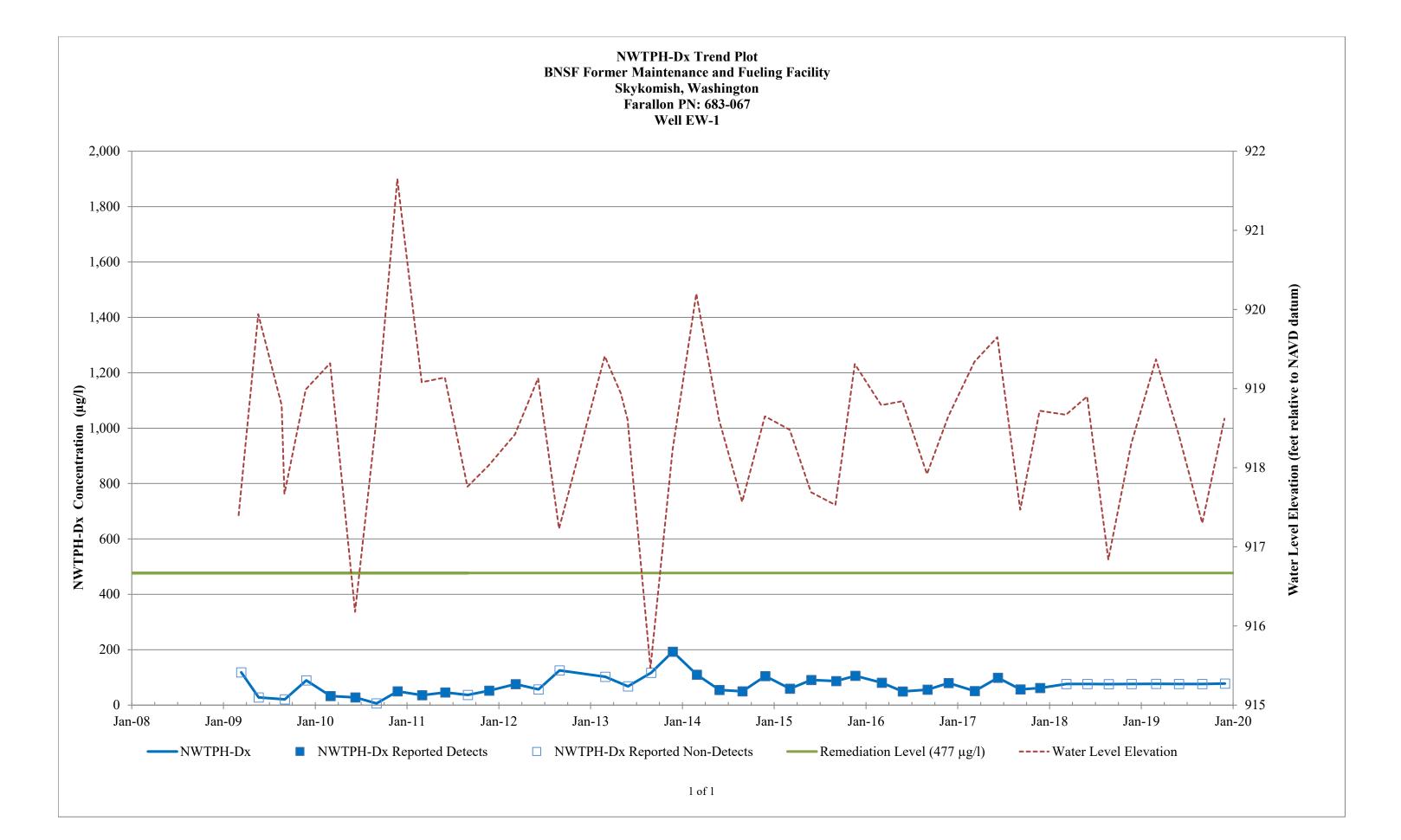
NWTPH-Dx Trend Plot BNSF Former Maintenance and Fueling Facility Skykomish, Washington Farallon PN: 683-067 Well GW-2



**NWTPH-Dx Trend Plot BNSF Former Maintenance and Fueling Facility** Skykomish, Washington Farallon PN: 683-067 Well GW-3 2,000 1,800 1,600 1,400 NWTPH-Dx Concentration (µg/l) 1,200 1,000 800 600 ---400 200 0 Jan-10 Jan-11 Jan-12 Jan-15 Jan-18 Jan-09 Jan-13 Jan-14 Jan-16 Jan-17 ■ NWTPH-Dx Reported Detects □ NWTPH-Dx Reported Non-Detects ■ NWTPH-Dx/SGC Reported Detects □ NWTPH-Dx/SGC Reported Non-Detects ----- Water Level Elevation 1 of 1



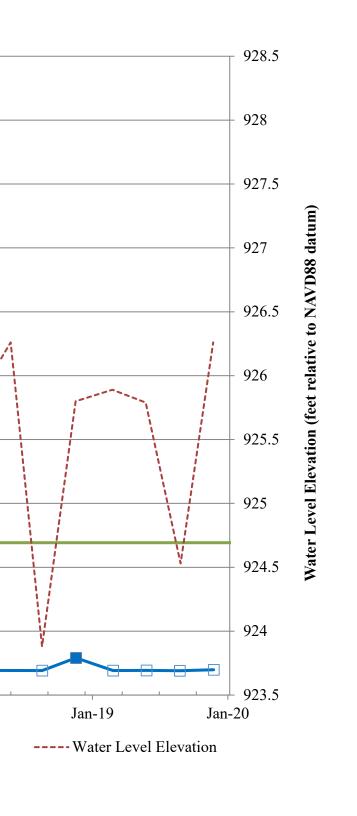




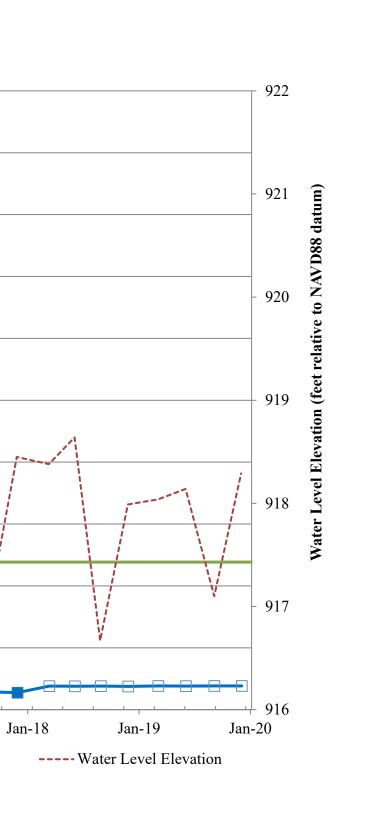
**NWTPH-Dx Trend Plot BNSF Former Maintenance and Fueling Facility** Skykomish, Washington Farallon PN: 683-067 Well EW-2A 2,000 1,800 1,600 1,400 1,200 1,000 800 600 M 400 200 0 Jan-18 Jan-12 Jan-13 Jan-15 Jan-16 Jan-14 Jan-17 Jan-11 -NWTPH-Dx NWTPH-Dx Reported Detects □ NWTPH-Dx Reported Non-Detects - Remediation Level (477 µg/l)

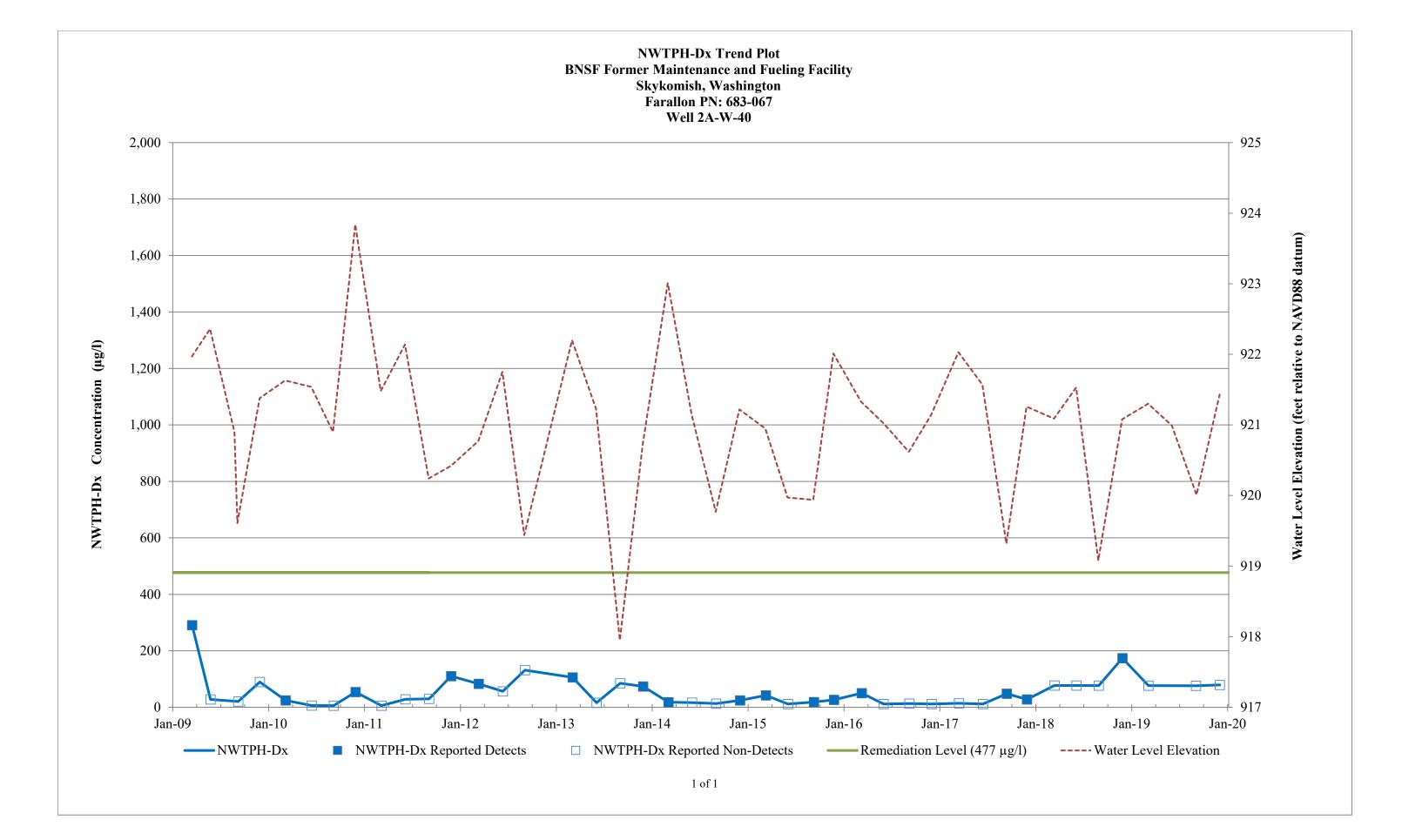
NWTPH-Dx Concentration (µg/l)

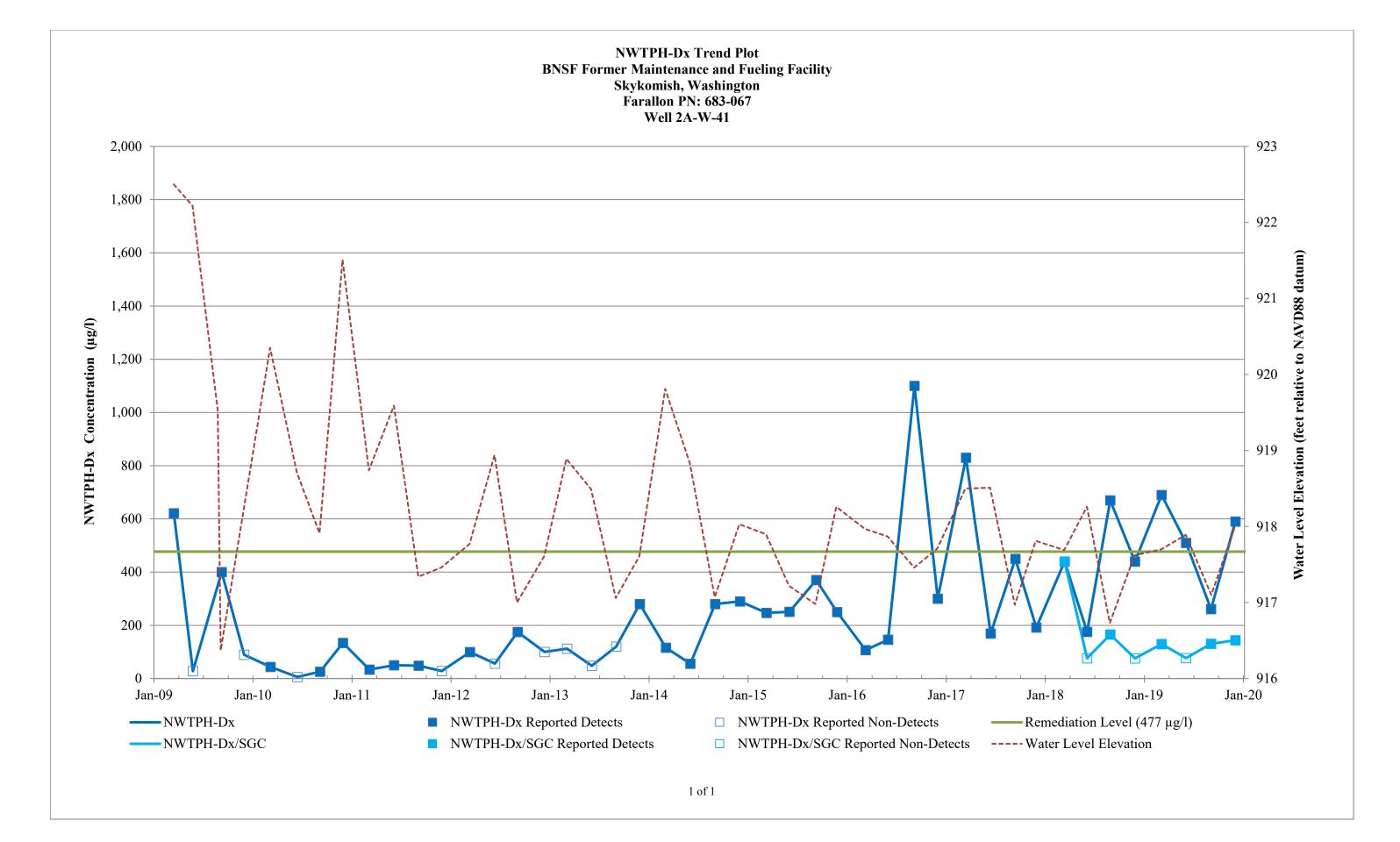
1 of 1

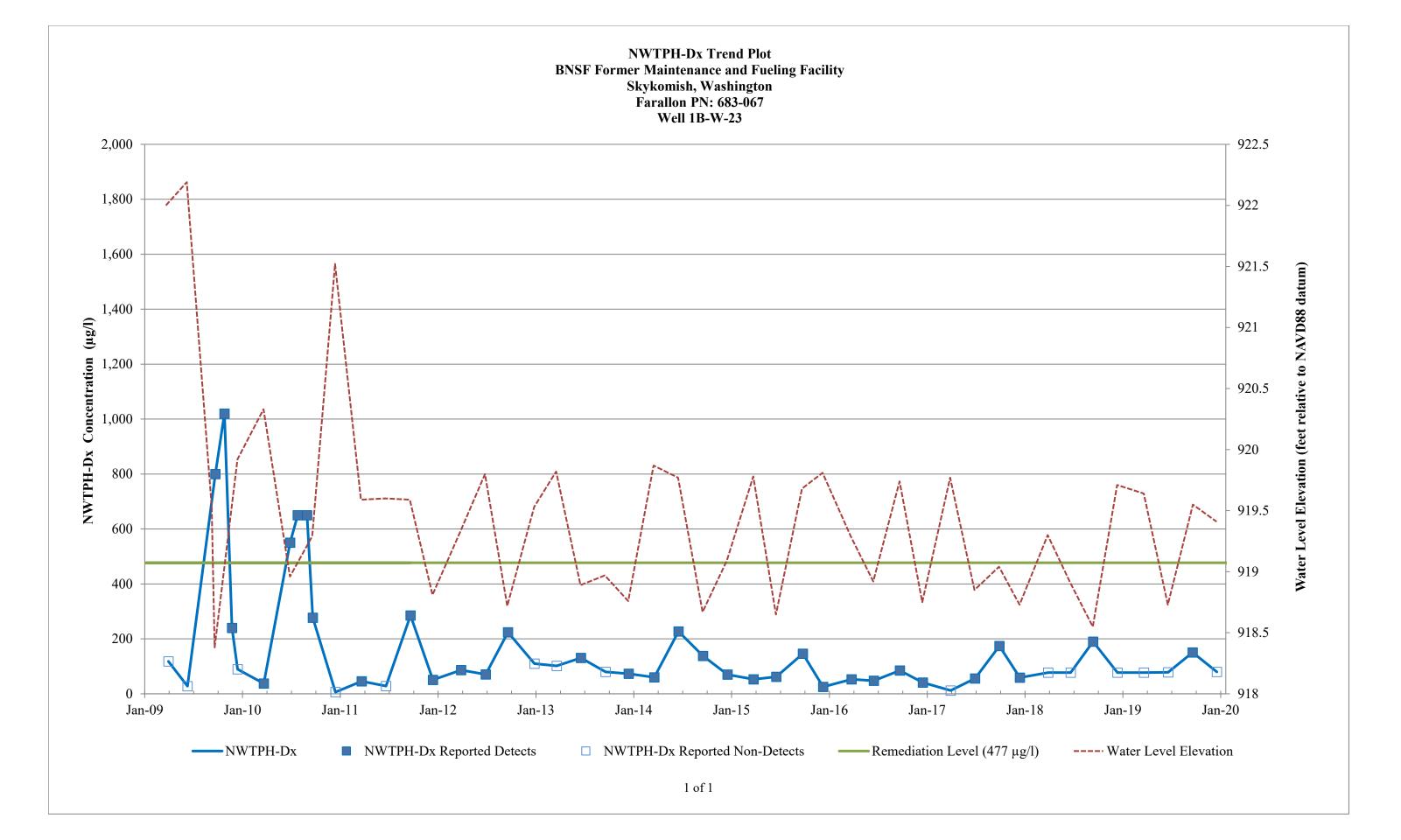


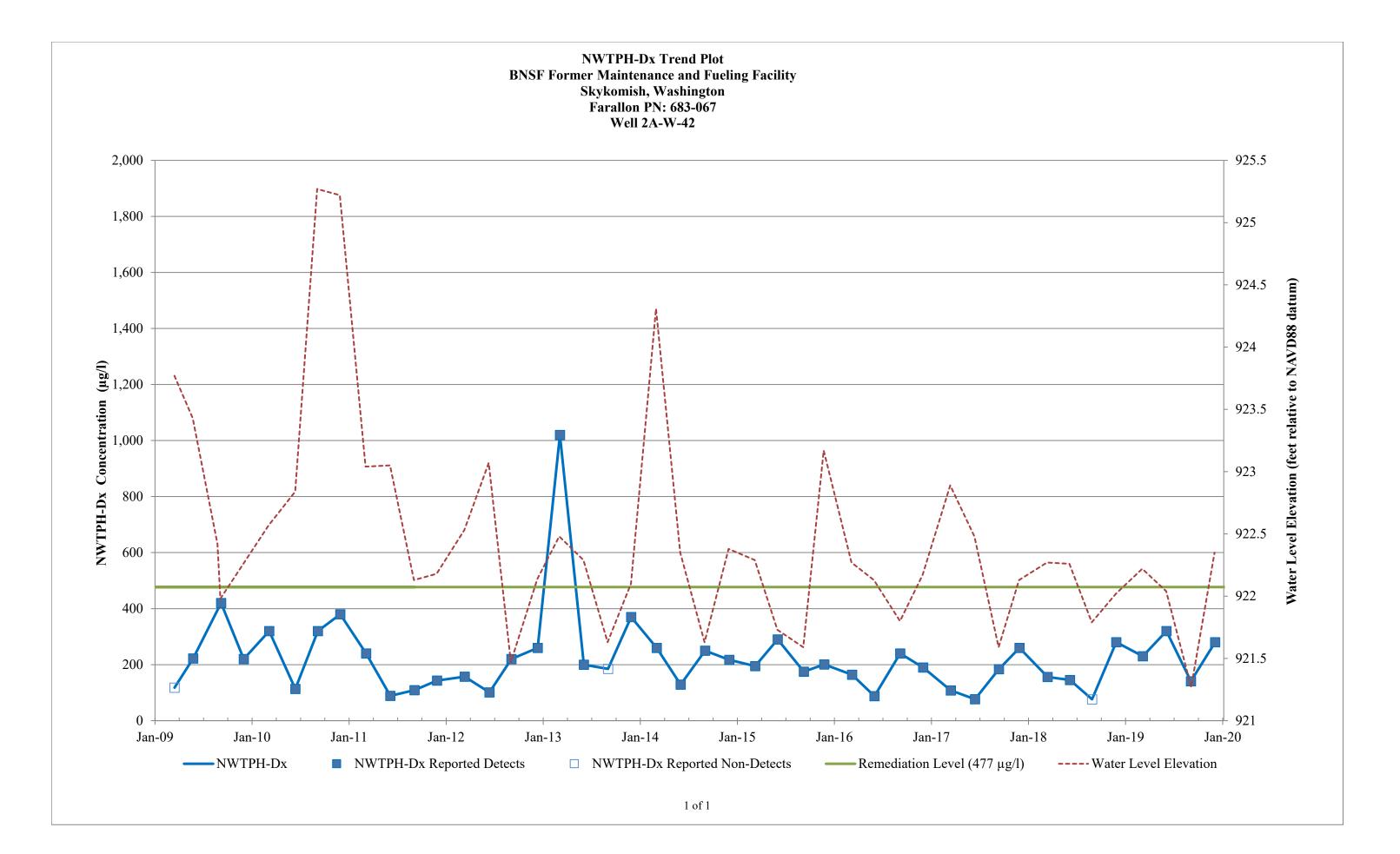
**NWTPH-Dx Trend Plot BNSF Former Maintenance and Fueling Facility** Skykomish, Washington Farallon PN: 683-067 Well 5-W-43 2,000 1,800 1,600 NWTPH-Dx Concentration (µg/l) 1,400 1,200 1,000 800 600 400 200 0 Jan-09 Jan-10 Jan-12 Jan-13 Jan-14 Jan-15 Jan-16 Jan-17 Jan-11 ■ NWTPH-Dx Reported Detects □ NWTPH-Dx Reported Non-Detects 1 of 1







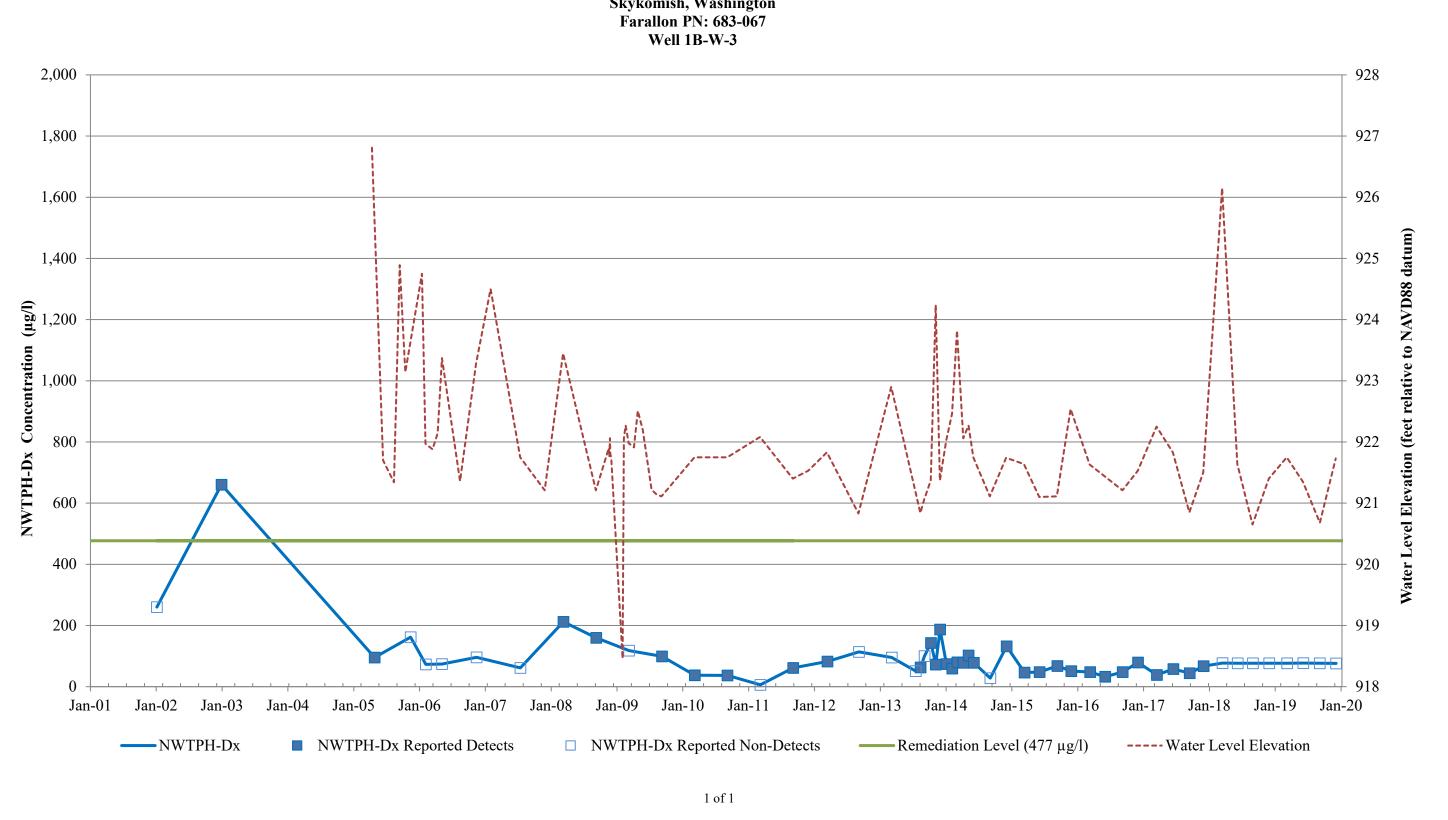


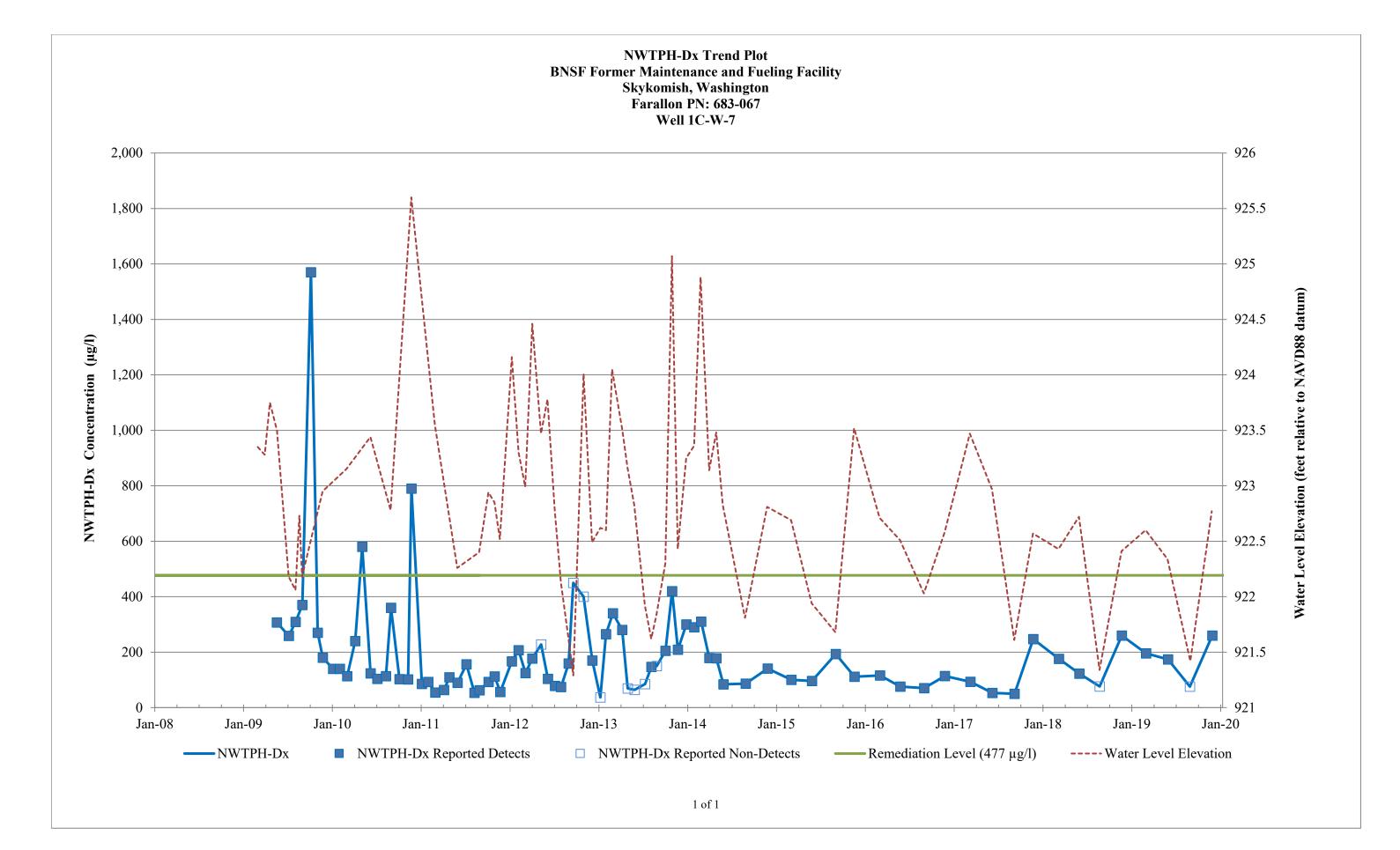


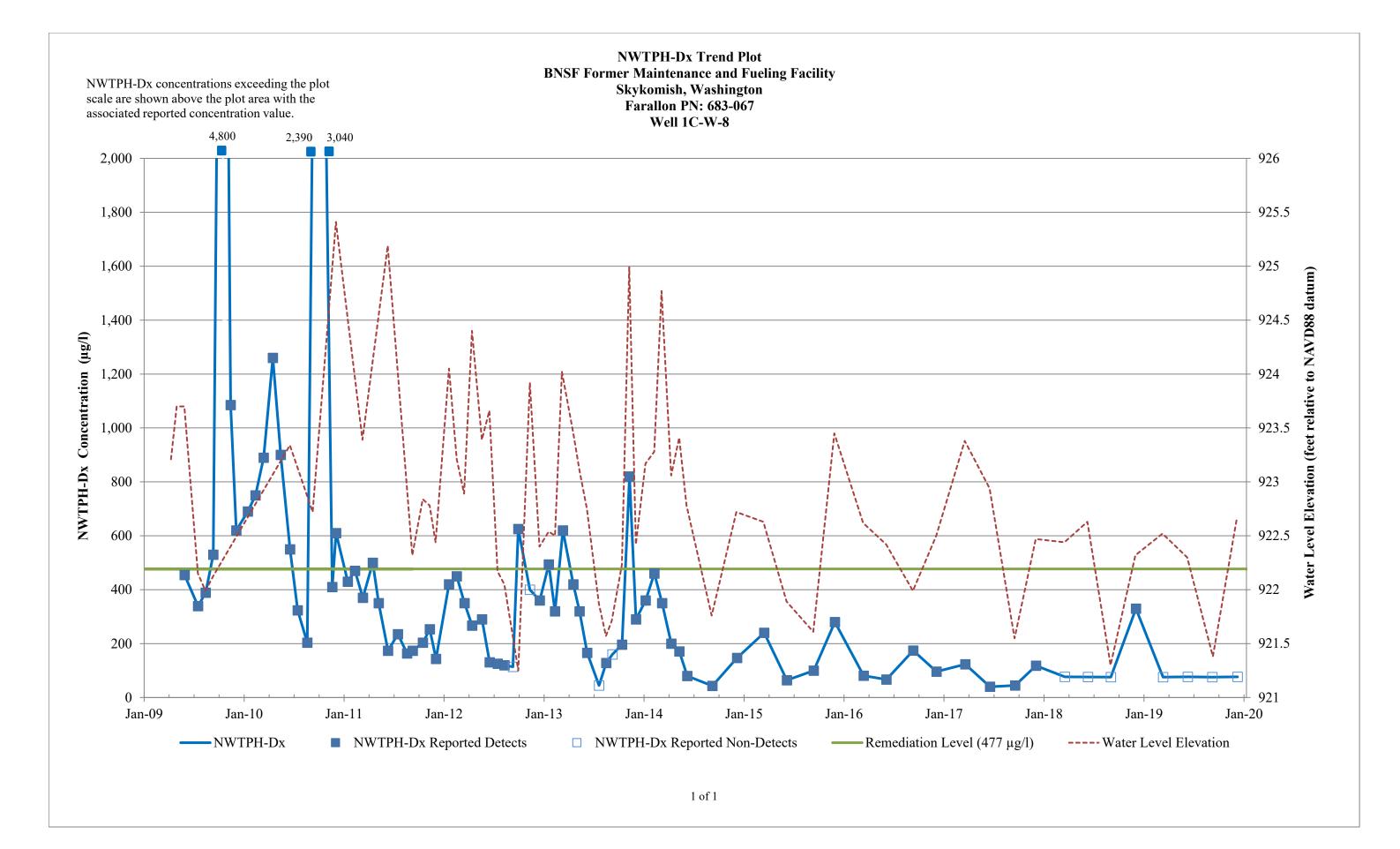
## Former Air Sparge Area Monitoring Wells

Note: Former Air Sparge Area monitoring well NWTPH-Dx groundwater results are compared to the RL of 477 micrograms per liter.

**NWTPH-Dx Trend Plot BNSF Former Maintenance and Fueling Facility** Skykomish, Washington Farallon PN: 683-067 Well 1B-W-3

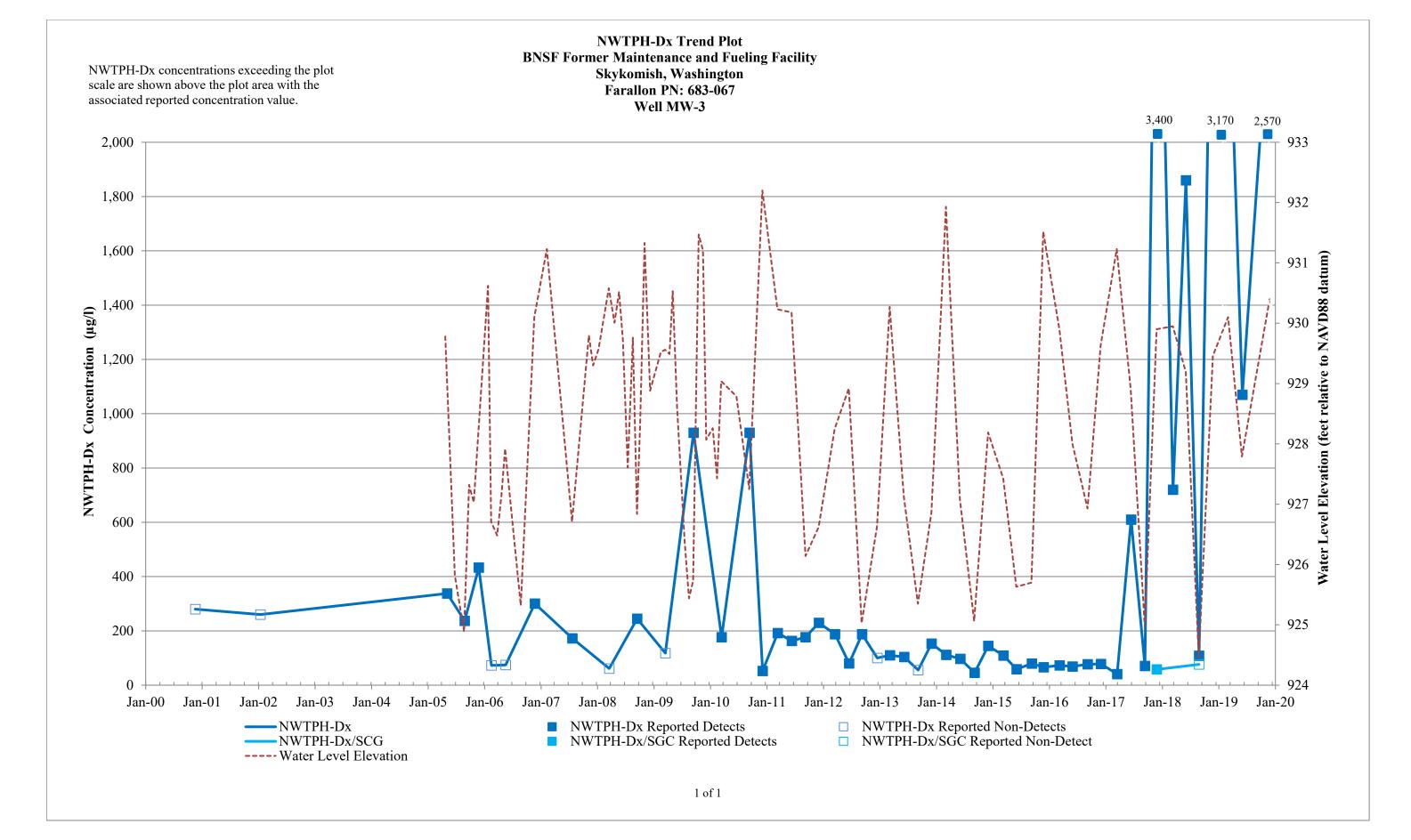


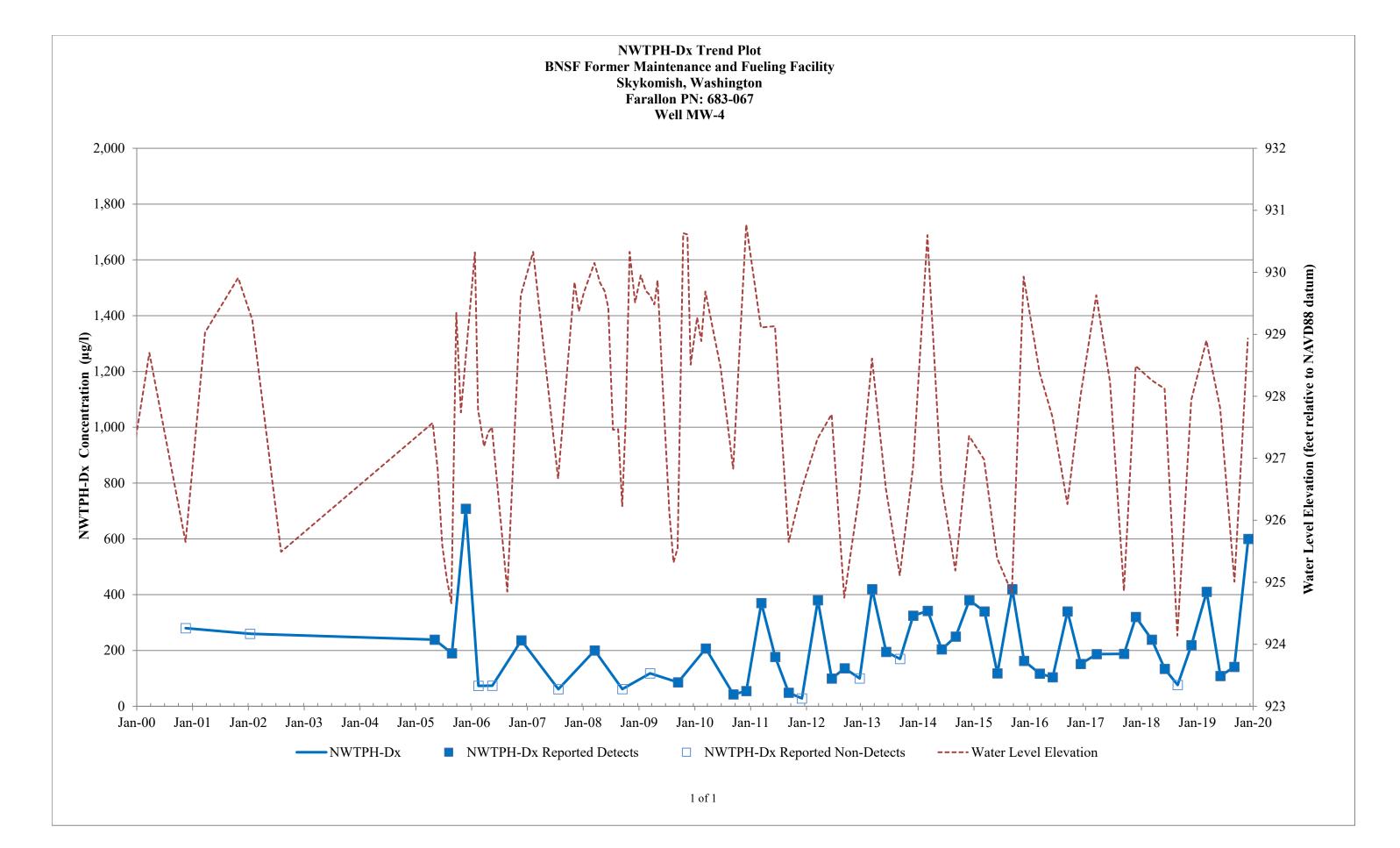


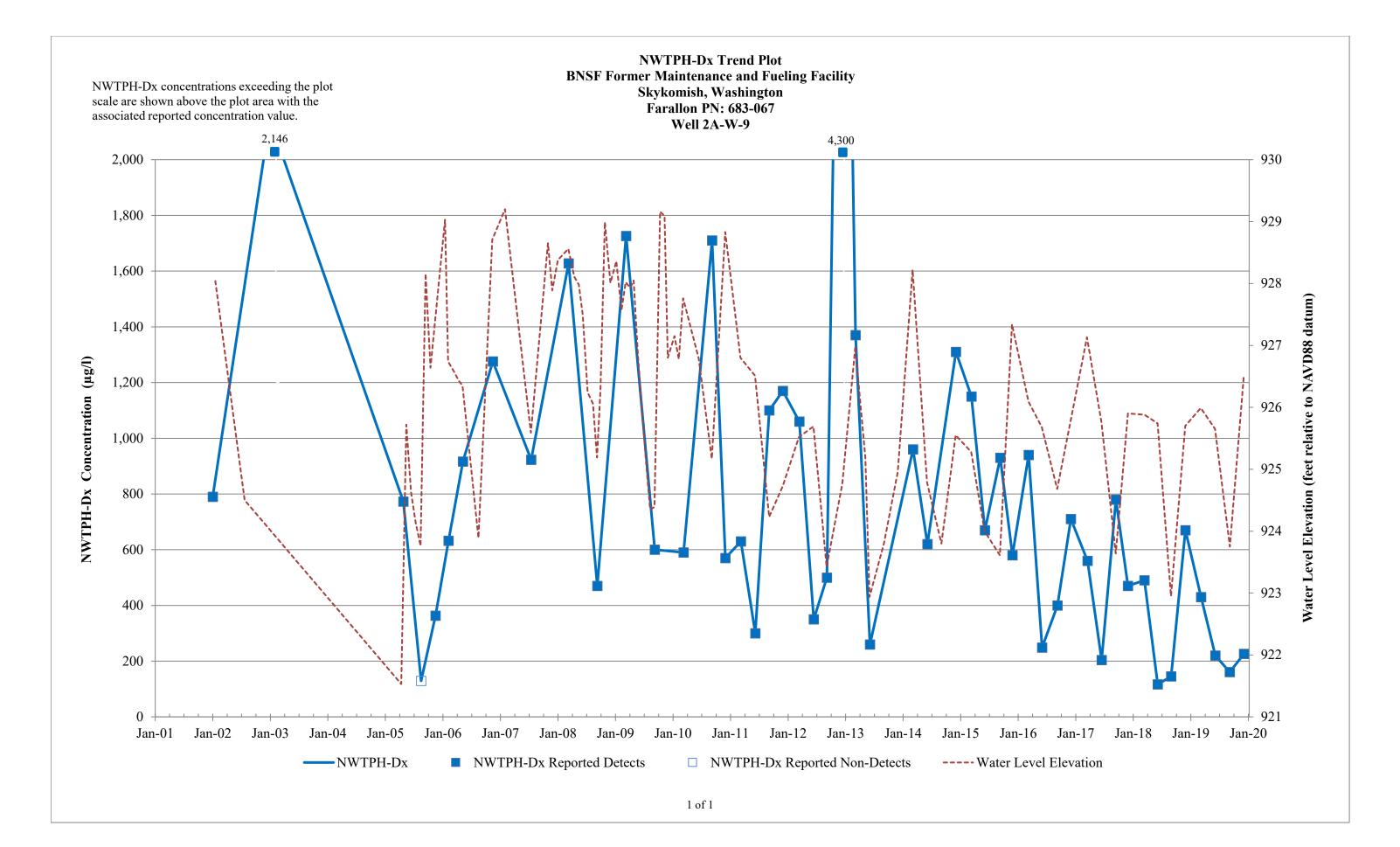


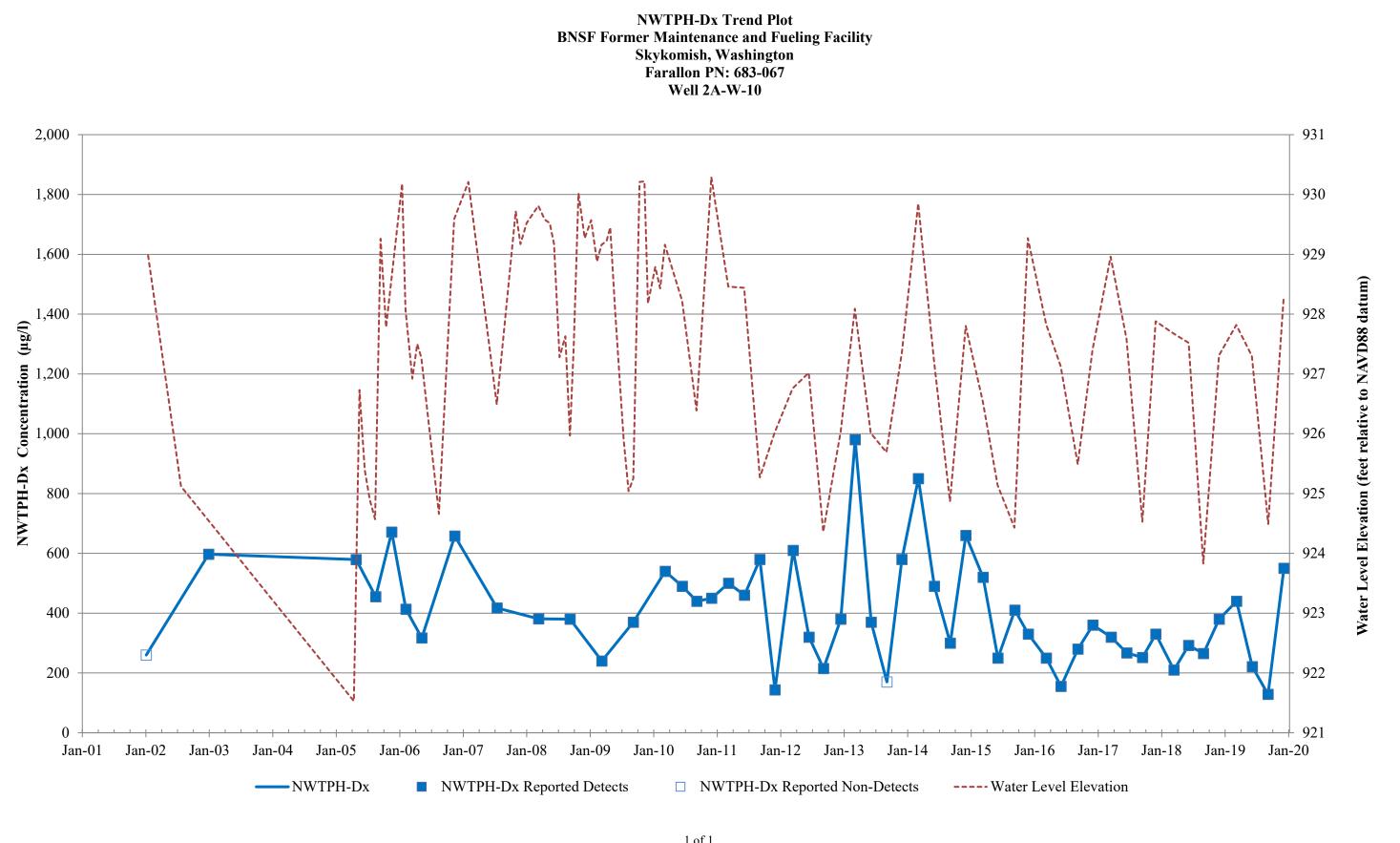
## Former Maloney Creek Zone Monitoring Wells

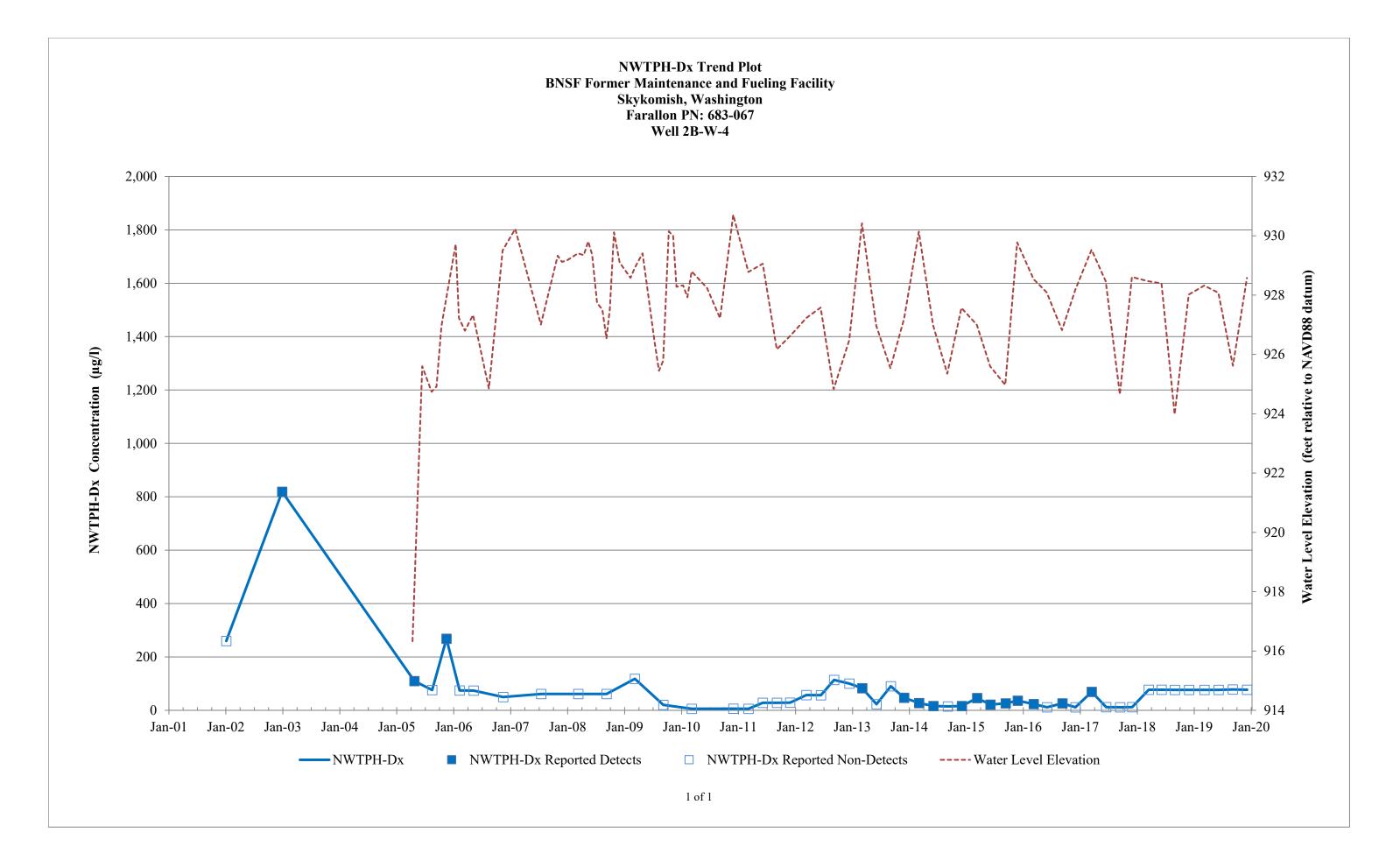
Note: Former Maloney Creek Zone monitoring wells are located within the railyard and NWTPH-Dx groundwater results from these wells have no NWTPH-Dx target.





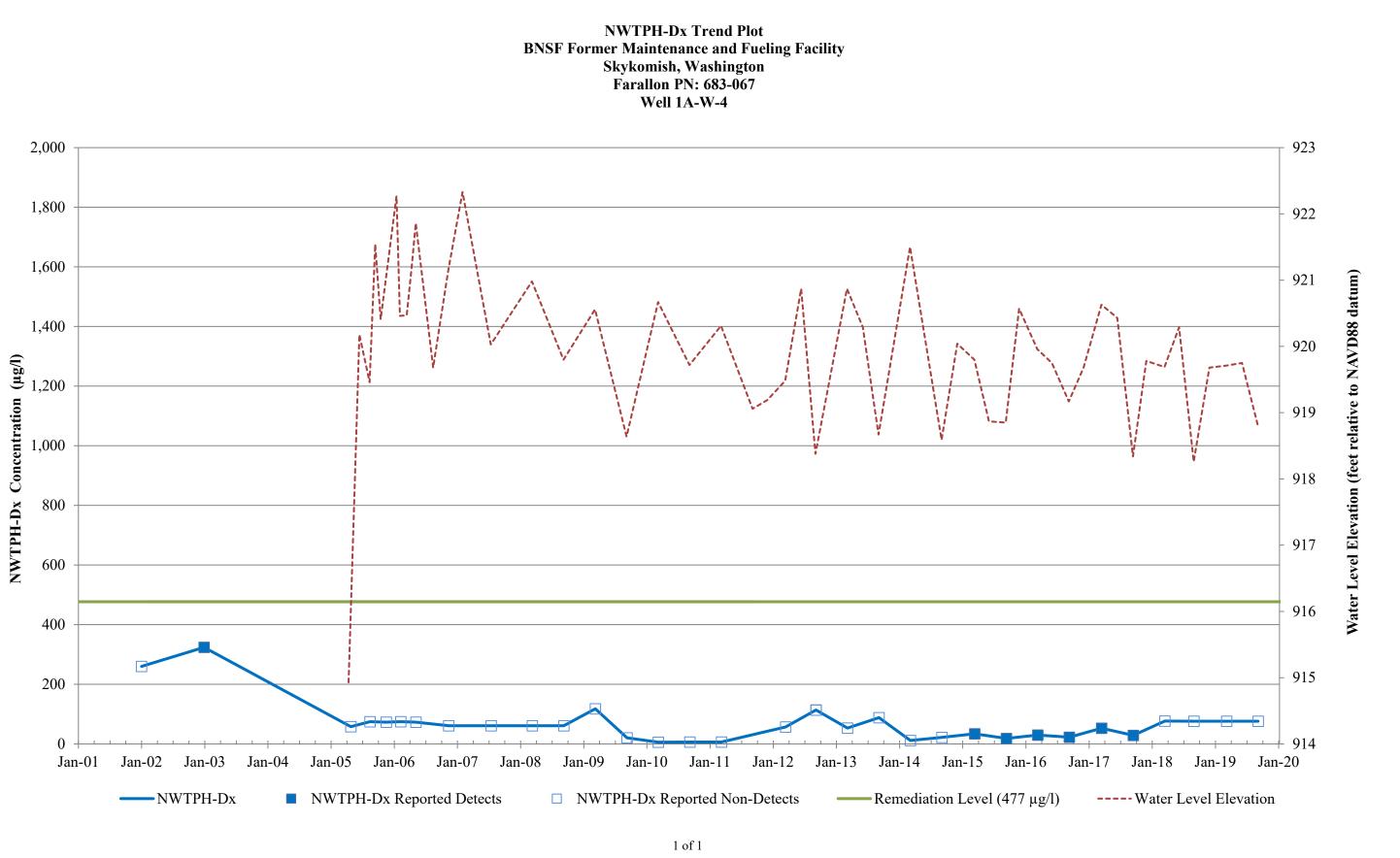


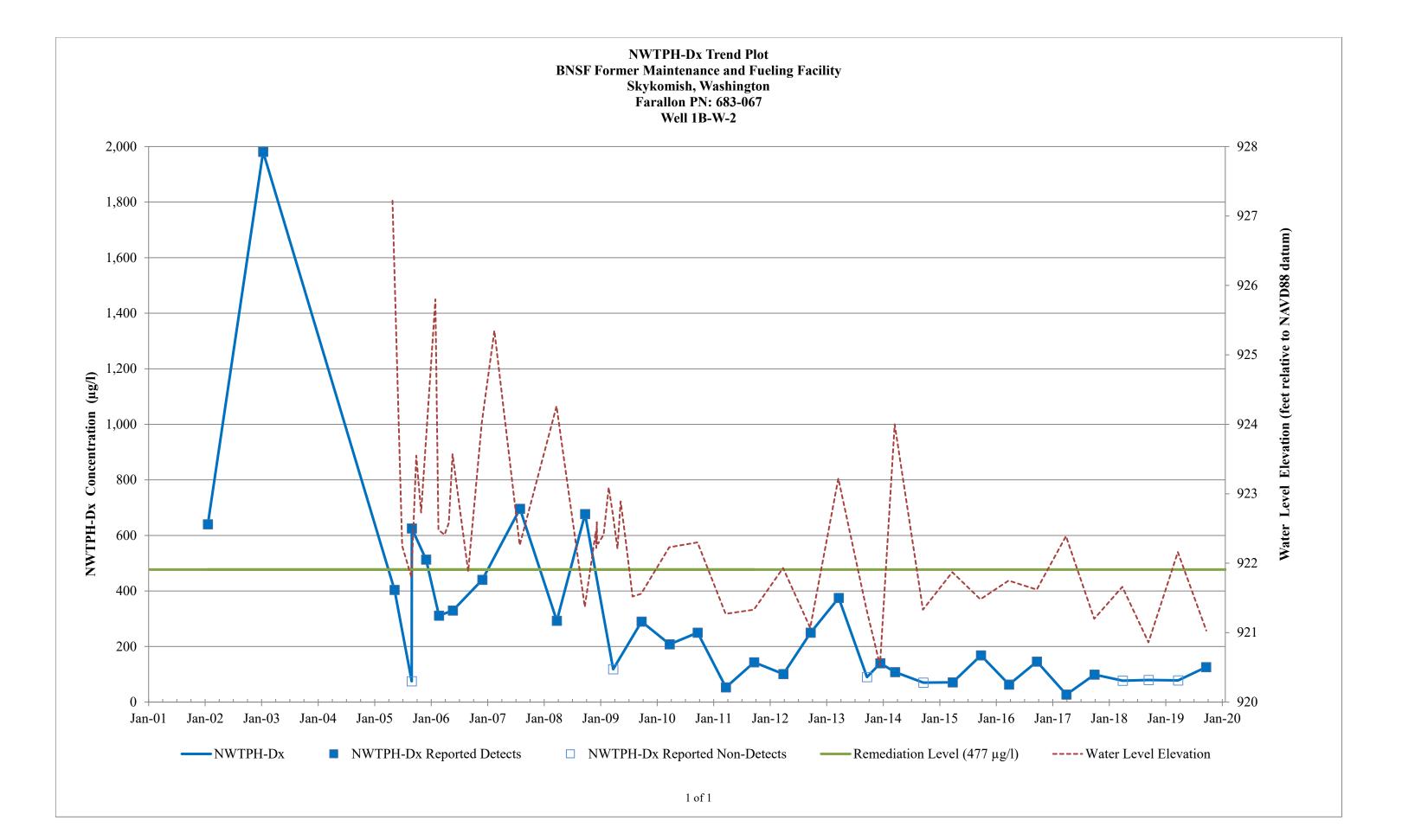


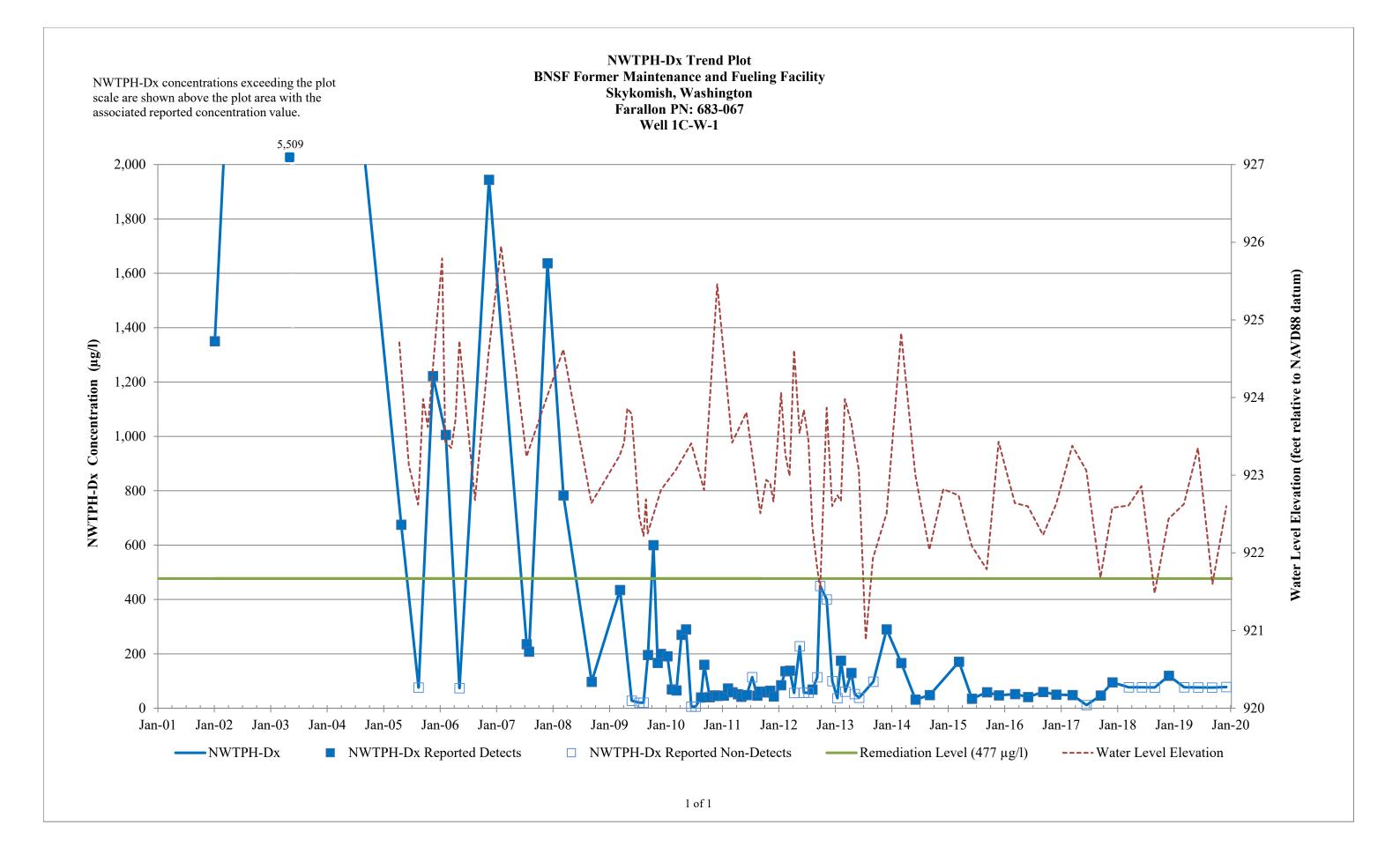


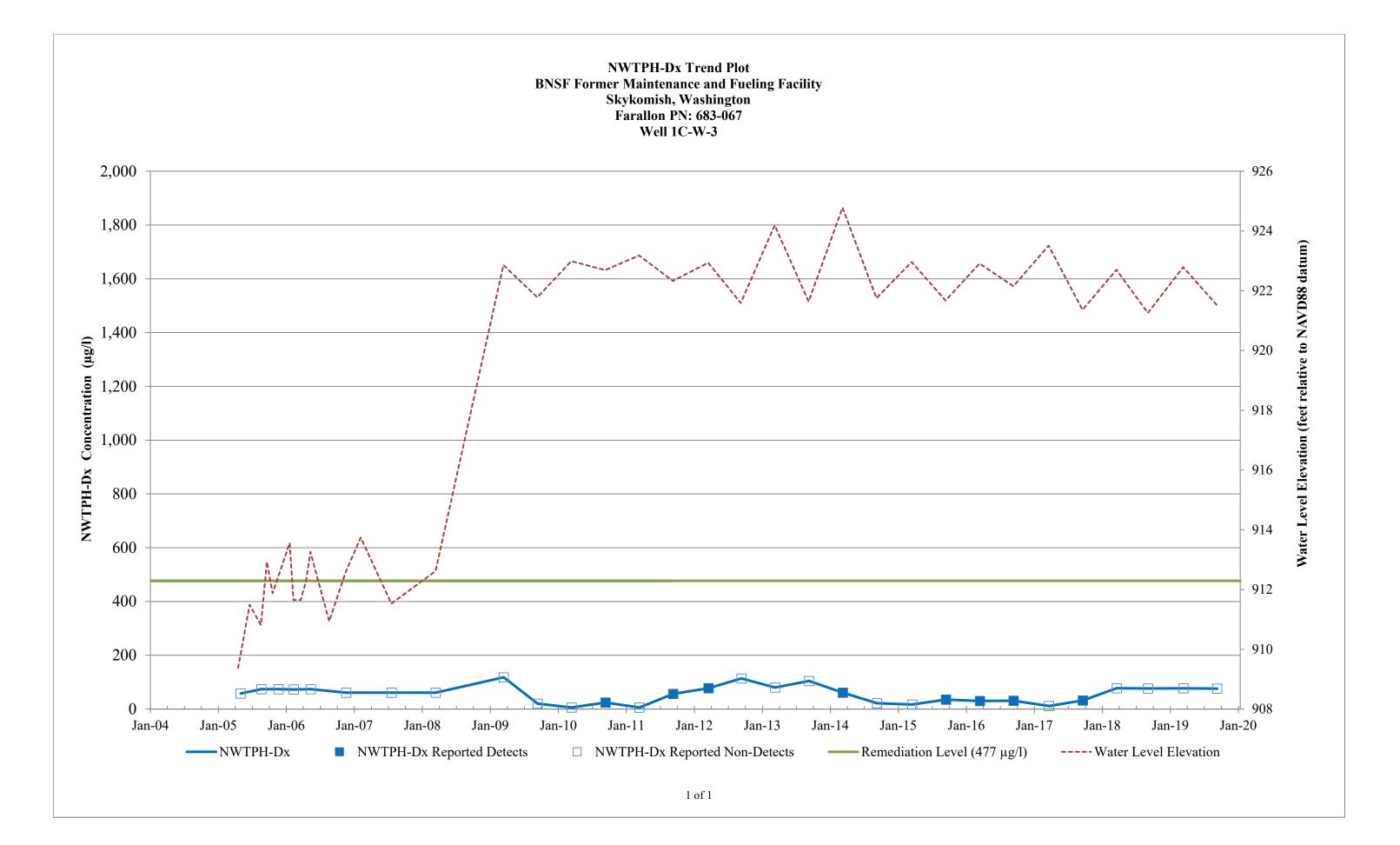
## Site-Wide Monitoring Wells

Note: Groundwater NWTPH-Dx results from site-wide monitoring wells located north of the railyard (downgradient) are compared to the RL of 477 micrograms per liter; groundwater NWTPH-Dx results from monitoring wells located within the railyard have no NWTPH-Dx target.









**NWTPH-Dx Trend Plot BNSF Former Maintenance and Fueling Facility** Skykomish, Washington Farallon PN: 683-067 Well 1C-W-4 2,000 1,800 1,600 1,400 Concentration (µg/l) 1,200 1,000 NWTPH-Dx 800 600 400 200 0 Jan-08 Jan-04 Jan-05 Jan-06 Jan-07 Jan-09 Jan-10 Jan-11 Jan-12 Jan-14 Jan-15 Jan-16 Jan-17 Jan-13 ■ NWTPH-Dx Reported Detects □ NWTPH-Dx Reported Non-Detects -----Remediation Level (477 μg/l)

