Shane C. DeGross
Manager Environmental
Remediation

BNSF Railway Company
605 Puyallup Avenue
Tacoma, WA 98421

Phone: (253) 591-2567
E-mail: Shane.DeGross@bnsf.com

July 6, 2018

Brian Sato
Toxics Cleanup Program
Dept. of Ecology
3190 160th AVE SE
Bellevue, WA 98008-5452

RE: Final 2017 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. Sato:

Enclosed is the Final 2017 Site-Wide Groundwater Monitoring Report. Changes to this report were based on your comments received June 1, 2018 and subsequent email communications.

Sincerely,

Shane C. DeGross
Manager Environmental Remediation, BNSF Railway

cc: Mr. Craig Trueblood, K&L Gates
Ms. Amy Essig Desai, Farallon Consulting

FARALLON CONSULTING

Washington
Issaquah | Bellingham | Seattle
Oregon
Portland | Bend | Baker City
California
Oakland | Folsom | Irvine

2017 SITE-WIDE GROUNDWATER MONITORING REPORT

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

Submitted by:
Farallon Consulting, L.L.C.
975 5th Avenue Northwest
Issaquah, Washington 98027

Farallon PN: 683-067

For:
BNSF Railway Company
605 Puyallup Avenue
Tacoma, Washington 98421

July 6, 2018

Prepared by:

Jeanette Mullin, L.G.
Staff Geologist

Reviewed by:

Amy Essig Desai
Principal Scientist

Rob Leet, Ph.D., L.G.
Senior Geologist

State of Washington 201 Licensed Geologist ROBERT C. LEET

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

EXECUTIVE SUMMARY

Quarterly groundwater monitoring was conducted in 2017 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 diesel- and as oil-range organics (herein referred to collectively as NWTPH-Dx) using Washington State Department of Ecology Method NWTPH-Dx.

Groundwater flow direction in 2017 generally was consistent with previous years. South (i.e., up-gradient) 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 is predominantly toward the west. Light nonaqueous-phase liquid (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; measured LNAPL thicknesses ranged from a light trace (i.e., less than 0.01 foot) to 1.7 feet. The locations where LNAPL was detected were generally consistent with prior years. Several measured LNAPL thicknesses in piezometers PZ-5S and PZ-6S were greater than the thicknesses measured in these piezometers in 2016, although LNAPL measurements are subject to uncertainty due to the viscous nature of the LNAPL. Piezometers PZ-5S and PZ-6S will continue to be monitored for potential LNAPL accumulation and migration in 2018, and LNAPL will be removed from piezometers as needed during routine HCC system operation, maintenance, and monitoring activities.

The site-specific NWTPH-Dx groundwater cleanup level of 208 micrograms per liter (µg/l) (CUL) is applicable at the groundwater conditional point of compliance, defined as the point where groundwater enters the Skykomish River. Reported NWTPH-Dx concentrations were less than the CUL in groundwater samples collected from Levee Zone monitoring wells, with the exception of one sample collected in June 2017 from monitoring well 5-W-15, which had a reported concentration of 250 µg/l. Monitoring well 5-W-15 is at the northeastern corner of the Skykomish School sheet pile barrier wall. Reported NWTPH-Dx concentrations in most of the groundwater samples collected from well 5-W-15 since 2007 have exceeded the CUL; the time-averaged NWTPH-Dx concentration in this well has decreased since 2010. Reported NWTPH-Dx concentrations in groundwater samples collected from Levee Zone wells down-gradient of well 5-W-15 were less than the CUL in 2016 and 2017.

The site-specific NWTPH-Dx groundwater remediation level of 477 µg/l (RL) is applicable from the BNSF railyard boundary to the groundwater conditional point of compliance. Excluding monitoring wells that are inside the Skykomish School sheet pile barrier wall, reported NWTPH-Dx concentrations in groundwater samples collected from monitoring wells north of the railyard and outside the Levee Zone were less than the RL, with the exception of the March 2017 sample from monitoring well 2A-W-41 and the June and December 2017 samples from monitoring well GW-3. NWTPH-Dx concentrations in wells GW-3 and 2A-W-41 have increased since June 2014 and June 2013, respectively. Wells GW-3 and 2A-W-41 will continue to be monitored in 2018, and the results will be evaluated for the need to take additional actions to ensure Site-related

NWTPH-Dx concentrations in groundwater immediately north of the HCC system barrier wall meet the RL.

In general, with the exceptions noted above, the groundwater monitoring data indicate that LNAPL thicknesses and NWTPH-Dx concentrations in groundwater remained stable or decreased in 2017. Reported NWTPH-Dx concentrations in groundwater samples collected from the Levee Zone wells closest to the Skykomish River did not exceed the groundwater CUL. The monitoring wells that had RL exceedances in 2017 will continue to be monitored in 2018.

During the summer of 2018, the hot water flushing (HWF) remediation system that operated at the Skykomish School in 2016 and 2017 will be decommissioned, and the Skykomish School sheet pile barrier wall will be removed. During the HWF system decommissioning, all groundwater monitoring wells, treated water injection wells, and LNAPL recovery wells installed as part of the HWF system will be decommissioned, with the exception of HWF system recovery well RW-10 near the northeastern corner of the Skykomish School. In addition, monitoring wells 5-W-15 and 5-W-54 will be decommissioned. HWF system recovery well RW-10 and monitoring wells 5-W-51, 5-W-55, and 5-W-56 will be retained after the Skykomish School sheet pile barrier wall is removed to evaluate post-HWF treatment groundwater quality. Recovery well RW-10 will be gauged quarterly for the presence of sheen/LNAPL, and wells 5-W-51, 5-W-55, and 5-W-56 will be monitored and sampled quarterly. If any of the aforementioned wells that are planned to be retained are damaged during removal of the Skykomish School sheet pile barrier wall, they will be replaced prior to the December 2018 Site-wide groundwater monitoring event.

1.0 INTRODUCTION

This 2017 Site-Wide Groundwater Monitoring Report was prepared on behalf of BNSF Railway Company (BNSF) and describes the groundwater monitoring activities conducted in 2017 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 the *Cleanup Action Plan for BNSF Former Maintenance and Fueling Facility, Skykomish, Washington* (Ecology 2007a) (CAP) and the Consent Decree No. 07-2-33672-9 SEA between BNSF and the Washington State Department of Ecology (Ecology) (2007b) (Consent Decree). Groundwater monitoring is conducted quarterly in accordance with the 2010 Groundwater Monitoring Plan, Appendix E of the 2010 Compliance Monitoring Plan Update (AECOM Environment [AECOM] 2010b) (2010 GWMP). Most of the wells included in the groundwater monitoring program are sampled every quarter; some wells are sampled semiannually in March and September.

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 gradient magnitude and direction, 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 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, is 208 micrograms per liter (µg/l) (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 CUL is intended to protect sediments in the Skykomish River and Former Maloney Creek from recontamination by groundwater. The CAP anticipates that the CUL will be attained at the groundwater CPOC following implementation of the cleanup action. Compliance with the groundwater CUL currently is assessed using monitoring wells in the Levee Zone adjacent to the Skykomish River (Figure 1).

The Site-specific groundwater remediation level for total petroleum hydrocarbon concentrations is 477 µg/l (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 railyard and outside the Levee Zone. The groundwater RL is intended to be protective of drinking water resources.

1.3 SITE DESCRIPTION

The Site includes BNSF property and public and private properties in the Town of Skykomish in King County, Washington (Figure 1), and encompasses an area of approximately 40 acres. The Site is bounded by the South Fork Skykomish River to the north, the Town of Skykomish city limits to the east, Old Cascade Highway to the south, and Maloney Creek to the west. Railroad Avenue separates the BNSF railyard property from the main commercial district of the Town of Skykomish (Figure 1). Additional Site history and background information is presented in the Consent Decree, 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 and piezometers used for groundwater monitoring was established in the 2010 GWMP and is shown on Figures 1 and 2. The dates of the groundwater monitoring events conducted in 2017 are presented in Table 1. Tables 2 and 3 provide additional details regarding the sampling and liquid level gauging frequencies for the locations included in the groundwater monitoring program.

During the summer of 2018, the hot water flushing (HWF) remediation system that operated at the Skykomish School in 2016 and 2017 will be decommissioned, and the Skykomish School sheet pile barrier wall will be removed. During the HWF system decommissioning, all groundwater monitoring wells, treated water injection wells, and LNAPL recovery wells installed as part of the HWF system will be decommissioned, with the exception of HWF system recovery well RW-10 near the northeastern corner of the Skykomish School. HWF system recovery well RW-10 and monitoring wells 5-W-51, 5-W-55, and 5-W-56 will be retained after the Skykomish School sheet pile barrier wall is removed to evaluate post-HWF treatment groundwater quality. Recovery well RW-10 will be gauged quarterly for the presence of sheen/LNAPL, and wells 5-W-51, 5-W-55, and 5-W-56 will be monitored and sampled quarterly. If any of the aforementioned wells that are planned to be retained are damaged during removal of the Skykomish School sheet pile barrier wall, they will be replaced prior to the December 2018 Site-wide groundwater monitoring event.

3.0 SAMPLING, ANALYSIS, AND REPORTING

This section summarizes the groundwater monitoring sampling methods, laboratory analysis and reporting procedures, and data management and validation protocols used. Groundwater samples collected in 2017 were analyzed by TestAmerica Laboratories, Inc. of Tacoma, Washington. The groundwater analytical results were independently validated by Sayler Data Solutions, Inc. of Bothell, 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. 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 for DRO and ORO (herein referred to collectively as NWTPH-Dx) by Ecology Method NWTPH-Dx (without silica gel cleanup). The laboratory reported sample results relative to the analytical method detection limit (MDL), which typically is less than the method reporting limit (MRL). Reported DRO and ORO concentrations that exceeded the MDL but were less than the MRL were considered to be estimated values and were qualified using a "J" data flag. Reporting sample results relative to the MDL rather than the MRL minimizes the occurrence of non-detect results with MRLs that exceed the groundwater CUL.

3.3 DATA MANAGEMENT AND VALIDATION PROTOCOLS

The laboratory electronic data deliverables were directly imported into the project environmental data management system. A quality control check was performed on the imported data to ensure that they were accurately uploaded. Laboratory analytical reports are included in Appendix A. The groundwater analytical data were independently validated by Sayler Data Solutions, Inc. and checked for completeness by Farallon Consulting, L.L.C (Farallon).

Sayler Data Solutions, Inc. evaluated 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. Data validation reports are provided in Appendix B. The data validation results indicate that the groundwater analytical data are suitable for the intended use of assessing Site groundwater quality.

4.0 RESULTS AND DISCUSSION

This section summarizes the results of the Site-wide groundwater monitoring conducted in 2017.

4.1 GROUNDWATER LEVELS AND GRADIENT DIRECTIONS

Table 3 summarizes the frequency (i.e., weekly, quarterly, semiannually) of liquid level gauging at Site monitoring locations. Most locations are gauged quarterly. Additional locations are gauged semiannually in March and September. Table 4 presents groundwater level and LNAPL thickness data. Potentiometric surface maps for the groundwater monitoring events are presented on Figures 3 through 6.

As noted on the potentiometric surface maps, the groundwater elevations at some wells, piezometers, and gate vault locations were not used for contouring the potentiometric surface. In some cases, the groundwater elevations at the subject locations were inconsistent with groundwater elevation data from other nearby locations, likely due to local geological heterogeneities, and therefore were not considered representative. In other cases, it was not possible to depict local details of the potentiometric surface graphically, because the spatial scale of the potentiometric surface maps is too small. Groundwater elevations at monitoring wells inside the Skykomish School sheet pile barrier wall were not used for contouring because groundwater levels in these wells are affected by the presence of the sheet pile barrier wall, and therefore are not considered representative of conditions outside of the barrier wall.

Seasonal groundwater level fluctuations of 2.65 to 6.30 feet occurred in wells and piezometers on the southern (i.e., up-gradient) side of the hydraulic control and containment (HCC) system barrier wall. Seasonal groundwater level fluctuations in wells and piezometers on the northern (i.e., down-gradient) side of the barrier wall were smaller, ranging from 0.12 to 3.97 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 1.7 feet in September 2017 to 6.7 feet in March 2017, as measured in piezometer pairs adjacent to the barrier wall (i.e., one piezometer on either side of the wall). Groundwater pumping at the HCC system groundwater extraction/LNAPL recovery wells influenced groundwater elevations locally near the recovery wells.

Estimated hydraulic gradients in 2017 generally were consistent with previous years. South of the HCC system barrier wall, the gradient direction is predominantly toward the west-northwest. North of the HCC system barrier wall, the gradient direction is predominantly toward the west, subparallel to the Skykomish River flow direction. Estimated gradient magnitudes on the southern side of the HCC system barrier wall ranged from 0.003 to 0.014 foot per foot in the eastern portion of the BNSF railyard, and from 0.016 to 0.023 foot per foot in the western portion of the BNSF railyard. Estimated gradient magnitudes on the northern side of the HCC system barrier wall ranged from 0.008 to 0.010 foot per foot.

4.2 FIELD PARAMETERS

Field parameters measured during well purging included temperature, pH, dissolved oxygen (DO), oxidation-reduction potential (ORP), and specific conductivity. Table 5 presents the stabilized field parameter values recorded at the wells sampled in 2017.

Groundwater temperatures varied seasonally, ranging from 2.6 degrees Celsius (°C) in well MW-4 in March 2017 to 35.4°C in well 5-W-55 in September 2017. The groundwater temperatures measured in September 2017 at well 5-W-55 and other wells near the Skykomish School were higher than normal due to groundwater heating caused by HWF treatment at the Skykomish School property from June through October 2017.

Groundwater pH values were generally consistent with previous years, ranging from 5.21 to 7.46. Measured DO concentrations also were generally consistent with previous years, ranging from 0.1 milligrams per liter (mg/l) in well 2A-W-9 in June 2017 to 12.06 mg/l in well 1C-W-3 in March 2017. In general, monitoring wells with no reported detections of petroleum hydrocarbons exhibited higher DO values (average of 6.50 mg/l) than wells with reported detections (average of 3.65 mg/l), indicating that the petroleum hydrocarbons in Site groundwater are biodegrading.

ORP values were consistent with previous years, ranging from -234 millivolts in well 5-W-56 in September 2017 to 422 millivolts in well 1C-W-8 in June 2017. Of the 122 ORP values measured in 2017, 119 were positive. The 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

Petroleum hydrocarbon concentrations in groundwater samples were analyzed using Ecology Method NWTPH-Dx. 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 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 through 5-W-19 were gauged and sampled quarterly. Reported NWTPH-Dx concentrations were less than the CUL in groundwater samples collected from the Levee Zone wells, with the exception of the June 2017 sample from well 5-W-15 at the northeastern corner of the Skykomish School sheet pile barrier wall, which had a reported concentration of 250 µg/l (Table 6; Figure 8). Reported NWTPH-Dx concentrations in most of the groundwater samples collected from well 5-W-15 since 2007 have exceeded the CUL; the time-

averaged NWTPH-Dx concentration in this well has decreased since 2010. Reported NWTPH-Dx concentrations in groundwater samples collected from Levee Zone wells down-gradient of well 5-W-15 (i.e., wells 5-W-16 through 5-W-19) were less than the CUL in 2016 and 2017.

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 and 5-W-54 through 5-W-56 inside the Skykomish School sheet pile barrier wall were gauged and sampled semiannually in March and September. Reported NWTPH-Dx concentrations exceeded the RL in the groundwater samples collected from wells 5-W-51 and 5-W-56; the reported NWTPH-Dx concentrations in these samples ranged from 620 to 3,380 µg/l (Table 6; Figures 7 and 9). Reported NWTPH-Dx concentrations were less than the RL in the groundwater samples collected from wells 5-W-54 and 5-W-55. A light trace of LNAPL (i.e., less than 0.01 foot thick) was observed in well 5-W-51 in September 2017; LNAPL or sheen was not observed in any of the other schoolyard monitoring wells.

Former monitoring well 5-W-50 was located near the northeastern corner of the Skykomish School; this well was destroyed in 2015 during installation of the Skykomish School sheet pile barrier wall. As discussed in Section 2.0, Groundwater Monitoring Well Network, the HWF remediation system and most of the associated wells will be decommissioned in 2018. Monitoring wells 5-W-15 and 5-W-54 also will be decommissioned. HWF system recovery well RW-10 and monitoring wells 5-W-51, 5-W-55, and 5-W-56 will be retained (Figure 1).

4.3.3 Hydraulic Control and Containment System Sentry Wells and Monitoring Wells

The 20 sentry wells in the HCC system barrier wall treatment gates were sampled during the March, June, and September monitoring events. The June sampling of the sentry wells was performed in response to an HCC system shut-down in June 2017 that lasted more than 48 hours. The HCC system shut-down was caused by a local power outage and a hard-drive failure on the computer that runs the HCC system operating software (Farallon 2018). The 2010 GWMP requires that the sentry wells be sampled after an HCC system shut-down lasting more than 48 hours.

Reported NWTPH-Dx concentrations ranged from 17 to 111 µg/l in groundwater samples collected from the sentry wells, with the exception of the sample collected in March 2017 from well S2-BU in the eastern up-gradient granular activated carbon/pea gravel chamber of the West Gate; the reported NWTPH-Dx concentration in this sample was 820 µg/l (Table 6, Figure 7). The reported NWTPH-Dx concentration in the March 2017 groundwater sample from sentry well S2-BD, in the eastern down-gradient granular activated carbon/pea gravel chamber of the West Gate, was 111 µg/l.

The March 2017 NWTPH-Dx result for sentry well S2-BU is anomalous. The highest NWTPH-Dx concentration reported previously in well S2-BU was 505 µg/l in September 2013, and the reported NWTPH-Dx concentrations in this well in June and September 2017 were 37 and 83 µg/l, respectively. A light trace of LNAPL was observed in the east vault oil-water separator chamber of the West Gate in June, September, and December 2017 (location WG-EV) (Table 4), and may

be a source of elevated NWTPH-Dx concentrations in the east vault of the West Gate. The reported NWTPH-Dx concentrations in all but two groundwater samples collected from well S2-BU from 2009 through 2016 were less than 200 µg/l; most results were less than 100 µg/l.

Monitoring wells EW-1, EW-2A, 5-W-43, 2A-W-40, 2A-W-41, 1B-W-23, 2A-W-42, and GW-1 through GW-4 were gauged and sampled quarterly. Reported NWTPH-Dx concentrations were less than the RL in groundwater samples collected from these wells, with the exception of the March 2017 sample from well 2A-W-41, which had a reported concentration of 830 µg/l, and the June and December 2017 samples from well GW-3, which had reported concentrations of 480 and 570 µg/l, respectively (Table 6; Figures 7, 8, and 10). LNAPL or sheen was not observed in any of these monitoring wells.

NWTPH-Dx concentrations in monitoring wells GW-3 and 2A-W-41 have increased since June 2014 and June 2013, respectively. Wells GW-3 and 2A-W-41 will continue to be monitored in 2018, and the results will be evaluated for the need to take additional actions to ensure Site-related NWTPH-Dx concentrations in groundwater immediately north of the HCC system barrier wall meet the RL.

4.3.4 Former Air Sparge Area Monitoring Wells

Monitoring wells 1B-W-3, 1C-W-7, and 1C-W-8 were gauged and sampled quarterly. Reported NWTPH-Dx concentrations were less than the RL in groundwater samples collected from these wells. 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 gauged and sampled quarterly. Reported NWTPH-Dx concentrations ranged from 41 to 780 µg/l in groundwater samples collected from these wells, with the exception of the December 2017 sample from well MW-3, which had a reported concentration of 3,400 µg/l (Table 6; Figure 10). This concentration exceeded the previous maximum concentration of 930 µg/l reported in well MW-3 in October 2009 and October 2010.

A sulfur-like odor was noted during purging of monitoring well MW-3 in December 2017, 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. Based on the observed sulfur-like odor and the anomalous NWTPH-Dx concentration, the December 2017 groundwater sample from well MW-3 was reanalyzed using a silica gel cleanup process. The NWTPH-Dx result from the reanalysis was 58 µg/l (Table 6), which is comparable to historical NWTPH-Dx concentrations reported at well MW-3. 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.

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, and MW-38R were gauged quarterly and sampled semiannually in March and September. Monitoring well 1C-W-1 was gauged and sampled quarterly. Monitoring wells 1B-W-2, 1C-W-3, and 1C-W-4 were gauged and sampled semiannually in March and September. Reported NWTPH-Dx concentrations were less than the RL in groundwater samples collected from the wells north of the railyard. 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 2017. Reported NWTPH-Dx concentrations in groundwater samples collected from the Levee Zone wells closest to the Skykomish River did not exceed the groundwater CUL. The monitoring wells that had RL exceedances in 2017 will continue to be monitored in 2018.

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; measured LNAPL thicknesses ranged from a light trace to 1.7 feet. The locations where LNAPL was detected were generally consistent with prior years. Several measured LNAPL thicknesses in piezometers PZ-5S and PZ-6S were greater than the thicknesses measured in these piezometers in 2016, although LNAPL measurements are subject to uncertainty due to the viscous nature of the LNAPL. Piezometers PZ-5S and PZ-6S will continue to be monitored for potential LNAPL accumulation and migration in 2018, and LNAPL will be removed from piezometers as needed during routine HCC system operation, maintenance, and monitoring activities.

NWTPH-Dx concentrations in monitoring wells GW-3 and 2A-W-41 have increased since June 2014 and June 2013, respectively. Wells GW-3 and 2A-W-41 will continue to be monitored in 2018, and the results will be evaluated for the need to take additional actions to ensure Site-related NWTPH-Dx concentrations in groundwater immediately north of the HCC system barrier wall meet the RL.

The HWF remediation system and most of the associated wells will be decommissioned during the summer of 2018. Monitoring wells 5-W-51, 5-W-55, and 5-W-56 and HWF system recovery well RW-10 will be retained to assess post-HWF treatment groundwater quality. Monitoring wells 5-W-51, 5-W-55, and 5-W-56 will be monitored and sampled quarterly and recovery well RW-10 will be gauged for sheen/LNAPL.

6.0 BIBLIOGRAPHY

AECOM Environmental (AECOM). 2009a. *Former Maloney Creek Zone – West Wetland Sediment and Soil Investigation Report, Former Maintenance and Fueling Facility – Skykomish, Washington.* Prepared for BNSF Railway Company. March.

———. 2009b. *2009 Compliance Monitoring Plan Update, BNSF Former Maintenance and Fueling Facility – Skykomish, Washington.* Prepared for The BNSF Railway Company. April.

———. 2009c. *2008 Addendum to the Remedial Design Investigation Report, Former Maintenance and Fueling Facility – Skykomish, Washington.* Prepared for BNSF Railway Company. July.

———. 2010a. *Final 2009 Remedial Design Investigation Report, Former Maintenance and Fueling Facility – Skykomish, Washington.* Prepared for BNSF Railway Company. January.

———. 2010b. *2010 Compliance Monitoring Plan Update, BNSF Former Maintenance and Fueling Facility – Skykomish, Washington, Appendix E.* Prepared for The BNSF Railway Company. April 30.

———. 2010c. *Specifications – 2010 Remediation, Skykomish, Washington*. Prepared for BNSF Railway Company. May.

———. 2011a. *Draft 2010 Annual Hydraulic Control and Containment System Operations Report, Skykomish, Washington.* Prepared for BNSF Railway Company. February.

———. 2011b. *2010 Remediation – As-Built Completion Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. October 26.

———. 2012a. *Draft 2011 Annual Air Sparging System Operations Report, Skykomish, Washington.* Prepared for BNSF Railway Company. February.

———. 2012b. *Draft 2011 Annual Hydraulic Control and Containment System Operations Report, Skykomish, Washington.* Prepared for BNSF Railway Company. February.

———. 2012c. Memorandum Regarding HCC System Updated Optimization Plan. From Greg Chase. To Brian Sato, Washington State Department of Ecology. May 9.

———. 2012d. *2011 Remediation – As-Built Completion Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. June 22.

ENSR. 2007. *Levee Zone Interim Action for Cleanup – 2007 As-Built Completion Report, Former Maintenance and Fueling Facility – Skykomish, Washington.* Prepared for BNSF Railway Company. August.

———. 2008a. *2007 Remedial Design Investigation Report, Former Maintenance and Fueling Facility – Skykomish, Washington.* Prepared for BNSF Railway Company. May.

———. 2008b. *Final Groundwater Monitoring Plan, Former Maintenance and Fueling Facility – Skykomish, Washington.* Prepared for BNSF Railway Company. July.

Farallon Consulting, L.L.C. (Farallon). 2012. Technical Memorandum Regarding HCC System Optimization Work Plan, Skykomish Cleanup Action, Skykomish, Washington. From Richard McManus and Gerald Portele. To Brian Sato, Washington State Department of Ecology. December 11.

———. 2013a. Technical Memorandum Regarding HCC System Optimization Status Report. From Richard McManus. To Brian Sato, Washington State Department of Ecology. February 27.

———. 2013b. *2012 As-Built Completion Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. April 26.

———. 2013c. *2012 Annual Air Sparging System Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. July 12.

———. 2013d. *2012 Annual Hydraulic Control and Containment System Operations Report, Skykomish Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. July 26.

———. 2013e. *2011/2012 Site-Wide Groundwater Monitoring Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. July 29.

———. 2014a. *2013 Annual Air Sparging System Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. April 28.

———. 2014b. *2013 As-Built Completion Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. April 28.

———. 2014c. *2013 Annual Hydraulic Control and Containment System Operations Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. August 7.

———. 2014d. *2013 Site-Wide Groundwater Monitoring Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. August 7.

———. 2015a. *Skykomish School Hot Water Flushing Remediation Bid Set*. Prepared for BNSF Railway Company. Issued January 16.

———. 2015b. *2014 Site-Wide Groundwater Monitoring Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. April.

———. 2015c. *2014 Annual Hydraulic Control and Containment System Operations Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. June 3.

———. 2016a. *2015 As-Built Completion Report, Hot Water Flushing System and Supplemental Excavation, Skykomish School, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. April 21.

———. 2016b. *2015 Site-Wide Groundwater Monitoring Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. May 13.

———. 2016c. Revised Draft *Hydraulic Control and Containment System Optimization and Pilot Testing Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. Revised June.

———. 2016d. Technical Memo Regarding Revised Work Plan for Carbon Replacement at East Vault of West Gate of HCC System. From Gerald Portele. To Brian Sato, Washington State Department of Ecology. August 12.

———. 2016e. *2015 Annual Hydraulic Control and Containment System Operations Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. Revised November.

———. 2017. *2016 Annual Hydraulic Control and Containment System Operations Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. June.

———. 2018. *2017 Annual Hydraulic Control and Containment System Operations Report, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. March.

The RETEC Group, Inc. 1996. *Remedial Investigation for the Former Maintenance and Fueling Facility in Skykomish, Washington.* Prepared for BNSF Railway Company. January.

———. 2001. *Interim Action Basis of Design for LNAPL Barrier System: Former BNSF Fueling and Maintenance Facility, Skykomish, Washington, Vol. 1 of 2.* Prepared for BNSF Railway Company. August 10.

———. 2002a. *Supplemental Remedial Investigation: BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. July 12.

———. 2002b. *Supplemental Remedial Investigation, Volume 1: Text, Tables, Figures, and Appendices A through D, BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for The Burlington Northern and Santa Fe Railway Company. July 16.

———. 2005a. *Final Feasibility Study, Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. March 15.

———. 2005b. *Groundwater Sampling Plan, Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. May 12.

———. 2007. *Groundwater Monitoring Plan, Revision 1, Former Maintenance and Fueling Facility, Skykomish Washington.* Prepared for BNSF Railway Company. June 7.

U.S. Environmental Protection Agency. 2008. *Contract Laboratory Program National Functional Guidelines For Superfund Organic Methods Data Review*. Office of Superfund Remediation and Technology Innovation. Publication No. USEPA-540-R-008-01. June.

Washington State Department of Ecology (Ecology). 2007a. *Cleanup Action Plan for BNSF Former Maintenance and Fueling Facility, Skykomish, Washington.* Prepared for BNSF Railway Company. October.

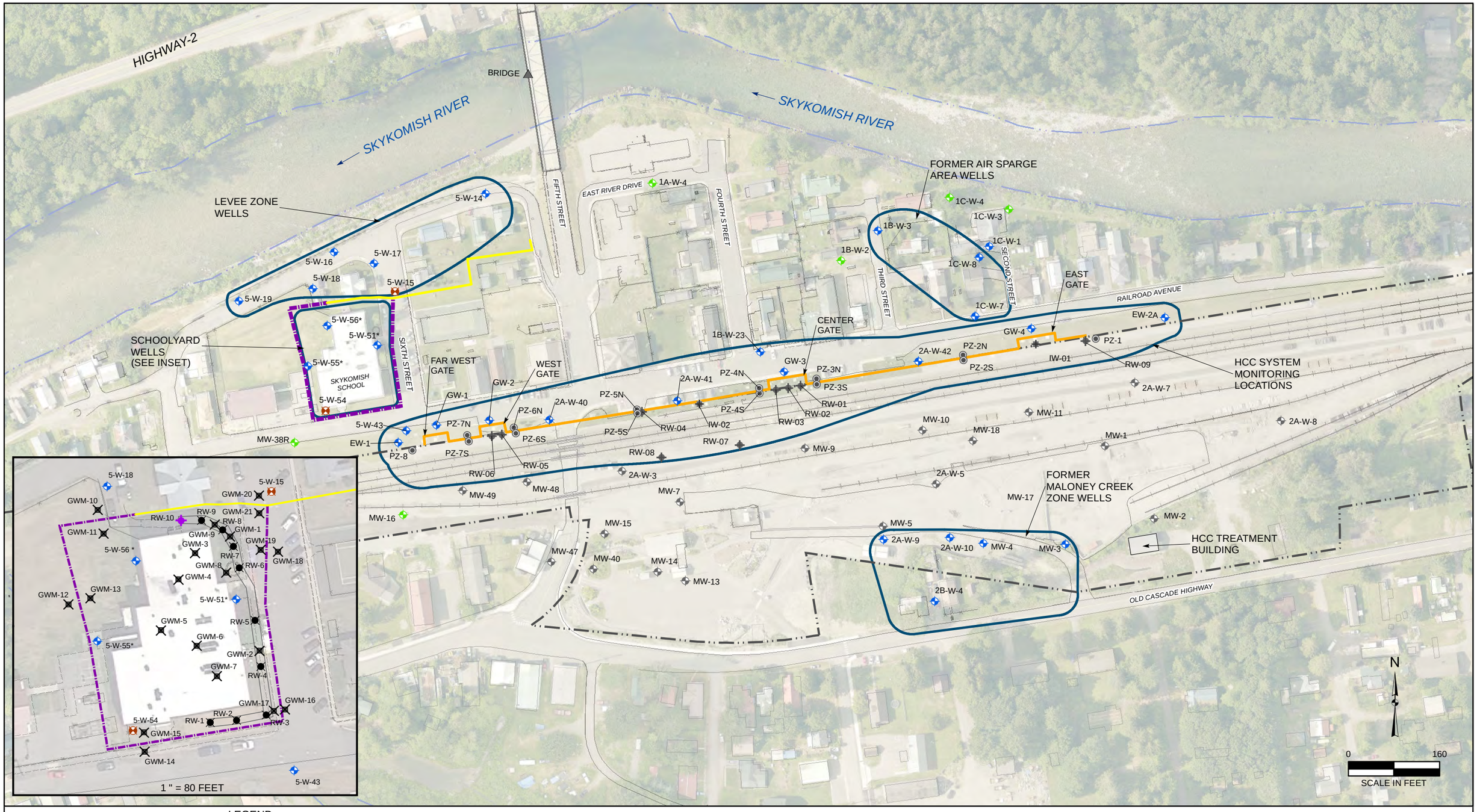
———. 2007b. *Final Consent Decree for BNSF Railway, Former Maintenance and Fueling Facility, Skykomish, Washington.* October.

———. 2014. Email Message Regarding HCC Optimization Pilot Testing. From Brian Sato. To Rich McManus, Farallon Consulting, L.L.C. September 12.

FIGURES

2017 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



LEGEND

2A-W-41	MONITORING WELL
RW-4	RECOVERY WELL
RW-10	RECOVERY WELL TO BE RETAINED
PZ-5S	PIEZOMETER
IW-02	INJECTION WELL
BRIDGE	BRIDGE MEASURING POINT
	LIQUID LEVEL GAUGING LOCATIONS

	WELLS SAMPLED QUARTERLY
	WELLS SAMPLED SEMIANNUALLY
	SITE-WIDE MONITORING WELL TO BE DECOMMISSIONED
	HWF SYSTEM RECOVERY WELL TO BE DECOMMISSIONED
	HWF SYSTEM MONITORING WELL TO BE DECOMMISSIONED
	HYDRAULIC CONTROL AND CONTAINMENT SYSTEM SHEET PILE BARRIER WALL AND GATES
	BNSF RAILYARD BOUNDARY
	MECHANICALLY STABILIZED EARTH WALL
	SKYKOMISH SCHOOL SHEET PILE BARRIER WALL (TO BE REMOVED)
	MONITORING WELL ZONES

IMAGERY SOURCE: USDA FARM SERVICE AGENCY(FSA) NATIONAL AGRICULTURE IMAGERY PROGRAM (NAIP) 2015

NOTES

HYDRAULIC CONTROL AND CONTAINMENT SYSTEM SENTRY WELLS AND BARRIER WALL GATE VAULT LOCATIONS NOT SHOWN. SEE FIGURE 2 FOR BARRIER WALL GATE DETAILS.

* = MONITORING WELLS TO BE SAMPLED QUARTERLY BEGINNING IN 2018, FOLLOWING REMOVAL OF THE SKYKOMISH SCHOOL HOT WATER FLUSHING (HWF) TREATMENT SYSTEM AND SHEET PILE WALL.

FARALLON CONSULTING
Quality Service for Environmental Solutions | faralloncconsulting.com

Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Bend | Baker City

California
Oakland | Folsom | Irvine

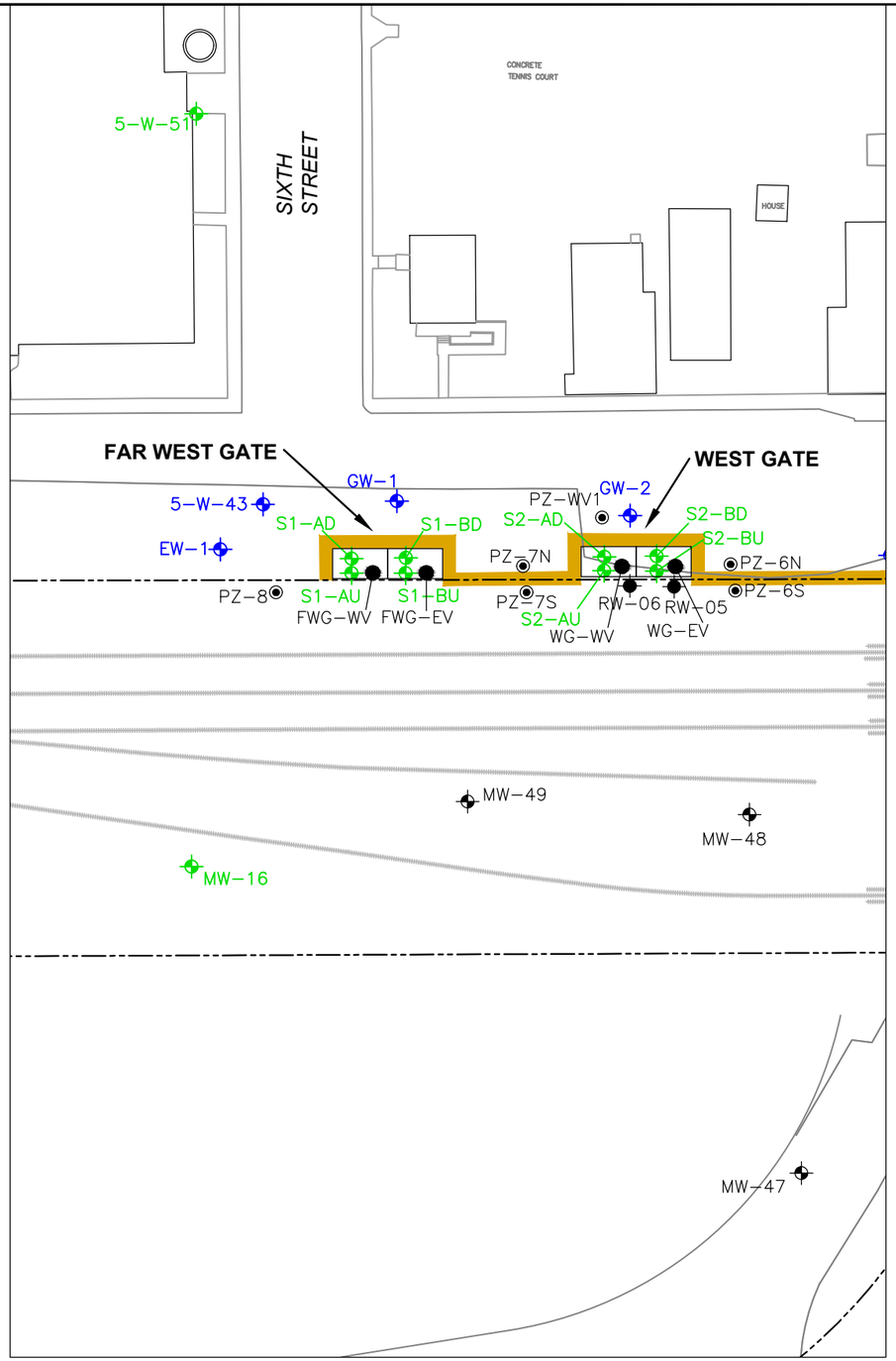
FIGURE 1

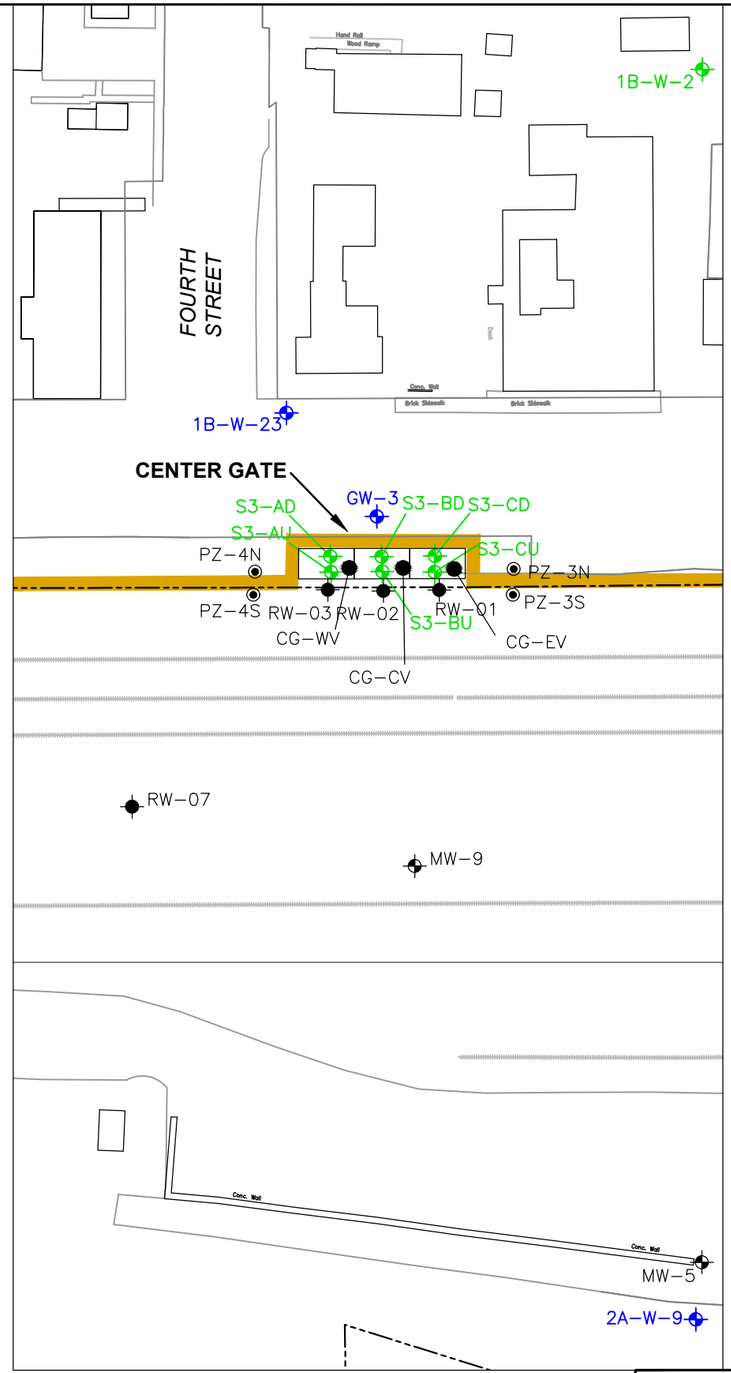
SITE PLAN SHOWING 2017
GROUNDWATER MONITORING NETWORK
BNSF FORMER MAINTENANCE
AND FUELING FACILITY
SKYKOMISH, WASHINGTON

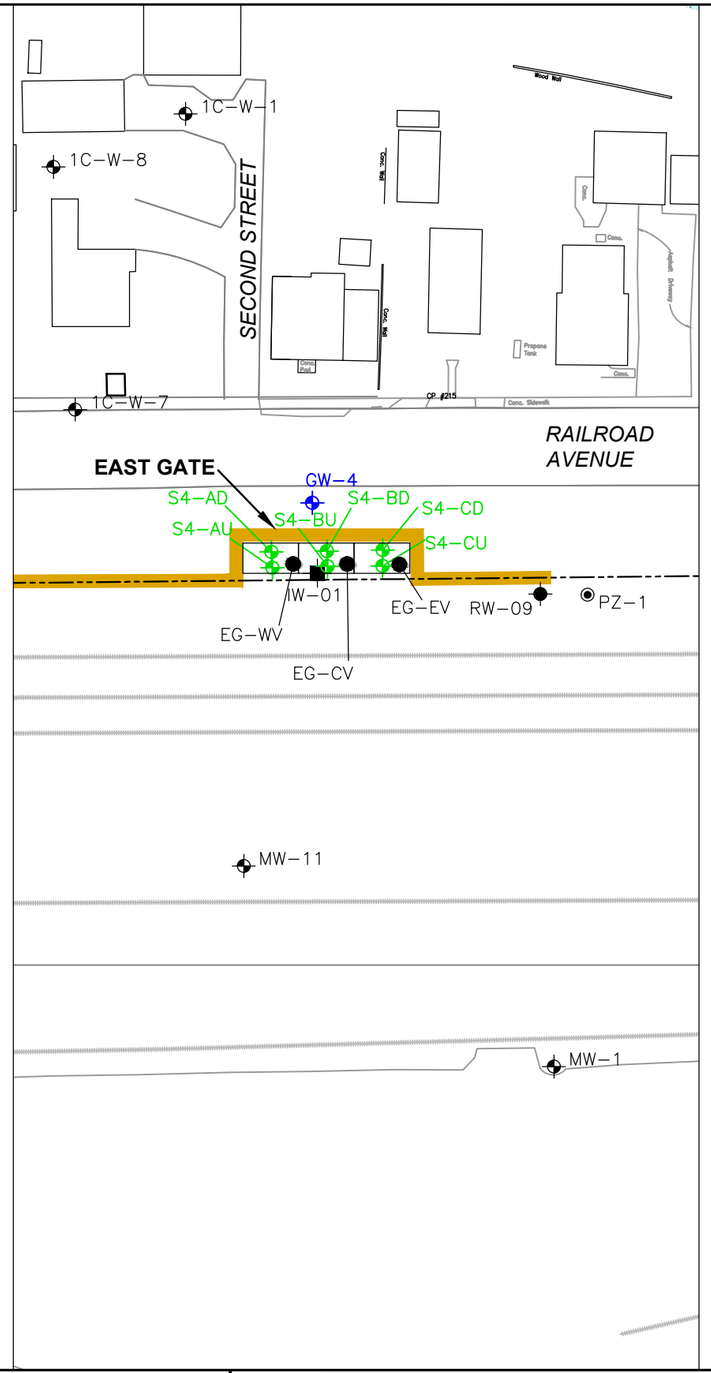
FARALLON PN: 683-067

Drawn By: tperrin | Checked By:TC | Date: 6/26/2018 | Disc Reference:

Document Path: Q:\Projects\683 BNSF\043 GROUNDWATER_HCC\GW_2017\FIGURE 1 Siteplan_2017_2018June.mxd







LEGEND

2A-W-41	MONITORING WELL
RW-04	RECOVERY WELL
PZ-5S	PIEZOMETER
IW-02	TREATED-WATER REINJECTION WELL
WG-WV	BARRIER WALL GATE VAULT
GW-2	WELLS SAMPLED QUARTERLY
S1-AU	WELLS SAMPLED SEMIANNUALLY

HYDRAULIC CONTROL AND CONTAINMENT SYSTEM BARRIER WALL/GATE SYSTEM

BNSF RAILYARD PROPERTY LINE

30 0 60

SCALE IN FEET

FARALLON CONSULTING

Quality Service for Environmental Solutions | farallonconsulting.com

Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Bend | Baker City

California
Oakland | Folsom | Irvine

FIGURE 2

HYDRAULIC CONTROL AND CONTAINMENT SYSTEM
BARRIER WALL GATE DETAIL
BNSF FORMER MAINTENANCE
AND FUELING FACILITY
SKYKOMISH, WASHINGTON

FARALLON PN: 683-067

Drawn By: MB Checked By: RCL Date: 6/18/18 Disk Reference: 683-067-061818

R:\Projects\683-067\CAD\683-067-061818.dwg, 6/19/2018 12:48:01 PM, DWG To PDF.pc3

HIGHWAY - 2
BRIDGE 919.29
SKYKOMISH RIVER
SKYKOMISH RIVER
EAST RIVER DRIVE
FOURTH STREET
FIFTH STREET
SIXTH STREET
THIRD STREET
SECOND STREET
RAILROAD AVENUE
OLD CASCADE HIGHWAY
FIFTH STREET
MALONEY CREEK
GRADIENT 0.010
GRADIENT 0.011
GRADIENT 0.023
GRADIENT 0.014
GRADIENT 0.014
HCC TREATMENT BUILDING
5-W-14 918.00
5-W-16 917.82
5-W-17 917.84
5-W-18 917.80
5-W-19 917.67
5-W-15 918.05
5-W-56 [918.19]
5-W-51 [918.47]
5-W-55 [918.02]
5-W-54 [918.16]
5-W-43
EW-1 919.34
MW-38R
MW-32 917.45
PZ-8 920.71
FWG-WV 921.60
PZ-7S 924.42
MW-49 923.37
MW-48
MW-16 [930.98]
RW-05 920.63
RW-06 920.58
GW-1 918.60
GW-2 918.48
WG-EV 919.40
PZ-7N 918.56
PZ-6N 918.54
PZ-6S 924.21
2A-W-40 [922.03]
PZ-5N
PZ-5S 926.11
RW-04 [925.46]
IW-02
2A-W-41 918.50
2A-W-3 926.73
RW-08 [929.15]
MW-7 [925.70]
MW-15 [921.37]
MW-47 925.70
MW-40 925.73
MW-14 926.54
MW-13 928.14
1A-W-4 920.63
1B-W-23 [919.77]
PZ-4S 926.35
PZ-4N 919.66
RW-07 926.66
RW-03 925.05
CG-WV 925.59
RW-02 925.04
RW-01 925.14
PZ-3N [920.58]
PZ-3S
GW-3 921.12
MW-9 [924.93]
2A-W-42 922.89
PZ-2N 922.20
PZ-2S 927.94
1C-W-4 922.83
1B-W-3 922.25
1B-W-2 922.39
1C-W-1 923.38
1C-W-3 923.51
1C-W-8 923.38
1C-W-7 923.47
GW-4 925.15
EW-2A 927.05
PZ-1 926.75
EG-WV 925.13
IW-01
RW-09 926.21
2A-W-7 927.26
MW-11 927.95
MW-10 927.64
MW-18 928.00
MW-1 928.16
2A-W-8 929.33
2A-W-5 927.87
2A-W-10 928.96
MW-4 929.63
MW-2 928.75
MW-5 927.13
2A-W-9 927.13
MW-3 931.23
2B-W-4 929.53
N
0 160
SCALE IN FEET

LEGEND

- 2A-W-41 — MONITORING WELL
- 5-W-54 — MONITORING WELL (TO BE DECOMMISSIONED)
- RW-04 — RECOVERY WELL
- PZ-5S — PIEZOMETER
- IW-02 — INJECTION WELL
- FWG-WV — BARRIER WALL GATE VAULT
- BRIDGE — BRIDGE MEASURING POINT

- 917.10 — GROUNDWATER OR SURFACE WATER (SKYKOMISH RIVER) ELEVATION IN FEET NAVD88 (MARCH, 2017)
- [920.50] — GROUNDWATER ELEVATION NOT USED FOR CONTOURING
- 921 — APPROXIMATE GROUNDWATER ELEVATION CONTOUR IN FEET NAVD88 (INFERRED WHERE DASHED)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- GRADIENT 0.023 — GRADIENT UNITS IN FOOT PER FOOT

- BNSF RAILYARD BOUNDARY
- HYDRAULIC CONTROL AND CONTAINMENT SYSTEM SHEET PILE BARRIER WALL AND GATES
- MECHANICALLY STABILIZED EARTH WALL
- SKYKOMISH SCHOOL SHEET PILE BARRIER WALL (TO BE REMOVED)

NOTES:
HYDRAULIC CONTROL AND CONTAINMENT SYSTEM SENTRY WELLS NOT SHOWN.
ONLY BARRIER WALL GATE VAULT LOCATIONS WHERE GROUNDWATER ELEVATIONS WERE MEASURED ARE SHOWN.
NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
IMAGERY SOURCE: KING COUNTY PICTOMETRY 2015

FARALLON CONSULTING
Quality Service for Environmental Solutions | farallonconsulting.com

Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Bend | Baker City

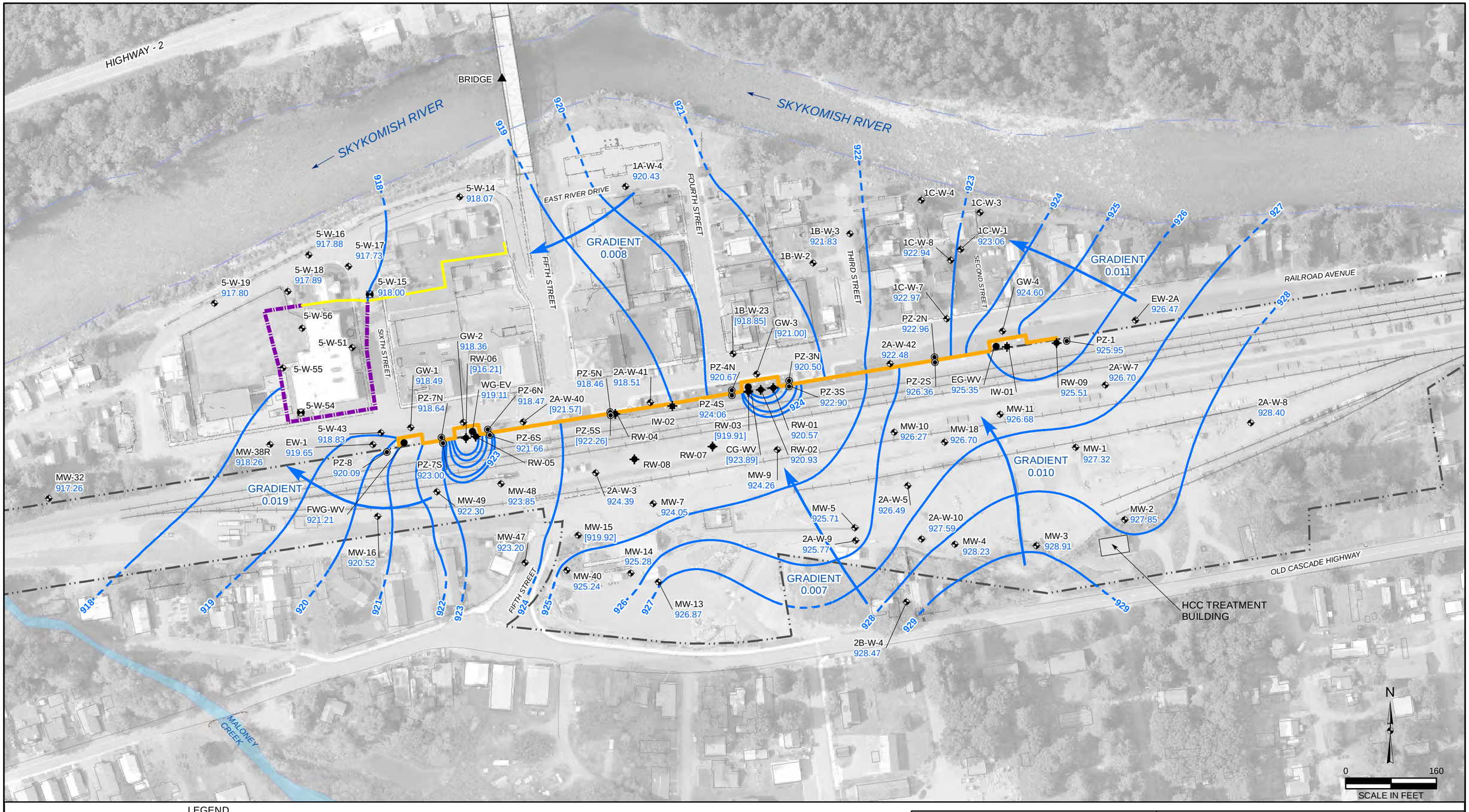
California
Oakland | Sacramento | Irvine

FIGURE 3

MARCH 2017
GROUNDWATER ELEVATION CONTOUR MAP
BNSF FORMER MAINTENANCE AND FUELING FACILITY
SKYKOMISH, WASHINGTON

FARALLON PN: 683-067

Drawn By: tperrin | Checked By: RL | Date: 6/18/2018 | Disc Reference:
Document Path: Q:\Projects\683 BNSF\043 GROUNDWATER_HCC\GW_2017\FIGURE GW_2-5_MAPBK_17.mxd



LEGEND

2A-W-41	MONITORING WELL
5-W-54	MONITORING WELL (TO BE DECOMMISSIONED)
RW-04	RECOVERY WELL
PZ-5S	PIEZOMETER
IW-02	INJECTION WELL
FWG-WV	BARRIER WALL GATE VAULT
BRIDGE	BRIDGE MEASURING POINT

917.10	GROUNDWATER OR SURFACE WATER (SKYKOMISH RIVER) ELEVATION IN FEET NAVD88 (JUNE, 2017)
[920.50]	GROUNDWATER ELEVATION NOT USED FOR CONTOURING
921	APPROXIMATE GROUNDWATER ELEVATION CONTOUR IN FEET NAVD88 (INFERRED WHERE DASHED)
	APPROXIMATE DIRECTION OF GROUNDWATER FLOW
GRADIENT 0.023	GRADIENT UNITS IN FOOT PER FOOT

- BNSF RAILYARD BOUNDARY
- HYDRAULIC CONTROL AND CONTAINMENT SYSTEM SHEET PILE BARRIER WALL AND GATES
- MECHANICALLY STABILIZED EARTH WALL
- SKYKOMISH SCHOOL SHEET PILE BARRIER WALL (TO BE REMOVED)

NOTES:
HYDRAULIC CONTROL AND CONTAINMENT SYSTEM SENTRY WELLS NOT SHOWN.
ONLY BARRIER WALL GATE VAULT LOCATIONS WHERE GROUNDWATER ELEVATIONS WERE MEASURED ARE SHOWN.
NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
IMAGERY SOURCE: KING COUNTY PICTOMETRY 2015

FARALLON CONSULTING
Quality Service for Environmental Solutions | farallonconsulting.com

Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Bend | Baker City

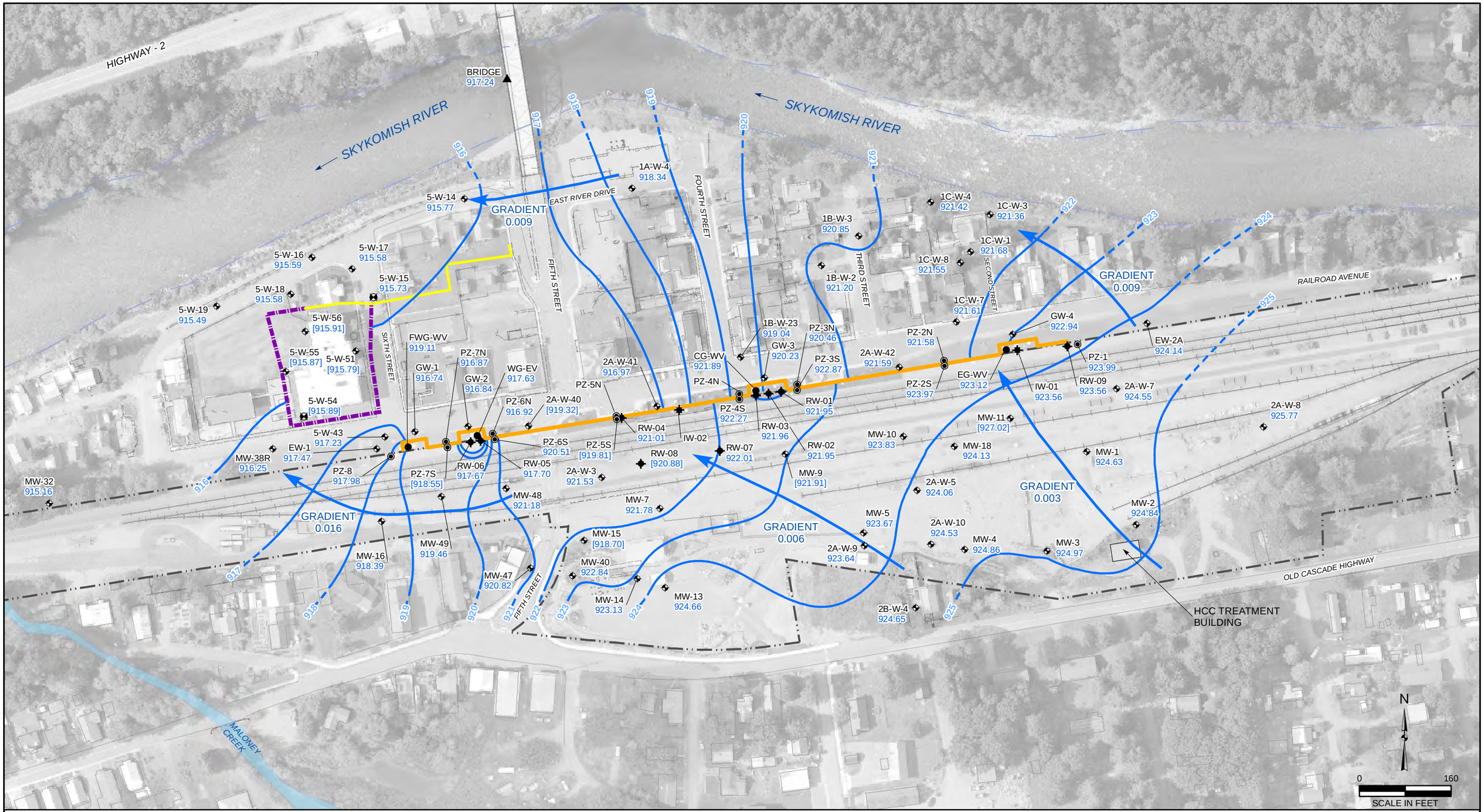
California
Oakland | Folsom | Irvine

FIGURE 4

JUNE 2017
GROUNDWATER ELEVATION CONTOUR MAP
BNSF FORMER MAINTENANCE
AND FUELING FACILITY
SKYKOMISH, WASHINGTON

FARALLON PN: 683-067

Drawn By: tperrin Checked By: RL Date: 6/18/2018 Disc Reference:
Document Path: Q:\Projects\683 BNSF\043 GROUNDWATER_HCC\GW_2017\FIGURE GW_2-5_MAPBK_17.mxd



LEGEND

2A-W-41	MONITORING WELL	917.10	GROUNDWATER OR SURFACE WATER (SKYKOMISH RIVER) ELEVATION IN FEET NAVD88 (SEPTEMBER, 2017)
5-W-54	MONITORING WELL (TO BE DECOMMISSIONED)	[920.50]	GROUNDWATER ELEVATION NOT USED FOR CONTOURING
RW-04	RECOVERY WELL	921	APPROXIMATE GROUNDWATER ELEVATION CONTOUR IN FEET NAVD88 (INFERRED WHERE DASHED)
PZ-5S	PIEZOMETER		APPROXIMATE DIRECTION OF GROUNDWATER FLOW
IW-02	INJECTION WELL	GRADIENT 0.023	GRADIENT UNITS IN FOOT PER FOOT
FWG-WV	BARRIER WALL GATE VAULT		
BRIDGE	BRIDGE MEASURING POINT		

BNSF RAILYARD BOUNDARY

HYDRAULIC CONTROL AND CONTAINMENT SYSTEM SHEET PILE BARRIER WALL AND GATES

MECHANICALLY STABILIZED EARTH WALL

SKYKOMISH SCHOOL SHEET PILE BARRIER WALL (TO BE REMOVED)

NOTES:
HYDRAULIC CONTROL AND CONTAINMENT SYSTEM SENTRY WELLS NOT SHOWN.
ONLY BARRIER WALL GATE VAULT LOCATIONS WHERE GROUNDWATER ELEVATIONS WERE MEASURED ARE SHOWN.
NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
IMAGERY SOURCE: KING COUNTY PICTOMETRY 2015

FARALLON CONSULTING
Quality Service for Environmental Solutions | farallonconsulting.com

Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Bend | Baker City

California
Oakland | Sacramento | Irvine

FIGURE 5

SEPTEMBER 2017
GROUNDWATER ELEVATION CONTOUR MAP
BNSF FORMER MAINTENANCE
AND FUELING FACILITY
SKYKOMISH, WASHINGTON

FARALLON PN: 683-067

Drawn By: tperrin | Checked By: RL | Date: 6/18/2018 | Disc Reference:

Document Path: Q:\Projects\683 BNSF\043 GROUNDWATER_HCC\GW_2017\FIGURE GW_2-5_MAPBK_17.mxd

LEGEND

2A-W-41	MONITORING WELL	917.10	GROUNDWATER OR SURFACE WATER (SKYKOMISH RIVER) ELEVATION IN FEET NAVD88 (DECEMBER, 2017)
5-W-54	MONITORING WELL (TO BE DECOMMISSIONED)	[920.50]	GROUNDWATER ELEVATION NOT USED FOR CONTOURING
RW-04	RECOVERY WELL	921	APPROXIMATE GROUNDWATER ELEVATION CONTOUR IN FEET NAVD88 (INFERRED WHERE DASHED)
PZ-5S	PIEZOMETER		APPROXIMATE DIRECTION OF GROUNDWATER FLOW
IW-02	INJECTION WELL	GRADIENT 0.023	GRADIENT UNITS IN FOOT PER FOOT
FWG-WV	BARRIER WALL GATE VAULT		
BRIDGE	BRIDGE MEASURING POINT		

BNSF RAILYARD BOUNDARY

HYDRAULIC CONTROL AND CONTAINMENT SYSTEM SHEET PILE BARRIER WALL AND GATES

MECHANICALLY STABILIZED EARTH WALL

SKYKOMISH SCHOOL SHEET PILE BARRIER WALL (TO BE REMOVED)

NOTES:
HYDRAULIC CONTROL AND CONTAINMENT SYSTEM SENTRY WELLS NOT SHOWN.
ONLY BARRIER WALL GATE VAULT LOCATIONS WHERE GROUNDWATER ELEVATIONS WERE MEASURED ARE SHOWN.
NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
IMAGERY SOURCE: KING COUNTY PICTOMETRY 2015

FARALLON CONSULTING
Quality Service for Environmental Solutions | farallonconsulting.com

Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Bend | Baker City

California
Oakland | Folsom | Irvine

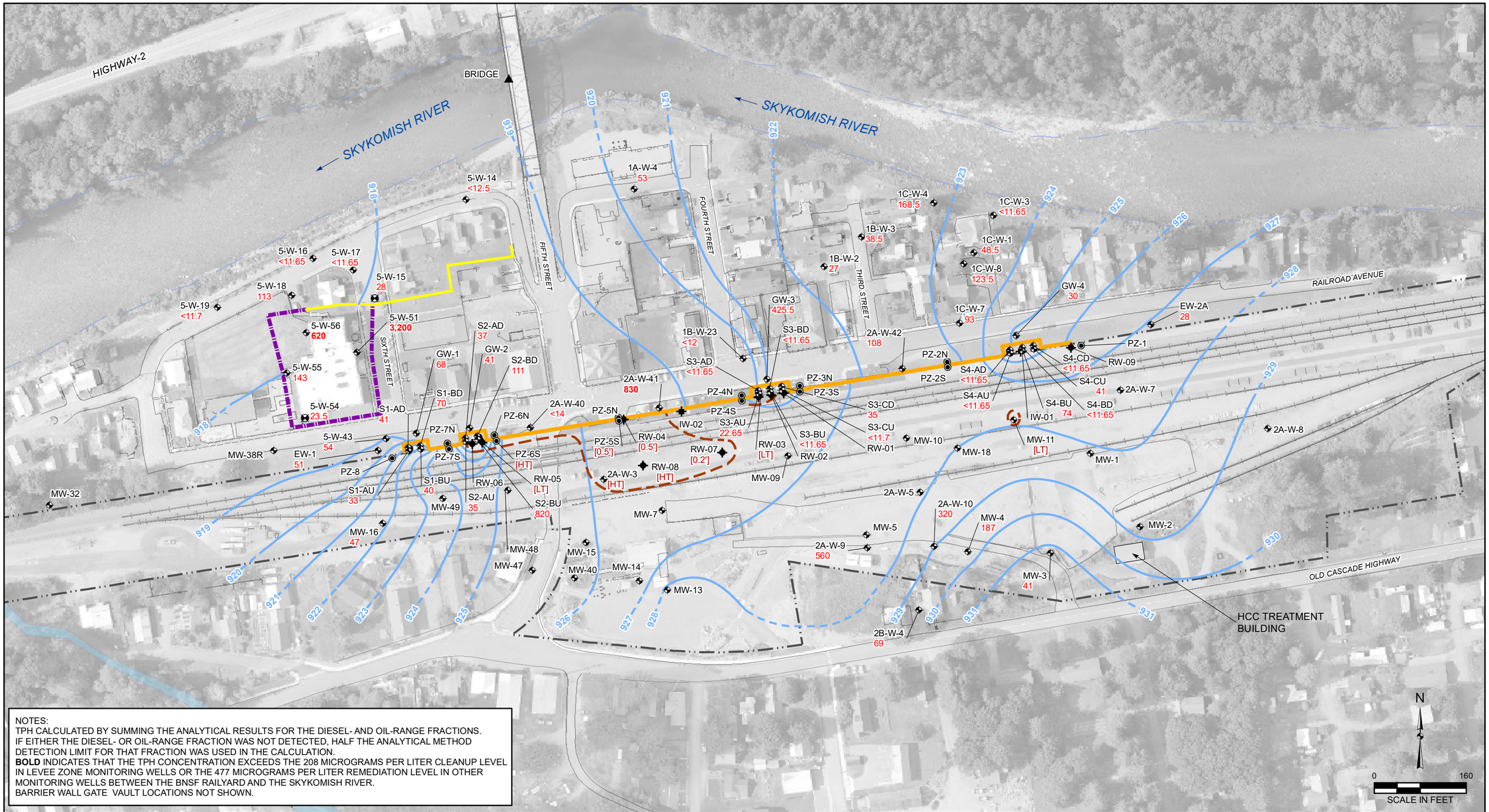
FIGURE 6

DECEMBER 2017
GROUNDWATER ELEVATION CONTOUR MAP
BNSF FORMER MAINTENANCE
AND FUELING FACILITY
SKYKOMISH, WASHINGTON

FARALLON PN: 683-067

Drawn By: tperrin | Checked By: RL | Date: 6/18/2018 | Disc Reference:

Document Path: Q:\Projects\683 BNSF\043 GROUNDWATER_HCC\GW_2017\FIGURE GW_2-5_MAPBK_17.mxd



NOTES:
TPH CALCULATED BY SUMMING THE ANALYTICAL RESULTS FOR THE DIESEL- AND OIL-RANGE FRACTIONS. IF EITHER THE DIESEL- OR OIL-RANGE FRACTION WAS NOT DETECTED, HALF THE ANALYTICAL METHOD DETECTION LIMIT FOR THAT FRACTION WAS USED IN THE CALCULATION.
BOLD INDICATES THAT THE TPH CONCENTRATION EXCEEDS THE 208 MICROGRAMS PER LITER CLEANUP LEVEL IN LEVEE ZONE MONITORING WELLS OR THE 477 MICROGRAMS PER LITER REMEDIATION LEVEL IN OTHER MONITORING WELLS BETWEEN THE BNSF RAILYARD AND THE SKYKOMISH RIVER.
BARRIER WALL GATE VAULT LOCATIONS NOT SHOWN.

LEGEND

- 2A-W-41 — MONITORING WELL
- 5-W-54 — MONITORING WELL (TO BE DECOMMISSIONED)
- RW-04 — RECOVERY WELL
- PZ-5S — PIEZOMETER
- IW-02 — INJECTION WELL
- BRIDGE — BRIDGE MEASURING POINT
- 927 — APPROXIMATE GROUNDWATER ELEVATION CONTOUR FEET NAVD88 (INFERRED WHERE DASHED)
- HYDRAULIC CONTROL AND CONTAINMENT SYSTEM SHEET PILE BARRIER WALL AND GATES
- BNSF RAILYARD BOUNDARY
- MECHANICALLY STABILIZED EARTH WALL
- SKYKOMISH SCHOOL SHEET PILE BARRIER WALL (TO BE REMOVED)
- 50.5 — TOTAL PETROLEUM HYDROCARBONS (TPH) IN MICROGRAMS PER LITER
- ESTIMATED EXTENT OF LNAPL AS INDICATED BY LIGHT TRACE (LT), HEAVY TRACE (HT), OR MEASURABLE LNAPL THICKNESS ON GROUNDWATER SURFACE
- [HT] — HEAVY TRACE - NO MEASURABLE LNAPL THICKNESS GREATER THAN 0.01 FOOT
- [LT] — LIGHT TRACE - NO MEASURABLE LNAPL THICKNESS GREATER THAN 0.01 FOOT
- [1.15'] — MEASURABLE LNAPL THICKNESS GREATER THAN 0.01 FOOT

LNAPL = LIGHT NONAQUEOUS-PHASE LIQUID
NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
IMAGERY SOURCE: KING COUNTY PICTOMETRY 2015

FARALLON CONSULTING
Quality Service for Environmental Solutions | farallonconsulting.com

Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Bend | Baker City

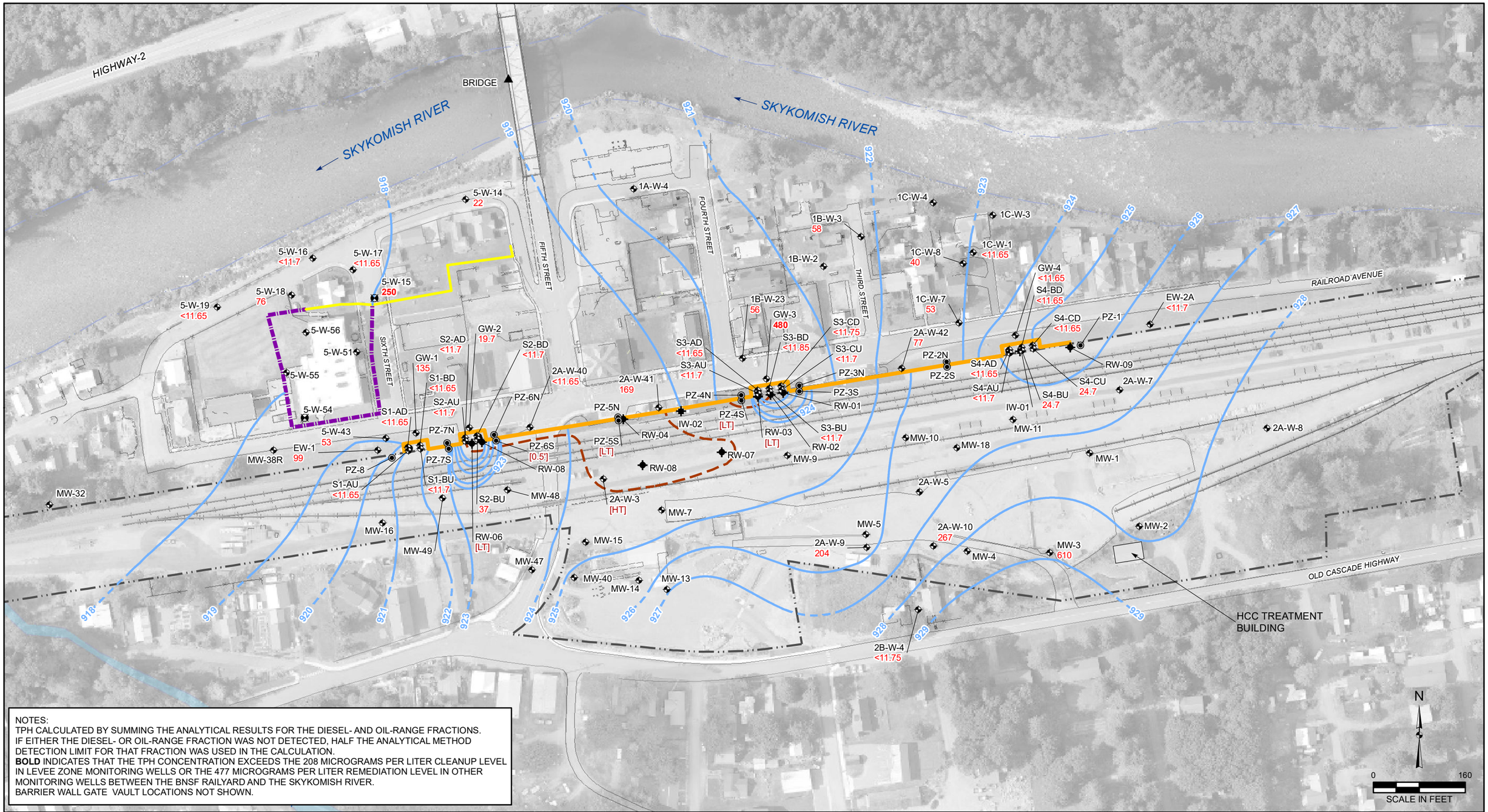
California
Oakland | Folsom | Irvine

FIGURE 7

MARCH 2017 TOTAL PETROLEUM HYDROCARBONS IN GROUNDWATER BNSF FORMER MAINTENANCE AND FUELING FACILITY SKYKOMISH, WASHINGTON

FARALLON PN: 683-067

Drawn By: tperrin | Checked By: RL | Date: 6/18/2018 | Disc Reference:
Document Path: Q:\Projects\683 BNSF\043 GROUNDWATER_HCC\GW_2017\FIGURE TPH-GW_6-9_MAPBK_17.mxd



NOTES:
TPH CALCULATED BY SUMMING THE ANALYTICAL RESULTS FOR THE DIESEL- AND OIL-RANGE FRACTIONS. IF EITHER THE DIESEL- OR OIL-RANGE FRACTION WAS NOT DETECTED, HALF THE ANALYTICAL METHOD DETECTION LIMIT FOR THAT FRACTION WAS USED IN THE CALCULATION.
BOLD INDICATES THAT THE TPH CONCENTRATION EXCEEDS THE 208 MICROGRAMS PER LITER CLEANUP LEVEL IN LEVEE ZONE MONITORING WELLS OR THE 477 MICROGRAMS PER LITER REMEDIATION LEVEL IN OTHER MONITORING WELLS BETWEEN THE BNSF RAILYARD AND THE SKYKOMISH RIVER.
BARRIER WALL GATE VAULT LOCATIONS NOT SHOWN.

N

0 160
SCALE IN FEET

LEGEND

- 2A-W-41 MONITORING WELL
- 5-W-54 MONITORING WELL (TO BE DECOMMISSIONED)
- RW-04 RECOVERY WELL
- PZ-5S PIEZOMETER
- IW-02 INJECTION WELL
- BRIDGE BRIDGE MEASURING POINT
- 927 APPROXIMATE GROUNDWATER ELEVATION CONTOUR FEET NAVD88 (INFERRED WHERE DASHED)
- HYDRAULIC CONTROL AND CONTAINMENT SYSTEM SHEET PILE BARRIER WALL AND GATES
- BNSF RAILYARD BOUNDARY
- MECHANICALLY STABILIZED EARTH WALL
- SKYKOMISH SCHOOL SHEET PILE BARRIER WALL (TO BE REMOVED)
- 50.5 TOTAL PETROLEUM HYDROCARBONS (TPH) IN MICROGRAMS PER LITER
- ESTIMATED EXTENT OF LNAPL AS INDICATED BY LIGHT TRACE (LT), HEAVY TRACE (HT), OR MEASURABLE LNAPL THICKNESS ON GROUNDWATER SURFACE
- [HT] HEAVY TRACE - NO MEASURABLE LNAPL THICKNESS GREATER THAN 0.01 FOOT
- [LT] LIGHT TRACE - NO MEASURABLE LNAPL THICKNESS GREATER THAN 0.01 FOOT
- [1.15'] MEASURABLE LNAPL THICKNESS GREATER THAN 0.01 FOOT

LNAPL = LIGHT NONAQUEOUS-PHASE LIQUID
NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
IMAGERY SOURCE: KING COUNTY PICTOMETRY 2015

FARALLON CONSULTING
Quality Service for Environmental Solutions | farallonconsulting.com

Washington
Issaquah | Bellingham | Seattle
Oregon
Portland | Bend | Baker City
California
Oakland | Folsom | Irvine

FIGURE 8

JUNE 2017 TOTAL PETROLEUM HYDROCARBONS IN GROUNDWATER
BNSF FORMER MAINTENANCE AND FUELING FACILITY
SKYKOMISH, WASHINGTON

FARALLON PN: 683-067

Drawn By: tperrin
Checked By: RL
Date: 6/18/2018
Disc Reference:
Document Path: Q:\Projects\683 BNSF\043 GROUNDWATER_HCC\GW_2017\FIGURE TPH-GW_6-9_MAPBK_17.mxd

HIGHWAY-2
BRIDGE
SKYKOMISH RIVER
SKYKOMISH RIVER
FIFTH STREET
FOURTH STREET
THIRD STREET
SIXTH STREET
RAILROAD AVENUE
OLD CASCADE HIGHWAY
916
917
918
919
920
921
922
923
924
925
5-W-14 26
5-W-16 30
5-W-17 16.7
5-W-18 120
5-W-19 18
5-W-15 92
5-W-56 1,850
5-W-51 3,380 [LT]
5-W-55 360
5-W-54 278
GW-1 45
GW-2 44.65
1A-W-4 29
1B-W-3 44
1B-W-2 99
1B-W-23 174
GW-3 263
1C-W-4 73
1C-W-3 32
1C-W-1 47
1C-W-8 45
1C-W-7 50
2A-W-42 184
GW-4 37
S4-BD 54
S4-CD 35
EW-2A <11.65
PZ-1
RW-09
S4-CU 25
S4-BU 53
2A-W-7
2A-W-8
IW-01
S4-AU 19
S4-AD <11.65
MW-11
MW-18
MW-1
MW-10
2A-W-5
MW-2
MW-3 71
MW-4 188
MW-5
2A-W-9 780
2A-W-10 252
2B-W-4 <11.65
MW-7
MW-15
MW-40
MW-14
MW-13
MW-47
MW-48
MW-49
MW-16 <11.7
MW-32
MW-38R 131
EW-1 57
5-W-43 57
PZ-8
PZ-7N
PZ-7S
S1-BD <11.65
S1-AD 29
S1-AU 34
S1-BU <11.65
S2-AD 39
S2-AU 35
S2-BD 18
S2-BU 83
PZ-6N
PZ-6S [0.5']
RW-05 [HT]
RW-06 [LT]
2A-W-40 48
2A-W-41 450
PZ-5N
PZ-5S [1.7']
RW-04 [LT]
IW-02
2A-W-3 [0.1']
RW-08 [HT]
RW-07 [HT]
PZ-4N
PZ-4S
S3-AD <11.65
S3-AU 17
RW-03
RW-02
S3-BD 18
S3-CD <11.65
PZ-3N
PZ-3S
S3-CU <11.65
RW-01
S3-BU 21
MW-09
PZ-2N
PZ-2S
HCC TREATMENT BUILDING

NOTES:
TPH CALCULATED BY SUMMING THE ANALYTICAL RESULTS FOR THE DIESEL- AND OIL-RANGE FRACTIONS. IF EITHER THE DIESEL- OR OIL-RANGE FRACTION WAS NOT DETECTED, HALF THE ANALYTICAL METHOD DETECTION LIMIT FOR THAT FRACTION WAS USED IN THE CALCULATION.
BOLD INDICATES THAT THE TPH CONCENTRATION EXCEEDS THE 208 MICROGRAMS PER LITER CLEANUP LEVEL IN LEVEE ZONE MONITORING WELLS OR THE 477 MICROGRAMS PER LITER REMEDIATION LEVEL IN OTHER MONITORING WELLS BETWEEN THE BNSF RAILYARD AND THE SKYKOMISH RIVER.
BARRIER WALL GATE VAULT LOCATIONS NOT SHOWN.

N

0 160
SCALE IN FEET

LEGEND

- 2A-W-41 MONITORING WELL
- 5-W-54 MONITORING WELL (TO BE DECOMMISSIONED)
- RW-04 RECOVERY WELL
- PZ-5S PIEZOMETER
- IW-02 INJECTION WELL
- BRIDGE BRIDGE MEASURING POINT
- 927~ APPROXIMATE GROUNDWATER ELEVATION CONTOUR FEET NAVD88 (INFERRED WHERE DASHED)
- HYDRAULIC CONTROL AND CONTAINMENT SYSTEM SHEET PILE BARRIER WALL AND GATES
- BNSF RAILYARD BOUNDARY
- MECHANICALLY STABILIZED EARTH WALL
- SKYKOMISH SCHOOL SHEET PILE BARRIER WALL (TO BE REMOVED)
- 50.5 TOTAL PETROLEUM HYDROCARBONS (TPH) IN MICROGRAMS PER LITER
- ESTIMATED EXTENT OF LNAPL AS INDICATED BY LIGHT TRACE (LT), HEAVY TRACE (HT), OR MEASURABLE LNAPL THICKNESS ON GROUNDWATER SURFACE
- [HT] HEAVY TRACE - NO MEASURABLE LNAPL THICKNESS GREATER THAN 0.01 FOOT
- [LT] LIGHT TRACE - NO MEASURABLE LNAPL THICKNESS GREATER THAN 0.01 FOOT
- [1.15'] MEASURABLE LNAPL THICKNESS GREATER THAN 0.01 FOOT

LNAPL = LIGHT NONAQUEOUS-PHASE LIQUID
NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
IMAGERY SOURCE: KING COUNTY PICTOMETRY 2015

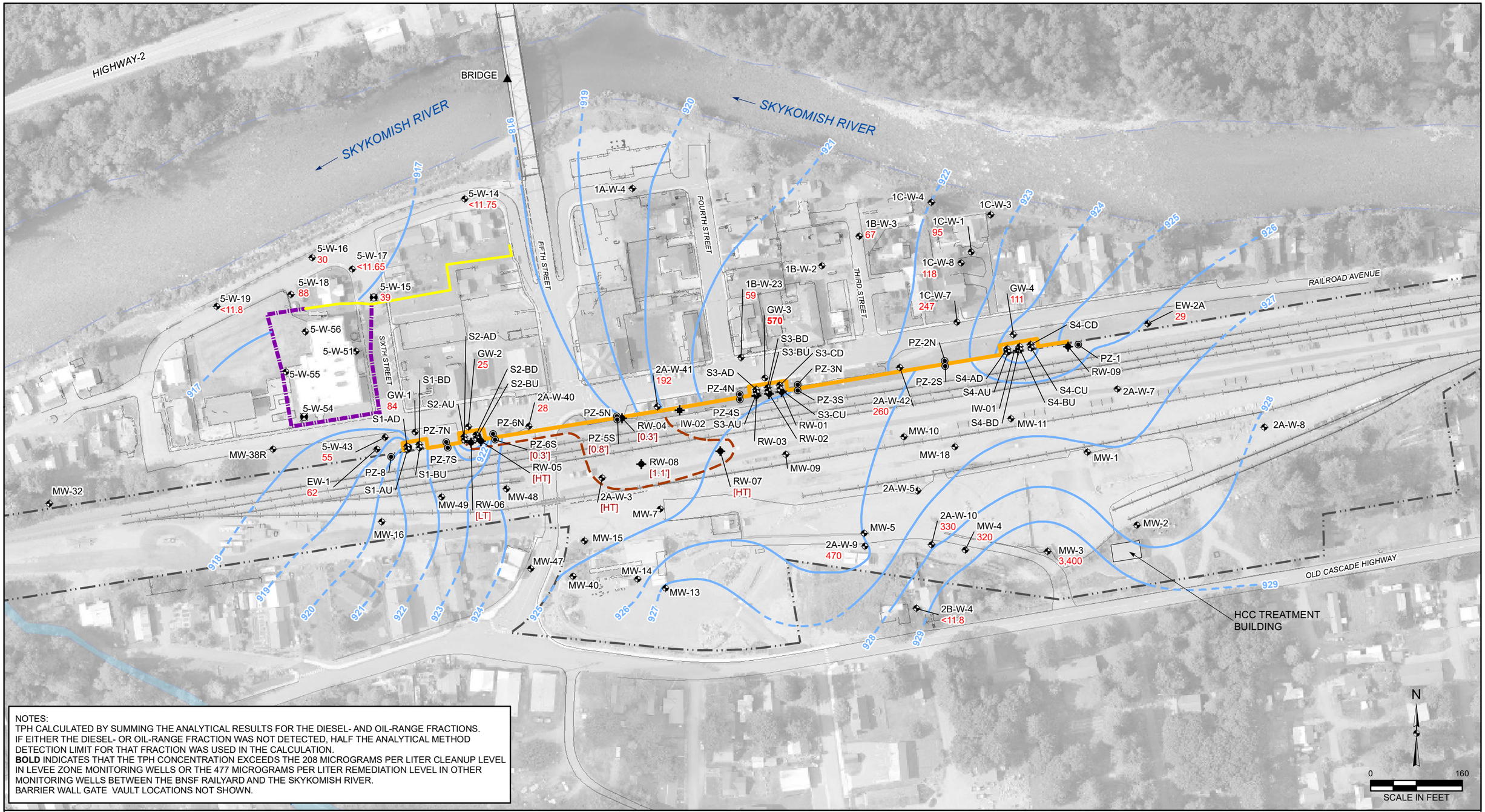
FARALLON CONSULTING
Quality Service for Environmental Solutions | farallonconsulting.com
Washington
Issaquah | Bellingham | Seattle
Oregon
Portland | Bend | Baker City
California
Oakland | Folsom | Irvine

FIGURE 9

SEPTEMBER 2017 TOTAL PETROLEUM HYDROCARBONS IN GROUNDWATER
BNSF FORMER MAINTENANCE AND FUELING FACILITY
SKYKOMISH, WASHINGTON

FARALLON PN: 683-067

Drawn By: tperrin
Checked By: RL
Date: 6/18/2018
Disc Reference:
Document Path: Q:\Projects\683 BNSF\043 GROUNDWATER_HCC\GW_2017\FIGURE TPH-GW_6-9_MAPBK_17.mxd



NOTES:
TPH CALCULATED BY SUMMING THE ANALYTICAL RESULTS FOR THE DIESEL- AND OIL-RANGE FRACTIONS. IF EITHER THE DIESEL- OR OIL-RANGE FRACTION WAS NOT DETECTED, HALF THE ANALYTICAL METHOD DETECTION LIMIT FOR THAT FRACTION WAS USED IN THE CALCULATION.
BOLD INDICATES THAT THE TPH CONCENTRATION EXCEEDS THE 208 MICROGRAMS PER LITER CLEANUP LEVEL IN LEVEE ZONE MONITORING WELLS OR THE 477 MICROGRAMS PER LITER REMEDIATION LEVEL IN OTHER MONITORING WELLS BETWEEN THE BNSF RAILYARD AND THE SKYKOMISH RIVER.
BARRIER WALL GATE VAULT LOCATIONS NOT SHOWN.

LEGEND

- 2A-W-41 — MONITORING WELL
- 5-W-54 — MONITORING WELL (TO BE DECOMMISSIONED)
- RW-04 — RECOVERY WELL
- PZ-5S — PIEZOMETER
- IW-02 — INJECTION WELL
- BRIDGE — BRIDGE MEASURING POINT
- 927~ — APPROXIMATE GROUNDWATER ELEVATION CONTOUR FEET NAVD88 (INFERRED WHERE DASHED)
- HYDRAULIC CONTROL AND CONTAINMENT SYSTEM SHEET PILE BARRIER WALL AND GATES
- BNSF RAILYARD BOUNDARY
- MECHANICALLY STABILIZED EARTH WALL
- SKYKOMISH SCHOOL SHEET PILE BARRIER WALL (TO BE REMOVED)
- 50.5 — TOTAL PETROLEUM HYDROCARBONS (TPH) IN MICROGRAMS PER LITER
- ESTIMATED EXTENT OF LNAPL AS INDICATED BY LIGHT TRACE (LT), HEAVY TRACE (HT), OR MEASURABLE LNAPL THICKNESS ON GROUNDWATER SURFACE
- [HT] — HEAVY TRACE - NO MEASURABLE LNAPL THICKNESS GREATER THAN 0.01 FOOT
- [LT] — LIGHT TRACE - NO MEASURABLE LNAPL THICKNESS GREATER THAN 0.01 FOOT
- [1.15'] — MEASURABLE LNAPL THICKNESS GREATER THAN 0.01 FOOT

LNAPL = LIGHT NONAQUEOUS-PHASE LIQUID
NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
IMAGERY SOURCE: KING COUNTY PICTOMETRY 2015

FARALLON CONSULTING
Quality Service for Environmental Solutions | farallonconsulting.com
Washington: Issaquah | Bellingham | Seattle
Oregon: Portland | Bend | Baker City
California: Oakland | Folsom | Irvine

FIGURE 10

DECEMBER 2017 TOTAL PETROLEUM HYDROCARBONS IN GROUNDWATER
BNSF FORMER MAINTENANCE AND FUELING FACILITY
SKYKOMISH, WASHINGTON

FARALLON PN: 683-067

Drawn By: tperrin | Checked By: RL | Date: 6/18/2018 | Disc Reference:
Document Path: Q:\Projects\683 BNSF\043 GROUNDWATER_HCC\GW_2017\FIGURE TPH-GW_6-9_MAPBK_17.mxd

TABLES

2017 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 1
2017 Groundwater Monitoring Event Dates
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Monitoring Event	Start Date	End Date
March Event	03/27/2017	03/30/2017
June Event	06/26/2017	06/29/2017
September Event	09/25/2017	09/27/2017
December Event	12/11/2017	12/13/2017

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

Table 2
2017 Groundwater Sampling Locations
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Area/Well Group	Well	March Monitoring Event	June Monitoring Event	September Monitoring Event	December Monitoring Event	Analyte
Levee Zone	5-W-14	X	X	X	X	NWTPH-Dx
	5-W-15	X	X	X	X	NWTPH-Dx
	5-W-16	X	X	X	X	NWTPH-Dx
	5-W-17	X	X	X	X	NWTPH-Dx
	5-W-18	X	X	X	X	NWTPH-Dx
	5-W-19	X	X	X	X	NWTPH-Dx
Schoolyard	5-W-51	X	—	X	—	NWTPH-Dx
	5-W-54	X	—	X	—	NWTPH-Dx
	5-W-55	X	—	X	—	NWTPH-Dx
	5-W-56	X	—	X	—	NWTPH-Dx
HCC System	S1-AD	X	X[1]	X	—	NWTPH-Dx
	S1-AU	X	X[1]	X	—	NWTPH-Dx
	S1-BD	X	X[1]	X	—	NWTPH-Dx
	S1-BU	X	X[1]	X	—	NWTPH-Dx
	S2-AD	X	X[1]	X	—	NWTPH-Dx
	S2-AU	X	X[1]	X	—	NWTPH-Dx
	S2-BD	X	X[1]	X	—	NWTPH-Dx
	S2-BU	X	X[1]	X	—	NWTPH-Dx
	S3-AD	X	X[1]	X	—	NWTPH-Dx
	S3-AU	X	X[1]	X	—	NWTPH-Dx
	S3-BD	X	X[1]	X	—	NWTPH-Dx
	S3-BU	X	X[1]	X	—	NWTPH-Dx
	S3-CD	X	X[1]	X	—	NWTPH-Dx
	S3-CU	X	X[1]	X	—	NWTPH-Dx
	S4-AD	X	X[1]	X	—	NWTPH-Dx
	S4-AU	X	X[1]	X	—	NWTPH-Dx
	S4-BD	X	X[1]	X	—	NWTPH-Dx
	S4-BU	X	X[1]	X	—	NWTPH-Dx
	S4-CD	X	X[1]	X	—	NWTPH-Dx
	S4-CU	X	X[1]	X	—	NWTPH-Dx
	GW-1	X	X	X	X	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	X	X	NWTPH-Dx
	EW-2A	X	X	X	X	NWTPH-Dx
	5-W-43	X	X	X	X	NWTPH-Dx
	2A-W-40	X	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
Former Air Sparge Area	1B-W-3	X	X	X	X	NWTPH-Dx
	1C-W-7	X	X	X	X	NWTPH-Dx
	1C-W-8	X	X	X	X	NWTPH-Dx

Table 2
2017 Groundwater Sampling Locations
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

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

NOTES:

"—" denotes well not sampled.

[1]Sentry wells were sampled in June in response to a June 2017 HCC system shut-down that lasted more than 48 hours (as required by the 2010 Groundwater Monitoring Plan).

[2]Well accidentally overlooked.

[3]Well inaccessible (beneath ecology block).

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

HCC = hydraulic control and containment

Table 3
2017 Liquid-Level Gauging Frequency
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Area/Well Group	Location	Gauging Frequency		
		Continuous[1]	Quarterly	Semiannually
Levee Zone	5-W-14	—	X	—
	5-W-15	—	X	—
	5-W-16	—	X	—
	5-W-17	—	X	—
	5-W-18	—	X	—
	5-W-19	—	X	—
Schoolyard	5-W-51	—	—	X
	5-W-54	—	—	X
	5-W-55	—	—	X
	5-W-56	—	—	X
HCC System	IW-01	—	—	X
	PZ-1	X	X	—
	PZ-2N	X	X	—
	PZ-2S	X	X	—
	PZ-3N	X	X	—
	PZ-3S	X	X	—
	PZ-4N	X	X	—
	PZ-4S	X	X	—
	PZ-5N	X	X	—
	PZ-5S	X	X	—
	PZ-6N	X	X	—
	PZ-6S	X	X	—
	PZ-7N	X	X	—
	PZ-7S	X	X	—
	PZ-8	X	X	—
	RW-01	X	X	—
	RW-02	X	X	—
	RW-03	X	X	—
	RW-04	X	X	—
	RW-05	X	X	—
	RW-06	X	X	—
	RW-07	X	X	—
	RW-08	X	X	—
	RW-09	X	X	—
	EG-WV (formerly EV)	X	X	—
	CG-WV (formerly CV)	X	X	—
	WG-EV (formerly WV)	X	X	—
	FWG-WV (formerly FWV)	X	X	—
	GW-1	X	X	—
	GW-2	X	X	—
	GW-3	X	X	—
	GW-4	X	X	—
	EW-1	—	X	—
	EW-2A	—	X	—
	5-W-43	—	X	—
	2A-W-40	—	X	—
	2A-W-41	—	X	—
	1B-W-23	—	X	—
	2A-W-42	—	X	—
Former Air Sparge Area	1B-W-3	—	X	—
	1C-W-7	—	X	—
	1C-W-8	—	X	—

Table 3
2017 Liquid-Level Gauging Frequency
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Area/Well Group	Location	Gauging Frequency		
		Continuous[1]	Quarterly	Semiannually
Former Maloney Creek Zone and Surrounding Area	MW-1	—	X	—
	MW-2	—	X	—
	MW-3	—	X	—
	MW-4	—	X	—
	MW-5	—	X	—
	MW-7	—	X	—
	MW-9	—	X	—
	MW-10	—	X	—
	MW-11	—	X	—
	MW-13	—	X	—
	MW-14	—	X	—
	MW-15	—	X	—
	MW-18	—	X	—
	MW-40	—	X	—
	2A-W-3	—	X	—
	2A-W-5	—	X	—
	2A-W-7	—	X	—
	2A-W-9	—	X	—
	2A-W-10	—	X	—
	2B-W-4	—	X	—
Site-Wide	1A-W-4	—	X	—
	1B-W-2	—	—	X
	1C-W-1	—	X	—
	1C-W-3	—	—	X
	1C-W-4	—	—	X
	2A-W-8	—	X	—
	MW-16	—	X	—
	MW-32	—	—	X
	MW-38R	—	X	—
	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

[1]Water-level transducers at the indicated locations provide continuous, real-time water level measurements; water levels are recorded hourly. Manual gauging for the presence or absence of LNAPL and sheen at these locations is performed quarterly.

Table 4
2017 Water Level Elevations and LNAPL Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Location	Measuring Point Elevation[1] (feet NAVD88)	Date	Depth to Water[2] (feet)	Water Level Elevation[1] (feet NAVD88)	LNAPL Thickness (feet)
Levee Zone Monitoring Wells					
5-W-14	926.59	3/27/2017	8.59	918.00	—
		6/26/2017	8.52	918.07	—
		9/25/2017	10.82	915.77	—
		12/11/2017	9.52	917.07	—
5-W-15	925.15	3/27/2017	7.10	918.05	—
		6/26/2017	7.15	918.00	—
		9/25/2017	9.42	915.73	—
		12/11/2017	8.04	917.11	—
5-W-16	925.2	3/27/2017	7.38	917.82	—
		6/26/2017	7.32	917.88	—
		9/25/2017	9.61	915.59	—
		12/11/2017	8.22	916.98	—
5-W-17	924.6	3/27/2017	6.76	917.84	—
		6/26/2017	6.87	917.73	—
		9/25/2017	9.02	915.58	—
		12/11/2017	7.64	916.96	—
5-W-18	924.64	3/27/2017	6.84	917.80	—
		6/26/2017	6.75	917.89	—
		9/25/2017	9.06	915.58	—
		12/11/2017	7.70	916.94	—
5-W-19	924.35	3/27/2017	6.68	917.67	—
		6/26/2017	6.55	917.80	—
		9/25/2017	8.86	915.49	—
		12/11/2017	7.52	916.83	—
Schoolyard Monitoring Wells					
5-W-51	925.08	3/27/2017	6.61	918.47	—
		9/25/2017	9.29	915.79	Light Trace
5-W-54	924.58	3/27/2017	6.42	918.16	—
		9/25/2017	8.69	915.89	—

Table 4
2017 Water Level Elevations and LNAPL Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Location	Measuring Point Elevation[1] (feet NAVD88)	Date	Depth to Water[2] (feet)	Water Level Elevation[1] (feet NAVD88)	LNAPL Thickness (feet)
5-W-55	923.92	3/27/2017	5.90	918.02	—
		9/25/2017	8.05	915.87	—
5-W-56	924.76	3/27/2017	6.57	918.19	—
		9/25/2017	8.85	915.91	—
Hydraulic Control and Containment System Monitoring Locations					
IW-01	933.49	3/27/2017	NM[3]	NM	—
		9/25/2017	9.93	923.56	—
PZ-1	935.38	3/27/2017	8.63	926.75	—
		6/26/2017	9.43	925.95	—
		9/25/2017	11.39	923.99	—
		12/11/2017	9.70	925.68	—
PZ-2N	934.35	3/27/2017	12.15	922.20	—
		6/26/2017	11.39	922.96	—
		9/25/2017	12.77	921.58	—
		12/11/2017	12.05	922.30	—
PZ-2S	934.94	3/27/2017	7.00	927.94	—
		6/26/2017	8.58	926.36	—
		9/25/2017	10.97	923.97	—
		12/11/2017	8.59	926.35	—
PZ-3N	934.41	3/27/2017	13.83	920.58	—
		6/26/2017	13.91	920.50	—
		9/25/2017	13.95	920.46	—
		12/11/2017	13.91	920.50	—
PZ-3S	934.45	3/27/2017	NM[4]	NM	—
		6/26/2017	11.55	922.90	—
		9/25/2017	11.58	922.87	—
		12/11/2017	8.93	925.52	—
PZ-4N	935.27	3/27/2017	15.61	919.66	—
		6/26/2017	14.6	920.67	—
		9/25/2017	NM[4]	NM	—
		12/11/2017	13.64	921.63	—

Table 4
2017 Water Level Elevations and LNAPL Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Location	Measuring Point Elevation[1] (feet NAVD88)	Date	Depth to Water[2] (feet)	Water Level Elevation[1] (feet NAVD88)	LNAPL Thickness (feet)
PZ-4S	935.31	3/27/2017	8.96	926.35	—
		6/26/2017	11.25	924.06	Light Trace
		9/25/2017	13.04	922.27	—
		12/11/2017	11.52	923.79	—
PZ-5N	933.15	3/27/2017	NM[4]	NM	—
		6/26/2017	14.69	918.46	—
		9/25/2017	NM[4]	NM	—
		12/11/2017	15.32	917.83	—
PZ-5S	933.46	3/27/2017	7.35	926.11	0.50
		6/26/2017	11.20	922.26	Light Trace
		9/25/2017	13.65	919.81	1.70
		12/11/2017	9.83	923.63	0.80
PZ-6N	931.17	3/27/2017	12.63	918.54	—
		6/26/2017	12.70	918.47	—
		9/25/2017	14.25	916.92	—
		12/11/2017	13.36	917.81	—
PZ-6S	931.41	3/27/2017	7.20	924.21	Heavy Trace
		6/26/2017	9.75	921.66	0.50
		9/25/2017	10.90	920.51	0.50
		12/11/2017	7.55	923.86	0.27
PZ-7N	930.37	3/27/2017	11.81	918.56	—
		6/26/2017	11.73	918.64	—
		9/25/2017	13.50	916.87	—
		12/11/2017	9.53	920.84	—
PZ-7S	930.4	3/27/2017	5.98	924.42	—
		6/26/2017	7.40	923.00	—
		9/25/2017	11.85	918.55	—
		12/11/2017	7.43	922.97	—

Table 4
2017 Water Level Elevations and LNAPL Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Location	Measuring Point Elevation[1] (feet NAVD88)	Date	Depth to Water[2] (feet)	Water Level Elevation[1] (feet NAVD88)	LNAPL Thickness (feet)
PZ-8	929.48	3/27/2017	8.77	920.71	—
		6/26/2017	9.39	920.09	—
		9/25/2017	11.50	917.98	—
		12/11/2017	9.71	919.77	—
RW-01	932.84	3/27/2017	7.70	925.14	—
		6/26/2017	12.27	920.57	—
		9/25/2017	10.89	921.95	—
		12/11/2017	8.73	924.11	—
RW-02	933.84	3/27/2017	8.80	925.04	—
		6/26/2017	12.91	920.93	—
		9/25/2017	11.89	921.95	—
		12/11/2017	9.42	924.42	—
RW-03	933.80	3/27/2017	8.75	925.05	Light Trace
		6/26/2017	13.89	919.91	Light Trace
		9/25/2017	11.84	921.96	—
		12/11/2017	9.78	924.02	—
RW-04	931.86	3/27/2017	6.40	925.46	0.50
		6/26/2017	NM[5]	NM	—
		9/25/2017	10.85	921.01	Light Trace
		12/11/2017	7.82	924.04	0.25
RW-05	928.53	3/27/2017	7.90	920.63	Light Trace
		6/26/2017	NM[5]	NM	—
		9/25/2017	10.83	917.70	Heavy Trace
		12/11/2017	8.45	920.08	Heavy Trace
RW-06	928.53	3/27/2017	7.95	920.58	—
		6/26/2017	12.32	916.21	Light Trace
		9/25/2017	10.86	917.67	Light Trace
		12/11/2017	8.46	920.07	Light Trace

Table 4
2017 Water Level Elevations and LNAPL Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Location	Measuring Point Elevation[1] (feet NAVD88)	Date	Depth to Water[2] (feet)	Water Level Elevation[1] (feet NAVD88)	LNAPL Thickness (feet)
RW-07	933.06	3/27/2017	6.40	926.66	0.20
		6/26/2017	NM[5]	NM	—
		9/25/2017	11.05	922.01	Heavy Trace
		12/11/2017	8.00	925.06	Heavy Trace
RW-08	931.85	3/27/2017	2.70	929.15	Heavy Trace
		6/26/2017	NM[5]	NM	—
		9/25/2017	10.97	920.88	Heavy Trace
		12/11/2017	8.50	923.35	1.05
RW-09	933.96	3/27/2017	7.75	926.21	—
		6/26/2017	8.45	925.51	—
		9/25/2017	10.40	923.56	—
		12/11/2017	8.74	925.22	—
EG-WV (formerly EV)	934.31	3/27/2017	9.18	925.13	—
		6/26/2017	8.96	925.35	—
		9/25/2017	11.19	923.12	—
		12/11/2017	9.82	924.49	—
CG-WV (formerly CV)	937.09	3/27/2017	11.50	925.59	—
		6/26/2017	13.20	923.89	—
		9/25/2017	15.20	921.89	—
		12/11/2017	12.81	924.28	—
WG-EV (formerly WV)	931.84	3/27/2017	12.44	919.40	—
		6/26/2017	12.73	919.11	Light Trace
		9/25/2017	14.21	917.63	Light Trace
		12/11/2017	12.78	919.06	Light Trace
FWG-WV (formerly FWV)	930.76	3/27/2017	9.16	921.60	—
		6/26/2017	9.55	921.21	—
		9/25/2017	11.65	919.11	—
		12/11/2017	9.20	921.56	—

Table 4
2017 Water Level Elevations and LNAPL Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Location	Measuring Point Elevation[1] (feet NAVD88)	Date	Depth to Water[2] (feet)	Water Level Elevation[1] (feet NAVD88)	LNAPL Thickness (feet)
GW-1	928.24	3/27/2017	9.64	918.60	—
		6/26/2017	9.75	918.49	—
		9/25/2017	11.50	916.74	—
		12/11/2017	10.43	917.81	—
GW-2	930.29	3/27/2017	11.81	918.48	—
		6/26/2017	11.93	918.36	—
		9/25/2017	13.45	916.84	—
		12/11/2017	12.48	917.81	—
GW-3	935.82	3/27/2017	14.70	921.12	—
		6/26/2017	14.82	921.00	—
		9/25/2017	15.59	920.23	—
		12/11/2017	14.53	921.29	—
GW-4	934.68	3/27/2017	9.53	925.15	—
		6/26/2017	10.08	924.60	—
		9/25/2017	11.74	922.94	—
		12/11/2017	10.47	924.21	—
EW-1	928.72	3/27/2017	9.38	919.34	—
		6/26/2017	9.07	919.65	—
		9/25/2017	11.25	917.47	—
		12/11/2017	10.00	918.72	—
EW-2A	936.2	3/27/2017	9.15	927.05	—
		6/26/2017	9.73	926.47	—
		9/25/2017	12.06	924.14	—
		12/11/2017	10.16	926.04	—
5-W-43	926.18	3/27/2017	NM[6]	NM	—
		6/26/2017	7.35	918.83	—
		9/25/2017	8.95	917.23	—
		12/11/2017	7.73	918.45	—

Table 4
2017 Water Level Elevations and LNAPL Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Location	Measuring Point Elevation[1] (feet NAVD88)	Date	Depth to Water[2] (feet)	Water Level Elevation[1] (feet NAVD88)	LNAPL Thickness (feet)
2A-W-40	933.34	3/27/2017	11.31	922.03	—
		6/26/2017	11.77	921.57	—
		9/25/2017	14.02	919.32	—
		12/11/2017	12.08	921.26	—
2A-W-41	935.22	3/27/2017	16.72	918.50	—
		6/26/2017	16.71	918.51	—
		9/25/2017	18.25	916.97	—
		12/11/2017	17.41	917.81	—
1B-W-23	936.25	3/27/2017	16.48	919.77	—
		6/26/2017	17.40	918.85	—
		9/25/2017	17.21	919.04	—
		12/11/2017	17.52	918.73	—
2A-W-42	935.37	3/27/2017	12.48	922.89	—
		6/26/2017	12.89	922.48	—
		9/25/2017	13.78	921.59	—
		12/11/2017	13.24	922.13	—
Former Air Sparge Area Monitoring Wells					
1B-W-3	936.66	3/27/2017	14.41	922.25	—
		6/26/2017	14.83	921.83	—
		9/25/2017	15.81	920.85	—
		12/11/2017	15.16	921.50	—
1C-W-7	935.04	3/27/2017	11.57	923.47	—
		6/26/2017	12.07	922.97	—
		9/25/2017	13.43	921.61	—
		12/11/2017	12.47	922.57	—
1C-W-8	935.7	3/27/2017	12.32	923.38	—
		6/26/2017	12.76	922.94	—
		9/25/2017	14.15	921.55	—
		12/11/2017	13.23	922.47	—

Table 4
2017 Water Level Elevations and LNAPL Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Location	Measuring Point Elevation[1] (feet NAVD88)	Date	Depth to Water[2] (feet)	Water Level Elevation[1] (feet NAVD88)	LNAPL Thickness (feet)
Former Maloney Creek Zone and Surrounding Area Monitoring Wells					
MW-1	939.2	3/27/2017	11.04	928.16	—
		6/26/2017	11.88	927.32	—
		9/25/2017	14.57	924.63	—
		12/11/2017	12.08	927.12	—
MW-2	939.2	3/27/2017	10.45	928.75	—
		6/26/2017	11.35	927.85	—
		9/25/2017	14.36	924.84	—
		12/11/2017	11.62	927.58	—
MW-3	938.03	3/27/2017	6.80	931.23	—
		6/26/2017	9.12	928.91	—
		9/25/2017	13.06	924.97	—
		12/11/2017	8.13	929.90	—
MW-4	936.95	3/27/2017	7.32	929.63	—
		6/26/2017	8.72	928.23	—
		9/25/2017	12.09	924.86	—
		12/11/2017	8.46	928.49	—
MW-5	933.36	3/27/2017	6.23	927.13	—
		6/26/2017	7.65	925.71	—
		9/25/2017	9.69	923.67	—
		12/11/2017	7.35	926.01	—
MW-7	936.89	3/27/2017	11.19	925.70	—
		6/26/2017	12.84	924.05	—
		9/25/2017	15.11	921.78	—
		12/11/2017	12.43	924.46	—
MW-9	937.53	3/27/2017	12.60	924.93	—
		6/26/2017	13.27	924.26	—
		9/30/2017	15.62	921.91	—
		12/11/2017	12.86	924.67	—

Table 4
2017 Water Level Elevations and LNAPL Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Location	Measuring Point Elevation[1] (feet NAVD88)	Date	Depth to Water[2] (feet)	Water Level Elevation[1] (feet NAVD88)	LNAPL Thickness (feet)
MW-10	938.34	3/27/2017	10.70	927.64	—
		6/26/2017	12.07	926.27	—
		9/25/2017	14.51	923.83	—
		12/11/2017	11.92	926.42	—
MW-11	939.2	3/27/2017	11.25	927.95	Light Trace
		6/26/2017	12.52	926.68	—
		9/25/2017	12.18	927.02	—
		12/11/2017	12.50	926.70	—
MW-13	936.49	3/27/2017	8.35	928.14	—
		6/26/2017	9.62	926.87	—
		9/25/2017	11.83	924.66	—
		12/11/2017	9.41	927.08	—
MW-14	936.8	3/27/2017	10.26	926.54	—
		6/26/2017	11.52	925.28	—
		9/25/2017	13.67	923.13	—
		12/11/2017	11.30	925.50	—
MW-15	933.32	3/27/2017	11.95	921.37	—
		6/26/2017	13.40	919.92	—
		9/25/2017	14.62	918.70	—
		12/11/2017	13.08	920.24	—
MW-18	940.68	3/27/2017	12.68	928.00	—
		6/26/2017	13.98	926.70	—
		9/25/2017	16.55	924.13	—
		12/11/2017	13.91	926.77	—
MW-40	936.95	3/27/2017	11.22	925.73	—
		6/26/2017	11.71	925.24	—
		9/25/2017	14.11	922.84	—
		12/11/2017	11.81	925.14	—

Table 4
2017 Water Level Elevations and LNAPL Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Location	Measuring Point Elevation[1] (feet NAVD88)	Date	Depth to Water[2] (feet)	Water Level Elevation[1] (feet NAVD88)	LNAPL Thickness (feet)
2A-W-3	934.43	3/27/2017	7.70	926.73	Heavy Trace
		6/26/2017	10.04	924.39	Heavy Trace
		9/25/2017	12.90	921.53	0.10
		12/11/2017	10.10	924.33	Heavy Trace
2A-W-5	939.47	3/27/2017	11.60	927.87	—
		6/26/2017	12.98	926.49	—
		9/25/2017	15.41	924.06	—
		12/11/2017	12.8	926.67	—
2A-W-7	937.76	3/27/2017	10.50	927.26	—
		6/26/2017	11.06	926.70	—
		9/25/2017	13.21	924.55	—
		12/11/2017	11.28	926.48	—
2A-W-9	936.58	3/27/2017	9.45	927.13	—
		6/26/2017	10.81	925.77	—
		9/25/2017	12.94	923.64	—
		12/11/2017	10.68	925.90	—
2A-W-10	937.93	3/27/2017	8.97	928.96	—
		6/26/2017	10.34	927.59	—
		9/25/2017	13.40	924.53	—
		12/11/2017	10.05	927.88	—
2B-W-4	931.03	3/27/2017	1.50	929.53	—
		6/26/2017	2.56	928.47	—
		9/25/2017	6.38	924.65	—
		12/11/2017	2.42	928.61	—
Site-Wide Monitoring Wells					
1A-W-4	929.07	3/27/2017	8.44	920.63	—
		6/26/2017	8.64	920.43	—
		9/25/2017	10.73	918.34	—
		12/11/2017	9.29	919.78	—
1B-W-2	935.81	3/27/2017	13.42	922.39	—
		9/25/2017	14.61	921.20	—

Table 4
2017 Water Level Elevations and LNAPL Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Location	Measuring Point Elevation[1] (feet NAVD88)	Date	Depth to Water[2] (feet)	Water Level Elevation[1] (feet NAVD88)	LNAPL Thickness (feet)
1C-W-1	936.44	3/27/2017	13.06	923.38	—
		6/26/2017	13.38	923.06	—
		9/25/2017	14.76	921.68	—
		12/11/2017	13.86	922.58	—
1C-W-3	933.56	3/27/2017	10.05	923.51	—
		9/25/2017	12.20	921.36	—
1C-W-4	932.74	3/27/2017	9.91	922.83	—
		9/25/2017	11.32	921.42	—
2A-W-8	942.62	3/27/2017	13.29	929.33	—
		6/26/2017	14.22	928.40	—
		9/25/2017	16.85	925.77	—
		12/11/2017	14.53	928.09	—
MW-16	933.32	3/27/2017	2.34	930.98	—
		6/26/2017	12.80	920.52	—
		9/25/2017	14.93	918.39	—
		12/11/2017	13.10	920.22	—
MW-32	926.06	3/27/2017	8.61	917.45	—
		6/26/2017	8.80	917.26	—
		9/25/2017	10.90	915.16	—
MW-38R	922.56	3/27/2017	NM[7]	NM	—
		6/26/2017	4.30	918.26	—
		9/25/2017	6.31	916.25	—
		12/11/2017	4.76	917.80	—
MW-47	932.61	3/27/2017	6.91	925.70	—
		6/26/2017	9.41	923.20	—
		9/25/2017	11.79	920.82	—
		12/11/2017	8.19	924.42	—
MW-48	933.9	3/27/2017	NM[8]	NM	—
		6/26/2017	10.05	923.85	—
		9/25/2017	12.72	921.18	—
		12/11/2017	9.71	924.19	—

Table 4
2017 Water Level Elevations and LNAPL Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Location	Measuring Point Elevation[1] (feet NAVD88)	Date	Depth to Water[2] (feet)	Water Level Elevation[1] (feet NAVD88)	LNAPL Thickness (feet)
MW-49	933.14	3/27/2017	9.77	923.37	—
		6/26/2017	10.84	922.30	—
		9/25/2017	13.68	919.46	—
		12/11/2017	10.89	922.25	—
Surface Water Monitoring Station					
Skykomish River Bridge	943.09	3/27/2017	23.80	919.29	—
		6/26/2017	NM[6]	NM	—
		9/25/2017	25.85	917.24	—
		12/11/2017	24.75	918.34	—

NOTES:

— denotes LNAPL was not observed.

LNAPL = light nonaqueous-phase liquid

NM = not measured

[1]Elevations referenced to North American Vertical Datum of 1988 (NAVD88).

[2]Depths referenced to measuring point.

[3]Unable to locate well.

[4]Unable to open well.

[5]Erroneous instrument readings due to presence of LNAPL - data not recorded.

[6]Well/location accidentally overlooked.

[7]Well inaccessible (beneath ecology block).

[8]Well inaccessible (beneath heavy snow cover).

Table 5
2017 Stabilized Groundwater Field Parameter Values
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Well	Date	Temperature (degrees Celsius)	pH (Standard Units)	Dissolved Oxygen (milligrams per liter)	Oxidation-Reduction Potential (millivolts)	Specific Conductivity (mS/cm)
Levee Zone Monitoring Wells						
5-W-14	3/28/2017	6.9	6.65	6.12	171.3	0.078
	6/28/2017	8.8	6.44	6.19	180.2	0.080
	9/26/2017	8.9	6.45	5.73	356.1	0.076
	12/12/2017	7.1	6.52	5.02	235.2	0.075
5-W-15	3/28/2017	6.4	7.04	0.28	-10.2	0.092
	6/28/2017	10.4	6.80	0.17	10.4	0.179
	9/26/2017	11.5	6.91	0.29	205.3	0.114
	12/12/2017	7.9	6.89	0.21	43.0	0.094
5-W-16	3/28/2017	4.9	6.53	8.89	272.5	0.085
	6/27/2017	11.5	6.56	8.35	146.7	0.059
	9/26/2017	11.5	6.71	6.36	399.4	0.091
	12/12/2017	4.8	6.95	8.08	226.6	0.097
5-W-17	3/28/2017	6.9	6.36	5.91	255.7	0.080
	6/27/2017	9.6	6.47	6.05	140.4	0.091
	9/26/2017	8.8	6.45	5.37	335.9	0.075
	12/12/2017	7.4	6.58	5.39	277.0	0.079
5-W-18	3/28/2017	6.3	6.77	5.72	157.2	0.083
	6/27/2017	10.2	6.54	2.23	187.0	0.118
	9/26/2017	10.8	6.57	2.00	244.8	0.132
	12/12/2017	7.8	6.63	2.20	210.5	0.111
5-W-19	3/28/2017	6.8	6.02	6.80	262.2	0.077
	6/27/2017	10.0	6.52	6.83	188.0	0.075
	9/26/2017	9.6	6.68	5.58	402.8	0.075
	12/12/2017	6.7	6.68	5.15	213.1	0.076
Schoolyard Monitoring Wells						
5-W-51	3/29/2017	8.4	6.34	4.52	188.0	0.203
	9/27/2017	33.4	5.95	0.15	-59.0	0.205
5-W-54	3/29/2017	5.5	6.75	11.35	225.2	0.131
	9/26/2017	29.4	6.21	0.24	269.9	0.230

Table 5
2017 Stabilized Groundwater Field Parameter Values
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Well	Date	Temperature (degrees Celsius)	pH (Standard Units)	Dissolved Oxygen (milligrams per liter)	Oxidation-Reduction Potential (millivolts)	Specific Conductivity (mS/cm)
5-W-55	3/28/2017	8.2	6.46	1.43	257.6	0.277
	9/26/2017	35.4	6.26	0.27	278.7	0.253
5-W-56	3/28/2017	10.0	6.49	2.06	1.2	0.337
	9/26/2017	33.9	6.22	0.16	-234.0	0.601
Hydraulic Control and Containment System Monitoring Wells						
GW-1	3/28/2017	4.9	5.96	6.81	280.0	0.104
	6/28/2017	9.9	6.23	0.76	113.2	0.108
	9/26/2017	11.8	6.21	0.35	215.9	0.098
	12/13/2017	8.6	6.22	1.11	138.1	0.117
GW-2	3/28/2017	5.7	6.46	3.95	161.3	0.092
	6/28/2017	9.4	6.22	1.21	56.6	0.098
	9/26/2017	12.2	6.20	0.50	328.1	0.130
	12/13/2017	8.1	5.87	0.43	111.9	0.116
GW-3	3/29/2017	6.9	6.16	0.95	86.5	0.090
	6/28/2017	13.0	6.01	4.15	141.4	0.091
	9/27/2017	12.2	5.89	0.71	409.2	0.095
	12/12/2017	7.9	5.60	1.50	117.1	0.112
GW-4	3/29/2017	6.7	6.23	2.36	291.5	0.107
	6/27/2017	8.3	6.19	3.60	380.1	0.087
	9/26/2017	12.3	5.86	2.31	245.5	0.082
	12/12/2017	8.3	5.97	2.04	121.8	0.122
EW-1	3/28/2017	5.8	6.24	3.86	192.7	0.085
	6/28/2017	8.7	6.02	1.80	141.2	0.080
	9/26/2017	10.0	6.13	0.64	357.6	0.062
	12/13/2017	9.2	5.74	0.98	121.3	0.093
EW-2A	3/29/2017	5.1	6.17	6.38	195.1	0.057
	6/28/2017	8.4	5.67	5.80	381.1	0.052
	9/26/2017	10.6	5.66	5.01	203.5	0.062
	12/12/2017	8.5	5.93	4.92	201.8	0.059

Table 5
2017 Stabilized Groundwater Field Parameter Values
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Well	Date	Temperature (degrees Celsius)	pH (Standard Units)	Dissolved Oxygen (milligrams per liter)	Oxidation-Reduction Potential (millivolts)	Specific Conductivity (mS/cm)
5-W-43	3/28/2017	4.7	5.97	3.67	276.4	0.085
	6/28/2017	8.5	6.12	2.37	190.9	0.077
	9/26/2017	10.5	6.01	1.24	344.9	0.074
	12/13/2017	8.9	6.03	1.08	191.6	0.085
2A-W-40	3/29/2017	6.2	6.39	10.91	199.3	0.040
	6/28/2017	8.4	6.49	8.03	203.1	0.054
	9/27/2017	11.9	7.46	8.83	215.6	0.049
	12/13/2017	7.9	6.34	6.11	127.7	0.064
2A-W-41	3/29/2017	6.0	6.01	9.35	128.5	0.100
	6/28/2017	10.4	6.38	8.32	60.8	0.093
	9/27/2017	11.3	6.30	2.97	293.6	0.154
	12/13/2017	8.3	6.30	5.85	59.4	0.115
1B-W-23	3/29/2017	5.3	6.52	11.32	275.4	0.075
	6/28/2017	13.0	6.16	9.14	396.2	0.093
	9/27/2017	13.6	6.35	7.21	172.0	0.130
	12/12/2017	8.0	6.22	9.90	252.8	0.075
2A-W-42	3/29/2017	6.7	6.39	4.01	161.7	0.134
	6/28/2017	10.2	6.08	2.81	160.3	0.114
	9/26/2017	12.6	5.77	3.32	170.9	0.163
	12/12/2017	8.9	5.99	0.90	183.5	0.155
Former Air Sparge Area Monitoring Wells						
1B-W-3	3/29/2017	6.8	6.54	4.79	142.1	0.154
	6/28/2017	9.3	6.26	1.94	312.0	0.114
	9/27/2017	11.0	6.07	1.39	152.9	0.11
	12/13/2017	8.2	6.53	1.41	142.1	0.164
1C-W-7	3/29/2017	6.2	5.81	4.26	276.8	0.081
	6/27/2017	9.3	5.21	4.06	246.1	0.066
	9/26/2017	13.7	5.81	1.17	219.3	0.118
	12/12/2017	8.5	5.55	2.95	181.4	0.126

Table 5
2017 Stabilized Groundwater Field Parameter Values
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Well	Date	Temperature (degrees Celsius)	pH (Standard Units)	Dissolved Oxygen (milligrams per liter)	Oxidation-Reduction Potential (millivolts)	Specific Conductivity (mS/cm)
1C-W-8	3/29/2017	6.2	6.29	8.40	196.4	0.060
	6/27/2017	9.4	5.81	6.19	422.0	0.065
	9/27/2017	10.5	5.77	3.39	73.5	0.158
	12/12/2017	9.0	5.62	4.00	170.9	0.105
Former Maloney Creek Zone Monitoring Wells						
MW-3	3/30/2017	3.3	6.14	9.40	200.9	0.028
	6/28/2017	8.0	5.62	0.72	365.9	0.047
	9/26/2017	10.5	5.66	0.25	61.9	0.097
	12/12/2017	9.1	5.88	0.80	39.6	0.242
MW-4	3/30/2017	2.6	6.19	11.43	270.8	0.042
	6/28/2017	Not sampled				
	9/26/2017	10.6	5.54	0.45	129.0	0.076
	12/12/2017	6.9	5.49	1.63	168.9	0.090
2A-W-9	3/30/2017	4.4	6.26	3.73	107.1	0.031
	6/28/2017	8.6	6.16	0.10	72.0	0.053
	9/26/2017	11.3	5.71	1.50	86.6	0.097
	12/12/2017	7.6	5.76	0.34	127.2	0.067
2A-W-10	3/30/2017	2.7	5.61	9.65	293.7	0.060
	6/28/2017	9.9	5.90	0.25	147.4	0.054
	9/26/2017	10.7	5.58	0.43	143.0	0.076
	12/12/2017	6.4	5.86	1.00	141.7	0.060
2B-W-4	3/28/2017	3.4	6.10	7.12	222.2	0.056
	6/29/2017	9.3	5.92	3.08	371.5	0.045
	9/26/2017	12.3	5.78	4.30	225.2	0.103
	12/13/2017	7.0	6.26	5.13	248.8	0.050
Site-Wide Monitoring Wells						
1A-W-4	3/28/2017	5.7	5.78	11.97	259.8	0.006
	9/27/2017	9.4	6.55	7.51	181.2	0.081
1B-W-2	3/29/2017	6.3	5.98	10.65	286.7	0.118
	9/27/2017	13.0	5.89	0.38	162.9	0.236

Table 5
2017 Stabilized Groundwater Field Parameter Values
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Well	Date	Temperature (degrees Celsius)	pH (Standard Units)	Dissolved Oxygen (milligrams per liter)	Oxidation-Reduction Potential (millivolts)	Specific Conductivity (mS/cm)
1C-W-1	3/29/2017	5.9	5.67	6.45	313.3	0.073
	6/27/2017	10.3	5.96	6.90	214.1	0.057
	9/27/2017	12.1	5.75	4.30	238.6	0.071
	12/12/2017	8.2	5.89	4.25	202.0	0.089
1C-W-3	3/29/2017	4.9	6.02	12.06	309.7	0.048
	9/26/2017	14.4	6.27	1.25	190.5	0.136
1C-W-4	3/29/2017	6.0	6.24	6.89	202.2	0.085
	9/26/2017	10.9	5.72	3.74	194.6	0.070
MW-16	3/28/2017	4.8	5.47	8.91	280.4	0.068
	9/26/2017	13.4	5.79	2.37	248.4	0.070
MW-38R	3/29/2017	Well inaccessible (beneath ecology block)				
	9/26/2017	10.6	6.43	0.54	271.2	0.105

NOTE:
mS/cm = milliSiemens per centimeter

Table 6
2017 Total Petroleum Hydrocarbon Concentrations in Groundwater
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Well	Date	Sample Identification	DRO (µg/l)[1]			ORO (µg/l)[1]			Calculated NWTPH-Dx[2] (µg/l)
			Result	MDL	MRL	Result	MDL	MRL	
Levee Zone Monitoring Wells									
5-W-14	3/28/2017	5-W-14-032817	< 26	15	26	< 53	0.01	53	< 12.5
	6/28/2017	5-W-14-062817	< 24	14	24	15 J	9.4	48	22
	9/26/2017	5-W-14-092617	15 J	14	24	11 J	9.3	47	26
	12/12/2017	5-W-14-121217	< 24	14	24	< 49	9.5	49	< 11.75
5-W-15	3/28/2017	5-W-15-032817	15 J	14	24	13 J	9.3	48	28
	6/28/2017	5-W-15-062817	140	14	24	110	9.3	48	**250**
	9/26/2017	5-W-15-092617	55 J	14	24	37 J	9.3	48	92
	12/12/2017	5-W-15-121217	24 J	14	24	15 J	9.3	47	39
5-W-16	3/28/2017	5-W-16-032817	< 24	14	24	< 47	9.3	47	< 11.65
	6/27/2017	5-W-16-062717	< 24	14	24	< 48	9.4	48	< 11.7
	9/26/2017	5-W-16-092617	15 J	14	24	15 J	9.3	47	30
	12/12/2017	5-W-16-121217	16 J	14	25	14 J	9.7	49	30
5-W-17	3/28/2017	5-W-17-032817	< 24	14	24	< 48	9.3	48	< 11.65
	6/27/2017	5-W-17-062717	< 24	14	24	< 48	9.3	48	< 11.65
	9/26/2017	5-W-17-092617	< 24 UJ	14	24	9.7 J	9.3	47	16.7
	12/12/2017	5-W-17-121217	< 24	14	24	< 48	9.3	48	< 11.65
5-W-18	3/28/2017	5-W-18-032817	58	15	26	55	10	53	113
	6/27/2017	5-W-18-062717	43	14	24	33 J	9.3	48	76
	9/26/2017	5-W-18-092617	65 J	14	24	55 J	9.3	48	120
	12/12/2017	5-W-18-121217	47 J	14	24	41 J	9.4	48	88
5-W-19	3/28/2017	5-W-19-032817	< 24	14	24	< 48	9.4	48	< 11.7
	6/27/2017	5-W-19-062717	< 24	14	24	< 48	9.3	48	< 11.65
	9/26/2017	5-W-19-092617	< 24 UJ	14	24	11 J	9.3	48	18
	12/12/2017	5-W-19-121217	< 24	14	24	< 49	9.6	49	< 11.8

Table 6
2017 Total Petroleum Hydrocarbon Concentrations in Groundwater
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Well	Date	Sample Identification	DRO (µg/l)[1]			ORO (µg/l)[1]			Calculated NWTPH-Dx[2] (µg/l)
			Result	MDL	MRL	Result	MDL	MRL	
Schoolyard Monitoring Wells									
5-W-51	3/29/2017	5-W-51-032917	2,000	14	24	1,200 B	37	190	**3,200**
	9/27/2017	5-W-51-092717	2,500 J	14	24	880 J	9.3	48	**3,380**
5-W-54	3/29/2017	5-W-54-032917	17 J	14	24	< 13 UJ	13	13	23.5
	9/26/2017	5-W-54-092617	190 J	14	24	88 J	9.3	48	278
5-W-55	3/28/2017	5-W-55-032817	78	14	24	65	9.4	48	143
	9/26/2017	5-W-55-092617	250 J	14	24	110 J	9.4	48	360
5-W-56	3/28/2017	5-W-56-032817	270	14	24	350	9.6	49	**620**
	9/26/2017	5-W-56-092617	1,200 J	14	24	650 J	9.3	48	**1,850**
Hydraulic Control and Containment System Sentry Wells and Monitoring Wells									
S1-AD	3/27/2017	S1-AD-032717	17 J	14	24	24 J	9.4	48	41
	6/26/2017	S1-AD-062617	< 24	14	24	< 48	9.3	48	< 11.65
	9/25/2017	S1-AD-092517	14 J	14	24	15 J	9.3	48	29
S1-AU	3/27/2017	S1-AU-032717	17 J	14	24	16 J	9.3	48	33
	6/26/2017	S1-AU-062617	< 24	14	24	< 47	9.3	47	< 11.65
	9/25/2017	S1-AU-092517	< 24	14	24	27 J	9.4	48	34
S1-BD	3/27/2017	S1-BD-032717	32	15	26	38 J	10	52	70
	6/26/2017	S1-BD-062617	< 24	14	24	< 48	9.3	48	< 11.65
	9/25/2017	S1-BD-092517	< 24	14	24	< 47	9.3	47	< 11.65
S1-BU	3/27/2017	S1-BU-032717	19 J	14	24	21 J	9.4	48	40
	6/26/2017	S1-BU-062617	< 24	14	24	< 48	9.4	48	< 11.7
	9/25/2017	S1-BU-092517	< 24	14	24	< 48	9.3	48	< 11.65
S2-AD	3/27/2017	S2-AD-032717	24	14	24	13 J	9.3	48	37
	6/27/2017	S2-AD-062717	< 24	14	24	< 48	9.4	48	< 11.7
	9/25/2017	S2-AD-092517	16 J	14	24	23 J	9.3	48	39
S2-AU	3/27/2017	S2-AU-032717	24	14	24	11 J	9.3	47	35
	6/27/2017	S2-AU-062717	< 24	14	24	< 48	9.4	48	< 11.7
	9/25/2017	S2-AU-092517	< 24	14	24	28 J	9.3	48	35

Table 6
2017 Total Petroleum Hydrocarbon Concentrations in Groundwater
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Well	Date	Sample Identification	DRO (µg/l)[1]			ORO (µg/l)[1]			Calculated NWTPH-Dx[2] (µg/l)
			Result	MDL	MRL	Result	MDL	MRL	
S2-BD	3/27/2017	S2-BD-032717	40	14	24	71	9.3	48	111
	6/27/2017	S2-BD-062717	< 24	14	24	< 48	9.4	48	< 11.7
	9/25/2017	S2-BD-092517	< 24	14	24	11 J	9.3	48	18
S2-BU	3/27/2017	S2-BU-032717	440	15	25	380	9.9	50	820
	6/27/2017	S2-BU-062717	26	14	24	11 J	9.3	48	37
	9/25/2017	S2-BU-092517	57	14	24	26 J	9.3	48	83
S3-AD	3/27/2017	S3-AD-032717	< 24	14	24	< 47	9.3	47	< 11.65
	6/27/2017	S3-AD-062717	< 24	14	24	< 48	9.3	48	< 11.65
	9/25/2017	S3-AD-092517	< 24	14	24	< 48	9.3	48	< 11.65
S3-AU	3/27/2017	S3-AU-032717	18 J	14	24	< 47	9.3	47	22.65
	6/27/2017	S3-AU-062717	< 24	14	24	< 48	9.4	48	< 11.7
	9/25/2017	S3-AU-092517	< 24	14	24	10 J	9.3	48	17
S3-BD	3/27/2017	S3-BD-032717	< 24	14	24	< 48	9.3	48	< 11.65
	6/27/2017	S3-BD-062717	< 25	14	25	< 49	9.7	49	< 11.85
	9/25/2017	S3-BD-092517	< 24	14	24	11 J	9.3	47	18
S3-BU	3/27/2017	S3-BU-032717	< 24	14	24	< 48	9.3	48	< 11.65
	6/27/2017	S3-BU-062717	< 24	14	24	< 48	9.4	48	< 11.7
	9/25/2017	S3-BU-092517	< 24	14	24	14 J	9.3	48	21
S3-CD	3/27/2017	S3-CD-032717	< 24	14	24	28 J	9.3	48	35
	6/27/2017	S3-CD-062717	< 24	14	24	< 48	9.5	48	< 11.75
	9/25/2017	S3-CD-092517	< 24	14	24	< 48	9.3	48	< 11.65
S3-CU	3/27/2017	S3-CU-032717	< 24	14	24	< 48	9.4	48	< 11.7
	6/27/2017	S3-CU-062717	< 24	14	24	< 48	9.4	48	< 11.7
	9/25/2017	S3-CU-092517	< 24	14	24	< 48	9.3	48	< 11.65
S4-AD	3/27/2017	S4-AD-032717	< 24	14	24	< 47	9.3	47	< 11.65
	6/27/2017	S4-AD-062717	< 24	14	24	< 48	9.3	48	< 11.65
	9/25/2017	S4-AD-092517	< 24 UJ	14	24	< 48 UJ	9.3	48	< 11.65

Table 6
2017 Total Petroleum Hydrocarbon Concentrations in Groundwater
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Well	Date	Sample Identification	DRO (µg/l)[1]			ORO (µg/l)[1]			Calculated NWTPH-Dx[2] (µg/l)
			Result	MDL	MRL	Result	MDL	MRL	
S4-AU	3/27/2017	S4-AU-032717	< 24	14	24	< 48	9.3	48	< 11.65
	6/27/2017	S4-AU-062717	< 24	14	24	< 48	9.4	48	< 11.7
	9/25/2017	S4-AU-092517	< 24 UJ	14	24	12 J	9.3	48	19
S4-BD	3/27/2017	S4-BD-032717	< 24	14	24	< 48	9.3	48	< 11.65
	6/27/2017	S4-BD-062717	< 24	14	24	< 48	9.3	48	< 11.65
	9/25/2017	S4-BD-092517	16 J	14	24	38 J	9.3	48	54
S4-BU	3/27/2017	S4-BU-032717	33	14	24	41 J	9.3	47	74
	6/27/2017	S4-BU-062717	20 J	14	24	< 48	9.4	48	24.7
	9/25/2017	S4-BU-092517	20 J	14	24	33 J	9.3	48	53
S4-CD	3/27/2017	S4-CD-032717	< 24	14	24	< 48	9.3	48	< 11.65
	6/27/2017	S4-CD-062717	< 24	14	24	< 47	9.3	47	< 11.65
	9/25/2017	S4-CD-092517	18 J	14	24	17 J	9.3	48	35
S4-CU	3/27/2017	S4-CU-032717	36	15	26	< 51	10	51	41
	6/27/2017	S4-CU-062717	20 J	14	24	< 48	9.4	48	24.7
	9/25/2017	S4-CU-092517	14 J	14	24	11 J	9.3	48	25
GW-1	3/28/2017	GW-1-032817	29	14	24	39 J	9.4	48	68
	6/28/2017	GW-1-062817	64	14	24	71	9.4	48	135
	9/26/2017	GW-1-092617	26 J	14	24	19 J	9.3	48	45
	12/13/2017	GW-1-121317	< 37 U	14	24	< 47 U	9.3	47	< 84
GW-2	3/28/2017	GW-2-032817	29 J	14	24	12 J	9.4	48	41
	6/28/2017	GW-2-062817	15	14	24	< 48	9.4	48	19.7
	9/26/2017	GW-2-092617	40 J	14	24	< 48 UJ	9.3	48	44.65
	12/13/2017	GW-2-121317	< 14 UJ	14	24	< 11 UJ	9.4	48	< 25
GW-3	3/29/2017	GW-3-032917	380	15	26	< 91 U	91	91	425.5
	6/28/2017	GW-3-062817	190	14	24	290 J	9.4	48	**480**
	9/27/2017	GW-3-092717	180	14	24	83	9.3	47	263
	12/12/2017	GW-3-121217	420	14	24	150	9.4	48	**570**

Table 6
2017 Total Petroleum Hydrocarbon Concentrations in Groundwater
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Well	Date	Sample Identification	DRO (µg/l)[1]			ORO (µg/l)[1]			Calculated NWTPH-Dx[2] (µg/l)
			Result	MDL	MRL	Result	MDL	MRL	
GW-4	3/29/2017	GW-4-032917	20 J	14	24	< 20 UJ	20	20	30
	6/27/2017	GW-4-062717	< 24	14	24	< 48	9.3	48	< 11.65
	9/26/2017	GW-4-092617	26	14	24	11 J	9.4	48	37
	12/12/2017	GW-4-121217	< 56 U	14	24	< 55 U	9.3	48	< 111
EW-1	3/28/2017	EW-1-032817	26 J	16	27	25 J	11	54	51
	6/28/2017	EW-1-062817	36	14	24	63	9.4	48	99
	9/26/2017	EW-1-092617	38 J	14	24	19 J	9.3	48	57
	12/13/2017	EW-1-121317	< 26 U	14	24	< 36 UJ	9.3	48	< 62
EW-2A	3/29/2017	EW-2A-032917	18 J	14	24	< 20 UJ	20	20	28
	6/28/2017	EW-2A-062817	< 24	14	24	< 48	9.4	48	< 11.7
	9/26/2017	EW-2A-092617	< 24	14	24	< 48	9.3	48	< 11.65
	12/12/2017	EW 2A-121217	14 J	14	24	15 J	9.3	48	29
5-W-43	3/28/2017	5-W-43-032817	28	14	24	26 J	9.4	48	54
	6/28/2017	5-W-43-062817	21 J	14	24	32 J	9.3	48	53
	9/26/2017	5-W-43-092617	39 J	14	24	18 J	9.3	48	57
	12/13/2017	5-W-43-121317	< 22 UJ	14	24	< 33 UJ	9.3	47	< 55
2A-W-40	3/29/2017	2A-W-40-032917	< 24	14	24	< 14 UJ	14	14	< 14
	6/28/2017	2A-W-40-062817	< 24	14	24	< 48	9.3	48	< 11.65
	9/27/2017	2A-W-40-092717	28 J	14	24	20 J	9.3	48	48
	12/13/2017	2A-W-40-121317	< 14 UJ	14	24	< 14 UJ	9.3	48	< 28
2A-W-41	3/29/2017	2A-W-41-032917	580	14	24	250 B	9.3	48	**830**
	6/28/2017	2A-W-41-062817	110	14	24	59	9.4	48	169
	9/27/2017	2A-W-41-092717	320	14	24	130	9.3	47	450
	12/13/2017	2A-W-41-121317	130 J	14	24	62 J	9.4	48	192
1B-W-23	3/29/2017	1B-W-23-032917	< 24	14	24	< 10 UJ	10	10	< 12
	6/28/2017	1B-W-23-062817	25	14	24	31 J	9.4	48	56
	9/27/2017	1B-W-23-092717	77	14	24	97	9.3	47	174
	12/12/2017	1B-W-23-121217	22 J	14	24	37 J	9.4	48	59

Table 6
2017 Total Petroleum Hydrocarbon Concentrations in Groundwater
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Well	Date	Sample Identification	DRO (µg/l)[1]			ORO (µg/l)[1]			Calculated NWTPH-Dx[2] (µg/l)
			Result	MDL	MRL	Result	MDL	MRL	
2A-W-42	3/29/2017	2A-W-42-032917	85	15	25	< 46 UJ	46	46	108
	6/28/2017	2A-W-42-062817	57	14	24	20 J	9.4	48	77
	9/26/2017	2A-W-42-092617	95	14	24	89	9.3	47	184
	12/12/2017	2A-W-42-121217	170 J	14	24	90	9.3	48	260
Former Air Sparge Area Monitoring Wells									
1B-W-3	3/29/2017	1B-W-3-032917	31	14	24	< 15 UJ	15	15	38.5
	6/28/2017	1B-W-3-062817	30	14	24	28 J	9.4	48	58
	9/27/2017	1B-W-3-092717	21 J	14	24	23 J	9.3	48	44
	12/13/2017	1B-W-3-121317	< 37 U	14	24	< 30 UJ	9.4	48	< 67
1C-W-7	3/29/2017	1C-W-7-032917	78	14	24	< 30 UJ	30	30	93
	6/27/2017	1C-W-7-062717	38	14	24	15 J	9.4	48	53
	9/26/2017	1C-W-7-092617	30	14	24	20 J	9.4	48	50
	12/12/2017	1C-W-7-121217	160 J	14	24	87	9.4	48	247
1C-W-8	3/29/2017	1C-W-8-032917	97	15	27	< 53 U	53	53	123.5
	6/27/2017	1C-W-8-062717	26	14	24	14 J	9.4	48	40
	9/27/2017	1C-W-8-092717	23 J	14	24	22 J	9.3	47	45
	12/12/2017	1C-W-8-121217	67 J	14	24	51	9.3	48	118
Former Maloney Creek Zone Monitoring Wells									
MW-3	3/30/2017	MW-3-033017	34	15	25	< 14 UJ	14	14	41
	6/28/2017	MW-3-062817	300	15	25	310	9.9	50	610
	9/26/2017	MW-3-092617	30 J	14	24	41 J	9.3	48	71
	12/12/2017	MW-3-121217	1,500 J	14	24	1,900	9.3	48	3,400
	12/12/2017[3]	MW-3-121217	36 J	14	100	22 J	9.3	240	58[3]
MW-4	3/30/2017	MW-4-033017	67	14	24	120 J	9.4	48	187
	6/28/2017	Not sampled							
	9/26/2017	MW-4-092617	110 J	14	24	78 J	9.4	48	188
	12/12/2017	MW-4-121217	110 J	14	24	210	9.3	48	320

Table 6
2017 Total Petroleum Hydrocarbon Concentrations in Groundwater
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Well	Date	Sample Identification	DRO (µg/l)[1]			ORO (µg/l)[1]			Calculated NWTPH-Dx[2] (µg/l)
			Result	MDL	MRL	Result	MDL	MRL	
2A-W-9	3/30/2017	2A-W-9-033017	450	15	25	110	9.9	50	560
	6/28/2017	2A-W-9-062817	120	14	24	84	9.3	48	204
	9/26/2017	2A-W-9-092617	460 J	14	24	320 J	9.3	48	780
	12/12/2017	2A-W-9-121217	240 J	14	24	230	9.4	48	470
2A-W-10	3/30/2017	2A-W-10-033017	110	14	24	210	9.3	48	320
	6/28/2017	2A-W-10-062817	67	14	24	200	9.3	48	267
	9/26/2017	2A-W-10-092617	92 J	14	24	160 J	9.4	48	252
	12/12/2017	2A-W-10-121217	100 J	14	24	230	9.3	47	330
2B-W-4	3/28/2017	2B-W-4-032817	40	14	24	29 J	9.3	48	69
	6/29/2017	2A-W-4-062917	< 24	14	24	< 48	9.5	48	< 11.75
	9/26/2017	2B-W-4-092617	< 24 UJ	14	24	< 48 UJ	9.3	48	< 11.65
	12/13/2017	2B-W-4-121317	< 24	14	24	< 49	9.6	49	< 11.8
Site-Wide Monitoring Wells									
1A-W-4	3/28/2017	1A-W-4-032817	23 J	14	24	30 J	9.3	47	53
	9/27/2017	1A-W-4-092717	18 J	14	24	11 J	9.3	47	29
1B-W-2	3/29/2017	1B-W-2-032917	18 J	14	24	< 18 UJ	18	18	27
	9/27/2017	1B-W-2-092717	46 J	14	24	53 J	9.3	48	99
1C-W-1	3/29/2017	1C-W-1-032917	38	14	24	< 21 UJ	21	21	48.5
	6/27/2017	1C-W-1-062717	< 24	14	24	< 48	9.3	48	< 11.65
	9/27/2017	1C-W-1-092717	26 J	14	24	21 J	9.3	48	47
	12/12/2017	1C-W-1-121217	50 J	14	24	45 J	9.3	48	95
1C-W-3	3/29/2017	1C-W-3-032917	< 24	14	24	< 48	9.3	48	< 11.65
	9/26/2017	1C-W-3-092617	19 J	14	24	13 J	9.3	48	32
1C-W-4	3/29/2017	1C-W-4-032917	140	14	24	< 57 U	57	57	168.5
	9/26/2017	1C-W-4-092617	47	14	24	26 J	9.3	47	73
MW-16	3/28/2017	MW-16-032817	25	14	24	22 J	9.3	48	47
	9/26/2017	MW-16-092617	< 24 UJ	14	24	< 48 UJ	9.4	48	< 11.7

Table 6
2017 Total Petroleum Hydrocarbon Concentrations in Groundwater
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067

Well	Date	Sample Identification	DRO (µg/l)[1]			ORO (µg/l)[1]			Calculated NWTPH-Dx[2] (µg/l)
			Result	MDL	MRL	Result	MDL	MRL	
MW-38R	3/29/2017	Well inaccessible (beneath ecology block)							
	9/26/2017	MW-38R-092617	74 J	14	24	57 J	9.3	47	131

NOTES:

Results in **bold** denote concentrations exceeding the 208 µg/l NWTPH-Dx cleanup level (Levee Zone wells) or the 477 µg/l NWTPH-Dx remediation level (wells outside the Levee Zone and between the railyard and the groundwater CPOC).

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

[1]Analyzed by Washington State Department of Ecology (Ecology) Method NWTPH-Dx without silica gel cleanup.

[2]Sum of DRO and ORO, using half the method detection limit for non-detect results.

[3]Sample reanalyzed by Ecology Method NWTPH-Dx with silica gel cleanup.

B = compound was detected in the method blank and the groundwater sample

CPOC = conditional point of compliance

DRO = total petroleum hydrocarbons as diesel-range organics

J = reported concentration is an estimated value

MDL = method detection limit

MRL = method reporting limit

µg/l = micrograms per liter

ORO = total petroleum hydrocarbons as oil-range organics

U = analyte was determined to be not detected based on data validation review

UJ = not detected at or exceeding the reported concentration; the reported concentration is an estimated value

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

2017 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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 580-67195-1
Client Project/Site: BNSF Skykomish Ground Water
Sampling Event: Skykomish HCC System

For:
BNSF Railway Company
605 Puyallup Avenue
Tacoma, Washington 98421

Attn: e procurement

Kristine D. Allen

Authorized for release by:
4/14/2017 4:09:18 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

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Job ID: 580-67195-1

Laboratory: TestAmerica Seattle

Narrative

Receipt

The samples were received on 3/31/2017 1:13 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 10 coolers at receipt time were 0.2º C, 0.3º C, 1.0º C, 1.2º C, 1.5º C, 1.5º C, 1.7º C, 1.9º C, 2.1º C and 2.4º C.

Receipt Exceptions

The following sample was not listed on the Chain-of-Custody (COC): 2A-W-410-032917 (580-67195-61) with a sample date/time of 3/29/2017 1240hr. The client verified that this sample needs to be added to the bottom of the login and NWTPH-Dx analysis was assigned.

GC Semi VOA

Method(s) NWTPH-Dx: The following continuing calibration verification (CCV) standard associated with batch 580-242506 recovered outside acceptance criteria for %D for surrogate o-Terphenyl. Since the %Rec is within the acceptance criteria for the surrogate in associated samples and target analytes were within %D criteria, the data have been reported. (CCVRT 580-242506/3)

Method(s) NWTPH-Dx: The following sample 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-BD-032717 (580-67195-7) and S2-BU-032717 (580-67195-8).

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: S4-BU-032717 (580-67195-19), S4-CU-032717 (580-67195-20) and 5-W-18-032817 (580-67195-21).

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-43-032817 (580-67195-27), EW-1-032817 (580-67195-28), EW-10-032817 (580-67195-29), GW-1-032817 (580-67195-30), GW-10-032817 (580-67195-31), GW-2-032817 (580-67195-32), GW-20-032817 (580-67195-33), 5-W-56-032817 (580-67195-34) and 5-W-55-032817 (580-67195-35).

Method(s) NWTPH-Dx: The Diesel Range Organics (DRO) concentration reported for the following samples is due to the presence of discrete peaks: 1A-W-4-032817 (580-67195-36), MW-16-032817 (580-67195-37) and 2B-W-4-032817 (580-67195-38).

Method(s) NWTPH-Dx: The method blank for preparation batch 580-242843 and analytical batch 580-242935 contained Motor Oil (>C24-C36) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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: GW-3-032917 (580-67195-40), GW-30-032917 (580-67195-41), 1B-W-3-032917 (580-67195-42), 1B-W-2-032917 (580-67195-43), 1C-W-7-032917 (580-67195-44), 2A-W-42-032917 (580-67195-45), 5-W-54-032917 (580-67195-46), 5-W-51-032917 (580-67195-47), 2A-W-41-032917 (580-67195-49), EW-2A-032917 (580-67195-50), GW-4-032917 (580-67195-51), 1C-W-8-032917 (580-67195-52), 1C-W-1-032917 (580-67195-53), 1C-W-4-032917 (580-67195-54), MW-3-033017 (580-67195-56), MW-4-033017 (580-67195-57) and 2A-W-410-032917 (580-67195-61).

Method(s) NWTPH-Dx: The following sample was diluted to bring the concentration of target analytes within the calibration range: 5-W-51-032917 (580-67195-47). Elevated reporting limits (RLs) are provided.

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-51-032917 (580-67195-47), 2A-W-10-033017 (580-67195-58), 2A-W-9-033017 (580-67195-59) and 2A-W-90-033017 (580-67195-60).

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

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S1-AD-032717
Date Collected: 03/27/17 13:15
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.017	J	0.024	0.014	mg/L		04/06/17 13:22	04/07/17 13:28	1
Motor Oil (>C24-C36)	0.024	J	0.048	0.0094	mg/L		04/06/17 13:22	04/07/17 13:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*50 - 150*	*04/06/17 13:22*	*04/07/17 13:28*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S1-AU-032717
Date Collected: 03/27/17 13:20
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.017	J	0.024	0.014	mg/L		04/06/17 13:22	04/07/17 13:51	1
Motor Oil (>C24-C36)	0.016	J	0.048	0.0093	mg/L		04/06/17 13:22	04/07/17 13:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*04/06/17 13:22*	*04/07/17 13:51*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S1-BD-032717
Date Collected: 03/27/17 13:23
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.032		0.026	0.015	mg/L		04/06/17 13:22	04/07/17 14:13	1
Motor Oil (>C24-C36)	0.038	J	0.052	0.010	mg/L		04/06/17 13:22	04/07/17 14:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*80*		*50 - 150*	*04/06/17 13:22*	*04/07/17 14:13*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S1-BU-032717
Date Collected: 03/27/17 13:45
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.019	J	0.024	0.014	mg/L		04/06/17 13:22	04/07/17 14:36	1
Motor Oil (>C24-C36)	0.021	J	0.048	0.0094	mg/L		04/06/17 13:22	04/07/17 14:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*50 - 150*	*04/06/17 13:22*	*04/07/17 14:36*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S2-AD-032717
Date Collected: 03/27/17 13:55
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.024		0.024	0.014	mg/L		04/06/17 13:22	04/07/17 14:58	1
Motor Oil (>C24-C36)	0.013	J	0.048	0.0093	mg/L		04/06/17 13:22	04/07/17 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*81*		*50 - 150*	*04/06/17 13:22*	*04/07/17 14:58*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S2-AU-032717
Date Collected: 03/27/17 14:00
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.024		0.024	0.014	mg/L		04/06/17 13:22	04/07/17 15:21	1
Motor Oil (>C24-C36)	0.011	J	0.047	0.0093	mg/L		04/06/17 13:22	04/07/17 15:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*76*		*50 - 150*	*04/06/17 13:22*	*04/07/17 15:21*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S2-BD-032717
Date Collected: 03/27/17 14:25
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.040		0.024	0.014	mg/L		04/06/17 13:22	04/07/17 16:05	1
Motor Oil (>C24-C36)	0.071		0.048	0.0093	mg/L		04/06/17 13:22	04/07/17 16:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*80*		*50 - 150*	*04/06/17 13:22*	*04/07/17 16:05*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S2-BU-032717
Date Collected: 03/27/17 14:30
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.44		0.025	0.015	mg/L		04/06/17 13:22	04/07/17 16:28	1
Motor Oil (>C24-C36)	0.38		0.050	0.0099	mg/L		04/06/17 13:22	04/07/17 16:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*65*		*50 - 150*	*04/06/17 13:22*	*04/07/17 16:28*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S3-AD-032717
Date Collected: 03/27/17 15:45
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-9
Matrix: Water

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		0.024	0.014	mg/L		04/07/17 09:37	04/09/17 21:59	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		04/07/17 09:37	04/09/17 21:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*82*		*50 - 150*	*04/07/17 09:37*	*04/09/17 21:59*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S3-BD-032717
Date Collected: 03/27/17 15:50
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-10
Matrix: Water

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		0.024	0.014	mg/L		04/07/17 09:37	04/09/17 22:21	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		04/07/17 09:37	04/09/17 22:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*85*		*50 - 150*	*04/07/17 09:37*	*04/09/17 22:21*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S3-CD-032717
Date Collected: 03/27/17 15:55
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-11
Matrix: Water

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		0.024	0.014	mg/L		04/07/17 09:37	04/09/17 22:43	1
Motor Oil (>C24-C36)	**0.028**	**J**	0.048	0.0093	mg/L		04/07/17 09:37	04/09/17 22:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*50 - 150*	*04/07/17 09:37*	*04/09/17 22:43*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S3-AU-032717
Date Collected: 03/27/17 16:15
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-12
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.018**	**J**	0.024	0.014	mg/L		04/07/17 15:07	04/09/17 23:05	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		04/07/17 15:07	04/09/17 23:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*81*		*50 - 150*	*04/07/17 15:07*	*04/09/17 23:05*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S3-BU-032717
Date Collected: 03/27/17 16:20
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-13
Matrix: Water

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		0.024	0.014	mg/L		04/07/17 15:07	04/09/17 23:49	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		04/07/17 15:07	04/09/17 23:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*50 - 150*	*04/07/17 15:07*	*04/09/17 23:49*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S3-CU-032717
Date Collected: 03/27/17 16:25
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-14
Matrix: Water

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		0.024	0.014	mg/L		04/07/17 15:07	04/10/17 00:11	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		04/07/17 15:07	04/10/17 00:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*72*		*50 - 150*	*04/07/17 15:07*	*04/10/17 00:11*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S4-AD-032717
Date Collected: 03/27/17 17:15
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-15
Matrix: Water

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		0.024	0.014	mg/L		04/07/17 15:07	04/10/17 00:32	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		04/07/17 15:07	04/10/17 00:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*04/07/17 15:07*	*04/10/17 00:32*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S4-BD-032717
Date Collected: 03/27/17 17:20
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-16
Matrix: Water

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		0.024	0.014	mg/L		04/07/17 15:07	04/10/17 00:54	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		04/07/17 15:07	04/10/17 00:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*85*		*50 - 150*	*04/07/17 15:07*	*04/10/17 00:54*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S4-CD-032717
Date Collected: 03/27/17 17:25
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-17
Matrix: Water

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		0.024	0.014	mg/L		04/07/17 15:07	04/10/17 01:16	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		04/07/17 15:07	04/10/17 01:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*04/07/17 15:07*	*04/10/17 01:16*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S4-AU-032717
Date Collected: 03/27/17 17:45
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-18
Matrix: Water

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		0.024	0.014	mg/L		04/07/17 15:07	04/10/17 01:38	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		04/07/17 15:07	04/10/17 01:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*50 - 150*	*04/07/17 15:07*	*04/10/17 01:38*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S4-BU-032717
Date Collected: 03/27/17 18:10
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-19
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.033		0.024	0.014	mg/L		04/07/17 15:07	04/10/17 02:00	1
Motor Oil (>C24-C36)	0.041	J	0.047	0.0093	mg/L		04/07/17 15:07	04/10/17 02:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*80*		*50 - 150*	*04/07/17 15:07*	*04/10/17 02:00*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: S4-CU-032717
Date Collected: 03/27/17 18:15
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-20
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.036**		0.026	0.015	mg/L		04/07/17 15:07	04/10/17 02:22	1
Motor Oil (>C24-C36)	ND		0.051	0.010	mg/L		04/07/17 15:07	04/10/17 02:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*85*		*50 - 150*	*04/07/17 15:07*	*04/10/17 02:22*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 5-W-18-032817
Date Collected: 03/28/17 09:45
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-21
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.058		0.026	0.015	mg/L		04/07/17 15:07	04/10/17 02:44	1
Motor Oil (>C24-C36)	0.055		0.053	0.010	mg/L		04/07/17 15:07	04/10/17 02:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*59*		*50 - 150*	*04/07/17 15:07*	*04/10/17 02:44*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 5-W-19-032817
Date Collected: 03/28/17 09:50
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-22
Matrix: Water

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		0.024	0.014	mg/L		04/07/17 15:07	04/10/17 03:06	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		04/07/17 15:07	04/10/17 03:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*85*		*50 - 150*	*04/07/17 15:07*	*04/10/17 03:06*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 5-W-15-032817
Date Collected: 03/28/17 11:12
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-23
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.015	J	0.024	0.014	mg/L		04/07/17 15:07	04/10/17 03:49	1
Motor Oil (>C24-C36)	0.013	J	0.048	0.0093	mg/L		04/07/17 15:07	04/10/17 03:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*04/07/17 15:07*	*04/10/17 03:49*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 5-W-17-032817
Date Collected: 03/28/17 11:15
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-24
Matrix: Water

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		0.024	0.014	mg/L		04/11/17 09:47	04/12/17 10:16	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		04/11/17 09:47	04/12/17 10:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*68*		*50 - 150*	*04/11/17 09:47*	*04/12/17 10:16*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 5-W-16-032817
Date Collected: 03/28/17 12:30
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-25
Matrix: Water

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		0.024	0.014	mg/L		04/11/17 13:46	04/12/17 10:43	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		04/11/17 13:46	04/12/17 10:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*69*		*50 - 150*	*04/11/17 13:46*	*04/12/17 10:43*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 5-W-14-032817
Date Collected: 03/28/17 12:32
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-26
Matrix: Water

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		0.026	0.015	mg/L		04/11/17 13:46	04/12/17 11:07	1
Motor Oil (>C24-C36)	ND		0.053	0.010	mg/L		04/11/17 13:46	04/12/17 11:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*74*		*50 - 150*	*04/11/17 13:46*	*04/12/17 11:07*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 5-W-43-032817
Date Collected: 03/28/17 14:34
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-27
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.028		0.024	0.014	mg/L		04/11/17 13:46	04/12/17 11:32	1
Motor Oil (>C24-C36)	0.026	J	0.048	0.0094	mg/L		04/11/17 13:46	04/12/17 11:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*71*		*50 - 150*	*04/11/17 13:46*	*04/12/17 11:32*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: EW-1-032817
Date Collected: 03/28/17 14:35
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-28
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.026	J	0.027	0.016	mg/L		04/11/17 13:46	04/12/17 11:56	1
Motor Oil (>C24-C36)	0.025	J	0.054	0.011	mg/L		04/11/17 13:46	04/12/17 11:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*70*		*50 - 150*	*04/11/17 13:46*	*04/12/17 11:56*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: EW-10-032817
Date Collected: 03/28/17 14:36
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-29
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.032		0.024	0.014	mg/L		04/11/17 13:46	04/12/17 12:21	1
Motor Oil (>C24-C36)	0.030	J	0.048	0.0093	mg/L		04/11/17 13:46	04/12/17 12:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*72*		*50 - 150*	*04/11/17 13:46*	*04/12/17 12:21*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: GW-1-032817
Date Collected: 03/28/17 15:40
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-30
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.029		0.024	0.014	mg/L		04/11/17 13:46	04/12/17 13:11	1
Motor Oil (>C24-C36)	0.039	J	0.048	0.0094	mg/L		04/11/17 13:46	04/12/17 13:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*77*		*50 - 150*	*04/11/17 13:46*	*04/12/17 13:11*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: GW-10-032817
Date Collected: 03/28/17 15:42
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-31
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.038		0.024	0.014	mg/L		04/11/17 13:46	04/12/17 13:37	1
Motor Oil (>C24-C36)	0.044	J	0.048	0.0094	mg/L		04/11/17 13:46	04/12/17 13:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*50 - 150*	*04/11/17 13:46*	*04/12/17 13:37*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: GW-2-032817
Date Collected: 03/28/17 16:00
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-32
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.029		0.024	0.014	mg/L		04/11/17 13:46	04/12/17 14:02	1
Motor Oil (>C24-C36)	0.012	J	0.048	0.0094	mg/L		04/11/17 13:46	04/12/17 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*50 - 150*	*04/11/17 13:46*	*04/12/17 14:02*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: GW-20-032817
Date Collected: 03/28/17 16:01
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-33
Matrix: Water

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		0.026	0.015	mg/L		04/11/17 13:46	04/12/17 14:28	1
Motor Oil (>C24-C36)	0.044	J	0.052	0.010	mg/L		04/11/17 13:46	04/12/17 14:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*78*		*50 - 150*	*04/11/17 13:46*	*04/12/17 14:28*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 5-W-56-032817
Date Collected: 03/28/17 17:10
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-34
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.27		0.024	0.014	mg/L		04/11/17 13:46	04/12/17 14:53	1
Motor Oil (>C24-C36)	0.35		0.049	0.0096	mg/L		04/11/17 13:46	04/12/17 14:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*81*		*50 - 150*	*04/11/17 13:46*	*04/12/17 14:53*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 5-W-55-032817
Date Collected: 03/28/17 17:15
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-35
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.078		0.024	0.014	mg/L		04/11/17 13:46	04/12/17 15:19	1
Motor Oil (>C24-C36)	0.065		0.048	0.0094	mg/L		04/11/17 13:46	04/12/17 15:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*81*		*50 - 150*	*04/11/17 13:46*	*04/12/17 15:19*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 1A-W-4-032817
Date Collected: 03/28/17 08:35
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-36
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.023	J	0.024	0.014	mg/L		04/11/17 16:59	04/12/17 16:02	1
Motor Oil (>C24-C36)	0.030	J	0.047	0.0093	mg/L		04/11/17 16:59	04/12/17 16:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*50 - 150*	*04/11/17 16:59*	*04/12/17 16:02*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: MW-16-032817
Date Collected: 03/28/17 11:25
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-37
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.025		0.024	0.014	mg/L		04/11/17 16:59	04/12/17 16:24	1
Motor Oil (>C24-C36)	0.022	J	0.048	0.0093	mg/L		04/11/17 16:59	04/12/17 16:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*85*		*50 - 150*	*04/11/17 16:59*	*04/12/17 16:24*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 2B-W-4-032817
Date Collected: 03/28/17 10:15
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-38
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.040		0.024	0.014	mg/L		04/11/17 16:59	04/12/17 16:47	1
Motor Oil (>C24-C36)	0.029	J	0.048	0.0093	mg/L		04/11/17 16:59	04/12/17 16:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*80*		*50 - 150*	*04/11/17 16:59*	*04/12/17 16:47*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 1B-W-23-032917
Date Collected: 03/29/17 09:50
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-39
Matrix: Water

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		0.024	0.014	mg/L		04/12/17 09:51	04/12/17 23:51	1
Motor Oil (>C24-C36)	**0.010**	**J B**	0.048	0.0094	mg/L		04/12/17 09:51	04/12/17 23:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*65*		*50 - 150*	*04/12/17 09:51*	*04/12/17 23:51*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: GW-3-032917
Date Collected: 03/29/17 09:51
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-40
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.38		0.026	0.015	mg/L		04/12/17 09:51	04/13/17 00:19	1
Motor Oil (>C24-C36)	0.091	B	0.051	0.010	mg/L		04/12/17 09:51	04/13/17 00:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*71*		*50 - 150*	*04/12/17 09:51*	*04/13/17 00:19*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: GW-30-032917
Date Collected: 03/29/17 09:52
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-41
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.37		0.024	0.014	mg/L		04/12/17 09:51	04/13/17 00:44	1
Motor Oil (>C24-C36)	0.086	B	0.048	0.0094	mg/L		04/12/17 09:51	04/13/17 00:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*67*		*50 - 150*	*04/12/17 09:51*	*04/13/17 00:44*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 1B-W-3-032917
Date Collected: 03/29/17 10:58
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-42
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.031		0.024	0.014	mg/L		04/12/17 09:51	04/13/17 01:09	1
Motor Oil (>C24-C36)	0.015	J B	0.048	0.0094	mg/L		04/12/17 09:51	04/13/17 01:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*65*		*50 - 150*	*04/12/17 09:51*	*04/13/17 01:09*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 1B-W-2-032917
Date Collected: 03/29/17 11:00
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-43
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.018	J	0.024	0.014	mg/L		04/12/17 09:51	04/13/17 01:33	1
Motor Oil (>C24-C36)	0.018	J B	0.048	0.0093	mg/L		04/12/17 09:51	04/13/17 01:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*63*		*50 - 150*	*04/12/17 09:51*	*04/13/17 01:33*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 1C-W-7-032917
Date Collected: 03/29/17 12:10
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-44
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.078		0.024	0.014	mg/L		04/12/17 09:51	04/13/17 01:58	1
Motor Oil (>C24-C36)	0.030	J B	0.048	0.0093	mg/L		04/12/17 09:51	04/13/17 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*65*		*50 - 150*	*04/12/17 09:51*	*04/13/17 01:58*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 2A-W-42-032917
Date Collected: 03/29/17 12:12
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-45
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.085		0.025	0.015	mg/L		04/12/17 09:51	04/13/17 02:23	1
Motor Oil (>C24-C36)	0.046	J B	0.050	0.0098	mg/L		04/12/17 09:51	04/13/17 02:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*67*		*50 - 150*	*04/12/17 09:51*	*04/13/17 02:23*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 5-W-54-032917
Date Collected: 03/29/17 09:00
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-46
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.017	J	0.024	0.014	mg/L		04/12/17 09:51	04/13/17 02:48	1
Motor Oil (>C24-C36)	0.013	J B	0.048	0.0093	mg/L		04/12/17 09:51	04/13/17 02:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*69*		*50 - 150*	*04/12/17 09:51*	*04/13/17 02:48*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 5-W-51-032917
Date Collected: 03/29/17 10:00
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-47
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	2.0		0.024	0.014	mg/L		04/12/17 09:51	04/13/17 03:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*74*		*50 - 150*	*04/12/17 09:51*	*04/13/17 03:12*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (>C24-C36)	1.2	B	0.19	0.037	mg/L		04/12/17 09:51	04/13/17 17:09	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*74*		*50 - 150*	*04/12/17 09:51*	*04/13/17 17:09*	*4*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 2A-W-40-032917
Date Collected: 03/29/17 11:05
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-48
Matrix: Water

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		0.024	0.014	mg/L		04/12/17 09:51	04/13/17 04:02	1
Motor Oil (>C24-C36)	**0.014**	**J B**	0.048	0.0093	mg/L		04/12/17 09:51	04/13/17 04:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*68*		*50 - 150*	*04/12/17 09:51*	*04/13/17 04:02*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 2A-W-41-032917
Date Collected: 03/29/17 12:35
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-49
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.58		0.024	0.014	mg/L		04/12/17 09:51	04/13/17 04:26	1
Motor Oil (>C24-C36)	0.25	B	0.048	0.0093	mg/L		04/12/17 09:51	04/13/17 04:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*68*		*50 - 150*	*04/12/17 09:51*	*04/13/17 04:26*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: EW-2A-032917
Date Collected: 03/29/17 14:18
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-50
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.018	J	0.024	0.014	mg/L		04/12/17 09:51	04/13/17 04:54	1
Motor Oil (>C24-C36)	0.020	J B	0.048	0.0094	mg/L		04/12/17 09:51	04/13/17 04:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*70*		*50 - 150*	*04/12/17 09:51*	*04/13/17 04:54*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: GW-4-032917
Date Collected: 03/29/17 14:20
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-51
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.020	J	0.024	0.014	mg/L		04/12/17 09:51	04/12/17 20:02	1
Motor Oil (>C24-C36)	0.020	J B	0.048	0.0094	mg/L		04/12/17 09:51	04/12/17 20:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*50 - 150*	*04/12/17 09:51*	*04/12/17 20:02*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 1C-W-8-032917
Date Collected: 03/29/17 15:25
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-52
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.097		0.027	0.015	mg/L		04/12/17 09:51	04/12/17 20:27	1
Motor Oil (>C24-C36)	0.053	B	0.053	0.010	mg/L		04/12/17 09:51	04/12/17 20:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*74*		*50 - 150*	*04/12/17 09:51*	*04/12/17 20:27*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 1C-W-1-032917
Date Collected: 03/29/17 15:30
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-53
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.038		0.024	0.014	mg/L		04/12/17 09:51	04/12/17 20:53	1
Motor Oil (>C24-C36)	0.021	J B	0.048	0.0094	mg/L		04/12/17 09:51	04/12/17 20:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*68*		*50 - 150*	*04/12/17 09:51*	*04/12/17 20:53*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 1C-W-4-032917
Date Collected: 03/29/17 16:17
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-54
Matrix: Water

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		0.024	0.014	mg/L		04/12/17 09:51	04/12/17 21:18	1
Motor Oil (>C24-C36)	0.057	B	0.049	0.0096	mg/L		04/12/17 09:51	04/12/17 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*75*		*50 - 150*	*04/12/17 09:51*	*04/12/17 21:18*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 1C-W-3-032917
Date Collected: 03/29/17 16:20
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-55
Matrix: Water

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		0.024	0.014	mg/L		04/12/17 09:51	04/12/17 21:46	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		04/12/17 09:51	04/12/17 21:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*71*		*50 - 150*	*04/12/17 09:51*	*04/12/17 21:46*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: MW-3-033017
Date Collected: 03/30/17 10:33
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-56
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.034		0.025	0.015	mg/L		04/12/17 09:51	04/12/17 22:11	1
Motor Oil (>C24-C36)	0.014	J B	0.050	0.0097	mg/L		04/12/17 09:51	04/12/17 22:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*50 - 150*	*04/12/17 09:51*	*04/12/17 22:11*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: MW-4-033017
Date Collected: 03/30/17 10:40
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-57
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.067		0.024	0.014	mg/L		04/12/17 09:51	04/12/17 22:36	1
Motor Oil (>C24-C36)	0.12	B	0.048	0.0094	mg/L		04/12/17 09:51	04/12/17 22:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*70*		*50 - 150*	*04/12/17 09:51*	*04/12/17 22:36*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 2A-W-10-033017
Date Collected: 03/30/17 11:30
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-58
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.11		0.024	0.014	mg/L		04/12/17 14:14	04/13/17 18:50	1
Motor Oil (>C24-C36)	0.21		0.048	0.0093	mg/L		04/12/17 14:14	04/13/17 18:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*50 - 150*	*04/12/17 14:14*	*04/13/17 18:50*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 2A-W-9-033017
Date Collected: 03/30/17 11:33
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-59
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.45		0.025	0.015	mg/L		04/12/17 14:14	04/13/17 19:15	1
Motor Oil (>C24-C36)	0.11		0.050	0.0099	mg/L		04/12/17 14:14	04/13/17 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*50 - 150*	*04/12/17 14:14*	*04/13/17 19:15*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 2A-W-90-033017
Date Collected: 03/30/17 11:34
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-60
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.47		0.026	0.015	mg/L		04/12/17 14:14	04/13/17 20:04	1
Motor Oil (>C24-C36)	0.11		0.051	0.010	mg/L		04/12/17 14:14	04/13/17 20:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*04/12/17 14:14*	*04/13/17 20:04*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 2A-W-410-032917
Date Collected: 03/29/17 12:40
Date Received: 03/31/17 13:13

Lab Sample ID: 580-67195-61
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.64		0.024	0.014	mg/L		04/12/17 09:51	04/12/17 23:26	1
Motor Oil (>C24-C36)	0.26	B	0.048	0.0093	mg/L		04/12/17 09:51	04/12/17 23:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*75*		*50 - 150*	*04/12/17 09:51*	*04/12/17 23:26*	*1*

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

Lab Sample ID: MB 580-242401/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242506 — **Prep Batch: 242401**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		04/06/17 13:22	04/07/17 11:58	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		04/06/17 13:22	04/07/17 11:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*04/06/17 13:22*	*04/07/17 11:58*	*1*

Lab Sample ID: LCS 580-242401/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242506 — **Prep Batch: 242401**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	0.503	0.430		mg/L		85	59 - 120
Motor Oil (>C24-C36)	0.503	0.463		mg/L		92	53 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*75*		*50 - 150*

Lab Sample ID: LCSD 580-242401/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242506 — **Prep Batch: 242401**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	0.503	0.409		mg/L		81	59 - 120	5	27
Motor Oil (>C24-C36)	0.503	0.432		mg/L		86	53 - 129	7	19

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*72*		*50 - 150*

Lab Sample ID: MB 580-242483/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242622 — **Prep Batch: 242483**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		04/07/17 09:37	04/09/17 19:47	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		04/07/17 09:37	04/09/17 19:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*04/07/17 09:37*	*04/09/17 19:47*	*1*

Lab Sample ID: LCS 580-242483/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242622 — **Prep Batch: 242483**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	0.503	0.389		mg/L		77	59 - 120
Motor Oil (>C24-C36)	0.503	0.412		mg/L		82	53 - 129

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

Lab Sample ID: LCS 580-242483/2-A
Matrix: Water
Analysis Batch: 242622

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242483

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	77		50 - 150

Lab Sample ID: LCSD 580-242483/3-A
Matrix: Water
Analysis Batch: 242622

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 242483

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			0.503	0.414		mg/L		82	59 - 120	6	27
Motor Oil (>C24-C36)			0.503	0.436		mg/L		87	53 - 129	6	19

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	81		50 - 150

Lab Sample ID: MB 580-242738/1-A
Matrix: Water
Analysis Batch: 242800

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 242738

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		04/11/17 09:47	04/12/17 05:16	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		04/11/17 09:47	04/12/17 05:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	68		50 - 150	04/11/17 09:47	04/12/17 05:16	1

Lab Sample ID: LCS 580-242738/2-A
Matrix: Water
Analysis Batch: 242800

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242738

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)			0.503	0.375		mg/L		74	59 - 120
Motor Oil (>C24-C36)			0.503	0.418		mg/L		83	53 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	78		50 - 150

Lab Sample ID: LCSD 580-242738/3-A
Matrix: Water
Analysis Batch: 242800

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 242738

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			0.503	0.431		mg/L		86	59 - 120	14	27
Motor Oil (>C24-C36)			0.503	0.452		mg/L		90	53 - 129	8	19

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	82		50 - 150

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

Lab Sample ID: MB 580-242802/1-A
Matrix: Water
Analysis Batch: 242868

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 242802

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		04/11/17 16:59	04/12/17 14:54	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		04/11/17 16:59	04/12/17 14:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*50 - 150*	*04/11/17 16:59*	*04/12/17 14:54*	*1*

Lab Sample ID: LCS 580-242802/2-A
Matrix: Water
Analysis Batch: 242868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242802

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	0.503	0.450		mg/L		90	59 - 120
Motor Oil (>C24-C36)	0.503	0.489		mg/L		97	53 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*82*		*50 - 150*

Lab Sample ID: LCSD 580-242802/3-A
Matrix: Water
Analysis Batch: 242868

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 242802

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	0.503	0.459		mg/L		91	59 - 120	2	27
Motor Oil (>C24-C36)	0.503	0.507		mg/L		101	53 - 129	4	19

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*82*		*50 - 150*

Lab Sample ID: MB 580-242843/1-A
Matrix: Water
Analysis Batch: 242935

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 242843

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		04/12/17 09:51	04/12/17 18:45	1
Motor Oil (>C24-C36)	0.0185	J	0.050	0.0098	mg/L		04/12/17 09:51	04/12/17 18:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*68*		*50 - 150*	*04/12/17 09:51*	*04/12/17 18:45*	*1*

Lab Sample ID: LCS 580-242843/2-A
Matrix: Water
Analysis Batch: 242935

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242843

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	0.503	0.373		mg/L		74	59 - 120
Motor Oil (>C24-C36)	0.503	0.417		mg/L		83	53 - 129

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

Lab Sample ID: LCS 580-242843/2-A
Matrix: Water
Analysis Batch: 242935

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242843

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	81		50 - 150

Lab Sample ID: LCSD 580-242843/3-A
Matrix: Water
Analysis Batch: 242935

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 242843

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			0.503	0.407		mg/L		81	59 - 120	9	27
Motor Oil (>C24-C36)			0.503	0.440		mg/L		87	53 - 129	5	19

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	86		50 - 150

Lab Sample ID: MB 580-242890/1-A
Matrix: Water
Analysis Batch: 243009

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 242890

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		04/12/17 14:14	04/13/17 17:35	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		04/12/17 14:14	04/13/17 17:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	81		50 - 150	04/12/17 14:14	04/13/17 17:35	1

Lab Sample ID: LCS 580-242890/2-A
Matrix: Water
Analysis Batch: 243009

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242890

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)			0.503	0.439		mg/L		87	59 - 120
Motor Oil (>C24-C36)			0.503	0.490		mg/L		97	53 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	90		50 - 150

Lab Sample ID: LCSD 580-242890/3-A
Matrix: Water
Analysis Batch: 243009

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 242890

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			0.503	0.490		mg/L		97	59 - 120	11	27
Motor Oil (>C24-C36)			0.503	0.552		mg/L		110	53 - 129	12	19

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	94		50 - 150

Client Sample ID: S1-AD-032717

Lab Sample ID: 580-67195-1

Date Collected: 03/27/17 13:15

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242401	04/06/17 13:22	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242506	04/07/17 13:28	W1T	TAL SEA

Client Sample ID: S1-AU-032717

Lab Sample ID: 580-67195-2

Date Collected: 03/27/17 13:20

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242401	04/06/17 13:22	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242506	04/07/17 13:51	W1T	TAL SEA

Client Sample ID: S1-BD-032717

Lab Sample ID: 580-67195-3

Date Collected: 03/27/17 13:23

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242401	04/06/17 13:22	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242506	04/07/17 14:13	W1T	TAL SEA

Client Sample ID: S1-BU-032717

Lab Sample ID: 580-67195-4

Date Collected: 03/27/17 13:45

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242401	04/06/17 13:22	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242506	04/07/17 14:36	W1T	TAL SEA

Client Sample ID: S2-AD-032717

Lab Sample ID: 580-67195-5

Date Collected: 03/27/17 13:55

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242401	04/06/17 13:22	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242506	04/07/17 14:58	W1T	TAL SEA

Client Sample ID: S2-AU-032717

Lab Sample ID: 580-67195-6

Date Collected: 03/27/17 14:00

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242401	04/06/17 13:22	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242506	04/07/17 15:21	W1T	TAL SEA

Client Sample ID: S2-BD-032717

Lab Sample ID: 580-67195-7

Date Collected: 03/27/17 14:25

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242401	04/06/17 13:22	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242506	04/07/17 16:05	W1T	TAL SEA

Client Sample ID: S2-BU-032717

Lab Sample ID: 580-67195-8

Date Collected: 03/27/17 14:30

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242401	04/06/17 13:22	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242506	04/07/17 16:28	W1T	TAL SEA

Client Sample ID: S3-AD-032717

Lab Sample ID: 580-67195-9

Date Collected: 03/27/17 15:45

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242483	04/07/17 09:37	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242622	04/09/17 21:59	D1R	TAL SEA

Client Sample ID: S3-BD-032717

Lab Sample ID: 580-67195-10

Date Collected: 03/27/17 15:50

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242483	04/07/17 09:37	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242622	04/09/17 22:21	D1R	TAL SEA

Client Sample ID: S3-CD-032717

Lab Sample ID: 580-67195-11

Date Collected: 03/27/17 15:55

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242483	04/07/17 09:37	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242622	04/09/17 22:43	D1R	TAL SEA

Client Sample ID: S3-AU-032717

Lab Sample ID: 580-67195-12

Date Collected: 03/27/17 16:15

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242483	04/07/17 15:07	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242622	04/09/17 23:05	D1R	TAL SEA

Client Sample ID: S3-BU-032717

Lab Sample ID: 580-67195-13

Date Collected: 03/27/17 16:20

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242483	04/07/17 15:07	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242622	04/09/17 23:49	D1R	TAL SEA

Client Sample ID: S3-CU-032717

Lab Sample ID: 580-67195-14

Date Collected: 03/27/17 16:25

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242483	04/07/17 15:07	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242622	04/10/17 00:11	D1R	TAL SEA

Client Sample ID: S4-AD-032717

Lab Sample ID: 580-67195-15

Date Collected: 03/27/17 17:15

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242483	04/07/17 15:07	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242622	04/10/17 00:32	D1R	TAL SEA

Client Sample ID: S4-BD-032717

Lab Sample ID: 580-67195-16

Date Collected: 03/27/17 17:20

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242483	04/07/17 15:07	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242622	04/10/17 00:54	D1R	TAL SEA

Client Sample ID: S4-CD-032717

Lab Sample ID: 580-67195-17

Date Collected: 03/27/17 17:25

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242483	04/07/17 15:07	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242622	04/10/17 01:16	D1R	TAL SEA

Client Sample ID: S4-AU-032717

Lab Sample ID: 580-67195-18

Date Collected: 03/27/17 17:45

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242483	04/07/17 15:07	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242622	04/10/17 01:38	D1R	TAL SEA

Client Sample ID: S4-BU-032717 — **Lab Sample ID: 580-67195-19**
Date Collected: 03/27/17 18:10 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242483	04/07/17 15:07	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242622	04/10/17 02:00	D1R	TAL SEA

Client Sample ID: S4-CU-032717 — **Lab Sample ID: 580-67195-20**
Date Collected: 03/27/17 18:15 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242483	04/07/17 15:07	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242622	04/10/17 02:22	D1R	TAL SEA

Client Sample ID: 5-W-18-032817 — **Lab Sample ID: 580-67195-21**
Date Collected: 03/28/17 09:45 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242483	04/07/17 15:07	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242622	04/10/17 02:44	D1R	TAL SEA

Client Sample ID: 5-W-19-032817 — **Lab Sample ID: 580-67195-22**
Date Collected: 03/28/17 09:50 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242483	04/07/17 15:07	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242622	04/10/17 03:06	D1R	TAL SEA

Client Sample ID: 5-W-15-032817 — **Lab Sample ID: 580-67195-23**
Date Collected: 03/28/17 11:12 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242483	04/07/17 15:07	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242622	04/10/17 03:49	D1R	TAL SEA

Client Sample ID: 5-W-17-032817 — **Lab Sample ID: 580-67195-24**
Date Collected: 03/28/17 11:15 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242738	04/11/17 09:47	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242800	04/12/17 10:16	KZ1	TAL SEA

Client Sample ID: 5-W-16-032817

Lab Sample ID: 580-67195-25

Date Collected: 03/28/17 12:30

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242738	04/11/17 13:46	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242800	04/12/17 10:43	KZ1	TAL SEA

Client Sample ID: 5-W-14-032817

Lab Sample ID: 580-67195-26

Date Collected: 03/28/17 12:32

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242738	04/11/17 13:46	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242800	04/12/17 11:07	KZ1	TAL SEA

Client Sample ID: 5-W-43-032817

Lab Sample ID: 580-67195-27

Date Collected: 03/28/17 14:34

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242738	04/11/17 13:46	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242800	04/12/17 11:32	KZ1	TAL SEA

Client Sample ID: EW-1-032817

Lab Sample ID: 580-67195-28

Date Collected: 03/28/17 14:35

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242738	04/11/17 13:46	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242800	04/12/17 11:56	KZ1	TAL SEA

Client Sample ID: EW-10-032817

Lab Sample ID: 580-67195-29

Date Collected: 03/28/17 14:36

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242738	04/11/17 13:46	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242800	04/12/17 12:21	KZ1	TAL SEA

Client Sample ID: GW-1-032817

Lab Sample ID: 580-67195-30

Date Collected: 03/28/17 15:40

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242738	04/11/17 13:46	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242800	04/12/17 13:11	KZ1	TAL SEA

Client Sample ID: GW-10-032817

Lab Sample ID: 580-67195-31

Date Collected: 03/28/17 15:42

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242738	04/11/17 13:46	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242800	04/12/17 13:37	KZ1	TAL SEA

Client Sample ID: GW-2-032817

Lab Sample ID: 580-67195-32

Date Collected: 03/28/17 16:00

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242738	04/11/17 13:46	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242800	04/12/17 14:02	KZ1	TAL SEA

Client Sample ID: GW-20-032817

Lab Sample ID: 580-67195-33

Date Collected: 03/28/17 16:01

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242738	04/11/17 13:46	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242800	04/12/17 14:28	KZ1	TAL SEA

Client Sample ID: 5-W-56-032817

Lab Sample ID: 580-67195-34

Date Collected: 03/28/17 17:10

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242738	04/11/17 13:46	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242800	04/12/17 14:53	KZ1	TAL SEA

Client Sample ID: 5-W-55-032817

Lab Sample ID: 580-67195-35

Date Collected: 03/28/17 17:15

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242738	04/11/17 13:46	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242800	04/12/17 15:19	KZ1	TAL SEA

Client Sample ID: 1A-W-4-032817

Lab Sample ID: 580-67195-36

Date Collected: 03/28/17 08:35

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242802	04/11/17 16:59	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242868	04/12/17 16:02	KZ1	TAL SEA

Client Sample ID: MW-16-032817

Lab Sample ID: 580-67195-37

Date Collected: 03/28/17 11:25

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242802	04/11/17 16:59	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242868	04/12/17 16:24	KZ1	TAL SEA

Client Sample ID: 2B-W-4-032817

Lab Sample ID: 580-67195-38

Date Collected: 03/28/17 10:15

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242802	04/11/17 16:59	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242868	04/12/17 16:47	KZ1	TAL SEA

Client Sample ID: 1B-W-23-032917

Lab Sample ID: 580-67195-39

Date Collected: 03/29/17 09:50

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/12/17 23:51	KZ1	TAL SEA

Client Sample ID: GW-3-032917

Lab Sample ID: 580-67195-40

Date Collected: 03/29/17 09:51

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/13/17 00:19	KZ1	TAL SEA

Client Sample ID: GW-30-032917

Lab Sample ID: 580-67195-41

Date Collected: 03/29/17 09:52

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/13/17 00:44	KZ1	TAL SEA

Client Sample ID: 1B-W-3-032917

Lab Sample ID: 580-67195-42

Date Collected: 03/29/17 10:58

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/13/17 01:09	KZ1	TAL SEA

Client Sample ID: 1B-W-2-032917

Lab Sample ID: 580-67195-43

Date Collected: 03/29/17 11:00

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/13/17 01:33	KZ1	TAL SEA

Client Sample ID: 1C-W-7-032917

Lab Sample ID: 580-67195-44

Date Collected: 03/29/17 12:10

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/13/17 01:58	KZ1	TAL SEA

Client Sample ID: 2A-W-42-032917

Lab Sample ID: 580-67195-45

Date Collected: 03/29/17 12:12

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/13/17 02:23	KZ1	TAL SEA

Client Sample ID: 5-W-54-032917

Lab Sample ID: 580-67195-46

Date Collected: 03/29/17 09:00

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/13/17 02:48	KZ1	TAL SEA

Client Sample ID: 5-W-51-032917

Lab Sample ID: 580-67195-47

Date Collected: 03/29/17 10:00

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/13/17 03:12	KZ1	TAL SEA
Total/NA	Prep	3510C	DL		242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx	DL	4	243009	04/13/17 17:09	KZ1	TAL SEA

Client Sample ID: 2A-W-40-032917

Lab Sample ID: 580-67195-48

Date Collected: 03/29/17 11:05

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA

Client Sample ID: 2A-W-40-032917 — Lab Sample ID: 580-67195-48

Date Collected: 03/29/17 11:05 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Dx		1	242935	04/13/17 04:02	KZ1	TAL SEA

Client Sample ID: 2A-W-41-032917 — Lab Sample ID: 580-67195-49

Date Collected: 03/29/17 12:35 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/13/17 04:26	KZ1	TAL SEA

Client Sample ID: EW-2A-032917 — Lab Sample ID: 580-67195-50

Date Collected: 03/29/17 14:18 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/13/17 04:54	KZ1	TAL SEA

Client Sample ID: GW-4-032917 — Lab Sample ID: 580-67195-51

Date Collected: 03/29/17 14:20 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/12/17 20:02	KZ1	TAL SEA

Client Sample ID: 1C-W-8-032917 — Lab Sample ID: 580-67195-52

Date Collected: 03/29/17 15:25 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/12/17 20:27	KZ1	TAL SEA

Client Sample ID: 1C-W-1-032917 — Lab Sample ID: 580-67195-53

Date Collected: 03/29/17 15:30 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/12/17 20:53	KZ1	TAL SEA

Client Sample ID: 1C-W-4-032917 — **Lab Sample ID: 580-67195-54**
Date Collected: 03/29/17 16:17 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/12/17 21:18	KZ1	TAL SEA

Client Sample ID: 1C-W-3-032917 — **Lab Sample ID: 580-67195-55**
Date Collected: 03/29/17 16:20 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/12/17 21:46	KZ1	TAL SEA

Client Sample ID: MW-3-033017 — **Lab Sample ID: 580-67195-56**
Date Collected: 03/30/17 10:33 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/12/17 22:11	KZ1	TAL SEA

Client Sample ID: MW-4-033017 — **Lab Sample ID: 580-67195-57**
Date Collected: 03/30/17 10:40 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/12/17 22:36	KZ1	TAL SEA

Client Sample ID: 2A-W-10-033017 — **Lab Sample ID: 580-67195-58**
Date Collected: 03/30/17 11:30 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242890	04/12/17 14:14	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	243009	04/13/17 18:50	KZ1	TAL SEA

Client Sample ID: 2A-W-9-033017 — **Lab Sample ID: 580-67195-59**
Date Collected: 03/30/17 11:33 — **Matrix: Water**
Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242890	04/12/17 14:14	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	243009	04/13/17 19:15	KZ1	TAL SEA

Lab Chronicle

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Client Sample ID: 2A-W-90-033017

Lab Sample ID: 580-67195-60

Date Collected: 03/30/17 11:34

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242890	04/12/17 14:14	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	243009	04/13/17 20:04	KZ1	TAL SEA

Client Sample ID: 2A-W-410-032917

Lab Sample ID: 580-67195-61

Date Collected: 03/29/17 12:40

Matrix: Water

Date Received: 03/31/17 13:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242843	04/12/17 09:51	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	242935	04/12/17 23:26	KZ1	TAL SEA

Laboratory References:

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

Accreditation/Certification Summary

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

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	UST-022	03-02-18
California	State Program	9	2901	01-31-18
L-A-B	DoD ELAP		L2236	01-19-19
L-A-B	ISO/IEC 17025		L2236	01-19-19
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-18

Sample Summary

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-67195-1	S1-AD-032717	Water	03/27/17 13:15	03/31/17 13:13
580-67195-2	S1-AU-032717	Water	03/27/17 13:20	03/31/17 13:13
580-67195-3	S1-BD-032717	Water	03/27/17 13:23	03/31/17 13:13
580-67195-4	S1-BU-032717	Water	03/27/17 13:45	03/31/17 13:13
580-67195-5	S2-AD-032717	Water	03/27/17 13:55	03/31/17 13:13
580-67195-6	S2-AU-032717	Water	03/27/17 14:00	03/31/17 13:13
580-67195-7	S2-BD-032717	Water	03/27/17 14:25	03/31/17 13:13
580-67195-8	S2-BU-032717	Water	03/27/17 14:30	03/31/17 13:13
580-67195-9	S3-AD-032717	Water	03/27/17 15:45	03/31/17 13:13
580-67195-10	S3-BD-032717	Water	03/27/17 15:50	03/31/17 13:13
580-67195-11	S3-CD-032717	Water	03/27/17 15:55	03/31/17 13:13
580-67195-12	S3-AU-032717	Water	03/27/17 16:15	03/31/17 13:13
580-67195-13	S3-BU-032717	Water	03/27/17 16:20	03/31/17 13:13
580-67195-14	S3-CU-032717	Water	03/27/17 16:25	03/31/17 13:13
580-67195-15	S4-AD-032717	Water	03/27/17 17:15	03/31/17 13:13
580-67195-16	S4-BD-032717	Water	03/27/17 17:20	03/31/17 13:13
580-67195-17	S4-CD-032717	Water	03/27/17 17:25	03/31/17 13:13
580-67195-18	S4-AU-032717	Water	03/27/17 17:45	03/31/17 13:13
580-67195-19	S4-BU-032717	Water	03/27/17 18:10	03/31/17 13:13
580-67195-20	S4-CU-032717	Water	03/27/17 18:15	03/31/17 13:13
580-67195-21	5-W-18-032817	Water	03/28/17 09:45	03/31/17 13:13
580-67195-22	5-W-19-032817	Water	03/28/17 09:50	03/31/17 13:13
580-67195-23	5-W-15-032817	Water	03/28/17 11:12	03/31/17 13:13
580-67195-24	5-W-17-032817	Water	03/28/17 11:15	03/31/17 13:13
580-67195-25	5-W-16-032817	Water	03/28/17 12:30	03/31/17 13:13
580-67195-26	5-W-14-032817	Water	03/28/17 12:32	03/31/17 13:13
580-67195-27	5-W-43-032817	Water	03/28/17 14:34	03/31/17 13:13
580-67195-28	EW-1-032817	Water	03/28/17 14:35	03/31/17 13:13
580-67195-29	EW-10-032817	Water	03/28/17 14:36	03/31/17 13:13
580-67195-30	GW-1-032817	Water	03/28/17 15:40	03/31/17 13:13
580-67195-31	GW-10-032817	Water	03/28/17 15:42	03/31/17 13:13
580-67195-32	GW-2-032817	Water	03/28/17 16:00	03/31/17 13:13
580-67195-33	GW-20-032817	Water	03/28/17 16:01	03/31/17 13:13
580-67195-34	5-W-56-032817	Water	03/28/17 17:10	03/31/17 13:13
580-67195-35	5-W-55-032817	Water	03/28/17 17:15	03/31/17 13:13
580-67195-36	1A-W-4-032817	Water	03/28/17 08:35	03/31/17 13:13
580-67195-37	MW-16-032817	Water	03/28/17 11:25	03/31/17 13:13
580-67195-38	2B-W-4-032817	Water	03/28/17 10:15	03/31/17 13:13
580-67195-39	1B-W-23-032917	Water	03/29/17 09:50	03/31/17 13:13
580-67195-40	GW-3-032917	Water	03/29/17 09:51	03/31/17 13:13
580-67195-41	GW-30-032917	Water	03/29/17 09:52	03/31/17 13:13
580-67195-42	1B-W-3-032917	Water	03/29/17 10:58	03/31/17 13:13
580-67195-43	1B-W-2-032917	Water	03/29/17 11:00	03/31/17 13:13
580-67195-44	1C-W-7-032917	Water	03/29/17 12:10	03/31/17 13:13
580-67195-45	2A-W-42-032917	Water	03/29/17 12:12	03/31/17 13:13
580-67195-46	5-W-54-032917	Water	03/29/17 09:00	03/31/17 13:13
580-67195-47	5-W-51-032917	Water	03/29/17 10:00	03/31/17 13:13
580-67195-48	2A-W-40-032917	Water	03/29/17 11:05	03/31/17 13:13
580-67195-49	2A-W-41-032917	Water	03/29/17 12:35	03/31/17 13:13
580-67195-50	EW-2A-032917	Water	03/29/17 14:18	03/31/17 13:13
580-67195-51	GW-4-032917	Water	03/29/17 14:20	03/31/17 13:13
580-67195-52	1C-W-8-032917	Water	03/29/17 15:25	03/31/17 13:13
580-67195-53	1C-W-1-032917	Water	03/29/17 15:30	03/31/17 13:13

Sample Summary

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-67195-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-67195-54	1C-W-4-032917	Water	03/29/17 16:17	03/31/17 13:13
580-67195-55	1C-W-3-032917	Water	03/29/17 16:20	03/31/17 13:13
580-67195-56	MW-3-033017	Water	03/30/17 10:33	03/31/17 13:13
580-67195-57	MW-4-033017	Water	03/30/17 10:40	03/31/17 13:13
580-67195-58	2A-W-10-033017	Water	03/30/17 11:30	03/31/17 13:13
580-67195-59	2A-W-9-033017	Water	03/30/17 11:33	03/31/17 13:13
580-67195-60	2A-W-90-033017	Water	03/30/17 11:34	03/31/17 13:13
580-67195-61	2A-W-410-032917	Water	03/29/17 12:40	03/31/17 13:13

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION		LAB WORK ORDER:
Laboratory:	Project Manager:	**SHIPMENT INFORMATION**
Address:	Phone:	Shipment Method:
City/State/ZIP:	Fax:	Tracking Number:

BNSF PROJECT INFORMATION		CONSULTANT INFORMATION	
	Project State of Origin: WA		Project Number: 683-063
BNSF Project Number: 683-063	Project City: Skykomish	Company: Farallon Consulting	Project Manager: Jerry Portele
BNSF Project Name: Skykomish GW SemiAnnual		Address: 975 5th AVE NW	Email: JPortele@farallonconsulting.com
BNSF Contact: Shane DeGross	BNSF Work Order No.: TBD	City/State/ZIP: Issaquah WA 98027	Phone: 425 295 0826 Fax:

TURNAROUND TIME		DELIVERABLES	
☐ 1-day Rush	☐ 5- to 8-day Rush	☒ BNSF Standard (Level II)	☐ Other Deliverables? ______
☐ 2-day Rush	☒ Standard 10-Day	☐ Level III	☐ EDD Req. Format? ______
☐ 3-day Rush	☐ Other ______	☐ Level IV	

SAMPLE INFORMATION / **METHODS FOR ANALYSIS**

#	Sample Identification	Containers	Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	23 TPH-Dx								COMMENTS	LAB USE
1	S1-AD-032717	2	3/27/17	1315	AB	N	G	W	X									
2	S1-AU-032717	↓	↓	1320	↓	↓	↓	↓	X									
3	S1-BD-032717	↓	↓	1323	↓	↓	↓	↓	X									
4	S1-BU-032717	↓	↓	1345	↓	↓	↓	↓	X									
5	S2-AD-032717	↓	↓	1355	↓	↓	↓	↓	X									
6	S2-AU-032717	↓	↓	1400	↓	↓	↓	↓	X									
7	S2-BD-032717	↓	↓	1425	↓	↓	↓	↓	X									
8	S2-BU-032717	↓	↓	1430	↓	↓	↓	↓	X									
9	S3-AD-032717	↓	↓	1545	↓	↓	↓	↓	X									
10	S3-BD-032717	↓	↓	1550	↓	↓	↓	↓	X									
11	S3-CD-032717	↓	↓	1555	↓	↓	↓	↓	X									
12	S3-AU-032717	↓	↓	1615	↓	↓	↓	↓	X									
13	S3-BU-032717	↓	↓	1620	↓	↓	↓	↓	X									
14	S3-CU-032717	↓	↓	1625	↓	↓	↓	↓	X									
15	S4-AD-032717	↓	↓	1715	↓	↓	↓	↓	X									

580-67195 Chain of Custody

Relinquished By: [signature]	Date/Time: 3/30/17 @ 1432	Received By: Tom [signature]	Date/Time: 3/31/17 1313	**Comments and Special Analytical Requirements:**
Relinquished By:	Date/Time:	Received By:	Date/Time:	
Relinquished By:	Date/Time:	Received By:	Date/Time:	
Received by Laboratory:	Date/Time:	Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No	Custody Seal No. / BNSF COC No

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES DUPLICATE - CONSULTANT TAL-1001 (0912)

BNSF RAILWAY — CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory: | Project Manager:
Address: | Phone:
City/State/ZIP: | Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method:
Tracking Number:

BNSF PROJECT INFORMATION

BNSF Project Number: 683-063
BNSF Project Name: Skykomish GW Semiannual
BNSF Contact: Shane Dyross
Project State of Origin: WA
Project City: Skykomish
BNSF Work Order No.: TBD

CONSULTANT INFORMATION

Company: Farallon Consulting
Address: 975 5th Ave NW
City/State/ZIP: Issaquah WA 98027
Project Number: 683-063
Project Manager: Jerry Bartole
Email: JPorta
Phone: Fax:

TURNAROUND TIME

- [ ] 1-day Rush
- [ ] 2-day Rush
- [ ] 3-day Rush
- [ ] 5- to 8-day Rush
- [x] Standard 10-Day
- [ ] Other

DELIVERABLES

- [x] BNSF Standard (Level II)
- [ ] Level III
- [ ] Level IV
- [ ] Other Deliverables?
- [ ] EDD Req. Format?

METHODS FOR ANALYSIS

NWTPH-Dx

SAMPLE INFORMATION

	Sample Identification	Containers	Sample Collection Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	NWTPH-Dx	COMMENTS	LAB USE
1	SH-BD-032717	2	3/27/17	1720	AB	N	G	W	X		
2	SH-CD-032717			1725					X		
3	SH-AU-032717			1745					X		
4	SH-BU-032717			1810					X		
5	SH-CU-032717			1815					X		
6	S-W-18-032817		3/28/17	0945	AB				X		
7	S-W-19-032817			0950					X		
8	S-W-15-032817			1112					X		
9	S-W-17-032817			1115					X		
10	S-W-16-032817			1230					X		
11	S-W-14-032817			1232					X		
12	S-W-45-032817			1434					X		
13	EW-1-032817			1435					X		
14	EW-10-032817			1436					X		
15	GWS1-032817			1540							

	Date/Time	Received By	Date/Time
Relinquished By:	3/30/17 1432	Received By:	3/31/17 1313
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Received by Laboratory:	Date/Time:	Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No

Comments and Special Analytical Requirements:

Custody Seal No.
BNSF COC No

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES
DUPLICATE - CONSULTANT
TAL-1001 (0912)

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory: | Project Manager:
Address: | Phone:
City/State/ZIP: | Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method:
Tracking Number:

BNSF PROJECT INFORMATION

BNSF Project Number: 683-063
Project State of Origin: WA
Project City: Skykomish
BNSF Project Name: BNSF Skykomish Semi Annual GWS
BNSF Contact: Shane D Gross
BNSF Work Order No.: TBD

CONSULTANT INFORMATION

Company: Farallon Consulting
Address: 975 5th Ave NW
City/State/ZIP: Issaquah WA 98027
Project Number: 683-063
Project Manager: Jerry Poteet
Email: JPoteet@farallonconsulting.com
Phone: Fax:

TURNAROUND TIME

- [ ] 1-day Rush
- [ ] 5- to 8-day Rush
- [ ] 2-day Rush
- [x] Standard 10-Day
- [ ] 3-day Rush
- [ ] Other

DELIVERABLES

- [x] BNSF Standard (Level II)
- [ ] Level III
- [ ] Level IV
- [ ] Other Deliverables?
- [ ] EDD Req. Format?

METHODS FOR ANALYSIS

Arsenic - 6020

SAMPLE INFORMATION

	Sample Identification	Containers	Sample Collection Date	Time	Sampler	Filtered Y/N	Type (Comp/ Grab)	Matrix	Arsenic - 6020	COMMENTS	LAB USE
1	GW-10-032817	2	3/28/17	1542	AB	N	G	W	X		
2	GW-2-032817			1600					X		
3	GW-20-032817			1601					X		
4	S-W-56-032817			1710					X		
5	S-W-55-032817			1715					X		
6	1A-W-4-032817		3/28/17	0835					X		
7	MW-16-032817			1125					X		
8	~~EA-W-032817~~ (AB)								~~X~~		
9	2B-W-4-032917			1015					X		
10	1B-W-23-032917		3/29/17	0950					X		
11	GW-3-032917			0951					X		
12	GW-30-032917			0952					X		
13	1B-W-3-032917			1058					X		
14	1B-W-2-032917			1100					X		
15	1C-W-7-032917			1210					X		

Relinquished By:	Date/Time: 3/30/17 1432	Received By: Tom Blount	Date/Time: 3/31/17 1313
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Received by Laboratory:	Date/Time:	Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No

Comments and Special Analytical Requirements:

Custody Seal No. | BNSF COC No

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES | DUPLICATE - CONSULTANT | TAL-1001 (0912)

![BNSF Railway]

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION		LAB WORK ORDER:
Laboratory:	Project Manager:	**SHIPMENT INFORMATION**
Address:	Phone:	Shipment Method:
City/State/ZIP:	Fax:	Tracking Number:

BNSF PROJECT INFORMATION		CONSULTANT INFORMATION	
	Project State of Origin: WA		Project Number: 683-063
BNSF Project Number:	Project City: Skykomish	Company: Farallon Consulting	Project Manager: Jerry Pavlele
BNSF Project Name: Skykomish Semiannual GWS		Address: 975 5th AVE NW	Email: Jpavlele@farallon
BNSF Contact: Shane DeGross	BNSF Work Order No.: TBD	City/State/Zip: Issaquah WA 98027	Phone: 425 295 0826 Fax:

TURNAROUND TIME

- ☐ 1-day Rush
- ☐ 2-day Rush
- ☐ 3-day Rush
- ☐ 5- to 8-day Rush
- ☒ Standard 10-Day
- ☐ Other ______

DELIVERABLES

- ☒ BNSF Standard (Level II)
- ☐ Level III
- ☐ Level IV
- ☐ Other Deliverables? ______
- ☐ EDD Req. Format? ______

SAMPLE INFORMATION

	Sample Identification	Containers	Sample Collection Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	METHODS FOR ANALYSIS: NWTPH-Dx								COMMENTS	LAB USE
1	2A-W-42-032917	2	3/29/17	1212	RO	N	G	W	X									
2	5-W-54-032917			0900	MB			*	X									
3	5-W-51-032917			1000	MB				X									
4	2A-W-40-032917			1105	MB				X									
5	2A-W-41-032917			1235	MB				X									
6	EW-2A-032917			1418	RO				X									
7	GW-4-032917			1420	AB				X									
8	1C-W-8-032917			1525	RO				X									
9	1C-W-1-032917			1530	AB				X									
10	1C-W-4-032917			1617	RO				X									
11	1C-W-3-032917			1620	AB				X									
12	MW-3-033017		3/30/17	1033	RO				X									
13	MW-4-033017			1040	AB				X									
14	2A-W-10-033017			1130	AB				X									
15	2A-W-9-033017			1133	RO				X									

Relinquished By: [signature]	Date/Time: 3/30/17 1432	Received By: Tom Blanksby	Date/Time: 3/31/17 1313	Comments and Special Analytical Requirements:
Relinquished By:	Date/Time:	Received By:	Date/Time:	
Relinquished By:	Date/Time:	Received By:	Date/Time:	
Received by Laboratory:	Date/Time:	Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No	Custody Seal No. / BNSF COC No

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES　　DUPLICATE - CONSULTANT　　TAL-1001 (0912)

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory:
Project Manager:
Address:
Phone:
City/State/ZIP:
Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method:
Tracking Number:

BNSF PROJECT INFORMATION

BNSF Project Number: 683-063
Project State of Origin: WA
Project City: Skykomish
BNSF Project Name: Skykomish Semi Annual GWS
BNSF Contact: Shane Dgross
BNSF Work Order No.: TBD

CONSULTANT INFORMATION

Company: Farallon Consulting
Address: 975 5th AVE NW
City/State/ZIP: Iss. WA 98027
Project Number: 683-063
Project Manager: Jerry Portele
Email: JPortele@farallonconsulting.com
Phone: 295 0826
Fax:

TURNAROUND TIME

- [ ] 1-day Rush
- [ ] 2-day Rush
- [ ] 3-day Rush
- [ ] 5- to 8-day Rush
- [x] Standard 10-Day
- [ ] Other

DELIVERABLES

- [x] BNSF Standard (Level II)
- [ ] Level III
- [ ] Level IV
- [ ] Other Deliverables?
- [ ] EDD Req. Format?

METHODS FOR ANALYSIS: TPH Dx; NWTPH

SAMPLE INFORMATION

	Sample Identification	Containers	Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	TPH Dx
1	2A-W-90-033017	2	3/30/17	1134	RU	N	G	W	X
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

A3

Relinquished By:	Date/Time:	Received By:	Date/Time:
3/30/17 [signature]	3/30/17 1432	Tom Blank [signature]	3/31/17 1313
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Received by Laboratory:	Date/Time:	Lab Remarks:	

Comments and Special I

TB A2 Cooler ___ Cor 1.7 w/o Unc 1.9
Cooler Dsc Lg Blue @Lab ___
Wet/Packs Packing bub

Lab Courier

TB A2 Cooler ___ Cor 1.5 w/o Unc 1.7
Cooler Dsc Lg Green @Lab ___
Wet/Packs Packing bub

TB A2 Cooler ___ Cor 2.1 w/o Unc 2.3
Cooler Dsc Lg Blue @Lab ___
Wet/Packs Packing bub

TB A2 Cooler ___ Cor 2.4 w/o Unc 2.6
Cooler Dsc Lg Blue @Lab ___
Wet/Packs Packing bub

TB A2 Cooler ___ Cor 1.9 w/o Unc 2.1
Cooler Dsc Lg Blue @Lab ___
Wet/Packs Packing bub

TB A2 Cooler ___ Cor 1.5 w/o Unc 1.7
Cooler Dsc Lg Blue @Lab ___
Wet/Packs Packing bub

TB A2 Cooler ___ Cor 0.3 w/o Unc 0.5
Cooler Dsc Lg Red @Lab ___
Wet/Packs Packing bub

TB A2 Cooler ___ Cor 1.2 w/o Unc 1.4
Cooler Dsc Lg Blue @Lab ___
Wet/Packs Packing bub

TB A2 Cooler ___ Cor 0.2 w/o Unc 0.4
Cooler Dsc Lg Blue @Lab ___
Wet/Packs Packing bub

TB A2 Cooler ___ Cor 1.0 w/o Unc 1.2
Cooler Dsc Lg Blue @Lab ___
Wet/Packs Packing bub

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES
DUPLICATE - CONSULTANT

4/14/2017

2)

Login Sample Receipt Checklist

Client: BNSF Railway Company

Job Number: 580-67195-1

Login Number: 67195

List Source: TestAmerica Seattle

List Number: 1

Creator: Bean, Dennis L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 580-69571-1
Client Project/Site: Skykomish 2017 GW Monitoring
Sampling Event: Skykomish HCC System

For:
BNSF Railway Company
605 Puyallup Avenue
Tacoma, Washington 98421

Attn: e procurement

Kristine D. Allen

Authorized for release by:
7/14/2017 5:23:14 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

Job ID: 580-69571-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative
580-69571-1

Comments
No additional comments.

Receipt
The samples were received on 6/29/2017 12:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 9 coolers at receipt time were -0.3º C, -0.2º C, -0.1º C, -0.1º C, 0.2º C, 0.4º C, 0.5º C, 2.0º C and 3.7º C.

Receipt Exceptions

The chain of custody was not relinquished by the client.

The last 3 samples on the chain of custody (COC) were not received with this shipment. The three samples, A1-W-40-, GW-2-, & GW-20- were received on 6/30/17 and will be logged in under job 69600.

GC Semi VOA
Method(s) NWTPH-Dx: The peak profile present in this sample S2-BU-A-062717 (580-69571-7) is atypical of a hydrocarbon pattern and consists of discrete peaks.

Method(s) NWTPH-Dx: The peak profile present in this sample S4-BU-062717 (580-69571-17), S4-CU-062717 (580-69571-20), 1C-W-8-062717 (580-69571-22), 1C-W-7-062717 (580-69571-23), 5-W-18-062717 (580-69571-27), 2A-W-42-062817 (580-69571-30) and 1B-W-23-062817 (580-69571-31) is atypical of a hydrocarbon pattern and consists of discrete peaks.

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: GW-3-062817 (580-69571-32), GW-30-062817 (580-69571-33) and 5-W-15-062817 (580-69571-35).

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: EW-1-062817 (580-69571-36), GW-1-062817 (580-69571-37), 5-W-43-062817 (580-69571-38), 2A-W-41-062817 (580-69571-39), 2A-W-410-062817 (580-69571-40) and 1B-W-3-062817 (580-69571-41).

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

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S1-AD-062617
Date Collected: 06/26/17 17:10
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-1
Matrix: Water

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		0.024	0.014	mg/L		07/07/17 08:19	07/07/17 21:23	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		07/07/17 08:19	07/07/17 21:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*75*		*43 - 119*	*07/07/17 08:19*	*07/07/17 21:23*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S1-AU-062617
Date Collected: 06/26/17 17:15
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-2
Matrix: Water

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		0.024	0.014	mg/L		07/07/17 08:19	07/07/17 21:47	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		07/07/17 08:19	07/07/17 21:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*72*		*43 - 119*	*07/07/17 08:19*	*07/07/17 21:47*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S1-BD-062617
Date Collected: 06/26/17 17:45
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-3
Matrix: Water

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		0.024	0.014	mg/L		07/07/17 08:19	07/07/17 22:33	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		07/07/17 08:19	07/07/17 22:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*72*		*43 - 119*	*07/07/17 08:19*	*07/07/17 22:33*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S1-BU-062617
Date Collected: 06/26/17 17:45
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-4
Matrix: Water

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		0.024	0.014	mg/L		07/07/17 08:19	07/07/17 22:56	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		07/07/17 08:19	07/07/17 22:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*43 - 119*	*07/07/17 08:19*	*07/07/17 22:56*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S2-AU-062717
Date Collected: 06/27/17 09:00
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-5
Matrix: Water

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		0.024	0.014	mg/L		07/07/17 08:19	07/07/17 23:19	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		07/07/17 08:19	07/07/17 23:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*90*		*43 - 119*	*07/07/17 08:19*	*07/07/17 23:19*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S2-AD-062717
Date Collected: 06/27/17 08:58
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-6
Matrix: Water

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		0.024	0.014	mg/L		07/07/17 08:19	07/07/17 23:41	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		07/07/17 08:19	07/07/17 23:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*101*		*43 - 119*	*07/07/17 08:19*	*07/07/17 23:41*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S2-BU-A-062717
Date Collected: 06/27/17 09:05
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.026		0.024	0.014	mg/L		07/07/17 08:19	07/08/17 00:04	1
Motor Oil (>C24-C36)	0.011	J	0.048	0.0093	mg/L		07/07/17 08:19	07/08/17 00:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*43 - 119*	*07/07/17 08:19*	*07/08/17 00:04*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S2-BD-062717
Date Collected: 06/27/17 09:25
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-8
Matrix: Water

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		0.024	0.014	mg/L		07/07/17 08:19	07/08/17 00:27	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		07/07/17 08:19	07/08/17 00:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*95*		*43 - 119*	*07/07/17 08:19*	*07/08/17 00:27*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S3-AD-062717
Date Collected: 06/27/17 10:44
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-9
Matrix: Water

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		0.024	0.014	mg/L		07/07/17 08:19	07/08/17 00:49	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		07/07/17 08:19	07/08/17 00:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*43 - 119*	*07/07/17 08:19*	*07/08/17 00:49*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S3-BD-062717
Date Collected: 06/27/17 10:45
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-10
Matrix: Water

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		0.025	0.014	mg/L		07/07/17 08:19	07/08/17 01:12	1
Motor Oil (>C24-C36)	ND		0.049	0.0097	mg/L		07/07/17 08:19	07/08/17 01:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*43 - 119*	*07/07/17 08:19*	*07/08/17 01:12*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S3-AU-062717
Date Collected: 06/27/17 10:46
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-11
Matrix: Water

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		0.024	0.014	mg/L		07/07/17 08:19	07/08/17 01:34	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		07/07/17 08:19	07/08/17 01:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*104*		*43 - 119*	*07/07/17 08:19*	*07/08/17 01:34*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S3-BU-062717
Date Collected: 06/27/17 11:15
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-12
Matrix: Water

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		0.024	0.014	mg/L		07/07/17 08:19	07/08/17 01:56	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		07/07/17 08:19	07/08/17 01:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*97*		*43 - 119*	*07/07/17 08:19*	*07/08/17 01:56*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S3-CU-062717
Date Collected: 06/27/17 11:20
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-13
Matrix: Water

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		0.024	0.014	mg/L		07/07/17 08:19	07/08/17 02:41	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		07/07/17 08:19	07/08/17 02:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*43 - 119*	*07/07/17 08:19*	*07/08/17 02:41*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S3-CD-062717
Date Collected: 06/27/17 11:25
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-14
Matrix: Water

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		0.024	0.014	mg/L		07/07/17 08:19	07/08/17 03:03	1
Motor Oil (>C24-C36)	ND		0.048	0.0095	mg/L		07/07/17 08:19	07/08/17 03:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*101*		*43 - 119*	*07/07/17 08:19*	*07/08/17 03:03*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S4-AU-062717
Date Collected: 06/27/17 12:35
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-15
Matrix: Water

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		0.024	0.014	mg/L		07/11/17 12:26	07/11/17 21:58	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		07/11/17 12:26	07/11/17 21:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*43 - 119*	*07/11/17 12:26*	*07/11/17 21:58*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S4-AD-062717
Date Collected: 06/27/17 12:35
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-16
Matrix: Water

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		0.024	0.014	mg/L		07/11/17 12:26	07/11/17 22:31	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		07/11/17 12:26	07/11/17 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*43 - 119*	*07/11/17 12:26*	*07/11/17 22:31*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S4-BU-062717
Date Collected: 06/27/17 12:36
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-17
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.020**	**J**	0.024	0.014	mg/L		07/11/17 12:26	07/11/17 23:04	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		07/11/17 12:26	07/11/17 23:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*43 - 119*	*07/11/17 12:26*	*07/11/17 23:04*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S4-BD-062717
Date Collected: 06/27/17 12:36
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-18
Matrix: Water

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		0.024	0.014	mg/L		07/11/17 12:26	07/11/17 23:35	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		07/11/17 12:26	07/11/17 23:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*72*		*43 - 119*	*07/11/17 12:26*	*07/11/17 23:35*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S4-CD-062717
Date Collected: 06/27/17 13:09
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-19
Matrix: Water

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		0.024	0.014	mg/L		07/11/17 12:26	07/12/17 00:37	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		07/11/17 12:26	07/12/17 00:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*43 - 119*	*07/11/17 12:26*	*07/12/17 00:37*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: S4-CU-062717
Date Collected: 06/27/17 13:11
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-20
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.020**	**J**	0.024	0.014	mg/L		07/11/17 12:26	07/12/17 01:06	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		07/11/17 12:26	07/12/17 01:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*43 - 119*	*07/11/17 12:26*	*07/12/17 01:06*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: 1C-W-1-062717
Date Collected: 06/27/17 15:20
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-21
Matrix: Water

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		0.024	0.014	mg/L		07/11/17 12:26	07/12/17 01:36	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		07/11/17 12:26	07/12/17 01:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*69*		*43 - 119*	*07/11/17 12:26*	*07/12/17 01:36*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: 1C-W-8-062717
Date Collected: 06/27/17 15:22
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-22
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.026		0.024	0.014	mg/L		07/11/17 12:26	07/12/17 09:08	1
Motor Oil (>C24-C36)	0.014	J	0.048	0.0094	mg/L		07/11/17 12:26	07/12/17 09:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*74*		*43 - 119*	*07/11/17 12:26*	*07/12/17 09:08*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: 1C-W-7-062717
Date Collected: 06/27/17 16:45
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-23
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.038		0.024	0.014	mg/L		07/11/17 12:26	07/12/17 09:37	1
Motor Oil (>C24-C36)	0.015	J	0.048	0.0094	mg/L		07/11/17 12:26	07/12/17 09:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*43 - 119*	*07/11/17 12:26*	*07/12/17 09:37*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: GW-4-062717
Date Collected: 06/27/17 16:41
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-24
Matrix: Water

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		0.024	0.014	mg/L		07/11/17 12:26	07/12/17 10:08	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		07/11/17 12:26	07/12/17 10:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*68*		*43 - 119*	*07/11/17 12:26*	*07/12/17 10:08*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: 5-W-19-062717
Date Collected: 06/27/17 15:11
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-25
Matrix: Water

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		0.024	0.014	mg/L		07/11/17 12:26	07/12/17 10:37	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		07/11/17 12:26	07/12/17 10:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*57*		*43 - 119*	*07/11/17 12:26*	*07/12/17 10:37*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: 5-W-17-062717
Date Collected: 06/27/17 15:43
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-26
Matrix: Water

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		0.024	0.014	mg/L		07/11/17 12:26	07/12/17 11:06	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		07/11/17 12:26	07/12/17 11:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*64*		*43 - 119*	*07/11/17 12:26*	*07/12/17 11:06*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: 5-W-18-062717
Date Collected: 06/27/17 16:33
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-27
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.043		0.024	0.014	mg/L		07/11/17 12:26	07/12/17 14:51	1
Motor Oil (>C24-C36)	0.033	J	0.048	0.0093	mg/L		07/11/17 12:26	07/12/17 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*61*		*43 - 119*	*07/11/17 12:26*	*07/12/17 14:51*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: 5-W-16-062717
Date Collected: 06/27/17 16:50
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-28
Matrix: Water

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		0.024	0.014	mg/L		07/11/17 12:26	07/12/17 15:20	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		07/11/17 12:26	07/12/17 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*65*		*43 - 119*	*07/11/17 12:26*	*07/12/17 15:20*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: EW-2A-062817
Date Collected: 06/28/17 10:54
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-29
Matrix: Water

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		0.024	0.014	mg/L		07/11/17 12:26	07/12/17 16:17	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		07/11/17 12:26	07/12/17 16:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*68*		*43 - 119*	*07/11/17 12:26*	*07/12/17 16:17*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: 2A-W-42-062817
Date Collected: 06/28/17 11:00
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-30
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.057		0.024	0.014	mg/L		07/11/17 12:26	07/12/17 16:48	1
Motor Oil (>C24-C36)	0.020	J	0.048	0.0094	mg/L		07/11/17 12:26	07/12/17 16:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*62*		*43 - 119*	*07/11/17 12:26*	*07/12/17 16:48*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: 1B-W-23-062817
Date Collected: 06/28/17 12:10
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-31
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.025		0.024	0.014	mg/L		07/11/17 12:26	07/12/17 17:17	1
Motor Oil (>C24-C36)	0.031	J	0.048	0.0094	mg/L		07/11/17 12:26	07/12/17 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*66*		*43 - 119*	*07/11/17 12:26*	*07/12/17 17:17*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: GW-3-062817
Date Collected: 06/28/17 12:25
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-32
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.19		0.024	0.014	mg/L		07/12/17 10:19	07/13/17 17:38	1
Motor Oil (>C24-C36)	0.29		0.048	0.0094	mg/L		07/12/17 10:19	07/13/17 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*68*		*43 - 119*	*07/12/17 10:19*	*07/13/17 17:38*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: GW-30-062817
Date Collected: 06/28/17 12:30
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-33
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.12		0.024	0.014	mg/L		07/12/17 10:19	07/13/17 17:59	1
Motor Oil (>C24-C36)	0.094		0.048	0.0094	mg/L		07/12/17 10:19	07/13/17 17:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*82*		*43 - 119*	*07/12/17 10:19*	*07/13/17 17:59*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: 5-W-14-062817
Date Collected: 06/28/17 09:27
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-34
Matrix: Water

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		0.024	0.014	mg/L		07/12/17 10:19	07/13/17 18:20	1
Motor Oil (>C24-C36)	**0.015**	**J**	0.048	0.0094	mg/L		07/12/17 10:19	07/13/17 18:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*43 - 119*	*07/12/17 10:19*	*07/13/17 18:20*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: 5-W-15-062817
Date Collected: 06/28/17 10:57
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-35
Matrix: Water

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		0.024	0.014	mg/L		07/12/17 10:19	07/13/17 18:40	1
Motor Oil (>C24-C36)	0.11		0.048	0.0093	mg/L		07/12/17 10:19	07/13/17 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*43 - 119*	*07/12/17 10:19*	*07/13/17 18:40*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: EW-1-062817
Date Collected: 06/28/17 11:13
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-36
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.036		0.024	0.014	mg/L		07/12/17 10:19	07/14/17 10:45	1
Motor Oil (>C24-C36)	0.063		0.048	0.0094	mg/L		07/12/17 10:19	07/14/17 10:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*102*		*43 - 119*	*07/12/17 10:19*	*07/14/17 10:45*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: GW-1-062817
Date Collected: 06/28/17 12:17
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-37
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.064		0.024	0.014	mg/L		07/12/17 10:19	07/14/17 11:06	1
Motor Oil (>C24-C36)	0.071		0.048	0.0094	mg/L		07/12/17 10:19	07/14/17 11:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*101*		*43 - 119*	*07/12/17 10:19*	*07/14/17 11:06*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: 5-W-43-062817
Date Collected: 06/28/17 12:17
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-38
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.021	J	0.024	0.014	mg/L		07/12/17 10:19	07/14/17 11:27	1
Motor Oil (>C24-C36)	0.032	J	0.048	0.0093	mg/L		07/12/17 10:19	07/14/17 11:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*43 - 119*	*07/12/17 10:19*	*07/14/17 11:27*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: 2A-W-41-062817
Date Collected: 06/28/17 13:50
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-39
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.11		0.024	0.014	mg/L		07/12/17 10:19	07/14/17 11:47	1
Motor Oil (>C24-C36)	0.059		0.048	0.0094	mg/L		07/12/17 10:19	07/14/17 11:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*43 - 119*	*07/12/17 10:19*	*07/14/17 11:47*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: 2A-W-410-062817
Date Collected: 06/28/17 13:55
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-40
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.12		0.024	0.014	mg/L		07/12/17 10:19	07/14/17 12:08	1
Motor Oil (>C24-C36)	0.061		0.048	0.0094	mg/L		07/12/17 10:19	07/14/17 12:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*95*		*43 - 119*	*07/12/17 10:19*	*07/14/17 12:08*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Client Sample ID: 1B-W-3-062817
Date Collected: 06/28/17 14:00
Date Received: 06/29/17 12:55

Lab Sample ID: 580-69571-41
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.030		0.024	0.014	mg/L		07/12/17 10:19	07/14/17 12:50	1
Motor Oil (>C24-C36)	0.028	J	0.048	0.0094	mg/L		07/12/17 10:19	07/14/17 12:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*82*		*43 - 119*	*07/12/17 10:19*	*07/14/17 12:50*	*1*

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

Lab Sample ID: MB 580-250499/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 250580 — **Prep Batch: 250499**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		07/07/17 08:19	07/07/17 18:20	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		07/07/17 08:19	07/07/17 18:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*100*		*43 - 119*	*07/07/17 08:19*	*07/07/17 18:20*	*1*

Lab Sample ID: LCS 580-250499/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 250580 — **Prep Batch: 250499**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	0.500	0.421		mg/L		84	59 - 112
Motor Oil (>C24-C36)	0.500	0.473		mg/L		95	64 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*80*		*43 - 119*

Lab Sample ID: LCSD 580-250499/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 250580 — **Prep Batch: 250499**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	0.500	0.457		mg/L		91	59 - 112	8	16
Motor Oil (>C24-C36)	0.500	0.545		mg/L		109	64 - 120	14	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*84*		*43 - 119*

Lab Sample ID: MB 580-250809/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 250870 — **Prep Batch: 250809**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		07/11/17 12:26	07/11/17 18:49	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		07/11/17 12:26	07/11/17 18:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*81*		*43 - 119*	*07/11/17 12:26*	*07/11/17 18:49*	*1*

Lab Sample ID: LCS 580-250809/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 250870 — **Prep Batch: 250809**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	0.500	0.436		mg/L		87	59 - 112
Motor Oil (>C24-C36)	0.500	0.471		mg/L		94	64 - 120

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

Lab Sample ID: LCS 580-250809/2-A
Matrix: Water
Analysis Batch: 250870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 250809

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	89		43 - 119

Lab Sample ID: LCSD 580-250809/3-A
Matrix: Water
Analysis Batch: 250870

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 250809

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			0.500	0.456		mg/L		91	59 - 112	4	16
Motor Oil (>C24-C36)			0.500	0.492		mg/L		98	64 - 120	4	17

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	82		43 - 119

Lab Sample ID: MB 580-250930/1-A
Matrix: Water
Analysis Batch: 251125

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 250930

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		07/12/17 10:19	07/13/17 15:31	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		07/12/17 10:19	07/13/17 15:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	82		43 - 119	07/12/17 10:19	07/13/17 15:31	1

Lab Sample ID: LCS 580-250930/2-A
Matrix: Water
Analysis Batch: 251125

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 250930

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)			0.500	0.404		mg/L		81	59 - 112
Motor Oil (>C24-C36)			0.500	0.486		mg/L		97	64 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	74		43 - 119

Lab Sample ID: LCSD 580-250930/3-A
Matrix: Water
Analysis Batch: 251125

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 250930

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			0.500	0.427		mg/L		85	59 - 112	6	16
Motor Oil (>C24-C36)			0.500	0.495		mg/L		99	64 - 120	2	17

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	80		43 - 119

Client Sample ID: S1-AD-062617

Lab Sample ID: 580-69571-1

Date Collected: 06/26/17 17:10

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250499	07/07/17 08:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250580	07/07/17 21:23	CJ	TAL SEA

Client Sample ID: S1-AU-062617

Lab Sample ID: 580-69571-2

Date Collected: 06/26/17 17:15

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250499	07/07/17 08:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250580	07/07/17 21:47	CJ	TAL SEA

Client Sample ID: S1-BD-062617

Lab Sample ID: 580-69571-3

Date Collected: 06/26/17 17:45

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250499	07/07/17 08:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250580	07/07/17 22:33	CJ	TAL SEA

Client Sample ID: S1-BU-062617

Lab Sample ID: 580-69571-4

Date Collected: 06/26/17 17:45

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250499	07/07/17 08:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250580	07/07/17 22:56	CJ	TAL SEA

Client Sample ID: S2-AU-062717

Lab Sample ID: 580-69571-5

Date Collected: 06/27/17 09:00

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250499	07/07/17 08:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250580	07/07/17 23:19	CJ	TAL SEA

Client Sample ID: S2-AD-062717

Lab Sample ID: 580-69571-6

Date Collected: 06/27/17 08:58

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250499	07/07/17 08:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250580	07/07/17 23:41	CJ	TAL SEA

Client Sample ID: S2-BU-A-062717

Lab Sample ID: 580-69571-7

Date Collected: 06/27/17 09:05

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250499	07/07/17 08:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250580	07/08/17 00:04	CJ	TAL SEA

Client Sample ID: S2-BD-062717

Lab Sample ID: 580-69571-8

Date Collected: 06/27/17 09:25

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250499	07/07/17 08:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250580	07/08/17 00:27	CJ	TAL SEA

Client Sample ID: S3-AD-062717

Lab Sample ID: 580-69571-9

Date Collected: 06/27/17 10:44

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250499	07/07/17 08:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250580	07/08/17 00:49	CJ	TAL SEA

Client Sample ID: S3-BD-062717

Lab Sample ID: 580-69571-10

Date Collected: 06/27/17 10:45

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250499	07/07/17 08:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250580	07/08/17 01:12	CJ	TAL SEA

Client Sample ID: S3-AU-062717

Lab Sample ID: 580-69571-11

Date Collected: 06/27/17 10:46

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250499	07/07/17 08:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250580	07/08/17 01:34	CJ	TAL SEA

Client Sample ID: S3-BU-062717

Lab Sample ID: 580-69571-12

Date Collected: 06/27/17 11:15

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250499	07/07/17 08:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250580	07/08/17 01:56	CJ	TAL SEA

Client Sample ID: S3-CU-062717

Lab Sample ID: 580-69571-13

Date Collected: 06/27/17 11:20

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250499	07/07/17 08:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250580	07/08/17 02:41	CJ	TAL SEA

Client Sample ID: S3-CD-062717

Lab Sample ID: 580-69571-14

Date Collected: 06/27/17 11:25

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250499	07/07/17 08:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250580	07/08/17 03:03	CJ	TAL SEA

Client Sample ID: S4-AU-062717

Lab Sample ID: 580-69571-15

Date Collected: 06/27/17 12:35

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/11/17 21:58	ERZ	TAL SEA

Client Sample ID: S4-AD-062717

Lab Sample ID: 580-69571-16

Date Collected: 06/27/17 12:35

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/11/17 22:31	ERZ	TAL SEA

Client Sample ID: S4-BU-062717

Lab Sample ID: 580-69571-17

Date Collected: 06/27/17 12:36

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/11/17 23:04	ERZ	TAL SEA

Client Sample ID: S4-BD-062717

Lab Sample ID: 580-69571-18

Date Collected: 06/27/17 12:36

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/11/17 23:35	ERZ	TAL SEA

Client Sample ID: S4-CD-062717

Lab Sample ID: 580-69571-19

Date Collected: 06/27/17 13:09

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/12/17 00:37	ERZ	TAL SEA

Client Sample ID: S4-CU-062717

Lab Sample ID: 580-69571-20

Date Collected: 06/27/17 13:11

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/12/17 01:06	ERZ	TAL SEA

Client Sample ID: 1C-W-1-062717

Lab Sample ID: 580-69571-21

Date Collected: 06/27/17 15:20

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/12/17 01:36	ERZ	TAL SEA

Client Sample ID: 1C-W-8-062717

Lab Sample ID: 580-69571-22

Date Collected: 06/27/17 15:22

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/12/17 09:08	ERZ	TAL SEA

Client Sample ID: 1C-W-7-062717

Lab Sample ID: 580-69571-23

Date Collected: 06/27/17 16:45

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/12/17 09:37	ERZ	TAL SEA

Client Sample ID: GW-4-062717

Lab Sample ID: 580-69571-24

Date Collected: 06/27/17 16:41

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/12/17 10:08	ERZ	TAL SEA

Client Sample ID: 5-W-19-062717

Lab Sample ID: 580-69571-25

Date Collected: 06/27/17 15:11

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/12/17 10:37	ERZ	TAL SEA

Client Sample ID: 5-W-17-062717

Lab Sample ID: 580-69571-26

Date Collected: 06/27/17 15:43

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/12/17 11:06	ERZ	TAL SEA

Client Sample ID: 5-W-18-062717

Lab Sample ID: 580-69571-27

Date Collected: 06/27/17 16:33

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/12/17 14:51	ERZ	TAL SEA

Client Sample ID: 5-W-16-062717

Lab Sample ID: 580-69571-28

Date Collected: 06/27/17 16:50

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/12/17 15:20	ERZ	TAL SEA

Client Sample ID: EW-2A-062817

Lab Sample ID: 580-69571-29

Date Collected: 06/28/17 10:54

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/12/17 16:17	ERZ	TAL SEA

Client Sample ID: 2A-W-42-062817

Lab Sample ID: 580-69571-30

Date Collected: 06/28/17 11:00

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/12/17 16:48	ERZ	TAL SEA

Client Sample ID: 1B-W-23-062817

Lab Sample ID: 580-69571-31

Date Collected: 06/28/17 12:10

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250809	07/11/17 12:26	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	250870	07/12/17 17:17	ERZ	TAL SEA

Client Sample ID: GW-3-062817

Lab Sample ID: 580-69571-32

Date Collected: 06/28/17 12:25

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251125	07/13/17 17:38	CJ	TAL SEA

Client Sample ID: GW-30-062817

Lab Sample ID: 580-69571-33

Date Collected: 06/28/17 12:30

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251125	07/13/17 17:59	CJ	TAL SEA

Client Sample ID: 5-W-14-062817

Lab Sample ID: 580-69571-34

Date Collected: 06/28/17 09:27

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251125	07/13/17 18:20	CJ	TAL SEA

Client Sample ID: 5-W-15-062817

Lab Sample ID: 580-69571-35

Date Collected: 06/28/17 10:57

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251125	07/13/17 18:40	CJ	TAL SEA

Client Sample ID: EW-1-062817

Lab Sample ID: 580-69571-36

Date Collected: 06/28/17 11:13

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251204	07/14/17 10:45	JCP	TAL SEA

Client Sample ID: GW-1-062817

Lab Sample ID: 580-69571-37

Date Collected: 06/28/17 12:17

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251204	07/14/17 11:06	JCP	TAL SEA

Client Sample ID: 5-W-43-062817

Lab Sample ID: 580-69571-38

Date Collected: 06/28/17 12:17

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251204	07/14/17 11:27	JCP	TAL SEA

Client Sample ID: 2A-W-41-062817

Lab Sample ID: 580-69571-39

Date Collected: 06/28/17 13:50

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251204	07/14/17 11:47	JCP	TAL SEA

Client Sample ID: 2A-W-410-062817

Lab Sample ID: 580-69571-40

Date Collected: 06/28/17 13:55

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251204	07/14/17 12:08	JCP	TAL SEA

Client Sample ID: 1B-W-3-062817

Lab Sample ID: 580-69571-41

Date Collected: 06/28/17 14:00

Matrix: Water

Date Received: 06/29/17 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251204	07/14/17 12:50	JCP	TAL SEA

Laboratory References:

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

Accreditation/Certification Summary

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

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	UST-022	03-02-18
California	State Program	9	2901	01-31-18
L-A-B	DoD ELAP		L2236	01-19-19
L-A-B	ISO/IEC 17025		L2236	01-19-19
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-18

Sample Summary

Client: BNSF Railway Company
Project/Site: Skykomish 2017 GW Monitoring

TestAmerica Job ID: 580-69571-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-69571-1	S1-AD-062617	Water	06/26/17 17:10	06/29/17 12:55
580-69571-2	S1-AU-062617	Water	06/26/17 17:15	06/29/17 12:55
580-69571-3	S1-BD-062617	Water	06/26/17 17:45	06/29/17 12:55
580-69571-4	S1-BU-062617	Water	06/26/17 17:45	06/29/17 12:55
580-69571-5	S2-AU-062717	Water	06/27/17 09:00	06/29/17 12:55
580-69571-6	S2-AD-062717	Water	06/27/17 08:58	06/29/17 12:55
580-69571-7	S2-BU-A-062717	Water	06/27/17 09:05	06/29/17 12:55
580-69571-8	S2-BD-062717	Water	06/27/17 09:25	06/29/17 12:55
580-69571-9	S3-AD-062717	Water	06/27/17 10:44	06/29/17 12:55
580-69571-10	S3-BD-062717	Water	06/27/17 10:45	06/29/17 12:55
580-69571-11	S3-AU-062717	Water	06/27/17 10:46	06/29/17 12:55
580-69571-12	S3-BU-062717	Water	06/27/17 11:15	06/29/17 12:55
580-69571-13	S3-CU-062717	Water	06/27/17 11:20	06/29/17 12:55
580-69571-14	S3-CD-062717	Water	06/27/17 11:25	06/29/17 12:55
580-69571-15	S4-AU-062717	Water	06/27/17 12:35	06/29/17 12:55
580-69571-16	S4-AD-062717	Water	06/27/17 12:35	06/29/17 12:55
580-69571-17	S4-BU-062717	Water	06/27/17 12:36	06/29/17 12:55
580-69571-18	S4-BD-062717	Water	06/27/17 12:36	06/29/17 12:55
580-69571-19	S4-CD-062717	Water	06/27/17 13:09	06/29/17 12:55
580-69571-20	S4-CU-062717	Water	06/27/17 13:11	06/29/17 12:55
580-69571-21	1C-W-1-062717	Water	06/27/17 15:20	06/29/17 12:55
580-69571-22	1C-W-8-062717	Water	06/27/17 15:22	06/29/17 12:55
580-69571-23	1C-W-7-062717	Water	06/27/17 16:45	06/29/17 12:55
580-69571-24	GW-4-062717	Water	06/27/17 16:41	06/29/17 12:55
580-69571-25	5-W-19-062717	Water	06/27/17 15:11	06/29/17 12:55
580-69571-26	5-W-17-062717	Water	06/27/17 15:43	06/29/17 12:55
580-69571-27	5-W-18-062717	Water	06/27/17 16:33	06/29/17 12:55
580-69571-28	5-W-16-062717	Water	06/27/17 16:50	06/29/17 12:55
580-69571-29	EW-2A-062817	Water	06/28/17 10:54	06/29/17 12:55
580-69571-30	2A-W-42-062817	Water	06/28/17 11:00	06/29/17 12:55
580-69571-31	1B-W-23-062817	Water	06/28/17 12:10	06/29/17 12:55
580-69571-32	GW-3-062817	Water	06/28/17 12:25	06/29/17 12:55
580-69571-33	GW-30-062817	Water	06/28/17 12:30	06/29/17 12:55
580-69571-34	5-W-14-062817	Water	06/28/17 09:27	06/29/17 12:55
580-69571-35	5-W-15-062817	Water	06/28/17 10:57	06/29/17 12:55
580-69571-36	EW-1-062817	Water	06/28/17 11:13	06/29/17 12:55
580-69571-37	GW-1-062817	Water	06/28/17 12:17	06/29/17 12:55
580-69571-38	5-W-43-062817	Water	06/28/17 12:17	06/29/17 12:55
580-69571-39	2A-W-41-062817	Water	06/28/17 13:50	06/29/17 12:55
580-69571-40	2A-W-410-062817	Water	06/28/17 13:55	06/29/17 12:55
580-69571-41	1B-W-3-062817	Water	06/28/17 14:00	06/29/17 12:55

BNSF RAILWAY — CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory:
Project Manager:
Address:
Phone:
City/State/ZIP:
Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method:
Tracking Number:

BNSF PROJECT INFORMATION

BNSF Project Number: 683-063
Project State of Origin: WA
Project City: Skykomish
BNSF Project Name: Skykomish GW Quarterly
BNSF Contact:
BNSF Work Order No.:

CONSULTANT INFORMATION

Company: Farallon
Project Number: 683-063
Project Manager: Jerry Portele
Address: 975 5th AVE NW
Email: JPortele@farallonconsulting.com
City/State/ZIP: Issaquah WA 98027
Phone: 425 295 0800
Fax:

TURNAROUND TIME

- [ ] 1-day Rush
- [ ] 5- to 8-day Rush
- [ ] 2-day Rush
- [ ] Standard 10-Day
- [ ] 3-day Rush
- [ ] Other

DELIVERABLES

- [ ] BNSF Standard (Level II)
- [ ] Level III
- [ ] Level IV
- [ ] Other Deliverables?
- [ ] EDD Req, Format?

SAMPLE INFORMATION

	Sample Identification	Containers	Sample Collection Date	Sample Collection Time	Sample Collection Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	METHODS FOR ANALYSIS: VOCs 8260C	COMMENTS	LAB USE
1	S1-AD-062617	2	6/26/17	1710	AB	N	G	W	X		
2	S1-AU-062617			1715	PG				X		
3	S1-BD-062617			1745	PG				X		
4	S1-BU-062617			1745	AB				X		
5	S2-AU-062717	2	6/27/17	0900	PG	N	G	W	X		
6	S2-AD-062717			0858	AB				X		
7	S2-BU-A-062717			0905	AB				X		
8	S2-BD-062717			0925	AB				X		
9	S3-AD-062717			1044	AB				X		
10	S3-BD-062717			1045	PG				X		
11	S3-AU-062717			1046	AB				X		
12	S3-BU-062717			1115	AB				X		
13	S3-CU-062717			1120	PG				X		
14	S3-CD-062717			1125	AB				X		
15	S4-AU-062717			1235	PG				X		

580-69571 Chain of Custody

	Date/Time		Date/Time	
Relinquished By:		Received By: B Hall SEA TA	6.29.17 1255	Comments and Special Analytical Requirements:
Relinquished By:		Received By:		
Relinquished By:		Received By:		
Received by Laboratory:		Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No	Custody Seal No. / BNSF COC No.

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES — DUPLICATE - CONSULTANT — TAL-1001 (0912)

(2)

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory: | Project Manager:
Address: | Phone:
City/State/ZIP: | Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method:
Tracking Number:

BNSF PROJECT INFORMATION

BNSF Project Number: 683-063
Project State of Origin: WA
Project City: Skykomish
BNSF Project Name: Skykomish Quarterly 2017 GW
BNSF Contact:
BNSF Work Order No.:

CONSULTANT INFORMATION

Company: Farallon
Address: 975 5th AVE NW
City/State/ZIP: Issaquah WA 98027
Project Number: 683-063
Project Manager: Jerry Parkele
Email:
Phone: 206 425 295 0800 Fax:

TURNAROUND TIME

- [ ] 1-day Rush
- [ ] 5- to 8-day Rush
- [ ] 2-day Rush
- [ ] Standard 10-Day
- [ ] 3-day Rush
- [ ] Other _____

DELIVERABLES

- [ ] BNSF Standard (Level II)
- [ ] Level III
- [ ] Level IV
- [ ] Other Deliverables? _____
- [ ] EDD Req. Format? _____

METHODS FOR ANALYSIS

	Sample Identification	Containers	Sample Collection Date	Sample Collection Time	Sample Collection Sampler	Filtered Y/N	Type (Comp/ Grab)	Matrix	1,2,3-TCP - DI								COMMENTS	LAB USE
16	1 SY-AD-062717	2	6/27/17	1235	AB	N	G	W	X									
	2 SY-BU-062717			1236	ES				X									
18	3 SY-BD-062717			1236	CB				X									
	4 SY-CD-062717			1309	AB				X									
20	5 SY-CU-062717			1314	ES				X									
	6 1C-W-1-062717			1520	AB				X									
22	7 1C-W-8-062717			1522	PG				X									
	8 1C-W-7-062717			1645	AB				X									
24	9 GW-4-062717			1641	PG				X									
	10 5-W-19-062717			1511	CB				X									
26	11 5-W-17-062717			1543	ES				X									
	12 5-W-18-062717			1633	ES				X									
28	13 5-W-16-062717			1650	CB				X									
	14 EW-2A-062817	2	6/28/17	1054	PG	N	G	W	X									
30	15 2A-W-42-062817			1100	AB	1	1	1	X									

Relinquished By:	Date/Time:	Received By: B. Hall SEA TA	Date/Time: 6.29.17 1255	Comments and Special Analytical Requirements:
Relinquished By:	Date/Time:	Received By:	Date/Time:	
Relinquished By:	Date/Time:	Received By:	Date/Time:	
Received by Laboratory:	Date/Time:	Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No	Custody Seal No. / BNSF COC No

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES | DUPLICATE - CONSULTANT | TAL-1001 (0912)

(3)

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION		LAB WORK ORDER:
Laboratory:	Project Manager:	**SHIPMENT INFORMATION**
Address:	Phone:	Shipment Method:
City/State/ZIP:	Fax:	Tracking Number:

BNSF PROJECT INFORMATION		CONSULTANT INFORMATION	
	Project State of Origin: WA		Project Number: 683-003
BNSF Project Number: 683-003	Project City: Skykomish	Company: Farallon Consulting	Project Manager: Jerry Portele
BNSF Project Name: Skykomish 2017 GW Monitoring		Address: 975 5th Ave NW	Email: JPortele@farallonconsulting.com
BNSF Contact: URM	BNSF Work Order No.:	City/State/ZIP: Issaquah WA 98027	Phone: 425 295 0800 Fax:

TURNAROUND TIME		DELIVERABLES	
☐ 1-day Rush	☐ 5- to 8-day Rush	☐ BNSF Standard (Level II)	☐ Other Deliverables?
☐ 2-day Rush	☐ Standard 10-Day	☐ Level III	☐ EDD Req. Format?
☐ 3-day Rush	☐ Other	☐ Level IV	

SAMPLE INFORMATION

METHODS FOR ANALYSIS: XO-#d-332

	Sample Identification	Containers	Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	XO-#d-332								COMMENTS	LAB USE
	1 1B-W-23-062817	2	6/28/17	1210	PG	N	G	W	X									
32	2 GW-3-062817	2		1225	AB				X									
	3 GW-30-062817	2		1230	AB				X									
-34	4 5-W-14-062817	2		0927	CB				X									
	5 5-W-15-062817	2		1057	CB				X									
-36	6 EW-1-062817	2		1113	ES				X									
	7 GW-1-062817	2		1217	ES				X									
-38	8 5W-43-062817	2		1217	CB				X									
	9 2A-W-41-062817	2		1350	AB				X									
-40	10 2A-W-410-062817	2		1355	AB				X									
	11 1B-W-3-062817	2		1400	PG				X									
42	12 2A-W-40-062817	2		1332	CB				X									
	13 GW-2-062817	2		1339	ES				X									
44	14 GW-20-062817	2		1352	ES				X									
	15																	

Relinquished By:	Date/Time:	Received By: B. [illegible] SRA TA	Date/Time: 6.29.17 1255	Comments and Special Analytical Requirements:
Relinquished By:	Date/Time:	Received By:	Date/Time:	
Relinquished By:	Date/Time:	Received By:	Date/Time:	
Received by Laboratory:	Date/Time:	Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No	Custody Seal No. / BNSF COC No

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES | DUPLICATE - CONSULTANT | TAL-1001 (0912)

TB A2 Cooler ___ Cor -0.2 Unc 0.6
Cooler Dsc Lrg B/W @Lab ___
Wet/Packs Packing Bubble
Lab cour w/C.S.

TB A2 Cooler ___ Cor 2.0 Unc 2.8
Cooler Dsc Lrg B/W @Lab ___
Wet/Packs Packing Bubble
Lab cour w/C.S.

TB A2 Cooler ___ Cor 0.2 Unc 1.0
Cooler Dsc Lrg B/W @Lab ___
Wet/Packs Packing Bubble
Lab cour w/C.S.

TB A2 Cooler ___ Cor 3.7 Unc 4.5
Cooler Dsc Lrg B/W @Lab ___
Wet/Packs Packing Bubble
Lab cour w/C.S.

TB A2 Cooler ___ Cor -0.3 Unc 0.5
Cooler Dsc Lrg B/W @Lab ___
Wet/Packs Packing Bubble
Lab cour. w/C.S.

TB A2 Cooler ___ Cor 0.1 Unc 0.7
Cooler Dsc Lrg G/W @Lab ___
Wet/Packs Packing Bubble
Lab cour w/C.S

TB A2 Cooler ___ Cor 0.5 Unc 1.3
Cooler Dsc Lrg G/W @Lab ___
Wet/Packs Packing Bubble
Lab cour. w/C.S.

TB A2 Cooler ___ Cor -0.1 Unc 0.7
Cooler Dsc Lrg Teal/W @Lab ___
Wet/Packs Packing Bubble
Lab cour w/C.S.

TB A2 Cooler ___ Cor 0.4 Unc 1.2
Cooler Dsc Lrg G/W @Lab ___
Wet/Packs Packing Bubble
Lab cour w/C.S.

Login Sample Receipt Checklist

Client: BNSF Railway Company

Job Number: 580-69571-1

Login Number: 69571

List Source: TestAmerica Seattle

List Number: 1

Creator: Blankinship, Tom X

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	COC not relinquished.
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	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 580-69600-1
Client Project/Site: BNSF Skykomish Ground Water Quarterly
Sampling Event: Skykomish HCC System

For:
BNSF Railway Company
605 Puyallup Avenue
Tacoma, Washington 98421

Attn: e procurement

Kristine D. Allen

Authorized for release by:
7/18/2017 4:29:55 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

Case Narrative

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water Quarterly

TestAmerica Job ID: 580-69600-1

Job ID: 580-69600-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative
580-69600-1

Comments
No additional comments.

Receipt
The samples were received on 6/30/2017 1:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.3º C and 1.6º 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: MW-3-062817 (580-69600-1) and 2A-W-10-062817 (580-69600-2).

Method(s) NWTPH-Dx: The Diesel Range Organics (DRO) concentration reported for the following sample is due to the presence of discrete peaks: GW-2-062817 (580-69600-4).

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

Definitions/Glossary

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water Quarterly

TestAmerica Job ID: 580-69600-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water Quarterly

TestAmerica Job ID: 580-69600-1

Client Sample ID: MW-3-062817
Date Collected: 06/28/17 17:05
Date Received: 06/30/17 13:50

Lab Sample ID: 580-69600-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.30		0.025	0.015	mg/L		07/12/17 10:19	07/14/17 10:04	1
Motor Oil (>C24-C36)	0.31		0.050	0.0099	mg/L		07/12/17 10:19	07/14/17 10:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*61*		*43 - 119*	*07/12/17 10:19*	*07/14/17 10:04*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water Quarterly

TestAmerica Job ID: 580-69600-1

Client Sample ID: 2A-W-10-062817
Date Collected: 06/28/17 16:21
Date Received: 06/30/17 13:50

Lab Sample ID: 580-69600-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.067		0.024	0.014	mg/L		07/12/17 10:19	07/14/17 10:24	1
Motor Oil (>C24-C36)	0.20		0.048	0.0093	mg/L		07/12/17 10:19	07/14/17 10:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*43 - 119*	*07/12/17 10:19*	*07/14/17 10:24*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water Quarterly

TestAmerica Job ID: 580-69600-1

Client Sample ID: GW-20-062817
Date Collected: 06/28/17 13:52
Date Received: 06/30/17 13:50

Lab Sample ID: 580-69600-3
Matrix: Water

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		0.024	0.014	mg/L		07/12/17 10:19	07/17/17 14:58	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		07/12/17 10:19	07/17/17 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*43 - 119*	*07/12/17 10:19*	*07/17/17 14:58*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water Quarterly

TestAmerica Job ID: 580-69600-1

Client Sample ID: GW-2-062817
Date Collected: 06/28/17 13:39
Date Received: 06/30/17 13:50

Lab Sample ID: 580-69600-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.015**	**J**	0.024	0.014	mg/L		07/12/17 10:19	07/17/17 15:20	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		07/12/17 10:19	07/17/17 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*78*		*43 - 119*	*07/12/17 10:19*	*07/17/17 15:20*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water Quarterly

TestAmerica Job ID: 580-69600-1

Client Sample ID: 2A-W-40-062817
Date Collected: 06/28/17 13:32
Date Received: 06/30/17 13:50

Lab Sample ID: 580-69600-5
Matrix: Water

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		0.024	0.014	mg/L		07/12/17 10:19	07/17/17 15:43	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		07/12/17 10:19	07/17/17 15:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*43 - 119*	*07/12/17 10:19*	*07/17/17 15:43*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water Quarterly

TestAmerica Job ID: 580-69600-1

Client Sample ID: 2A-W-9-062817
Date Collected: 06/28/17 15:12
Date Received: 06/30/17 13:50

Lab Sample ID: 580-69600-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.12		0.024	0.014	mg/L		07/12/17 10:19	07/17/17 16:06	1
Motor Oil (>C24-C36)	0.084		0.048	0.0093	mg/L		07/12/17 10:19	07/17/17 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*43 - 119*	*07/12/17 10:19*	*07/17/17 16:06*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water Quarterly

TestAmerica Job ID: 580-69600-1

Client Sample ID: 2A-W-4-062917
Date Collected: 06/29/17 11:24
Date Received: 06/30/17 13:50

Lab Sample ID: 580-69600-7
Matrix: Water

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		0.024	0.014	mg/L		07/12/17 10:19	07/17/17 16:28	1
Motor Oil (>C24-C36)	ND		0.048	0.0095	mg/L		07/12/17 10:19	07/17/17 16:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*43 - 119*	*07/12/17 10:19*	*07/17/17 16:28*	*1*

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

Lab Sample ID: MB 580-250930/1-A
Matrix: Water
Analysis Batch: 251125

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 250930

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		07/12/17 10:19	07/13/17 15:31	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		07/12/17 10:19	07/13/17 15:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*82*		*43 - 119*	*07/12/17 10:19*	*07/13/17 15:31*	*1*

Lab Sample ID: LCS 580-250930/2-A
Matrix: Water
Analysis Batch: 251125

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 250930

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	0.500	0.404		mg/L		81	59 - 112
Motor Oil (>C24-C36)	0.500	0.486		mg/L		97	64 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*74*		*43 - 119*

Lab Sample ID: LCSD 580-250930/3-A
Matrix: Water
Analysis Batch: 251125

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 250930

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	0.500	0.427		mg/L		85	59 - 112	6	16
Motor Oil (>C24-C36)	0.500	0.495		mg/L		99	64 - 120	2	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*80*		*43 - 119*

Lab Chronicle

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water Quarterly

TestAmerica Job ID: 580-69600-1

Client Sample ID: MW-3-062817
Lab Sample ID: 580-69600-1
Date Collected: 06/28/17 17:05
Matrix: Water
Date Received: 06/30/17 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251204	07/14/17 10:04	JCP	TAL SEA

Client Sample ID: 2A-W-10-062817
Lab Sample ID: 580-69600-2
Date Collected: 06/28/17 16:21
Matrix: Water
Date Received: 06/30/17 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251204	07/14/17 10:24	JCP	TAL SEA

Client Sample ID: GW-20-062817
Lab Sample ID: 580-69600-3
Date Collected: 06/28/17 13:52
Matrix: Water
Date Received: 06/30/17 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251358	07/17/17 14:58	W1T	TAL SEA

Client Sample ID: GW-2-062817
Lab Sample ID: 580-69600-4
Date Collected: 06/28/17 13:39
Matrix: Water
Date Received: 06/30/17 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251358	07/17/17 15:20	W1T	TAL SEA

Client Sample ID: 2A-W-40-062817
Lab Sample ID: 580-69600-5
Date Collected: 06/28/17 13:32
Matrix: Water
Date Received: 06/30/17 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251358	07/17/17 15:43	W1T	TAL SEA

Client Sample ID: 2A-W-9-062817
Lab Sample ID: 580-69600-6
Date Collected: 06/28/17 15:12
Matrix: Water
Date Received: 06/30/17 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251358	07/17/17 16:06	W1T	TAL SEA

Lab Chronicle

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water Quarterly

TestAmerica Job ID: 580-69600-1

Client Sample ID: 2A-W-4-062917
Date Collected: 06/29/17 11:24
Date Received: 06/30/17 13:50

Lab Sample ID: 580-69600-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250930	07/12/17 10:19	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	251358	07/17/17 16:28	W1T	TAL SEA

Laboratory References:

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

Accreditation/Certification Summary

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water Quarterly

TestAmerica Job ID: 580-69600-1

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	UST-022	03-02-18
California	State Program	9	2901	01-31-18
L-A-B	DoD ELAP		L2236	01-19-19
L-A-B	ISO/IEC 17025		L2236	01-19-19
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-18

Sample Summary

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water Quarterly

TestAmerica Job ID: 580-69600-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-69600-1	MW-3-062817	Water	06/28/17 17:05	06/30/17 13:50
580-69600-2	2A-W-10-062817	Water	06/28/17 16:21	06/30/17 13:50
580-69600-3	GW-20-062817	Water	06/28/17 13:52	06/30/17 13:50
580-69600-4	GW-2-062817	Water	06/28/17 13:39	06/30/17 13:50
580-69600-5	2A-W-40-062817	Water	06/28/17 13:32	06/30/17 13:50
580-69600-6	2A-W-9-062817	Water	06/28/17 15:12	06/30/17 13:50
580-69600-7	2A-W-4-062917	Water	06/29/17 11:24	06/30/17 13:50

Loc: 580
69600

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory: | Project Manager:
Address: | Phone:
City/State/ZIP: | Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method:
Tracking Number:

BNSF PROJECT INFORMATION

BNSF Project Number: 683-063
BNSF Project Name: Skykomish GW Quarterly
BNSF Contact:
Project State of Origin: WA
Project City: Skykomish
BNSF Work Order No.:

CONSULTANT INFORMATION

Company: Farallon
Address: 975 5th Ave NW
City/State/ZIP: Issaquah WA 98027
Project Number: 683-063
Project Manager: Jerry Portele
Email: JPortele@farallonconsulting.com
Phone: 425-295-0800 Fax:

TURNAROUND TIME

☐ 1-day Rush ☐ 5- to 8-day Rush
☐ 2-day Rush ☐ Standard 10-Day
☐ 3-day Rush ☐ Other

DELIVERABLES

☐ BNSF Standard (Level II) ☐ Other Deliverables?
☐ Level III ☐ EDD Req. Format?
☐ Level IV

METHODS FOR ANALYSIS

HFC DX MW

SAMPLE INFORMATION

	Sample Identification	Containers	Sample Collection Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix		COMMENTS	LAB USE
1	MW-3-062817	2	6/28/17	1705	PG	N	G	W	X		
2	2A-W-10-062817	2	6/28/17	1621	CB	N	G	W	X		
3	GW-20-062817	2	6/28/17	1352	ES	N	G	W	X		
4	GW-2-062817	2	6/28/17	1339	ES	N	G	W	X		
5	2A-W-40-062817	2	6/28/17	1332	CB	N	G	W	X		
6	2A-W-9-062817	2	6/28/17	1512	CB	N	G	W	X		
7	2A-W-4-062917	2	6/29/17	1124	PG	N	G	W	X		
8											
9											
10											
11											
12											
13											
14											
15											

580-69600 Chain of Custody

TB A2 Cooler Cor 1.6 Unc 2.4
Cooler Dsc Lg Blue @Lab —
Wet/Packs Packing Bubble
w/o

TB A2 Cooler Cor 0.3 Unc 1.1
Cooler Dsc Lg Blue @Lab —
Wet/Packs Packing Bubble
w/o

Relinquished By: Paul Garvin	Date/Time: 6/29/17 1200	Received By:	Date/Time: 6/29/17 1200	Comments and Special Analytical Requirements:
Relinquished By:	Date/Time: 6/30/17 1124	Received By:	Date/Time: 6/30/17 1350	
Relinquished By:	Date/Time:	Received By:	Date/Time:	
Received by Laboratory:	Date/Time:	Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No	Custody Seal No. / BNSF COC No

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

DUPLICATE - CONSULTANT

TAL-1001 (0912)

Login Sample Receipt Checklist

Client: BNSF Railway Company

Job Number: 580-69600-1

Login Number: 69600

List Source: TestAmerica Seattle

List Number: 1

Creator: Gall, Brandon A

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	False	Not present on either cooler
Sample custody seals, if present, are intact.	N/A	Not Present
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	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 580-71782-1
Client Project/Site: Skykomish Semi-Annual
Sampling Event: Skykomish HCC System

For:
BNSF Railway Company
605 Puyallup Avenue
Tacoma, Washington 98421

Attn: e procurement

Kristine D. Allen

Authorized for release by:
10/12/2017 4:45:05 PM

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

Table of Contents

Job ID: 580-71782-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative
580-71782-1

Comments
No additional comments.

Receipt
The samples were received on 9/28/2017 3:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 11 coolers at receipt time were 2.7º C, 4.0º C, 5.3º C, 5.4º C, 5.4º C, 7.8º C, 8.4º C, 8.6º C, 8.7º C, 8.9º C and 10.2º C.

Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: S4-AD-092517 (580-71782-15), S4-AU-092517 (580-71782-16), S4-BD-092517 (580-71782-17), S4-BU-092517 (580-71782-18), S4-CD-092517 (580-71782-19), S4-CU-092517 (580-71782-20), MW-4-092617 (580-71782-21), MW-3-092617 (580-71782-22), 2A-W-10-092617 (580-71782-23), 5-W-19-092617 (580-71782-24), 5-W-18-092617 (580-71782-25), 5-W-16-092617 (580-71782-26), 5-W-17-092617 (580-71782-27), 2A-W-9-092617 (580-71782-28), 5-W-15-092617 (580-71782-29), 5-W-14-092617 (580-71782-30), 2B-W-4-092617 (580-71782-31), MW-16-092617 (580-71782-32), 5-W-43-092617 (580-71782-40), EW-1-092617 (580-71782-41), GW-1-092617 (580-71782-42), GW-10-092617 (580-71782-43), GW-2-092617 (580-71782-44), GW-20-092617 (580-71782-45), 5-W-54-092617 (580-71782-46), MW-38R-092617 (580-71782-47), MW-380R-092617 (580-71782-48), 5-W-55-092617 (580-71782-49), 5-W-56-092617 (580-71782-50), 5-W-150-092617 (580-71782-51), 1C-W-1-092717 (580-71782-52), 1C-W-8-092717 (580-71782-53), 1B-W-2-092717 (580-71782-56), 1B-W-3-092717 (580-71782-57), 2A-W-40-092717 (580-71782-61) and 5-W-51-092717 (580-71782-62). The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

One container for the following sample was received broken: GW-10-092617 (580-71782-43). There is remaining volume for analysis.

GC Semi VOA
Method(s) NWTPH-Dx: The Diesel Range Organics (C10-C24) concentration reported for the following samples is due to the presence of discrete peaks: S1-BD-092517 (580-71782-1), S1-BU-092517 (580-71782-2) and (MB 580-258036/1-A).

Method(s) NWTPH-Dx: The continuing calibration verification (CCV) associated with batch 580-258268 recovered above the upper control limit for DRO (C10-C24) and Motor Oil. The samples associated with this CCV were non-detects for the affected analytes above the reporting limit; therefore, the data have been reported. The following samples are impacted: S3-BU-092517 (580-71782-10), S3-AD-092517 (580-71782-11) and (CCV 580-258268/17).

Method(s) NWTPH-Dx: The continuing calibration verification (CCV) associated with batch 580-258268 recovered above the upper control limit for o-Terphenyl surrogate. The associated samples were within %recovery control limits for o-Terphenyl; therefore the data are reported. S3-BU-092517 (580-71782-10), S3-AD-092517 (580-71782-11) and (CCV 580-258268/17)

Method(s) NWTPH-Dx: The Diesel Range Organics (DRO) concentration reported for the following samples is due to the presence of discrete peaks: S1-AD-092517 (580-71782-4) and S2-AD-092517 (580-71782-5).

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: GW-4-092617 (580-71782-34), GW-40-092617 (580-71782-35), 2A-W-42-092617 (580-71782-36), 1C-W-7-092617 (580-71782-37) and 1C-W-4-092617 (580-71782-38).

Method(s) NWTPH-Dx: Surrogate recovery for the following sample was outside control limits: 1C-W-8-092717 (580-71782-53). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) NWTPH-Dx: The peak profile present in this sample 5-W-56-092617 (580-71782-50), 1B-W-3-092717 (580-71782-57) and 1A-W-4-092717 (580-71782-59) is atypical of a hydrocarbon pattern and consists of two discrete peaks.

Method(s) NWTPH-Dx: The peak profile present in this sample 5-W-55-092617 (580-71782-49) and 1B-W-23-092717 (580-71782-58) is atypical of a hydrocarbon pattern and consists of four discrete peaks.

Job ID: 580-71782-1 (Continued)

Laboratory: TestAmerica Seattle (Continued)

Method(s) NWTPH-Dx: The peak profile present in this sample 1C-W-1-092717 (580-71782-52), 1C-W-8-092717 (580-71782-53), GW-3-092717 (580-71782-54), GW-30-092717 (580-71782-55), 1B-W-2-092717 (580-71782-56) and 2A-W-40-092717 (580-71782-61) is atypical of a hydrocarbon pattern and consists of three discrete peaks.

Method(s) NWTPH-Dx: The following continuing calibration verification (CCV) standard associated with batch 580-258299 recovered outside acceptance criteria for %D for surrogate o-Terphenyl (18.6%, Limit 15). The %Rec is within the acceptance criteria for the surrogate in the associated samples; therefore, the data have been reported. The following samples are impacted: 5-W-15-092617 (580-71782-29[1.0]), 5-W-14-092617 (580-71782-30[1.0]), 2B-W-4-092617 (580-71782-31[1.0]) and (CCV 580-258299/29)

Method(s) NWTPH-Dx: The continuing calibration verification (CCV) associated with batch 580-258299 recovered above the upper control limit for Motor Oil (>C24-C36). The samples associated with this CCV were non-detects for the affected analytes above the reporting limit; therefore, the data have been reported. The following samples are impacted: S3-AU-092517 (580-71782-12), S3-CD-092517 (580-71782-13), S3-CU-092517 (580-71782-14), S4-AD-092517 (580-71782-15), S4-AU-092517 (580-71782-16), S4-BD-092517 (580-71782-17), S4-BU-092517 (580-71782-18), S4-CD-092517 (580-71782-19), S4-CU-092517 (580-71782-20), MW-3-092617 (580-71782-22), 5-W-19-092617 (580-71782-24), 5-W-16-092617 (580-71782-26), 5-W-17-092617 (580-71782-27) and (CCV 580-258299/14).

Method(s) NWTPH-Dx: The Diesel Range Organics (DRO) concentration reported for the following samples is due to the presence of discrete peaks: S4-BD-092517 (580-71782-17), S4-BU-092517 (580-71782-18), S4-CD-092517 (580-71782-19), S4-CU-092517 (580-71782-20), MW-3-092617 (580-71782-22), 5-W-16-092617 (580-71782-26) and 5-W-14-092617 (580-71782-30).

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-4-092617 (580-71782-21), 2A-W-10-092617 (580-71782-23), 5-W-18-092617 (580-71782-25), 2A-W-9-092617 (580-71782-28) and 5-W-15-092617 (580-71782-29).

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-4-092617 (580-71782-21), 2A-W-10-092617 (580-71782-23) and 5-W-18-092617 (580-71782-25).

Method(s) NWTPH-Dx: The following sample 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-9-092617 (580-71782-28).

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

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

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: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S1-BD-092517
Date Collected: 09/25/17 15:37
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-1
Matrix: Water

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		0.024	0.014	mg/L		10/04/17 10:36	10/05/17 02:53	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		10/04/17 10:36	10/05/17 02:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*71*		*43 - 119*	*10/04/17 10:36*	*10/05/17 02:53*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S1-BU-092517
Date Collected: 09/25/17 15:40
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-2
Matrix: Water

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		0.024	0.014	mg/L		10/04/17 10:36	10/05/17 03:15	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		10/04/17 10:36	10/05/17 03:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*75*		*43 - 119*	*10/04/17 10:36*	*10/05/17 03:15*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S1-AU-092517
Date Collected: 09/25/17 15:45
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-3
Matrix: Water

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		0.024	0.014	mg/L		10/05/17 15:33	10/06/17 15:53	1
Motor Oil (>C24-C36)	**0.027**	**J**	0.048	0.0094	mg/L		10/05/17 15:33	10/06/17 15:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*10/05/17 15:33*	*10/06/17 15:53*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S1-AD-092517
Date Collected: 09/25/17 15:50
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.014	J	0.024	0.014	mg/L		10/05/17 15:33	10/06/17 16:16	1
Motor Oil (>C24-C36)	0.015	J	0.048	0.0093	mg/L		10/05/17 15:33	10/06/17 16:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*10/05/17 15:33*	*10/06/17 16:16*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S2-AD-092517
Date Collected: 09/25/17 16:20
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.016	J	0.024	0.014	mg/L		10/05/17 15:33	10/06/17 16:38	1
Motor Oil (>C24-C36)	0.023	J	0.048	0.0093	mg/L		10/05/17 15:33	10/06/17 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*100*		*50 - 150*	*10/05/17 15:33*	*10/06/17 16:38*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S2-AU-092517
Date Collected: 09/25/17 16:25
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-6
Matrix: Water

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		0.024	0.014	mg/L		10/05/17 15:33	10/06/17 17:00	1
Motor Oil (>C24-C36)	**0.028**	**J**	0.048	0.0093	mg/L		10/05/17 15:33	10/06/17 17:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*10/05/17 15:33*	*10/06/17 17:00*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S2-BU-092517
Date Collected: 09/25/17 16:35
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.057		0.024	0.014	mg/L		10/05/17 15:33	10/06/17 17:22	1
Motor Oil (>C24-C36)	0.026	J	0.048	0.0093	mg/L		10/05/17 15:33	10/06/17 17:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*50 - 150*	*10/05/17 15:33*	*10/06/17 17:22*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S2-BD-092517
Date Collected: 09/25/17 16:37
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-8
Matrix: Water

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		0.024	0.014	mg/L		10/05/17 15:33	10/06/17 17:44	1
Motor Oil (>C24-C36)	**0.011**	**J**	0.048	0.0093	mg/L		10/05/17 15:33	10/06/17 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*10/05/17 15:33*	*10/06/17 17:44*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S3-BD-092517
Date Collected: 09/25/17 17:15
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-9
Matrix: Water

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		0.024	0.014	mg/L		10/05/17 15:33	10/06/17 18:07	1
Motor Oil (>C24-C36)	**0.011**	**J**	0.047	0.0093	mg/L		10/05/17 15:33	10/06/17 18:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*95*		*50 - 150*	*10/05/17 15:33*	*10/06/17 18:07*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S3-BU-092517
Date Collected: 09/25/17 17:17
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-10
Matrix: Water

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		0.024	0.014	mg/L		10/05/17 15:33	10/06/17 18:52	1
Motor Oil (>C24-C36)	**0.014**	**J**	0.048	0.0093	mg/L		10/05/17 15:33	10/06/17 18:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*90*		*50 - 150*	*10/05/17 15:33*	*10/06/17 18:52*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S3-AD-092517
Date Collected: 09/25/17 17:20
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-11
Matrix: Water

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		0.024	0.014	mg/L		10/05/17 15:33	10/06/17 19:15	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		10/05/17 15:33	10/06/17 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*10/05/17 15:33*	*10/06/17 19:15*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S3-AU-092517
Date Collected: 09/25/17 17:21
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-12
Matrix: Water

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		0.024	0.014	mg/L		10/06/17 08:42	10/06/17 21:50	1
Motor Oil (>C24-C36)	**0.010**	**J**	0.048	0.0093	mg/L		10/06/17 08:42	10/06/17 21:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*50 - 150*	*10/06/17 08:42*	*10/06/17 21:50*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S3-CD-092517
Date Collected: 09/25/17 17:43
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-13
Matrix: Water

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		0.024	0.014	mg/L		10/06/17 08:42	10/06/17 22:13	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		10/06/17 08:42	10/06/17 22:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*10/06/17 08:42*	*10/06/17 22:13*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S3-CU-092517
Date Collected: 09/25/17 17:44
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-14
Matrix: Water

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		0.024	0.014	mg/L		10/06/17 08:42	10/06/17 22:35	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		10/06/17 08:42	10/06/17 22:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*77*		*50 - 150*	*10/06/17 08:42*	*10/06/17 22:35*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S4-AD-092517
Date Collected: 09/25/17 18:02
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-15
Matrix: Water

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		0.024	0.014	mg/L		10/06/17 08:42	10/06/17 22:57	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		10/06/17 08:42	10/06/17 22:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*81*		*50 - 150*	*10/06/17 08:42*	*10/06/17 22:57*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S4-AU-092517
Date Collected: 09/25/17 18:06
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-16
Matrix: Water

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		0.024	0.014	mg/L		10/06/17 08:42	10/06/17 23:19	1
Motor Oil (>C24-C36)	**0.012**	**J**	0.048	0.0093	mg/L		10/06/17 08:42	10/06/17 23:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*50 - 150*	*10/06/17 08:42*	*10/06/17 23:19*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S4-BD-092517
Date Collected: 09/25/17 18:16
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-17
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.016	J	0.024	0.014	mg/L		10/06/17 08:42	10/06/17 23:41	1
Motor Oil (>C24-C36)	0.038	J	0.048	0.0093	mg/L		10/06/17 08:42	10/06/17 23:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*10/06/17 08:42*	*10/06/17 23:41*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S4-BU-092517
Date Collected: 09/25/17 18:18
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-18
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.020	J	0.024	0.014	mg/L		10/06/17 08:42	10/07/17 00:03	1
Motor Oil (>C24-C36)	0.033	J	0.048	0.0093	mg/L		10/06/17 08:42	10/07/17 00:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*50 - 150*	*10/06/17 08:42*	*10/07/17 00:03*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S4-CD-092517
Date Collected: 09/25/17 18:25
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-19
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.018	J	0.024	0.014	mg/L		10/06/17 08:42	10/07/17 00:47	1
Motor Oil (>C24-C36)	0.017	J	0.048	0.0093	mg/L		10/06/17 08:42	10/07/17 00:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*95*		*50 - 150*	*10/06/17 08:42*	*10/07/17 00:47*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: S4-CU-092517
Date Collected: 09/25/17 18:30
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-20
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.014	J	0.024	0.014	mg/L		10/06/17 08:42	10/07/17 01:09	1
Motor Oil (>C24-C36)	0.011	J	0.048	0.0093	mg/L		10/06/17 08:42	10/07/17 01:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*50 - 150*	*10/06/17 08:42*	*10/07/17 01:09*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: MW-4-092617
Date Collected: 09/26/17 09:05
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-21
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.11		0.024	0.014	mg/L		10/06/17 08:42	10/12/17 01:03	1
Motor Oil (>C24-C36)	0.078		0.048	0.0094	mg/L		10/06/17 08:42	10/12/17 01:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*50 - 150*	*10/06/17 08:42*	*10/12/17 01:03*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: MW-3-092617
Date Collected: 09/26/17 09:14
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-22
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.030		0.024	0.014	mg/L		10/06/17 08:42	10/07/17 01:53	1
Motor Oil (>C24-C36)	0.041	J	0.048	0.0093	mg/L		10/06/17 08:42	10/07/17 01:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*10/06/17 08:42*	*10/07/17 01:53*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 2A-W-10-092617
Date Collected: 09/26/17 10:04
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-23
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.092		0.024	0.014	mg/L		10/06/17 08:42	10/12/17 01:25	1
Motor Oil (>C24-C36)	0.16		0.048	0.0094	mg/L		10/06/17 08:42	10/12/17 01:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*50 - 150*	*10/06/17 08:42*	*10/12/17 01:25*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 5-W-19-092617
Date Collected: 09/26/17 09:00
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-24
Matrix: Water

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		0.024	0.014	mg/L		10/06/17 08:42	10/07/17 02:37	1
Motor Oil (>C24-C36)	**0.011**	**J**	0.048	0.0093	mg/L		10/06/17 08:42	10/07/17 02:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*81*		*50 - 150*	*10/06/17 08:42*	*10/07/17 02:37*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 5-W-18-092617
Date Collected: 09/26/17 09:15
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-25
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.065		0.024	0.014	mg/L		10/06/17 08:42	10/12/17 01:47	1
Motor Oil (>C24-C36)	0.055		0.048	0.0093	mg/L		10/06/17 08:42	10/12/17 01:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*50 - 150*	*10/06/17 08:42*	*10/12/17 01:47*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 5-W-16-092617
Date Collected: 09/26/17 10:05
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-26
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.015	J	0.024	0.014	mg/L		10/06/17 08:42	10/07/17 03:21	1
Motor Oil (>C24-C36)	0.015	J	0.047	0.0093	mg/L		10/06/17 08:42	10/07/17 03:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*50 - 150*	*10/06/17 08:42*	*10/07/17 03:21*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 5-W-17-092617
Date Collected: 09/26/17 10:13
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-27
Matrix: Water

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		0.024	0.014	mg/L		10/06/17 08:42	10/07/17 03:43	1
Motor Oil (>C24-C36)	**0.0097**	**J**	0.047	0.0093	mg/L		10/06/17 08:42	10/07/17 03:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*80*		*50 - 150*	*10/06/17 08:42*	*10/07/17 03:43*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 2A-W-9-092617
Date Collected: 09/26/17 10:20
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-28
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.46		0.024	0.014	mg/L		10/06/17 08:42	10/12/17 10:09	1
Motor Oil (>C24-C36)	0.32		0.048	0.0093	mg/L		10/06/17 08:42	10/12/17 10:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*82*		*50 - 150*	*10/06/17 08:42*	*10/12/17 10:09*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 5-W-15-092617
Date Collected: 09/26/17 11:08
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-29
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.055		0.024	0.014	mg/L		10/06/17 08:42	10/07/17 04:48	1
Motor Oil (>C24-C36)	0.037	J	0.048	0.0093	mg/L		10/06/17 08:42	10/07/17 04:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*10/06/17 08:42*	*10/07/17 04:48*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 5-W-14-092617
Date Collected: 09/26/17 11:10
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-30
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.015	J	0.024	0.014	mg/L		10/06/17 08:42	10/07/17 05:10	1
Motor Oil (>C24-C36)	0.011	J	0.047	0.0093	mg/L		10/06/17 08:42	10/07/17 05:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*80*		*50 - 150*	*10/06/17 08:42*	*10/07/17 05:10*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 2B-W-4-092617
Date Collected: 09/26/17 11:33
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-31
Matrix: Water

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		0.024	0.014	mg/L		10/06/17 08:42	10/07/17 05:32	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		10/06/17 08:42	10/07/17 05:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*77*		*50 - 150*	*10/06/17 08:42*	*10/07/17 05:32*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: MW-16-092617
Date Collected: 09/26/17 11:45
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-32
Matrix: Water

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		0.024	0.014	mg/L		10/09/17 09:09	10/10/17 20:43	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		10/09/17 09:09	10/10/17 20:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*78*		*50 - 150*	*10/09/17 09:09*	*10/10/17 20:43*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: EW-2A-092617
Date Collected: 09/26/17 13:42
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-33
Matrix: Water

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		0.024	0.014	mg/L		10/09/17 09:09	10/10/17 21:05	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		10/09/17 09:09	10/10/17 21:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*10/09/17 09:09*	*10/10/17 21:05*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: GW-4-092617
Date Collected: 09/26/17 13:55
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-34
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.026		0.024	0.014	mg/L		10/09/17 09:09	10/10/17 21:27	1
Motor Oil (>C24-C36)	0.011	J	0.048	0.0094	mg/L		10/09/17 09:09	10/10/17 21:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*50 - 150*	*10/09/17 09:09*	*10/10/17 21:27*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: GW-40-092617
Date Collected: 09/26/17 14:00
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-35
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.025		0.024	0.014	mg/L		10/09/17 09:09	10/10/17 21:49	1
Motor Oil (>C24-C36)	0.014	J	0.047	0.0093	mg/L		10/09/17 09:09	10/10/17 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*85*		*50 - 150*	*10/09/17 09:09*	*10/10/17 21:49*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 2A-W-42-092617
Date Collected: 09/26/17 14:48
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-36
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.095		0.024	0.014	mg/L		10/09/17 09:09	10/10/17 22:33	1
Motor Oil (>C24-C36)	0.089		0.047	0.0093	mg/L		10/09/17 09:09	10/10/17 22:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*76*		*50 - 150*	*10/09/17 09:09*	*10/10/17 22:33*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 1C-W-7-092617
Date Collected: 09/26/17 15:00
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-37
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.030		0.024	0.014	mg/L		10/09/17 09:09	10/10/17 22:55	1
Motor Oil (>C24-C36)	0.020	J	0.048	0.0094	mg/L		10/09/17 09:09	10/10/17 22:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*74*		*50 - 150*	*10/09/17 09:09*	*10/10/17 22:55*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 1C-W-4-092617
Date Collected: 09/26/17 16:18
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-38
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.047		0.024	0.014	mg/L		10/09/17 09:09	10/10/17 23:17	1
Motor Oil (>C24-C36)	0.026	J	0.047	0.0093	mg/L		10/09/17 09:09	10/10/17 23:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*50 - 150*	*10/09/17 09:09*	*10/10/17 23:17*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 1C-W-3-092617
Date Collected: 09/26/17 16:40
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-39
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.019	J	0.024	0.014	mg/L		10/09/17 09:09	10/10/17 23:39	1
Motor Oil (>C24-C36)	0.013	J	0.048	0.0093	mg/L		10/09/17 09:09	10/10/17 23:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*50 - 150*	*10/09/17 09:09*	*10/10/17 23:39*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 5-W-43-092617
Date Collected: 09/26/17 13:00
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-40
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.039		0.024	0.014	mg/L		10/09/17 09:09	10/11/17 00:01	1
Motor Oil (>C24-C36)	0.018	J	0.048	0.0093	mg/L		10/09/17 09:09	10/11/17 00:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*78*		*50 - 150*	*10/09/17 09:09*	*10/11/17 00:01*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: EW-1-092617
Date Collected: 09/26/17 13:01
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-41
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.038		0.024	0.014	mg/L		10/09/17 09:09	10/11/17 00:23	1
Motor Oil (>C24-C36)	0.019	J	0.048	0.0093	mg/L		10/09/17 09:09	10/11/17 00:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*74*		*50 - 150*	*10/09/17 09:09*	*10/11/17 00:23*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: GW-1-092617
Date Collected: 09/26/17 13:55
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-42
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.026		0.024	0.014	mg/L		10/09/17 09:09	10/11/17 00:45	1
Motor Oil (>C24-C36)	0.019	J	0.048	0.0093	mg/L		10/09/17 09:09	10/11/17 00:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*75*		*50 - 150*	*10/09/17 09:09*	*10/11/17 00:45*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: GW-10-092617
Date Collected: 09/26/17 14:00
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-43
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.021	J	0.024	0.014	mg/L		10/09/17 09:09	10/11/17 01:07	1
Motor Oil (>C24-C36)	0.015	J	0.048	0.0093	mg/L		10/09/17 09:09	10/11/17 01:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*67*		*50 - 150*	*10/09/17 09:09*	*10/11/17 01:07*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: GW-2-092617
Date Collected: 09/26/17 13:59
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-44
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.040**		0.024	0.014	mg/L		10/09/17 09:09	10/11/17 01:28	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		10/09/17 09:09	10/11/17 01:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*50 - 150*	*10/09/17 09:09*	*10/11/17 01:28*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: GW-20-092617
Date Collected: 09/26/17 14:02
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-45
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.032**		0.024	0.014	mg/L		10/09/17 09:09	10/11/17 01:50	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		10/09/17 09:09	10/11/17 01:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*77*		*50 - 150*	*10/09/17 09:09*	*10/11/17 01:50*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 5-W-54-092617
Date Collected: 09/26/17 15:10
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-46
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.19		0.024	0.014	mg/L		10/09/17 09:09	10/11/17 02:34	1
Motor Oil (>C24-C36)	0.088		0.048	0.0093	mg/L		10/09/17 09:09	10/11/17 02:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*67*		*50 - 150*	*10/09/17 09:09*	*10/11/17 02:34*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: MW-38R-092617
Date Collected: 09/26/17 15:20
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-47
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.074		0.024	0.014	mg/L		10/09/17 09:09	10/11/17 02:56	1
Motor Oil (>C24-C36)	0.057		0.047	0.0093	mg/L		10/09/17 09:09	10/11/17 02:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*74*		*50 - 150*	*10/09/17 09:09*	*10/11/17 02:56*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: MW-380R-092617
Date Collected: 09/26/17 15:25
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-48
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.090		0.024	0.014	mg/L		10/09/17 09:09	10/11/17 03:18	1
Motor Oil (>C24-C36)	0.061		0.047	0.0093	mg/L		10/09/17 09:09	10/11/17 03:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*50 - 150*	*10/09/17 09:09*	*10/11/17 03:18*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 5-W-55-092617
Date Collected: 09/26/17 16:12
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-49
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.25		0.024	0.014	mg/L		10/09/17 14:47	10/10/17 19:37	1
Motor Oil (>C24-C36)	0.11		0.048	0.0094	mg/L		10/09/17 14:47	10/10/17 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*70*		*50 - 150*	*10/09/17 14:47*	*10/10/17 19:37*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 5-W-56-092617
Date Collected: 09/26/17 16:25
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-50
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	1.2		0.024	0.014	mg/L		10/09/17 14:47	10/10/17 19:59	1
Motor Oil (>C24-C36)	0.65		0.048	0.0093	mg/L		10/09/17 14:47	10/10/17 19:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*62*		*50 - 150*	*10/09/17 14:47*	*10/10/17 19:59*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 5-W-150-092617
Date Collected: 09/26/17 11:12
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-51
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.050		0.024	0.014	mg/L		10/09/17 14:47	10/10/17 20:21	1
Motor Oil (>C24-C36)	0.032	J	0.048	0.0093	mg/L		10/09/17 14:47	10/10/17 20:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*81*		*50 - 150*	*10/09/17 14:47*	*10/10/17 20:21*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 1C-W-1-092717
Date Collected: 09/27/17 09:25
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-52
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.026		0.024	0.014	mg/L		10/09/17 14:47	10/10/17 20:43	1
Motor Oil (>C24-C36)	0.021	J	0.048	0.0093	mg/L		10/09/17 14:47	10/10/17 20:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*78*		*50 - 150*	*10/09/17 14:47*	*10/10/17 20:43*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 1C-W-8-092717
Date Collected: 09/27/17 09:26
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-53
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.023	J	0.024	0.014	mg/L		10/09/17 14:47	10/10/17 21:05	1
Motor Oil (>C24-C36)	0.022	J	0.047	0.0093	mg/L		10/09/17 14:47	10/10/17 21:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*48*	*X*	*50 - 150*	*10/09/17 14:47*	*10/10/17 21:05*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: GW-3-092717
Date Collected: 09/27/17 09:25
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-54
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.18		0.024	0.014	mg/L		10/09/17 14:47	10/10/17 21:27	1
Motor Oil (>C24-C36)	0.083		0.047	0.0093	mg/L		10/09/17 14:47	10/10/17 21:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*77*		*50 - 150*	*10/09/17 14:47*	*10/10/17 21:27*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: GW-30-092717
Date Collected: 09/27/17 09:35
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-55
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.17		0.024	0.014	mg/L		10/09/17 14:47	10/10/17 22:33	1
Motor Oil (>C24-C36)	0.079		0.047	0.0093	mg/L		10/09/17 14:47	10/10/17 22:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*80*		*50 - 150*	*10/09/17 14:47*	*10/10/17 22:33*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 1B-W-2-092717
Date Collected: 09/27/17 10:33
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-56
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.046		0.024	0.014	mg/L		10/09/17 14:47	10/10/17 22:55	1
Motor Oil (>C24-C36)	0.053		0.048	0.0093	mg/L		10/09/17 14:47	10/10/17 22:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*77*		*50 - 150*	*10/09/17 14:47*	*10/10/17 22:55*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 1B-W-3-092717
Date Collected: 09/27/17 10:40
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-57
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.021	J	0.024	0.014	mg/L		10/09/17 14:47	10/10/17 23:17	1
Motor Oil (>C24-C36)	0.023	J	0.048	0.0093	mg/L		10/09/17 14:47	10/10/17 23:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*75*		*50 - 150*	*10/09/17 14:47*	*10/10/17 23:17*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 1B-W-23-092717
Date Collected: 09/27/17 09:50
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-58
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.077		0.024	0.014	mg/L		10/09/17 14:47	10/10/17 23:39	1
Motor Oil (>C24-C36)	0.097		0.047	0.0093	mg/L		10/09/17 14:47	10/10/17 23:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*50 - 150*	*10/09/17 14:47*	*10/10/17 23:39*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 1A-W-4-092717
Date Collected: 09/27/17 11:18
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-59
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.018	J	0.024	0.014	mg/L		10/09/17 14:47	10/11/17 00:01	1
Motor Oil (>C24-C36)	0.011	J	0.047	0.0093	mg/L		10/09/17 14:47	10/11/17 00:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*74*		*50 - 150*	*10/09/17 14:47*	*10/11/17 00:01*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 2A-W-41-092717
Date Collected: 09/27/17 11:20
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-60
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.32		0.024	0.014	mg/L		10/09/17 14:47	10/11/17 00:23	1
Motor Oil (>C24-C36)	0.13		0.047	0.0093	mg/L		10/09/17 14:47	10/11/17 00:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*78*		*50 - 150*	*10/09/17 14:47*	*10/11/17 00:23*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 2A-W-40-092717
Date Collected: 09/27/17 12:10
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-61
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.028		0.024	0.014	mg/L		10/09/17 14:47	10/11/17 00:45	1
Motor Oil (>C24-C36)	0.020	J	0.048	0.0093	mg/L		10/09/17 14:47	10/11/17 00:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*50 - 150*	*10/09/17 14:47*	*10/11/17 00:45*	*1*

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 5-W-51-092717
Date Collected: 09/27/17 12:20
Date Received: 09/28/17 15:45

Lab Sample ID: 580-71782-62
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	2.5		0.024	0.014	mg/L		10/09/17 14:47	10/10/17 21:49	1
Motor Oil (>C24-C36)	0.88		0.048	0.0093	mg/L		10/09/17 14:47	10/10/17 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*10/09/17 14:47*	*10/10/17 21:49*	*1*

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

Lab Sample ID: MB 580-258036/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258110 — **Prep Batch: 258036**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		10/04/17 10:36	10/04/17 18:27	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		10/04/17 10:36	10/04/17 18:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*76*		*43 - 119*	*10/04/17 10:36*	*10/04/17 18:27*	*1*

Lab Sample ID: LCS 580-258036/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258110 — **Prep Batch: 258036**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	0.500	0.354		mg/L		71	59 - 112
Motor Oil (>C24-C36)	0.500	0.389		mg/L		78	64 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*76*		*43 - 119*

Lab Sample ID: LCSD 580-258036/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258110 — **Prep Batch: 258036**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	0.500	0.368		mg/L		74	59 - 112	4	16
Motor Oil (>C24-C36)	0.500	0.401		mg/L		80	64 - 120	3	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*80*		*43 - 119*

Lab Sample ID: MB 580-258207/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258268 — **Prep Batch: 258207**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		10/05/17 15:33	10/06/17 14:46	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		10/05/17 15:33	10/06/17 14:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*90*		*50 - 150*	*10/05/17 15:33*	*10/06/17 14:46*	*1*

Lab Sample ID: LCS 580-258207/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258268 — **Prep Batch: 258207**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	0.500	0.512		mg/L		102	59 - 112
Motor Oil (>C24-C36)	0.500	0.562		mg/L		112	64 - 120

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

Lab Sample ID: LCS 580-258207/2-A
Matrix: Water
Analysis Batch: 258268

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 258207

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	102		50 - 150

Lab Sample ID: LCSD 580-258207/3-A
Matrix: Water
Analysis Batch: 258382

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 258207

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			0.500	0.498		mg/L		100	59 - 112	3	16
Motor Oil (>C24-C36)			0.500	0.573		mg/L		115	64 - 120	2	17

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	104		50 - 150

Lab Sample ID: MB 580-258245/1-A
Matrix: Water
Analysis Batch: 258299

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 258245

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		10/06/17 08:42	10/06/17 20:44	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		10/06/17 08:42	10/06/17 20:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	88		50 - 150	10/06/17 08:42	10/06/17 20:44	1

Lab Sample ID: LCS 580-258245/2-A
Matrix: Water
Analysis Batch: 258375

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 258245

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)			0.500	0.424		mg/L		85	59 - 112
Motor Oil (>C24-C36)			0.500	0.449		mg/L		90	64 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	86		50 - 150

Lab Sample ID: LCSD 580-258245/3-A
Matrix: Water
Analysis Batch: 258299

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 258245

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			0.500	0.438		mg/L		88	59 - 112	3	16
Motor Oil (>C24-C36)			0.500	0.471		mg/L		94	64 - 120	5	17

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	98		50 - 150

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

Lab Sample ID: MB 580-258366/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258499 — **Prep Batch: 258366**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		10/09/17 09:09	10/10/17 18:31	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		10/09/17 09:09	10/10/17 18:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*50 - 150*	*10/09/17 09:09*	*10/10/17 18:31*	*1*

Lab Sample ID: LCS 580-258366/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258499 — **Prep Batch: 258366**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	0.500	0.352		mg/L		70	59 - 112
Motor Oil (>C24-C36)	0.500	0.386		mg/L		77	64 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*71*		*50 - 150*

Lab Sample ID: LCSD 580-258366/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258499 — **Prep Batch: 258366**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	0.500	0.374		mg/L		75	59 - 112	6	16
Motor Oil (>C24-C36)	0.500	0.411		mg/L		82	64 - 120	6	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*80*		*50 - 150*

Lab Sample ID: MB 580-258424/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258510 — **Prep Batch: 258424**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		10/09/17 14:47	10/10/17 18:31	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		10/09/17 14:47	10/10/17 18:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*50 - 150*	*10/09/17 14:47*	*10/10/17 18:31*	*1*

Lab Sample ID: LCS 580-258424/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258510 — **Prep Batch: 258424**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	0.500	0.358		mg/L		72	59 - 112
Motor Oil (>C24-C36)	0.500	0.409		mg/L		82	64 - 120

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

Lab Sample ID: LCS 580-258424/2-A
Matrix: Water
Analysis Batch: 258510

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 258424

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*83*		*50 - 150*

Lab Sample ID: LCSD 580-258424/3-A
Matrix: Water
Analysis Batch: 258510

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 258424

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			0.500	0.403		mg/L		81	59 - 112	12	16
Motor Oil (>C24-C36)			0.500	0.432		mg/L		86	64 - 120	5	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*88*		*50 - 150*

Client Sample ID: S1-BD-092517

Lab Sample ID: 580-71782-1

Date Collected: 09/25/17 15:37

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258036	10/04/17 10:36	NDB	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258110	10/05/17 02:53	CJ	TAL SEA

Client Sample ID: S1-BU-092517

Lab Sample ID: 580-71782-2

Date Collected: 09/25/17 15:40

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258036	10/04/17 10:36	NDB	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258110	10/05/17 03:15	CJ	TAL SEA

Client Sample ID: S1-AU-092517

Lab Sample ID: 580-71782-3

Date Collected: 09/25/17 15:45

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258207	10/05/17 15:33	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258268	10/06/17 15:53	ADB	TAL SEA

Client Sample ID: S1-AD-092517

Lab Sample ID: 580-71782-4

Date Collected: 09/25/17 15:50

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258207	10/05/17 15:33	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258268	10/06/17 16:16	ADB	TAL SEA

Client Sample ID: S2-AD-092517

Lab Sample ID: 580-71782-5

Date Collected: 09/25/17 16:20

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258207	10/05/17 15:33	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258268	10/06/17 16:38	ADB	TAL SEA

Client Sample ID: S2-AU-092517

Lab Sample ID: 580-71782-6

Date Collected: 09/25/17 16:25

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258207	10/05/17 15:33	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258268	10/06/17 17:00	ADB	TAL SEA

Client Sample ID: S2-BU-092517 — **Lab Sample ID: 580-71782-7**
Date Collected: 09/25/17 16:35 — **Matrix: Water**
Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258207	10/05/17 15:33	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258268	10/06/17 17:22	ADB	TAL SEA

Client Sample ID: S2-BD-092517 — **Lab Sample ID: 580-71782-8**
Date Collected: 09/25/17 16:37 — **Matrix: Water**
Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258207	10/05/17 15:33	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258268	10/06/17 17:44	ADB	TAL SEA

Client Sample ID: S3-BD-092517 — **Lab Sample ID: 580-71782-9**
Date Collected: 09/25/17 17:15 — **Matrix: Water**
Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258207	10/05/17 15:33	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258268	10/06/17 18:07	ADB	TAL SEA

Client Sample ID: S3-BU-092517 — **Lab Sample ID: 580-71782-10**
Date Collected: 09/25/17 17:17 — **Matrix: Water**
Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258207	10/05/17 15:33	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258268	10/06/17 18:52	ADB	TAL SEA

Client Sample ID: S3-AD-092517 — **Lab Sample ID: 580-71782-11**
Date Collected: 09/25/17 17:20 — **Matrix: Water**
Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258207	10/05/17 15:33	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258268	10/06/17 19:15	ADB	TAL SEA

Client Sample ID: S3-AU-092517 — **Lab Sample ID: 580-71782-12**
Date Collected: 09/25/17 17:21 — **Matrix: Water**
Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/06/17 21:50	ADB	TAL SEA

Client Sample ID: S3-CD-092517

Lab Sample ID: 580-71782-13

Date Collected: 09/25/17 17:43

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/06/17 22:13	ADB	TAL SEA

Client Sample ID: S3-CU-092517

Lab Sample ID: 580-71782-14

Date Collected: 09/25/17 17:44

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/06/17 22:35	ADB	TAL SEA

Client Sample ID: S4-AD-092517

Lab Sample ID: 580-71782-15

Date Collected: 09/25/17 18:02

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/06/17 22:57	ADB	TAL SEA

Client Sample ID: S4-AU-092517

Lab Sample ID: 580-71782-16

Date Collected: 09/25/17 18:06

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/06/17 23:19	ADB	TAL SEA

Client Sample ID: S4-BD-092517

Lab Sample ID: 580-71782-17

Date Collected: 09/25/17 18:16

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/06/17 23:41	ADB	TAL SEA

Client Sample ID: S4-BU-092517

Lab Sample ID: 580-71782-18

Date Collected: 09/25/17 18:18

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/07/17 00:03	ADB	TAL SEA

Client Sample ID: S4-CD-092517 — Lab Sample ID: 580-71782-19

Date Collected: 09/25/17 18:25 — **Matrix: Water**
Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/07/17 00:47	ADB	TAL SEA

Client Sample ID: S4-CU-092517 — Lab Sample ID: 580-71782-20

Date Collected: 09/25/17 18:30 — **Matrix: Water**
Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/07/17 01:09	ADB	TAL SEA

Client Sample ID: MW-4-092617 — Lab Sample ID: 580-71782-21

Date Collected: 09/26/17 09:05 — **Matrix: Water**
Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258557	10/12/17 01:03	ADB	TAL SEA

Client Sample ID: MW-3-092617 — Lab Sample ID: 580-71782-22

Date Collected: 09/26/17 09:14 — **Matrix: Water**
Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/07/17 01:53	ADB	TAL SEA

Client Sample ID: 2A-W-10-092617 — Lab Sample ID: 580-71782-23

Date Collected: 09/26/17 10:04 — **Matrix: Water**
Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258557	10/12/17 01:25	ADB	TAL SEA

Client Sample ID: 5-W-19-092617 — Lab Sample ID: 580-71782-24

Date Collected: 09/26/17 09:00 — **Matrix: Water**
Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/07/17 02:37	ADB	TAL SEA

Client Sample ID: 5-W-18-092617

Lab Sample ID: 580-71782-25

Date Collected: 09/26/17 09:15

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258557	10/12/17 01:47	ADB	TAL SEA

Client Sample ID: 5-W-16-092617

Lab Sample ID: 580-71782-26

Date Collected: 09/26/17 10:05

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/07/17 03:21	ADB	TAL SEA

Client Sample ID: 5-W-17-092617

Lab Sample ID: 580-71782-27

Date Collected: 09/26/17 10:13

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/07/17 03:43	ADB	TAL SEA

Client Sample ID: 2A-W-9-092617

Lab Sample ID: 580-71782-28

Date Collected: 09/26/17 10:20

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258650	10/12/17 10:09	ADB	TAL SEA

Client Sample ID: 5-W-15-092617

Lab Sample ID: 580-71782-29

Date Collected: 09/26/17 11:08

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/07/17 04:48	ADB	TAL SEA

Client Sample ID: 5-W-14-092617

Lab Sample ID: 580-71782-30

Date Collected: 09/26/17 11:10

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/07/17 05:10	ADB	TAL SEA

Client Sample ID: 2B-W-4-092617

Lab Sample ID: 580-71782-31

Date Collected: 09/26/17 11:33

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258245	10/06/17 08:42	MRG	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258299	10/07/17 05:32	ADB	TAL SEA

Client Sample ID: MW-16-092617

Lab Sample ID: 580-71782-32

Date Collected: 09/26/17 11:45

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/10/17 20:43	ADB	TAL SEA

Client Sample ID: EW-2A-092617

Lab Sample ID: 580-71782-33

Date Collected: 09/26/17 13:42

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/10/17 21:05	ADB	TAL SEA

Client Sample ID: GW-4-092617

Lab Sample ID: 580-71782-34

Date Collected: 09/26/17 13:55

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/10/17 21:27	ADB	TAL SEA

Client Sample ID: GW-40-092617

Lab Sample ID: 580-71782-35

Date Collected: 09/26/17 14:00

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/10/17 21:49	ADB	TAL SEA

Client Sample ID: 2A-W-42-092617

Lab Sample ID: 580-71782-36

Date Collected: 09/26/17 14:48

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/10/17 22:33	ADB	TAL SEA

Client Sample ID: 1C-W-7-092617

Lab Sample ID: 580-71782-37

Date Collected: 09/26/17 15:00

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/10/17 22:55	ADB	TAL SEA

Client Sample ID: 1C-W-4-092617

Lab Sample ID: 580-71782-38

Date Collected: 09/26/17 16:18

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/10/17 23:17	ADB	TAL SEA

Client Sample ID: 1C-W-3-092617

Lab Sample ID: 580-71782-39

Date Collected: 09/26/17 16:40

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/10/17 23:39	ADB	TAL SEA

Client Sample ID: 5-W-43-092617

Lab Sample ID: 580-71782-40

Date Collected: 09/26/17 13:00

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/11/17 00:01	ADB	TAL SEA

Client Sample ID: EW-1-092617

Lab Sample ID: 580-71782-41

Date Collected: 09/26/17 13:01

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/11/17 00:23	ADB	TAL SEA

Client Sample ID: GW-1-092617

Lab Sample ID: 580-71782-42

Date Collected: 09/26/17 13:55

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/11/17 00:45	ADB	TAL SEA

Client Sample ID: GW-10-092617

Lab Sample ID: 580-71782-43

Date Collected: 09/26/17 14:00

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/11/17 01:07	ADB	TAL SEA

Client Sample ID: GW-2-092617

Lab Sample ID: 580-71782-44

Date Collected: 09/26/17 13:59

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/11/17 01:28	ADB	TAL SEA

Client Sample ID: GW-20-092617

Lab Sample ID: 580-71782-45

Date Collected: 09/26/17 14:02

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/11/17 01:50	ADB	TAL SEA

Client Sample ID: 5-W-54-092617

Lab Sample ID: 580-71782-46

Date Collected: 09/26/17 15:10

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/11/17 02:34	ADB	TAL SEA

Client Sample ID: MW-38R-092617

Lab Sample ID: 580-71782-47

Date Collected: 09/26/17 15:20

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/11/17 02:56	ADB	TAL SEA

Client Sample ID: MW-380R-092617

Lab Sample ID: 580-71782-48

Date Collected: 09/26/17 15:25

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258366	10/09/17 09:09	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258499	10/11/17 03:18	ADB	TAL SEA

Client Sample ID: 5-W-55-092617

Lab Sample ID: 580-71782-49

Date Collected: 09/26/17 16:12

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258424	10/09/17 14:47	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258510	10/10/17 19:37	W1T	TAL SEA

Client Sample ID: 5-W-56-092617

Lab Sample ID: 580-71782-50

Date Collected: 09/26/17 16:25

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258424	10/09/17 14:47	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258510	10/10/17 19:59	W1T	TAL SEA

Client Sample ID: 5-W-150-092617

Lab Sample ID: 580-71782-51

Date Collected: 09/26/17 11:12

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258424	10/09/17 14:47	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258510	10/10/17 20:21	W1T	TAL SEA

Client Sample ID: 1C-W-1-092717

Lab Sample ID: 580-71782-52

Date Collected: 09/27/17 09:25

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258424	10/09/17 14:47	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258510	10/10/17 20:43	W1T	TAL SEA

Client Sample ID: 1C-W-8-092717

Lab Sample ID: 580-71782-53

Date Collected: 09/27/17 09:26

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258424	10/09/17 14:47	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258510	10/10/17 21:05	W1T	TAL SEA

Client Sample ID: GW-3-092717

Lab Sample ID: 580-71782-54

Date Collected: 09/27/17 09:25

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258424	10/09/17 14:47	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258510	10/10/17 21:27	W1T	TAL SEA

Client Sample ID: GW-30-092717

Lab Sample ID: 580-71782-55

Date Collected: 09/27/17 09:35

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258424	10/09/17 14:47	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258510	10/10/17 22:33	W1T	TAL SEA

Client Sample ID: 1B-W-2-092717

Lab Sample ID: 580-71782-56

Date Collected: 09/27/17 10:33

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258424	10/09/17 14:47	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258510	10/10/17 22:55	W1T	TAL SEA

Client Sample ID: 1B-W-3-092717

Lab Sample ID: 580-71782-57

Date Collected: 09/27/17 10:40

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258424	10/09/17 14:47	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258510	10/10/17 23:17	W1T	TAL SEA

Client Sample ID: 1B-W-23-092717

Lab Sample ID: 580-71782-58

Date Collected: 09/27/17 09:50

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258424	10/09/17 14:47	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258510	10/10/17 23:39	W1T	TAL SEA

Client Sample ID: 1A-W-4-092717

Lab Sample ID: 580-71782-59

Date Collected: 09/27/17 11:18

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258424	10/09/17 14:47	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258510	10/11/17 00:01	W1T	TAL SEA

Client Sample ID: 2A-W-41-092717

Lab Sample ID: 580-71782-60

Date Collected: 09/27/17 11:20

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258424	10/09/17 14:47	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258510	10/11/17 00:23	W1T	TAL SEA

Lab Chronicle

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Client Sample ID: 2A-W-40-092717

Lab Sample ID: 580-71782-61

Date Collected: 09/27/17 12:10

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258424	10/09/17 14:47	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258510	10/11/17 00:45	W1T	TAL SEA

Client Sample ID: 5-W-51-092717

Lab Sample ID: 580-71782-62

Date Collected: 09/27/17 12:20

Matrix: Water

Date Received: 09/28/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258424	10/09/17 14:47	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	258510	10/10/17 21:49	W1T	TAL SEA

Laboratory References:

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

Accreditation/Certification Summary

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

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	UST-022	03-02-18
California	State Program	9	2901	01-31-18
L-A-B	DoD ELAP		L2236	01-19-19
L-A-B	ISO/IEC 17025		L2236	01-19-19
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-17
US Fish & Wildlife	Federal		LE058448-0	10-31-18
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-18

Sample Summary

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-71782-1	S1-BD-092517	Water	09/25/17 15:37	09/28/17 15:45
580-71782-2	S1-BU-092517	Water	09/25/17 15:40	09/28/17 15:45
580-71782-3	S1-AU-092517	Water	09/25/17 15:45	09/28/17 15:45
580-71782-4	S1-AD-092517	Water	09/25/17 15:50	09/28/17 15:45
580-71782-5	S2-AD-092517	Water	09/25/17 16:20	09/28/17 15:45
580-71782-6	S2-AU-092517	Water	09/25/17 16:25	09/28/17 15:45
580-71782-7	S2-BU-092517	Water	09/25/17 16:35	09/28/17 15:45
580-71782-8	S2-BD-092517	Water	09/25/17 16:37	09/28/17 15:45
580-71782-9	S3-BD-092517	Water	09/25/17 17:15	09/28/17 15:45
580-71782-10	S3-BU-092517	Water	09/25/17 17:17	09/28/17 15:45
580-71782-11	S3-AD-092517	Water	09/25/17 17:20	09/28/17 15:45
580-71782-12	S3-AU-092517	Water	09/25/17 17:21	09/28/17 15:45
580-71782-13	S3-CD-092517	Water	09/25/17 17:43	09/28/17 15:45
580-71782-14	S3-CU-092517	Water	09/25/17 17:44	09/28/17 15:45
580-71782-15	S4-AD-092517	Water	09/25/17 18:02	09/28/17 15:45
580-71782-16	S4-AU-092517	Water	09/25/17 18:06	09/28/17 15:45
580-71782-17	S4-BD-092517	Water	09/25/17 18:16	09/28/17 15:45
580-71782-18	S4-BU-092517	Water	09/25/17 18:18	09/28/17 15:45
580-71782-19	S4-CD-092517	Water	09/25/17 18:25	09/28/17 15:45
580-71782-20	S4-CU-092517	Water	09/25/17 18:30	09/28/17 15:45
580-71782-21	MW-4-092617	Water	09/26/17 09:05	09/28/17 15:45
580-71782-22	MW-3-092617	Water	09/26/17 09:14	09/28/17 15:45
580-71782-23	2A-W-10-092617	Water	09/26/17 10:04	09/28/17 15:45
580-71782-24	5-W-19-092617	Water	09/26/17 09:00	09/28/17 15:45
580-71782-25	5-W-18-092617	Water	09/26/17 09:15	09/28/17 15:45
580-71782-26	5-W-16-092617	Water	09/26/17 10:05	09/28/17 15:45
580-71782-27	5-W-17-092617	Water	09/26/17 10:13	09/28/17 15:45
580-71782-28	2A-W-9-092617	Water	09/26/17 10:20	09/28/17 15:45
580-71782-29	5-W-15-092617	Water	09/26/17 11:08	09/28/17 15:45
580-71782-30	5-W-14-092617	Water	09/26/17 11:10	09/28/17 15:45
580-71782-31	2B-W-4-092617	Water	09/26/17 11:33	09/28/17 15:45
580-71782-32	MW-16-092617	Water	09/26/17 11:45	09/28/17 15:45
580-71782-33	EW-2A-092617	Water	09/26/17 13:42	09/28/17 15:45
580-71782-34	GW-4-092617	Water	09/26/17 13:55	09/28/17 15:45
580-71782-35	GW-40-092617	Water	09/26/17 14:00	09/28/17 15:45
580-71782-36	2A-W-42-092617	Water	09/26/17 14:48	09/28/17 15:45
580-71782-37	1C-W-7-092617	Water	09/26/17 15:00	09/28/17 15:45
580-71782-38	1C-W-4-092617	Water	09/26/17 16:18	09/28/17 15:45
580-71782-39	1C-W-3-092617	Water	09/26/17 16:40	09/28/17 15:45
580-71782-40	5-W-43-092617	Water	09/26/17 13:00	09/28/17 15:45
580-71782-41	EW-1-092617	Water	09/26/17 13:01	09/28/17 15:45
580-71782-42	GW-1-092617	Water	09/26/17 13:55	09/28/17 15:45
580-71782-43	GW-10-092617	Water	09/26/17 14:00	09/28/17 15:45
580-71782-44	GW-2-092617	Water	09/26/17 13:59	09/28/17 15:45
580-71782-45	GW-20-092617	Water	09/26/17 14:02	09/28/17 15:45
580-71782-46	5-W-54-092617	Water	09/26/17 15:10	09/28/17 15:45
580-71782-47	MW-38R-092617	Water	09/26/17 15:20	09/28/17 15:45
580-71782-48	MW-380R-092617	Water	09/26/17 15:25	09/28/17 15:45
580-71782-49	5-W-55-092617	Water	09/26/17 16:12	09/28/17 15:45
580-71782-50	5-W-56-092617	Water	09/26/17 16:25	09/28/17 15:45
580-71782-51	5-W-150-092617	Water	09/26/17 11:12	09/28/17 15:45
580-71782-52	1C-W-1-092717	Water	09/27/17 09:25	09/28/17 15:45
580-71782-53	1C-W-8-092717	Water	09/27/17 09:26	09/28/17 15:45

Sample Summary

Client: BNSF Railway Company
Project/Site: Skykomish Semi-Annual

TestAmerica Job ID: 580-71782-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-71782-54	GW-3-092717	Water	09/27/17 09:25	09/28/17 15:45
580-71782-55	GW-30-092717	Water	09/27/17 09:35	09/28/17 15:45
580-71782-56	1B-W-2-092717	Water	09/27/17 10:33	09/28/17 15:45
580-71782-57	1B-W-3-092717	Water	09/27/17 10:40	09/28/17 15:45
580-71782-58	1B-W-23-092717	Water	09/27/17 09:50	09/28/17 15:45
580-71782-59	1A-W-4-092717	Water	09/27/17 11:18	09/28/17 15:45
580-71782-60	2A-W-41-092717	Water	09/27/17 11:20	09/28/17 15:45
580-71782-61	2A-W-40-092717	Water	09/27/17 12:10	09/28/17 15:45
580-71782-62	5-W-51-092717	Water	09/27/17 12:20	09/28/17 15:45

1 of 5

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Project Manager:
Phone:
Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method:
Tracking Number:

BNSF PROJECT INFORMATION

BNSF Project Number: 683-063
Project State of Origin: WA
Project City: Skykomish
BNSF Project Name: Skykomish Semi-Annual
BNSF Contact: BF10007215 /
BNSF Work Order No.: TT-0100-R21

CONSULTANT INFORMATION

Project Number: 683-063
Company: Farallon Consulting
Project Manager: Jerry Portele
Address: 975 5th AVE NW
Email: JPortele@farallonconsulting.com
City/State/ZIP: Issaquah WA 98059
Phone: 425 295 0839
Fax:

TURNAROUND TIME

- ☐ 1-day Rush
- ☐ 5- to 8-day Rush
- ☐ 2-day Rush
- ☒ Standard 10-Day
- ☐ 3-day Rush
- ☐ Other

DELIVERABLES

- ☒ BNSF Standard (Level II)
- ☐ Level III
- ☐ Level IV
- ☐ Other Deliverables?
- ☐ EDD Req. Format?

METHODS FOR ANALYSIS: XD-HTPH32

SAMPLE INFORMATION

	Sample Identification	Containers	Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	Method	COMMENTS	LAB USE
1	S1-BD-092517	2	9/25/17	1537	AB	N	G	W	X		
2	S1-BU-092517	↓	↓	1540	↓	↓	↓	↓	X		
3	S1-AU-092517			1545					X		
4	S1-AD-092517			1550					X		
5	S2-AD-092517			1620					X		
6	S2-AU-092517			1625					X		
7	S2-BU-092517			1635					X		
8	S2-BD-092517			1637					X		
9	S3-BD-092517			1715					X		
10	S3-BU-092517			1717					X		
11	S3-AD-092517			1720					X		
12	S3-AU-092517			1721					X		
13	S3-CD-092517			1743					X		
14	S3-CU-092517			1744					X		
15	S4-AD-092517	↓	↓	1802	↓	↓	↓	↓	X		

580-71782 Chain of Custody

Relinquished By: [signature]	Date/Time: 9/27/17 / 1510	Received By: M. Pomeroy McDermott	Date/Time: 9/28/17 1545
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Received by Laboratory:	Date/Time:	Lab Remarks:	Lab Custody Intact? ☐ Yes ☐ No

Comments and Special Analytical Requirements:

Custody Seal No.
BNSF COC No

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES
DUPLICATE - CONSULTANT
TAL-1001 (0912)

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory: | Project Manager:
Address: | Phone:
City/State/ZIP: | Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method:
Tracking Number:

BNSF PROJECT INFORMATION

BNSF Project Number: 683-063
BNSF Project Name: Skykomish Semi-Annual
BNSF Contact: BF1000 7215 / TT-0100-R21
Project State of Origin: WA
Project City: Skykomish
BNSF Work Order No.:

CONSULTANT INFORMATION

Company: Farallon Consulting
Address: 975 5th AVE NW
City/State/ZIP: Iss WA 98059
Project Number: 683-063
Project Manager: Jerry Portele
Email: JPortele@farallonconsulting.com
Phone: 425 295-0839 Fax:

TURNAROUND TIME

- [ ] 1-day Rush
- [ ] 2-day Rush
- [ ] 3-day Rush
- [ ] 5- to 8-day Rush
- [x] Standard 10-Day
- [ ] Other

DELIVERABLES

- [ ] Other Deliverables?
- [x] BNSF Standard (Level II)
- [ ] Level III
- [ ] EDD Req. Format?
- [ ] Level IV

METHODS FOR ANALYSIS

Sample Identification	Containers	Sample Collection Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	XD-HDTPH	COMMENTS	LAB USE
1 SK-AU-092517	2	9/25/17	1806	AB	N	G	W	X		
2 SK-BD-092517		9/25/17	1816					X		
3 SK-BU-092517			1818					X		
4 SK-CD-092517			1825					X		
5 SK-CU-092517			1830					X		
6 MW-4-092617	2	9/26/17	0905	AB				X		
7 MW-3-092617			0914	NT				X		
8 2A-W-10-092617			1004	AB				X		
9 SW-19-092617			0900	YP				X		
10 SW-18-092617			0915	MB				X		
11 SW-16-092617			1005	YP				X		
12 SW-17-092617			1013	MB				X		
13 2A-W-9-092617			1020	NT				X		
14 SW-15-092617			1108	YP				X		
15 SW-14-092617			1110	MB				X		

	Date/Time	Received By	Date/Time
Relinquished By:	9/27/17 1510	Received By:	9/28/17 1549
Relinquished By:		Received By:	
Relinquished By:		Received By:	
Received by Laboratory:		Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No

Comments and Special Analytical Requirements:

Custody Seal No.:
BNSF COC No:

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES
DUPLICATE - CONSULTANT
TAL-1001 (0912)

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory:
Project Manager:
Address:
Phone:
City/State/ZIP:
Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method:
Tracking Number:

BNSF PROJECT INFORMATION

BNSF Project Number: 683-063
Project State of Origin: WA
BNSF Project Name: Skykomish Semi-Annual
Project City: Skykomish
BNSF Contact: BF,0007215 / BNSF Work Order No.: TT-0100-R21

CONSULTANT INFORMATION

Company: Farallon Consulting
Address: 975 5th AVE NW
City/State/ZIP: Issaquah, WA, 98059
Project Number: 683-063
Project Manager: Jerry Parkele
Email: JParkele@farallonconsulting.com
Phone: 425 295 0839 Fax:

TURNAROUND TIME

- [ ] 1-day Rush
- [ ] 2-day Rush
- [ ] 3-day Rush
- [ ] 5- to 8-day Rush
- [x] Standard 10-Day
- [ ] Other

DELIVERABLES

- [x] BNSF Standard (Level II)
- [ ] Level III
- [ ] Level IV
- [ ] Other Deliverables?
- [ ] EDD Req. Format?

SAMPLE INFORMATION

	Sample Identification	Containers	Sample Collection Date	Sample Collection Time	Sample Collection Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	METHODS FOR ANALYSIS: TPH-DX	COMMENTS	LAB USE
1	2B-W-4-092617	2	9/26/17	1133	NT	N	G	W	X		
2	MW-16-092617			1145	AB				X		
3	EW-2A-092617			1342	NT				X		
4	GW-4-092617			1355	AB				X		
5	GW-10-092617			1400	AB				X		
6	2A-W-42-092617			1448	NT				X		
7	2C-W-7-092617			1500	AB				X		
8	2C-W-4-092617			1618	NT				X		
9	2C-W-3-092617			1640	AB				X		
10	5-W-43-092617			1300	MB				X		
11	EW-1-092617			1301	YP				X		
12	GW-1-092617			1359	MB				X		
13	GW-10-092617			1400	MB				X		
14	GW-2-092617			1359	YP				X		
15	GW-20-092617			1402	YP				X		

Relinquished By:	Date/Time: 9/27/17 1510	Received By: [illegible]	Date/Time: 9/28/17 1545	Comments and Special Analytical Requirements:
Relinquished By:	Date/Time:	Received By:	Date/Time:	
Relinquished By:	Date/Time:	Received By:	Date/Time:	
Received by Laboratory:	Date/Time:	Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No	Custody Seal No. / BNSF COC No

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

DUPLICATE - CONSULTANT

TAL-1001 (0912)

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory: | Project Manager:
Address: | Phone:
City/State/ZIP: | Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method:
Tracking Number:

BNSF PROJECT INFORMATION

Project State of Origin: WA
BNSF Project Number: 683-063 | Project City: Skykomish
BNSF Project Name: Skykomish Semi-Annual
BNSF Contact: 8F10007215 | BNSF Work Order No.: / IT-0100-R21

CONSULTANT INFORMATION

Project Number: 683-063
Company: Farallon Consulting | Project Manager: Jerry Portele
Address: 975 5th AVE NW | Email: JPortele@faralloncosulting.com
City/State/ZIP: ISS, WA 98059 | Phone: 425 295 0839 | Fax:

TURNAROUND TIME

- [ ] 1-day Rush
- [ ] 5- to 8-day Rush
- [ ] 2-day Rush
- [x] Standard 10-Day
- [ ] 3-day Rush
- [ ] Other

DELIVERABLES

- [x] BNSF Standard (Level II)
- [ ] Level III
- [ ] Level IV
- [ ] Other Deliverables?
- [ ] EDD Req. Format?

SAMPLE INFORMATION

	Sample Identification	Containers	Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	NWTPH-Dx	COMMENTS	LAB USE
1	5-W-54-092617	2	9/26/17	1510	YP	N	G	W	X		
2	MW-38R-092617	↓	↓	1520	MB	↓	↓	↓	X		
3	MW-380R-092617			1525	MB				X		
4	5-W-55-092617			1612	MT				X		
5	5-W-56-092617			1625	AB				X		
6	5-W-150-092617			1112	MB				X		
7	1C-W-1-092717		9/27/17	0925	AB				X		
8	1C-W-8-092717		↓	0926	NT				X		
9	GW-3-092717			0925	YP				X		
10	GW-30-092717			0935	YP				X		
11	1B-W-2-092717			1033	NT				X		
12	1B-W-3-092717			1040	AB				X		
13	1B-W-23-092717			0950	MB				X		
14	1A-W-4-092717			1118	MB				X		
15	2A-W-41-092717	↓	↓	1120	YP	↓	↓	↓	X		

Relinquished By	Date/Time	Received By	Date/Time
[signature]	9/27/17 / 1510	M. Rose McDermott	9/28/17 1545

Received by Laboratory: | Date/Time: | Lab Remarks: | Lab: Custody Intact? ☐ Yes ☐ No | Custody Seal No. | BNSF COC No

Comments and Special Analytical Requirements:

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES | DUPLICATE - CONSULTANT | TAL-1001 (0912)

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory: | Project Manager:
Address: | Phone:
City/State/ZIP: | Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method:
Tracking Number:

BNSF PROJECT INFORMATION

BNSF Project Number: 683-063
BNSF Project Name: Skykomish Semi-Annual
BNSF Contact: BF1000 7215
Project State of Origin: WA
Project City: Skykomish
BNSF Work Order No.: IT-0100-R21

CONSULTANT INFORMATION

Company: Farallon Consulting
Address: 975 5th AVE NW
City/State/ZIP: Issaquah, WA 98059
Project Number: 683-063
Project Manager: Jerry Potter
Email: JPotter@farallonconsulting.com
Phone: 425 295 0839 Fax:

TURNAROUND TIME

- [ ] 1-day Rush
- [ ] 2-day Rush
- [ ] 3-day Rush
- [ ] 5- to 8-day Rush
- [x] Standard 10-Day
- [ ] Other

DELIVERABLES

- [x] BNSF Standard (Level II)
- [ ] Level III
- [ ] Level IV
- [ ] Other Deliverables?
- [ ] EDD Req. Format?

METHODS FOR ANALYSIS

TPH-Dx

SAMPLE INFORMATION

	Sample Identification	Containers	Sample Collection Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	TPH-Dx	COMMENTS	LAB USE
1	2A-W-40-092717	2	9/27/17	1210	AB	N	G	W	X		
2	5-W-51-092717	2	9/27/17	1220	NT	N	G	W	X		
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

AB

Relinquished By:	Date/Time: 9/27/17 1510	Received By: [signature]	Date/Time: 9/28/17 1545	Comments and Special Analytical Requirements:
Relinquished By:	Date/Time:	Received By:	Date/Time:	
Relinquished By:	Date/Time:	Received By:	Date/Time:	
Received by Laboratory:	Date/Time:	Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No	Custody Seal No. / BNSF COC No

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES | DUPLICATE - CONSULTANT | TAL-1001 (0912)

Box 1

TB A2 Cooler ___ Cor 8.9 Unc 9.6
Cooler Dsc lg Green Blue @Lab ___
Wet/Packs Packing bubble
L.C. w/cs

Confirm 8.5/8.6 IR5

Box 2

TB A2 Cooler ___ Cor 7.8 Unc 8.5
Cooler Dsc lg Green Blue @Lab ___
Wet/Packs Packing bubble
L.C. w/cs

Confirm 9.3/9.4 IR5

Box 3

TB A2 Cooler ___ Cor 8.6 Unc 9.3
Cooler Dsc lg blue white @Lab ___
Wet/Packs Packing bubble
L.C. w/cs

Confirm 8.4/8.6 IR4

Box 4

TB A2 Cooler ___ Cor 10.2 Unc 10.9
Cooler Dsc lg blue white @Lab ___
Wet/Packs Packing bubble
L.C. w/cs

Confirm 10.2/10.4 IR4

Box 5

TB A2 Cooler ___ Cor 2.7 Unc 3.4
Cooler Dsc lg Green blue @Lab ___
Wet/Packs Packing bubble
L.C. w/cs

cooler 1/2 full

Box 6

TB A2 Cooler ___ Cor 5.4 Unc 6.1
Cooler Dsc lg blue green @Lab ___
Wet/Packs Packing bubble
L.C. w/cs

Some ice out of bag

Box 7

TB A2 Cooler ___ Cor 5.3 Unc 6.0
Cooler Dsc lg green blue @Lab ___
Wet/Packs Packing bubble
L.C. w/cs

Box 8

TB A2 Cooler ___ Cor 5.4 Unc 6.1
Cooler Dsc lg blue white @Lab ___
Wet/Packs Packing bubble
L.C. w/cs

Box 9

TB A2 Cooler ___ Cor 8.7 Unc 9.4
Cooler Dsc lg Green Blue @ Lab ___
Wet/Packs Packing bubble
L.C. w/cs

Confirm 10.1/10.9 IR4

Box 10

TB A2 Cooler ___ Cor 8.4 Unc 9.1
Cooler Dsc lg Green Blue @ Lab ___
Wet/Packs Packing bubble
L.C. w/cs

Confirm 9.8/9.9 IR5

Box 11

TB A2 Cooler ___ Cor 4.0 Unc 4.7
Cooler Dsc Lg Green Blue @ Lab ___
Wet/Packs Packing bubble
L.C. w/o cs

Login Sample Receipt Checklist

Client: BNSF Railway Company

Job Number: 580-71782-1

Login Number: 71782

List Source: TestAmerica Seattle

List Number: 1

Creator: Ponce-McDermott, Monica

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Refer to Job Narrative for details.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 580-73612-1
Client Project/Site: BNSF Skykomish Ground Water

For:
BNSF Railway Company
605 Puyallup Avenue
Tacoma, Washington 98421

Attn: e procurement

M. Elaine Walker

Authorized for release by:
12/26/2017 10:13:07 AM
Elaine Walker, Project Manager II
(253)248-4972
elaine.walker@testamericainc.com

Designee for

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

Job ID: 580-73612-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative
580-73612-1

Receipt
Teenty-nine samples were received on 12/14/2017 3:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were -0.9º C, -0.9º C, -0.6º C, -0.6º C, -0.3º C and 0.0º C.

GC Semi VOA
Method(s) NWTPH-Dx: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 580-263750 and analytical batch 580-263875 recovered outside control limits for the following analytes: #2 Diesel (C10-C24). The LCS/LCSD rcoveries were within control; therefore the data are qualified and 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: MW-3-121217 (580-73612-2), MW-4-121217 (580-73612-3), 2A-W-9-121217 (580-73612-5), 2A-W-10-121217 (580-73612-6), 5-W-18-121217 (580-73612-7), 5-W-180-121217 (580-73612-8), GW-4-121217 (580-73612-10), EW 2A-121217 (580-73612-9), 1C-W-8-121217 (580-73612-12), 1C-W-1-121217 (580-73612-13), 1C-W-7-121217 (580-73612-15), 2A-W-42-121217 (580-73612-16), 5-W-15-121217 (580-73612-17), 1B-W-23-121217 (580-73612-18), GW-3-121217 (580-73612-19), GW-30-121217 (580-73612-20), 2A-W-41-121317 (580-73612-21), 2A-W-410-121317 (580-73612-22), 2A-W-40-121317 (580-73612-23), GW-2-121317 (580-73612-24), GW-1-121317 (580-73612-25), EW-1-121317 (580-73612-26), 5-W-43-121317 (580-73612-27) and 1B-W-3-121317 (580-73612-29).

Method(s) NWTPH-Dx: The method blank for preparation batch 580-263830 and 580-263830 and analytical batch 580-263985 contained DRO (C10-C24) and Motor Oil above the method detection limit. The target analyte concentrations were less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 5-W-19-121217
Date Collected: 12/12/17 09:58
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-1
Matrix: Water

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	*	0.024	0.014	mg/L		12/19/17 14:04	12/20/17 19:35	1
Motor Oil (>C24-C36)	ND		0.049	0.0096	mg/L		12/19/17 14:04	12/20/17 19:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*75*		*50 - 150*	*12/19/17 14:04*	*12/20/17 19:35*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: MW-3-121217
Date Collected: 12/12/17 09:58
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	1.5	*	0.024	0.014	mg/L		12/19/17 14:04	12/20/17 19:57	1
Motor Oil (>C24-C36)	1.9		0.048	0.0093	mg/L		12/19/17 14:04	12/20/17 19:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*50 - 150*	*12/19/17 14:04*	*12/20/17 19:57*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: MW-4-121217
Date Collected: 12/12/17 10:05
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.11	*	0.024	0.014	mg/L		12/19/17 14:04	12/20/17 20:19	1
Motor Oil (>C24-C36)	0.21		0.048	0.0093	mg/L		12/19/17 14:04	12/20/17 20:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*70*		*50 - 150*	*12/19/17 14:04*	*12/20/17 20:19*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 5-W-16-121217
Date Collected: 12/12/17 10:56
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.016	J *	0.025	0.014	mg/L		12/19/17 14:04	12/20/17 20:41	1
Motor Oil (>C24-C36)	0.014	J	0.049	0.0097	mg/L		12/19/17 14:04	12/20/17 20:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*77*		*50 - 150*	*12/19/17 14:04*	*12/20/17 20:41*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 2A-W-9-121217
Date Collected: 12/12/17 11:15
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.24	*	0.024	0.014	mg/L		12/19/17 14:04	12/20/17 21:02	1
Motor Oil (>C24-C36)	0.23		0.048	0.0094	mg/L		12/19/17 14:04	12/20/17 21:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*78*		*50 - 150*	*12/19/17 14:04*	*12/20/17 21:02*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 2A-W-10-121217
Date Collected: 12/12/17 11:15
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.10	*	0.024	0.014	mg/L		12/19/17 14:04	12/20/17 21:24	1
Motor Oil (>C24-C36)	0.23		0.047	0.0093	mg/L		12/19/17 14:04	12/20/17 21:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*77*		*50 - 150*	*12/19/17 14:04*	*12/20/17 21:24*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 5-W-18-121217
Date Collected: 12/12/17 11:55
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.047	*	0.024	0.014	mg/L		12/19/17 14:04	12/20/17 21:46	1
Motor Oil (>C24-C36)	0.041	J	0.048	0.0094	mg/L		12/19/17 14:04	12/20/17 21:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*50 - 150*	*12/19/17 14:04*	*12/20/17 21:46*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 5-W-180-121217
Date Collected: 12/12/17 11:56
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.052	*	0.024	0.014	mg/L		12/19/17 14:04	12/21/17 10:20	1
Motor Oil (>C24-C36)	0.040	J	0.048	0.0095	mg/L		12/19/17 14:04	12/21/17 10:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*80*		*50 - 150*	*12/19/17 14:04*	*12/21/17 10:20*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: EW 2A-121217
Date Collected: 12/12/17 12:25
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.014	J *	0.024	0.014	mg/L		12/19/17 14:04	12/21/17 10:42	1
Motor Oil (>C24-C36)	0.015	J	0.048	0.0093	mg/L		12/19/17 14:04	12/21/17 10:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*50 - 150*	*12/19/17 14:04*	*12/21/17 10:42*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: GW-4-121217
Date Collected: 12/12/17 12:25
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.056	B	0.024	0.014	mg/L		12/20/17 14:08	12/22/17 01:42	1
Motor Oil (>C24-C36)	0.055	B	0.048	0.0093	mg/L		12/20/17 14:08	12/22/17 01:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*70*		*50 - 150*	*12/20/17 14:08*	*12/22/17 01:42*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 5-W-14-121217
Date Collected: 12/12/17 13:19
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-11
Matrix: Water

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	*	0.024	0.014	mg/L		12/19/17 14:04	12/21/17 11:04	1
Motor Oil (>C24-C36)	ND		0.049	0.0095	mg/L		12/19/17 14:04	12/21/17 11:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*50 - 150*	*12/19/17 14:04*	*12/21/17 11:04*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 1C-W-8-121217
Date Collected: 12/12/17 14:10
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-12
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.067	*	0.024	0.014	mg/L		12/19/17 14:04	12/21/17 11:26	1
Motor Oil (>C24-C36)	0.051		0.048	0.0093	mg/L		12/19/17 14:04	12/21/17 11:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*76*		*50 - 150*	*12/19/17 14:04*	*12/21/17 11:26*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 1C-W-1-121217
Date Collected: 12/12/17 14:20
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-13
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.050	*	0.024	0.014	mg/L		12/19/17 14:04	12/21/17 11:48	1
Motor Oil (>C24-C36)	0.045	J	0.048	0.0093	mg/L		12/19/17 14:04	12/21/17 11:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*71*		*50 - 150*	*12/19/17 14:04*	*12/21/17 11:48*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 5-W-17-121217
Date Collected: 12/12/17 14:41
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-14
Matrix: Water

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	*	0.024	0.014	mg/L		12/19/17 14:04	12/21/17 12:09	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		12/19/17 14:04	12/21/17 12:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*69*		*50 - 150*	*12/19/17 14:04*	*12/21/17 12:09*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 1C-W-7-121217
Date Collected: 12/12/17 15:10
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-15
Matrix: Water

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	*	0.024	0.014	mg/L		12/19/17 14:04	12/21/17 12:32	1
Motor Oil (>C24-C36)	0.087		0.048	0.0094	mg/L		12/19/17 14:04	12/21/17 12:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*75*		*50 - 150*	*12/19/17 14:04*	*12/21/17 12:32*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 2A-W-42-121217
Date Collected: 12/12/17 15:20
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-16
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.17	*	0.024	0.014	mg/L		12/19/17 14:04	12/21/17 12:54	1
Motor Oil (>C24-C36)	0.090		0.048	0.0093	mg/L		12/19/17 14:04	12/21/17 12:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*50 - 150*	*12/19/17 14:04*	*12/21/17 12:54*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 5-W-15-121217
Date Collected: 12/12/17 15:58
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-17
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.024	*	0.024	0.014	mg/L		12/19/17 14:04	12/21/17 13:16	1
Motor Oil (>C24-C36)	0.015	J	0.047	0.0093	mg/L		12/19/17 14:04	12/21/17 13:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*50 - 150*	*12/19/17 14:04*	*12/21/17 13:16*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 1B-W-23-121217
Date Collected: 12/12/17 16:25
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-18
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.022	J *	0.024	0.014	mg/L		12/19/17 14:04	12/21/17 13:37	1
Motor Oil (>C24-C36)	0.037	J	0.048	0.0094	mg/L		12/19/17 14:04	12/21/17 13:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*76*		*50 - 150*	*12/19/17 14:04*	*12/21/17 13:37*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: GW-3-121217
Date Collected: 12/12/17 16:25
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-19
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.42	B	0.024	0.014	mg/L		12/20/17 14:08	12/22/17 02:04	1
Motor Oil (>C24-C36)	0.15	B	0.048	0.0094	mg/L		12/20/17 14:08	12/22/17 02:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*67*		*50 - 150*	*12/20/17 14:08*	*12/22/17 02:04*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: GW-30-121217
Date Collected: 12/12/17 16:30
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-20
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.41	*	0.024	0.014	mg/L		12/19/17 14:04	12/21/17 14:21	1
Motor Oil (>C24-C36)	0.12		0.048	0.0095	mg/L		12/19/17 14:04	12/21/17 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*71*		*50 - 150*	*12/19/17 14:04*	*12/21/17 14:21*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 2A-W-41-121317
Date Collected: 12/13/17 09:55
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-21
Matrix: Water

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	B	0.024	0.014	mg/L		12/20/17 11:18	12/21/17 19:54	1
Motor Oil (>C24-C36)	0.062	B	0.048	0.0094	mg/L		12/20/17 11:18	12/21/17 19:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*69*		*50 - 150*	*12/20/17 11:18*	*12/21/17 19:54*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 2A-W-410-121317
Date Collected: 12/13/17 10:00
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-22
Matrix: Water

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	B	0.024	0.014	mg/L		12/20/17 11:18	12/21/17 20:16	1
Motor Oil (>C24-C36)	0.077	B	0.048	0.0093	mg/L		12/20/17 11:18	12/21/17 20:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*64*		*50 - 150*	*12/20/17 11:18*	*12/21/17 20:16*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 2A-W-40-121317
Date Collected: 12/13/17 09:50
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-23
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.014	J B	0.024	0.014	mg/L		12/20/17 11:18	12/21/17 20:38	1
Motor Oil (>C24-C36)	0.014	J B	0.048	0.0093	mg/L		12/20/17 11:18	12/21/17 20:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*61*		*50 - 150*	*12/20/17 11:18*	*12/21/17 20:38*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: GW-2-121317
Date Collected: 12/13/17 11:00
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-24
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.014	J B	0.024	0.014	mg/L		12/20/17 11:18	12/21/17 21:00	1
Motor Oil (>C24-C36)	0.011	J B	0.048	0.0094	mg/L		12/20/17 11:18	12/21/17 21:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*70*		*50 - 150*	*12/20/17 11:18*	*12/21/17 21:00*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: GW-1-121317
Date Collected: 12/13/17 11:20
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-25
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.037	B	0.024	0.014	mg/L		12/20/17 11:18	12/21/17 21:22	1
Motor Oil (>C24-C36)	0.047	B	0.047	0.0093	mg/L		12/20/17 11:18	12/21/17 21:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*50 - 150*	*12/20/17 11:18*	*12/21/17 21:22*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: EW-1-121317
Date Collected: 12/13/17 12:15
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-26
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.026	B	0.024	0.014	mg/L		12/20/17 11:18	12/21/17 21:44	1
Motor Oil (>C24-C36)	0.036	J B	0.048	0.0093	mg/L		12/20/17 11:18	12/21/17 21:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*66*		*50 - 150*	*12/20/17 11:18*	*12/21/17 21:44*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 5-W-43-121317
Date Collected: 12/13/17 12:15
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-27
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.022	J B	0.024	0.014	mg/L		12/20/17 11:18	12/21/17 22:05	1
Motor Oil (>C24-C36)	0.033	J B	0.047	0.0093	mg/L		12/20/17 11:18	12/21/17 22:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*71*		*50 - 150*	*12/20/17 11:18*	*12/21/17 22:05*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 2B-W-4-121317
Date Collected: 12/13/17 09:39
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-28
Matrix: Water

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		0.024	0.014	mg/L		12/20/17 11:18	12/21/17 22:49	1
Motor Oil (>C24-C36)	ND		0.049	0.0096	mg/L		12/20/17 11:18	12/21/17 22:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*55*		*50 - 150*	*12/20/17 11:18*	*12/21/17 22:49*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 1B-W-3-121317
Date Collected: 12/13/17 11:12
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-29
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.037	B	0.024	0.014	mg/L		12/20/17 11:18	12/21/17 23:11	1
Motor Oil (>C24-C36)	0.030	J B	0.048	0.0094	mg/L		12/20/17 11:18	12/21/17 23:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*66*		*50 - 150*	*12/20/17 11:18*	*12/21/17 23:11*	*1*

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

Lab Sample ID: MB 580-263750/1-A
Matrix: Water
Analysis Batch: 263875

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263750

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		12/19/17 14:04	12/20/17 18:29	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		12/19/17 14:04	12/20/17 18:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*76*		*50 - 150*	*12/19/17 14:04*	*12/20/17 18:29*	*1*

Lab Sample ID: LCS 580-263750/2-A
Matrix: Water
Analysis Batch: 263875

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263750

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	0.500	0.294		mg/L		59	59 - 112
Motor Oil (>C24-C36)	0.500	0.320		mg/L		64	64 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*61*		*50 - 150*

Lab Sample ID: LCSD 580-263750/3-A
Matrix: Water
Analysis Batch: 263875

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263750

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	0.500	0.365	*	mg/L		73	59 - 112	22	16
Motor Oil (>C24-C36)	0.500	0.378		mg/L		76	64 - 120	16	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*71*		*50 - 150*

Lab Sample ID: MB 580-263830/1-A
Matrix: Water
Analysis Batch: 263985

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263830

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.0161	J	0.025	0.015	mg/L		12/20/17 11:18	12/21/17 18:48	1
Motor Oil (>C24-C36)	0.0122	J	0.050	0.0098	mg/L		12/20/17 11:18	12/21/17 18:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*67*		*50 - 150*	*12/20/17 11:18*	*12/21/17 18:48*	*1*

Lab Sample ID: LCS 580-263830/2-A
Matrix: Water
Analysis Batch: 263985

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263830

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	0.500	0.376		mg/L		75	59 - 112
Motor Oil (>C24-C36)	0.500	0.439		mg/L		88	64 - 120

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

Lab Sample ID: LCS 580-263830/2-A
Matrix: Water
Analysis Batch: 263985

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263830

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*78*		*50 - 150*

Lab Sample ID: LCSD 580-263830/3-A
Matrix: Water
Analysis Batch: 263985

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263830

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			0.500	0.397		mg/L		79	59 - 112	5	16
Motor Oil (>C24-C36)			0.500	0.457		mg/L		91	64 - 120	4	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*79*		*50 - 150*

Lab Chronicle

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 5-W-19-121217
Lab Sample ID: 580-73612-1
Date Collected: 12/12/17 09:58
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263875	12/20/17 19:35	TL1	TAL SEA

Client Sample ID: MW-3-121217
Lab Sample ID: 580-73612-2
Date Collected: 12/12/17 09:58
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263875	12/20/17 19:57	TL1	TAL SEA

Client Sample ID: MW-4-121217
Lab Sample ID: 580-73612-3
Date Collected: 12/12/17 10:05
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263875	12/20/17 20:19	TL1	TAL SEA

Client Sample ID: 5-W-16-121217
Lab Sample ID: 580-73612-4
Date Collected: 12/12/17 10:56
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263875	12/20/17 20:41	TL1	TAL SEA

Client Sample ID: 2A-W-9-121217
Lab Sample ID: 580-73612-5
Date Collected: 12/12/17 11:15
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263875	12/20/17 21:02	TL1	TAL SEA

Client Sample ID: 2A-W-10-121217
Lab Sample ID: 580-73612-6
Date Collected: 12/12/17 11:15
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263875	12/20/17 21:24	TL1	TAL SEA

Lab Chronicle

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 5-W-18-121217
Lab Sample ID: 580-73612-7
Date Collected: 12/12/17 11:55
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263875	12/20/17 21:46	TL1	TAL SEA

Client Sample ID: 5-W-180-121217
Lab Sample ID: 580-73612-8
Date Collected: 12/12/17 11:56
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263911	12/21/17 10:20	ADB	TAL SEA

Client Sample ID: EW 2A-121217
Lab Sample ID: 580-73612-9
Date Collected: 12/12/17 12:25
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263911	12/21/17 10:42	ADB	TAL SEA

Client Sample ID: GW-4-121217
Lab Sample ID: 580-73612-10
Date Collected: 12/12/17 12:25
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263830	12/20/17 14:08	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263985	12/22/17 01:42	ADB	TAL SEA

Client Sample ID: 5-W-14-121217
Lab Sample ID: 580-73612-11
Date Collected: 12/12/17 13:19
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263911	12/21/17 11:04	ADB	TAL SEA

Client Sample ID: 1C-W-8-121217
Lab Sample ID: 580-73612-12
Date Collected: 12/12/17 14:10
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263911	12/21/17 11:26	ADB	TAL SEA

Lab Chronicle

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: 1C-W-1-121217
Date Collected: 12/12/17 14:20
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263911	12/21/17 11:48	ADB	TAL SEA

Client Sample ID: 5-W-17-121217
Date Collected: 12/12/17 14:41
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263911	12/21/17 12:09	ADB	TAL SEA

Client Sample ID: 1C-W-7-121217
Date Collected: 12/12/17 15:10
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263911	12/21/17 12:32	ADB	TAL SEA

Client Sample ID: 2A-W-42-121217
Date Collected: 12/12/17 15:20
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263911	12/21/17 12:54	ADB	TAL SEA

Client Sample ID: 5-W-15-121217
Date Collected: 12/12/17 15:58
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-17
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263911	12/21/17 13:16	ADB	TAL SEA

Client Sample ID: 1B-W-23-121217
Date Collected: 12/12/17 16:25
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-18
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263911	12/21/17 13:37	ADB	TAL SEA

Client Sample ID: GW-3-121217
Lab Sample ID: 580-73612-19
Date Collected: 12/12/17 16:25
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263830	12/20/17 14:08	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263985	12/22/17 02:04	ADB	TAL SEA

Client Sample ID: GW-30-121217
Lab Sample ID: 580-73612-20
Date Collected: 12/12/17 16:30
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263911	12/21/17 14:21	ADB	TAL SEA

Client Sample ID: 2A-W-41-121317
Lab Sample ID: 580-73612-21
Date Collected: 12/13/17 09:55
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263830	12/20/17 11:18	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263985	12/21/17 19:54	ADB	TAL SEA

Client Sample ID: 2A-W-410-121317
Lab Sample ID: 580-73612-22
Date Collected: 12/13/17 10:00
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263830	12/20/17 11:18	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263985	12/21/17 20:16	ADB	TAL SEA

Client Sample ID: 2A-W-40-121317
Lab Sample ID: 580-73612-23
Date Collected: 12/13/17 09:50
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263830	12/20/17 11:18	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263985	12/21/17 20:38	ADB	TAL SEA

Client Sample ID: GW-2-121317
Lab Sample ID: 580-73612-24
Date Collected: 12/13/17 11:00
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263830	12/20/17 11:18	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263985	12/21/17 21:00	ADB	TAL SEA

Lab Chronicle

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Client Sample ID: GW-1-121317
Lab Sample ID: 580-73612-25
Date Collected: 12/13/17 11:20
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263830	12/20/17 11:18	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263985	12/21/17 21:22	ADB	TAL SEA

Client Sample ID: EW-1-121317
Lab Sample ID: 580-73612-26
Date Collected: 12/13/17 12:15
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263830	12/20/17 11:18	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263985	12/21/17 21:44	ADB	TAL SEA

Client Sample ID: 5-W-43-121317
Lab Sample ID: 580-73612-27
Date Collected: 12/13/17 12:15
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263830	12/20/17 11:18	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263985	12/21/17 22:05	ADB	TAL SEA

Client Sample ID: 2B-W-4-121317
Lab Sample ID: 580-73612-28
Date Collected: 12/13/17 09:39
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263830	12/20/17 11:18	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263985	12/21/17 22:49	ADB	TAL SEA

Client Sample ID: 1B-W-3-121317
Lab Sample ID: 580-73612-29
Date Collected: 12/13/17 11:12
Matrix: Water
Date Received: 12/14/17 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263830	12/20/17 11:18	REY	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	263985	12/21/17 23:11	ADB	TAL SEA

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

Accreditation/Certification Summary

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

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	UST-022	03-02-18
ANAB	DoD ELAP		L2236	01-19-19
ANAB	ISO/IEC 17025		L2236	01-19-19
California	State Program	9	2901	01-31-18
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-18
US Fish & Wildlife	Federal		LE058448-0	10-31-18
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-18

Sample Summary

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-73612-1	5-W-19-121217	Water	12/12/17 09:58	12/14/17 15:40
580-73612-2	MW-3-121217	Water	12/12/17 09:58	12/14/17 15:40
580-73612-3	MW-4-121217	Water	12/12/17 10:05	12/14/17 15:40
580-73612-4	5-W-16-121217	Water	12/12/17 10:56	12/14/17 15:40
580-73612-5	2A-W-9-121217	Water	12/12/17 11:15	12/14/17 15:40
580-73612-6	2A-W-10-121217	Water	12/12/17 11:15	12/14/17 15:40
580-73612-7	5-W-18-121217	Water	12/12/17 11:55	12/14/17 15:40
580-73612-8	5-W-180-121217	Water	12/12/17 11:56	12/14/17 15:40
580-73612-9	EW 2A-121217	Water	12/12/17 12:25	12/14/17 15:40
580-73612-10	GW-4-121217	Water	12/12/17 12:25	12/14/17 15:40
580-73612-11	5-W-14-121217	Water	12/12/17 13:19	12/14/17 15:40
580-73612-12	1C-W-8-121217	Water	12/12/17 14:10	12/14/17 15:40
580-73612-13	1C-W-1-121217	Water	12/12/17 14:20	12/14/17 15:40
580-73612-14	5-W-17-121217	Water	12/12/17 14:41	12/14/17 15:40
580-73612-15	1C-W-7-121217	Water	12/12/17 15:10	12/14/17 15:40
580-73612-16	2A-W-42-121217	Water	12/12/17 15:20	12/14/17 15:40
580-73612-17	5-W-15-121217	Water	12/12/17 15:58	12/14/17 15:40
580-73612-18	1B-W-23-121217	Water	12/12/17 16:25	12/14/17 15:40
580-73612-19	GW-3-121217	Water	12/12/17 16:25	12/14/17 15:40
580-73612-20	GW-30-121217	Water	12/12/17 16:30	12/14/17 15:40
580-73612-21	2A-W-41-121317	Water	12/13/17 09:55	12/14/17 15:40
580-73612-22	2A-W-410-121317	Water	12/13/17 10:00	12/14/17 15:40
580-73612-23	2A-W-40-121317	Water	12/13/17 09:50	12/14/17 15:40
580-73612-24	GW-2-121317	Water	12/13/17 11:00	12/14/17 15:40
580-73612-25	GW-1-121317	Water	12/13/17 11:20	12/14/17 15:40
580-73612-26	EW-1-121317	Water	12/13/17 12:15	12/14/17 15:40
580-73612-27	5-W-43-121317	Water	12/13/17 12:15	12/14/17 15:40
580-73612-28	2B-W-4-121317	Water	12/13/17 09:39	12/14/17 15:40
580-73612-29	1B-W-3-121317	Water	12/13/17 11:12	12/14/17 15:40

(1)

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory: | Project Manager:
Address: | Phone:
City/State/ZIP: | Fax:

LAB WORK ORDER: 73612

SHIPMENT INFORMATION

Shipment Method:
Tracking Number:

BNSF PROJECT INFORMATION

BNSF Project Number: 683-063
Project State of Origin: WA
Project City: Skykomish
BNSF Project Name: Skykomish Quarterly GWS
BNSF Contact:
BNSF Work Order No.: BF100071215 / TT-060-R21

CONSULTANT INFORMATION

Company: Farallon Consulting
Address: 975 5th AVE NW
City/State/ZIP: Issaquah WA 98027
Project Number: 683-063
Project Manager: Rob Leet
Email: RLeet@farallonconsulting.com
Phone: 425 295 0800 Fax:

TURNAROUND TIME

- [ ] 1-day Rush
- [ ] 2-day Rush
- [ ] 3-day Rush
- [ ] 5- to 8-day Rush
- [X] Standard 10-Day
- [ ] Other

DELIVERABLES

- [X] BNSF Standard (Level II)
- [ ] Level III
- [ ] Level IV
- [ ] Other Deliverables?
- [ ] EDD Req. Format?

SAMPLE INFORMATION

	Sample Identification	Containers	Sample Collection Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	Nitrate - DX	COMMENTS	LAB USE
1	S-W-19-121217	2	12/12/17	0958	RO	N	G	W	X		
2	MW-3-121217			0958	AB				X		
3	MW-4-121217			1005	KK				X		
4	S-W-16-121217			1056	RR				X		
5	2A-W-9-121217			1115	KK				X		
6	2A-W-10-121217			1115	AB				X		
7	S-W-18-121217			1155	RO				X		
8	S-W-180-121217			1156	RO				X		
9	EW-2A-121217			1225	AB				X		
10	GW-4-121217			1225	KK				X		
11	S-W-14-121217			1314	RO				X		
12	1C-W-8-121217			1410	KK				X		
13	1C-W-1-121217			1420	AB				X		
14	S-W-17-121217			1441	RO				X		
15	1C-W-7-121217			1510	KK				X		

580-73612 Chain of Custody

Relinquished By:	Date/Time: 12/14/17 0930	Received By: TASha	Date/Time: 12/14/17 1230
Relinquished By: TASha	Date/Time: 12/14/17 1540	Received By:	Date/Time: 12-14-17 1540
Relinquished By:	Date/Time:	Received By:	Date/Time:
Received by Laboratory:	Date/Time:	Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No

Comments and Special Analytical Requirements:

Custody Seal No. | BNSF COC No

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES | DUPLICATE - CONSULTANT | TAL-1001 (0912)

(2)

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory: | Project Manager:
Address: | Phone:
City/State/ZIP: | Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method:
Tracking Number:

BNSF PROJECT INFORMATION

Project State of Origin: WA
BNSF Project Number: 683-063
Project City: Skykomish
BNSF Project Name: Skykomish Quarterly GWS
BNSF Contact:
BNSF Work Order No.: BF1000 7215 / TT-060-R21

CONSULTANT INFORMATION

Company: Farallon Consulting
Address: 975 5th AVE NW
City/State/ZIP: Issaquah WA 98027
Project Number: 683-063
Project Manager: Rob Leet
Email: RLeet@farallonconsulting.com
Phone: 425 295 0800 Fax:

TURNAROUND TIME

☐ 1-day Rush ☐ 5- to 8-day Rush
☐ 2-day Rush ☒ Standard 10-Day
☐ 3-day Rush ☐ Other ________

DELIVERABLES

☒ BNSF Standard (Level II) ☐ Other Deliverables?
☐ Level III ☐ EDD Req, Format?
☐ Level IV

METHODS FOR ANALYSIS: NWTPH-Dx

SAMPLE INFORMATION

	Sample Identification	Containers	Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	NWTPH-Dx							COMMENTS	LAB USE
1	2A-W-42-121217	2	12/12/17	1520	AB	N	G	W	X								
2	5-W-15-121217			1558	RO				X								
3	1B-W-23-121217			1625	AB				X								
4	GW-3-121217			1625	KK				X								
5	GW-30-121217			1630	KK				X								
6	2A-W-41-121317		12/13/17	0955	AB				X								
7	2A-W-410-121317			1000	AB				X								
8	2A-W-40-121317			0950	KK				X								
9	GW-2-121317			1100	KK				X								
10	GW-1-121317			1120	AB				X								
11	EW-1-121317			1215	KK				X								
12	5-W-43-121317			1215	AB				X								
13	2B-W-4-121317			0939	RO				X								
14	1B-W-3-121317			1112	RO				X								
15																	

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	12/14/17/0930	[signature] TASA	12/14/17 1230
[signature] TASA	12/14/17 1540	[signature]	12-14-17 1540

Comments and Special Analytical Requirements:

Received by Laboratory: | Date/Time: | Lab Remarks: | Lab: Custody Intact? ☐ Yes ☐ No | Custody Seal No | BNSF COC No

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES | DUPLICATE - CONSULTANT | TAL-1001 (0912)

Therm. ID A2 Cor -0.9 Unc 0.0
Cooler Dsc Lg Blue @Lab _____
Wet/Packs Packing Bub _____
Custody Seal: Yes X No ___
Labco

Therm. ID A2 Cor -0.3 Unc 0.6
Cooler Dsc Lg green @Lab _____
Wet/Packs Packing Bub _____
Custody Seal: Yes X No ___
Labco

Therm. ID A2 Cor 0.0 Unc 0.9
Cooler Dsc Lg green @Lab _____
Wet/Packs Packing Bub _____
Labcd Custody Seal: Yes X No ___

Therm. ID A2 Cor -0.6 Unc 0.3
Cooler Dsc Lg green @Lab _____
Wet/Packs Packing Bub _____
Labco Custody Seal: Yes X No ___

Therm. ID A2 Cor 0.9 Unc 0.0
Cooler Dsc Lg green @Lab _____
Wet/Packs Packing Bub _____
Custody Seal: Yes X No ___
Labco

Therm. ID A2 Cor -0.6 Unc 0.3
Cooler Dsc Lg Blue @Lab _____
Wet/Packs Packing Bub _____
L.C. Custody Seal: Yes X No ___

Login Sample Receipt Checklist

Client: BNSF Railway Company

Job Number: 580-73612-1

Login Number: 73612
List Number: 1
Creator: Gamble, Cathy L

List Source: TestAmerica Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 580-73612-3
Client Project/Site: BNSF Skykomish Ground Water

For:
BNSF Railway Company
605 Puyallup Avenue
Tacoma, Washington 98421

Attn: e procurement

Kristine D. Allen

Authorized for release by:
1/16/2018 2:13:58 PM

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

Table of Contents

Case Narrative

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-3

Job ID: 580-73612-3

Laboratory: TestAmerica Seattle

Narrative

Job Narrative
580-73612-3

Comments
No additional comments.

Receipt
The samples were received on 12/14/2017 3:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were -0.9º C, -0.9º C, -0.6º C, -0.6º C, -0.3º C and 0.0º C.

GC Semi VOA
Method(s) NWTPH-Dx: The method blank for preparation batch 580-263750 and analytical batch 580-265244 contained #2 Diesel (C10-C24) and Motor Oil (>C24-C36) above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

Method(s) NWTPH-Dx: The laboratory control sample duplicate (LCSD) for preparation batch 580-263750 and analytical batch 580-265244 recovered outside control limits for the following analytes: Motor Oil (>C24-C36). These analytes were biased high in the LCSD and were not detected above 1/2 RL in the associated samples; therefore, the data have been reported.

Method(s) NWTPH-Dx: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 580-265254 and analytical batch 580-265244 recovered outside control limits for the following analytes: #2 Diesel (C10-C24) and Motor Oil (>C24-C36).

Method(s) NWTPH-Dx: The following sample 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-3-121217 (580-73612-2).

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.

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.

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: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-3

Client Sample ID: MW-3-121217
Date Collected: 12/12/17 09:58
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.036	J B *	0.10	0.014	mg/L		12/19/17 14:04	01/16/18 01:48	1
Motor Oil (>C24-C36)	0.022	J * B	0.24	0.0093	mg/L		12/19/17 14:04	01/16/18 01:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*113*		*50 - 150*	*12/19/17 14:04*	*01/16/18 01:48*	*1*

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-3

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

Lab Sample ID: MB 580-263750/1-C
Matrix: Water
Analysis Batch: 265244

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263750

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.0194	J	0.11	0.015	mg/L		12/19/17 14:04	01/16/18 00:42	1
Motor Oil (>C24-C36)	0.0308	J	0.25	0.0098	mg/L		12/19/17 14:04	01/16/18 00:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*99*		*50 - 150*	*12/19/17 14:04*	*01/16/18 00:42*	*1*

Lab Sample ID: LCS 580-263750/2-C
Matrix: Water
Analysis Batch: 265244

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263750

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
#2 Diesel (C10-C24)			0.500	0.376		mg/L		75	59 - 112		
Motor Oil (>C24-C36)			0.500	0.465		mg/L		93	64 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*69*		*50 - 150*

Lab Sample ID: LCSD 580-263750/3-C
Matrix: Water
Analysis Batch: 265244

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263750

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			0.500	0.560	*	mg/L		112	59 - 112	39	16
Motor Oil (>C24-C36)			0.500	0.661	*	mg/L		132	64 - 120	35	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*112*		*50 - 150*

Lab Chronicle

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-3

Client Sample ID: MW-3-121217
Date Collected: 12/12/17 09:58
Date Received: 12/14/17 15:40

Lab Sample ID: 580-73612-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263750	12/19/17 14:04	REY	TAL SEA
Total/NA	Cleanup	3630C			265254	01/15/18 15:27	APR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	265244	01/16/18 01:48	W1T	TAL SEA

Laboratory References:

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

Accreditation/Certification Summary

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-3

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	UST-022	03-02-18
ANAB	DoD ELAP		L2236	01-19-19
ANAB	ISO/IEC 17025		L2236	01-19-19
California	State Program	9	2901	01-31-18
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-18
US Fish & Wildlife	Federal		LE058448-0	10-31-18
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-18

Sample Summary

Client: BNSF Railway Company
Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-73612-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-73612-2	MW-3-121217	Water	12/12/17 09:58	12/14/17 15:40

Login Sample Receipt Checklist

Client: BNSF Railway Company

Job Number: 580-73612-3

Login Number: 73612

List Source: TestAmerica Seattle

List Number: 1

Creator: Gamble, Cathy L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	

APPENDIX B
DATA VALIDATION REPORTS

2017 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

Sayler Data Solutions, Inc.
14257 93rd Court NE Kirkland, Washington 98034 (425) 820-7504 cari@saylerdata.com

DATA VALIDATION REPORT

Skykomish Groundwater Monitoring March 2017 Data

Prepared for:
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, Washington 98027

May 17, 2017

1.0 Introduction

Data Validation was performed on the following water samples:

Sample ID	Sample Date/Time	Lab ID	Analyses
S1-AD-032717	03/27/2017 13:15	580-67195-1	NWTPH-Dx
S1-AU-032717	03/27/2017 13:20	580-67195-2	NWTPH-Dx
S1-BD-032717	03/27/2017 13:23	580-67195-3	NWTPH-Dx
S1-BU-032717	03/27/2017 13:45	580-67195-4	NWTPH-Dx
S2-AD-032717	03/27/2017 13:55	580-67195-5	NWTPH-Dx
S2-AU-032717	03/27/2017 14:00	580-67195-6	NWTPH-Dx
S2-BD-032717	03/27/2017 14:25	580-67195-7	NWTPH-Dx
S2-BU-032717	03/27/2017 14:30	580-67195-8	NWTPH-Dx
S3-AD-032717	03/27/2017 15:45	580-67195-9	NWTPH-Dx
S3-BD-032717	03/27/2017 15:50	580-67195-10	NWTPH-Dx
S3-CD-032717	03/27/2017 15:55	580-67195-11	NWTPH-Dx
S3-AU-032717	03/27/2017 16:15	580-67195-12	NWTPH-Dx
S3-BU-032717	03/27/2017 16:20	580-67195-13	NWTPH-Dx
S3-CU-032717	03/27/2017 16:25	580-67195-14	NWTPH-Dx
S4-AD-032717	03/27/2017 17:15	580-67195-15	NWTPH-Dx
S4-BD-032717	03/27/2017 17:20	580-67195-16	NWTPH-Dx
S4-CD-032717	03/27/2017 17:25	580-67195-17	NWTPH-Dx
S4-AU-032717	03/27/2017 17:45	580-67195-18	NWTPH-Dx
S4-BU-032717	03/27/2017 18:10	580-67195-19	NWTPH-Dx
S4-CU-032717	03/27/2017 18:15	580-67195-20	NWTPH-Dx
1A-W-4-032817	03/28/2017 08:35	580-67195-36	NWTPH-Dx
5-W-18-032817	03/28/2017 09:45	580-67195-21	NWTPH-Dx
5-W-19-032817	03/28/2017 09:50	580-67195-22	NWTPH-Dx
2B-W-4-032817	03/28/2017 10:15	580-67195-38	NWTPH-Dx
5-W-15-032817	03/28/2017 11:12	580-67195-23	NWTPH-Dx
5-W-17-032817	03/28/2017 11:15	580-67195-24	NWTPH-Dx
MW-16-032817	03/28/2017 11:25	580-67195-37	NWTPH-Dx
5-W-16-032817	03/28/2017 12:30	580-67195-25	NWTPH-Dx
5-W-14-032817	03/28/2017 12:32	580-67195-26	NWTPH-Dx
5-W-43-032817	03/28/2017 14:34	580-67195-27	NWTPH-Dx

Sample ID	Sample Date/Time	Lab ID	Analyses
EW-1-032817	03/28/2017 14:35	580-67195-28	NWTPH-Dx
EW-10-032817	03/28/2017 14:36	580-67195-29	NWTPH-Dx
GW-1-032817	03/28/2017 15:40	580-67195-30	NWTPH-Dx
GW-10-032817	03/28/2017 15:42	580-67195-31	NWTPH-Dx
GW-2-032817	03/28/2017 16:00	580-67195-32	NWTPH-Dx
GW-20-032817	03/28/2017 16:01	580-67195-33	NWTPH-Dx
5-W-56-032817	03/28/2017 17:10	580-67195-34	NWTPH-Dx
5-W-55-032817	03/28/2017 17:15	580-67195-35	NWTPH-Dx
5-W-54-032917	03/29/2017 09:00	580-67195-46	NWTPH-Dx
1B-W-23-032917	03/29/2017 09:50	580-67195-39	NWTPH-Dx
GW-3-032917	03/29/2017 09:51	580-67195-40	NWTPH-Dx
GW-30-032917	03/29/2017 09:52	580-67195-41	NWTPH-Dx
5-W-51-032917	03/29/2017 10:00	580-67195-47	NWTPH-Dx
1B-W-3-032917	03/29/2017 10:58	580-67195-42	NWTPH-Dx
1B-W-2-032917	03/29/2017 11:00	580-67195-43	NWTPH-Dx
2A-W-40-032917	03/29/2017 11:05	580-67195-48	NWTPH-Dx
1C-W-7-032917	03/29/2017 12:10	580-67195-44	NWTPH-Dx
2A-W-42-032917	03/29/2017 12:12	580-67195-45	NWTPH-Dx
2A-W-41-032917	03/29/2017 12:35	580-67195-49	NWTPH-Dx
2A-W-410-032917	03/29/2017 12:40	580-67195-61	NWTPH-Dx
EW-2A-032917	03/29/2017 14:18	580-67195-50	NWTPH-Dx
GW-4-032917	03/29/2017 14:20	580-67195-51	NWTPH-Dx
1C-W-8-032917	03/29/2017 15:25	580-67195-52	NWTPH-Dx
1C-W-1-032917	03/29/2017 15:30	580-67195-53	NWTPH-Dx
1C-W-4-032917	03/29/2017 16:17	580-67195-54	NWTPH-Dx
1C-W-3-032917	03/29/2017 16:20	580-67195-55	NWTPH-Dx
MW-3-033017	03/30/2017 10:33	580-67195-56	NWTPH-Dx
MW-4-033017	03/30/2017 10:40	580-67195-57	NWTPH-Dx
2A-W-10-033017	03/30/2017 11:30	580-67195-58	NWTPH-Dx
2A-W-9-033017	03/30/2017 11:33	580-67195-59	NWTPH-Dx
2A-W-90-033017	03/30/2017 11:34	580-67195-60	NWTPH-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 of this report.

2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

Sample analysis frequencies: Quarterly sampling includes 26 water sample locations, and semi-annual sampling includes an additional 31 water sample locations. For this round of sampling both quarterly and semi-annual locations were required. All required samples except 5-W-50 were collected and the required analysis was completed by the laboratory for each collected sample. All required samples except 5-W-50 and MW-38-R were collected and the required analysis was completed by the laboratory for each collected sample.

Analysis methods: Samples were analyzed by method NWTPH-Dx and prepared by method SW3510C. These methods are approved EPA methods and therefore meet comparability requirements.

Precision, accuracy and completeness: Accuracy and precision measurements were within control limits with two exceptions: Diesel precision in one field duplicate resulted in an estimated qualifier and motor oil blank contamination resulted in an estimated qualifier. A data completeness of 96.5% was calculated based on 55 of 57 intended sample analyses completed. This meets the project goal of 90%.

3.0 Diesel Range Petroleum Hydrocarbon Analysis

Quality control analysis frequencies: 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.

Holding times: 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 time in the original analysis. The reanalysis results were extracted outside of holding time as shown below:

Sample ID	Days, Sample to Extraction	Days, Extraction to Analysis	Days, Sample to Analysis
S2-BU-032717RE	23	2	25

Re-extraction results are discussed further in the “multiple reported results” section below.

Laboratory blank results: 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.

Blank ID	Analyte	Concentration (mg/L)	RL (mg/L
MB 580-242843/1-A	Motor Oil (>C24-C36)	0.0185 J	0.05

Results in the associated samples with concentrations less than 5 times this levels should be considered not detected at the reported concentration, and are qualified “U”. Results that are both below both 5 times the blank level and below the reporting limit are considered not detected at an estimated level and are qualified “UJ”. Results with concentrations between 5 and 10 times these levels are qualified as estimated. Results in above 10 times these levels are considered unaffected.

Surrogate recoveries: Laboratory control limits were 50-150%. Surrogate recoveries were within limits.

LCS recoveries: Laboratory control limits ranged from 59-120% to 53-129%. LCS recoveries were within limits.

LCS/LCSD RPDs: The laboratory control limit ranged from <19 to <27%. LCS/LCSD RPD values were within limits.

Field duplicate RPDs: For concentrations below five times the reporting limits, concentrations were within +/- two times the reporting limit with the following exception.

FD ID/Sample ID	Analyte	FD Result (mg/L)	Sample Result (mg/L)	RL (mg/L)
GW-20-032817 / GW-2-032817	#2 Diesel (C10-C24)	0.14	0.029	0.026

The diesel result in this sample and field duplicate are qualified as estimated.

For concentrations above five times the reporting limit, RPDs were below 50%.

Multiple reported results: At the request of the client, sample S2-BU-032717 was reextracted and reanalyzed to compare values. The re-extraction was performed outside of holding time. Associated QC and surrogate recoveries were acceptable for both analyses. Due to the exceeded holding time, the reextraction results are rejected in favor of the original analysis.

Reporting limits: The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met.

Laboratory narrative and flags: No other qualifiers were added based on a review of the laboratory narratives.

Diesel and oil range petroleum hydrocarbon data are acceptable for use as qualified.

4.0 Qualifier Summary

Client ID	Analyte(s)	Qualifier	Reason
1B-W-2-032917	Motor Oil (>C24-C36)	UJ	Lab blank contamination
1B-W-23-032917	Motor Oil (>C24-C36)	UJ	Lab blank contamination
1B-W-3-032917	Motor Oil (>C24-C36)	UJ	Lab blank contamination
1C-W-1-032917	Motor Oil (>C24-C36)	UJ	Lab blank contamination
1C-W-4-032917	Motor Oil (>C24-C36)	U	Lab blank contamination
1C-W-7-032917	Motor Oil (>C24-C36)	UJ	Lab blank contamination
1C-W-8-032917	Motor Oil (>C24-C36)	U	Lab blank contamination
2A-W-40-032917	Motor Oil (>C24-C36)	UJ	Lab blank contamination
2A-W-42-032917	Motor Oil (>C24-C36)	UJ	Lab blank contamination
5-W-54-032917	Motor Oil (>C24-C36)	UJ	Lab blank contamination
EW-2A-032917	Motor Oil (>C24-C36)	UJ	Lab blank contamination
GW-20-032817	#2 Diesel (C10-C24)	J	High FD Difference
GW-2-032817	#2 Diesel (C10-C24)	J	High FD Difference
GW-30-032917	Motor Oil (>C24-C36)	U	Lab blank contamination
GW-3-032917	Motor Oil (>C24-C36)	U	Lab blank contamination
GW-4-032917	Motor Oil (>C24-C36)	UJ	Lab blank contamination
MW-3-033017	Motor Oil (>C24-C36)	UJ	Lab blank contamination
MW-4-033017	Motor Oil (>C24-C36)	J	Lab blank contamination
S2-BU-032717 RE	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	R1	Another result available

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.
N	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	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 Contract Laboratory Program National Functional Guidelines For Superfund Organic Methods Data Review, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency, June 2008, USEPA-540-R-008-01.

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.

Sayler Data Solutions, Inc.
14257 93rd Court NE Kirkland, Washington 98034 (425) 820-7504 cari.say@saylerdata.com

DATA VALIDATION REPORT

Skykomish Groundwater Monitoring June 2017 Data

Prepared for:
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, Washington 98027

September 20, 2017

1.0 Introduction

Data Validation was performed on the following water samples:

Sample ID	Sample Date/Time	Lab ID	Analyses
S1-AD-062617	06/26/2017 17:10	580-69571-1	TPH-Dx
S1-AU-062617	06/26/2017 17:15	580-69571-2	TPH-Dx
S1-BD-062617	06/26/2017 17:45	580-69571-3	TPH-Dx
S1-BU-062617	06/26/2017 17:45	580-69571-4	TPH-Dx
S2-AU-062717	06/27/2017 09:00	580-69571-5	TPH-Dx
S2-AD-062717	06/27/2017 08:58	580-69571-6	TPH-Dx
S2-BU-A-062717	06/27/2017 09:05	580-69571-7	TPH-Dx
S2-BD-062717	06/27/2017 09:25	580-69571-8	TPH-Dx
S3-AD-062717	06/27/2017 10:44	580-69571-9	TPH-Dx
S3-BD-062717	06/27/2017 10:45	580-69571-10	TPH-Dx
S3-AU-062717	06/27/2017 10:46	580-69571-11	TPH-Dx
S3-BU-062717	06/27/2017 11:15	580-69571-12	TPH-Dx
S3-CU-062717	06/27/2017 11:20	580-69571-13	TPH-Dx
S3-CD-062717	06/27/2017 11:25	580-69571-14	TPH-Dx
S4-AU-062717	06/27/2017 12:35	580-69571-15	TPH-Dx
S4-AD-062717	06/27/2017 12:35	580-69571-16	TPH-Dx
S4-BU-062717	06/27/2017 12:36	580-69571-17	TPH-Dx
S4-BD-062717	06/27/2017 12:36	580-69571-18	TPH-Dx
S4-CD-062717	06/27/2017 13:09	580-69571-19	TPH-Dx
S4-CU-062717	06/27/2017 13:11	580-69571-20	TPH-Dx
1C-W-1-062717	06/27/2017 15:20	580-69571-21	TPH-Dx
1C-W-8-062717	06/27/2017 15:22	580-69571-22	TPH-Dx
1C-W-7-062717	06/27/2017 16:45	580-69571-23	TPH-Dx
GW-4-062717	06/27/2017 16:41	580-69571-24	TPH-Dx
5-W-19-062717	06/27/2017 15:11	580-69571-25	TPH-Dx
5-W-17-062717	06/27/2017 15:43	580-69571-26	TPH-Dx
5-W-18-062717	06/27/2017 16:33	580-69571-27	TPH-Dx
5-W-16-062717	06/27/2017 16:50	580-69571-28	TPH-Dx
EW-2A-062817	06/28/2017 10:54	580-69571-29	TPH-Dx
2A-W-42-062817	06/28/2017 11:00	580-69571-30	TPH-Dx

Sample ID	Sample Date/Time	Lab ID	Analyses
1B-W-23-062817	06/28/2017 12:10	580-69571-31	TPH-Dx
GW-3-062817	06/28/2017 12:25	580-69571-32	TPH-Dx
GW-30-062817	06/28/2017 12:30	580-69571-33	TPH-Dx
5-W-14-062817	06/28/2017 09:27	580-69571-34	TPH-Dx
5-W-15-062817	06/28/2017 10:57	580-69571-35	TPH-Dx
EW-1-062817	06/28/2017 11:13	580-69571-36	TPH-Dx
GW-1-062817	06/28/2017 12:17	580-69571-37	TPH-Dx
5-W-43-062817	06/28/2017 12:17	580-69571-38	TPH-Dx
2A-W-41-062817	06/28/2017 13:50	580-69571-39	TPH-Dx
2A-W-410-062817	06/28/2017 13:55	580-69571-40	TPH-Dx
1B-W-3-062817	06/28/2017 14:00	580-69571-41	TPH-Dx
MW-3-062817	06/28/2017 17:05	580-69600-1	TPH-Dx
2A-W-10-062817	06/28/2017 16:21	580-69600-2	TPH-Dx
GW-20-062817	06/28/2017 13:52	580-69600-3	TPH-Dx
GW-2-062817	06/28/2017 13:39	580-69600-4	TPH-Dx
2A-W-40-062817	06/28/2017 13:32	580-69600-5	TPH-Dx
2A-W-9-062817	06/28/2017 15:12	580-69600-6	TPH-Dx
2A-W-4-062917	06/29/2017 11:24	580-69600-7	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 of this report.

2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

Sample analysis frequencies: Quarterly sampling includes 26 water sample locations, and semi-annual sampling includes an additional 31 water sample locations. 20 of the 31 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. For this round of sampling, quarterly locations and sentry wells were required. All required samples except MW-4 were collected and the required analysis was completed by the laboratory for each collected sample.

Analysis methods: Samples were analyzed by method NWTPH-Dx and prepared by method SW3510C. These methods are approved EPA methods and therefore meet comparability requirements.

Precision, accuracy and completeness: Accuracy and precision measurements were within control limits with one exception: Motor oil precision in one field duplicate resulted in an estimated qualifier. A data completeness of 97.8% was calculated based on 45 of 46 intended sample analyses completed. This meets the project goal of 90%.

3.0 Diesel Range Petroleum Hydrocarbon Analysis

Quality control analysis frequencies: 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.

Holding times: 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 time.

Laboratory blank results: 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.

Surrogate recoveries: Laboratory control limits were 43-119%. Surrogate recoveries were within limits.

LCS recoveries: Laboratory control limits ranged from 59-112% to 64-120%. LCS recoveries were within limits.

LCS/LCSD RPDs: The laboratory control limit ranged from <16 to <17%. LCS/LCSD RPD values were within limits.

Field duplicate RPDs: For concentrations below five times the reporting limits, concentrations were within +/- two times the reporting limit. For concentrations above five times the reporting limit, RPDs were below 50% with the following exception.

Field Duplicate ID/Sample ID	Analyte	FD Result (mg/L)	Sample Result (mg/L)	RPD
GW-30-062817 / GW-3-062817	Motor Oil (>C24-C36)	0.094	0.29	102

The motor oil result in this sample and field duplicate are qualified as estimated.

Multiple reported results: No multiple reported results were present in this laboratory report.

Reporting limits: The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met.

Laboratory narrative and flags: No other qualifiers were added based on a review of the laboratory narratives.

Diesel and oil range petroleum hydrocarbon data are acceptable for use as qualified.

4.0 Qualifier Summary

Client ID	Analyte(s)	Qualifier	Reason
GW-3-062817	Motor Oil (>C24-C36)	J	High field duplicate RPD
GW-30-062817	Motor Oil (>C24-C36)	J	High field duplicate RPD

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.
N	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	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 Contract Laboratory Program National Functional Guidelines For Superfund Organic Methods Data Review, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency, June 2008, USEPA-540-R-008-01.

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.

Sayler Data Solutions, Inc.
14257 93rd Court NE Kirkland, Washington 98034 (425) 820-7504 cari.say@saylerdata.com

DATA VALIDATION REPORT

Skykomish Groundwater Monitoring September 2017 Data

Prepared for:
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, Washington 98027

November 13, 2017

1.0 Introduction

Data Validation was performed on the following water samples:

Sample ID	Sample Date/Time	Lab ID	Analyses
S1-BD-092517	09/25/2017 15:37	580-71782-1	TPH-Dx
S3-BU-092517	09/25/2017 17:17	580-71782-10	TPH-Dx
S3-AD-092517	09/25/2017 17:20	580-71782-11	TPH-Dx
S3-AU-092517	09/25/2017 17:21	580-71782-12	TPH-Dx
S3-CD-092517	09/25/2017 17:43	580-71782-13	TPH-Dx
S3-CU-092517	09/25/2017 17:44	580-71782-14	TPH-Dx
S4-AD-092517	09/25/2017 18:02	580-71782-15	TPH-Dx
S4-AU-092517	09/25/2017 18:06	580-71782-16	TPH-Dx
S4-BD-092517	09/25/2017 18:16	580-71782-17	TPH-Dx
S4-BU-092517	09/25/2017 18:18	580-71782-18	TPH-Dx
S4-CD-092517	09/25/2017 18:25	580-71782-19	TPH-Dx
S1-BU-092517	09/25/2017 15:40	580-71782-2	TPH-Dx
S4-CU-092517	09/25/2017 18:30	580-71782-20	TPH-Dx
MW-4-092617	09/26/2017 09:05	580-71782-21	TPH-Dx
MW-3-092617	09/26/2017 09:14	580-71782-22	TPH-Dx
2A-W-10-092617	09/26/2017 10:04	580-71782-23	TPH-Dx
5-W-19-092617	09/26/2017 09:00	580-71782-24	TPH-Dx
5-W-18-092617	09/26/2017 09:15	580-71782-25	TPH-Dx
5-W-16-092617	09/26/2017 10:05	580-71782-26	TPH-Dx
5-W-17-092617	09/26/2017 10:13	580-71782-27	TPH-Dx
2A-W-9-092617	09/26/2017 10:20	580-71782-28	TPH-Dx
5-W-15-092617	09/26/2017 11:08	580-71782-29	TPH-Dx
S1-AU-092517	09/25/2017 15:45	580-71782-3	TPH-Dx
5-W-14-092617	09/26/2017 11:10	580-71782-30	TPH-Dx
2B-W-4-092617	09/26/2017 11:33	580-71782-31	TPH-Dx
MW-16-092617	09/26/2017 11:45	580-71782-32	TPH-Dx
EW-2A-092617	09/26/2017 13:42	580-71782-33	TPH-Dx
GW-4-092617	09/26/2017 13:55	580-71782-34	TPH-Dx
GW-40-092617	09/26/2017 14:00	580-71782-35	TPH-Dx
2A-W-42-092617	09/26/2017 14:48	580-71782-36	TPH-Dx

Sample ID	Sample Date/Time	Lab ID	Analyses
1C-W-7-092617	09/26/2017 15:00	580-71782-37	TPH-Dx
1C-W-4-092617	09/26/2017 16:18	580-71782-38	TPH-Dx
1C-W-3-092617	09/26/2017 16:40	580-71782-39	TPH-Dx
S1-AD-092517	09/25/2017 15:50	580-71782-4	TPH-Dx
5-W-43-092617	09/26/2017 13:00	580-71782-40	TPH-Dx
EW-1-092617	09/26/2017 13:01	580-71782-41	TPH-Dx
GW-1-092617	09/26/2017 13:55	580-71782-42	TPH-Dx
GW-10-092617	09/26/2017 14:00	580-71782-43	TPH-Dx
GW-2-092617	09/26/2017 13:59	580-71782-44	TPH-Dx
GW-20-092617	09/26/2017 14:02	580-71782-45	TPH-Dx
5-W-54-092617	09/26/2017 15:10	580-71782-46	TPH-Dx
MW-38R-092617	09/26/2017 15:20	580-71782-47	TPH-Dx
MW-380R-092617	09/26/2017 15:25	580-71782-48	TPH-Dx
5-W-55-092617	09/26/2017 16:12	580-71782-49	TPH-Dx
S2-AD-092517	09/25/2017 16:20	580-71782-5	TPH-Dx
5-W-56-092617	09/26/2017 16:25	580-71782-50	TPH-Dx
5-W-150-092617	09/26/2017 11:12	580-71782-51	TPH-Dx
1C-W-1-092717	09/27/2017 09:25	580-71782-52	TPH-Dx
1C-W-8-092717	09/27/2017 09:26	580-71782-53	TPH-Dx
GW-3-092717	09/27/2017 09:25	580-71782-54	TPH-Dx
GW-30-092717	09/27/2017 09:35	580-71782-55	TPH-Dx
1B-W-2-092717	09/27/2017 10:33	580-71782-56	TPH-Dx
1B-W-3-092717	09/27/2017 10:40	580-71782-57	TPH-Dx
1B-W-23-092717	09/27/2017 09:50	580-71782-58	TPH-Dx
1A-W-4-092717	09/27/2017 11:18	580-71782-59	TPH-Dx
S2-AU-092517	09/25/2017 16:25	580-71782-6	TPH-Dx
2A-W-41-092717	09/27/2017 11:20	580-71782-60	TPH-Dx
2A-W-40-092717	09/27/2017 12:10	580-71782-61	TPH-Dx
5-W-51-092717	09/27/2017 12:20	580-71782-62	TPH-Dx
S2-BU-092517	09/25/2017 16:35	580-71782-7	TPH-Dx
S2-BD-092517	09/25/2017 16:37	580-71782-8	TPH-Dx
S3-BD-092517	09/25/2017 17:15	580-71782-9	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.

Data qualifiers are summarized in section 4.0 of this report.

2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

Sample analysis frequencies: Quarterly sampling includes 26 water sample locations, and semi-annual sampling includes an additional 31 water sample locations. Additionally, 20 of the 31 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. For this round of sampling, quarterly and semi-annual locations were required. All required samples except 5-W-50 were collected and the required analysis was completed by the laboratory for each collected sample.

Analysis methods: Samples were analyzed by method NWTPH-Dx and prepared by method SW3510C. These methods are approved EPA methods and therefore meet comparability requirements.

Precision, accuracy and completeness: Precision measurements were within control limits. With the exception of continuing calibration results and matrix interference affecting the surrogate recovery in one sample, accuracy measurements were within control limits. Results were estimated due to continuing calibration verification recoveries, high sample receipt temperatures, and one broken sample. A data completeness of 98.2% was calculated based on 56 of 57 intended sample analyses completed. This meets the project goal of 90%.

3.0 Diesel Range Petroleum Hydrocarbon Analysis

Quality control analysis frequencies: 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.

Holding times: 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 time. However, a large number of sample coolers exceeded the allowable temperature range of 0-6°C. These samples are qualified as estimated and include:

Sample ID	Lab ID	Sample ID (continued)	Lab ID (continued)
S4-AD-092517	580-71782-15	5-W-43-092617	580-71782-40
S4-AU-092517	580-71782-16	EW-1-092617	580-71782-41
S4-BD-092517	580-71782-17	GW-1-092617	580-71782-42
S4-BU-092517	580-71782-18	GW-10-092617	580-71782-43
S4-CD-092517	580-71782-19	GW-2-092617	580-71782-44
S4-CU-092517	580-71782-20	GW-20-092617	580-71782-45
MW-4-092617	580-71782-21	5-W-54-092617	580-71782-46
MW-3-092617	580-71782-22	MW-38R-092617	580-71782-47
2A-W-10-092617	580-71782-23	MW-380R-092617	580-71782-48
5-W-19-092617	580-71782-24	5-W-55-092617	580-71782-49
5-W-18-092617	580-71782-25	5-W-56-092617	580-71782-50
5-W-16-092617	580-71782-26	5-W-150-092617	580-71782-51
5-W-17-092617	580-71782-27	1C-W-1-092717	580-71782-52
2A-W-9-092617	580-71782-28	1C-W-8-092717	580-71782-53
5-W-15-092617	580-71782-29	1B-W-2-092717	580-71782-56
5-W-14-092617	580-71782-30	1B-W-3-092717	580-71782-57
2B-W-4-092617	580-71782-31	2A-W-40-092717	580-71782-61
MW-16-092617	580-71782-32	5-W-51-092717	580-71782-62

Laboratory blank results: 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.

Surrogate recoveries: Laboratory control limits ranged from 43-119% to 50-150%. Surrogate recoveries were within limits with the following exception:

Sample ID	Surrogate	% Recovery	Lab Control Limit
1C-W-8-092717	o-Terphenyl	48	50 - 150

According to the laboratory narrative, matrix interference was observed and no qualifiers were assigned.

LCS recoveries: Laboratory control limits ranged from 59-112% to 64-120%. LCS recoveries were within limits.

LCS/LCSD RPDs: The laboratory control limit ranged from <16 to <17%. LCS/LCSD RPD values were within limits.

Field duplicate RPDs: For concentrations below five times the reporting limits, concentrations were within +/- two times the reporting limit. For concentrations above five times the reporting limit, RPDs were below 50%.

Multiple reported results: No multiple reported results were present in this laboratory report.

Reporting limits: The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met.

Laboratory narrative and flags: According to the laboratory narrative, continuing calibration verifications in batches 580-258268 and 580-258299 had high recoveries. Associated detected results are qualified as estimated. Additionally, sample GW-10-092617 was received broken. Both positive and non-detect results in this sample are qualified as estimated. No other qualifiers were added based on a review of the laboratory narratives.

Diesel and oil range petroleum hydrocarbon data are acceptable for use as qualified.

4.0 Qualifier Summary

Client ID	Analyte(s)	Qualifier	Reason
1B-W-2-092717	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
1B-W-3-092717	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
1C-W-1-092717	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
1C-W-8-092717	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
2A-W-10-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
2A-W-40-092717	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
2A-W-9-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
2B-W-4-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	High cooler receipt temperature
5-W-14-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
5-W-150-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature

Client ID	Analyte(s)	Qualifier	Reason
5-W-15-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
5-W-16-092617	Motor Oil (>C24-C36)	J	High CCV Recovery, High cooler receipt temperature
5-W-16-092617	#2 Diesel (C10-C24)	J	High cooler receipt temperature
5-W-17-092617	Motor Oil (>C24-C36)	J	High CCV Recovery, High cooler receipt temperature
5-W-17-092617	#2 Diesel (C10-C24)	UJ	High cooler receipt temperature
5-W-18-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
5-W-19-092617	Motor Oil (>C24-C36)	J	High CCV Recovery, High cooler receipt temperature
5-W-19-092617	#2 Diesel (C10-C24)	UJ	High cooler receipt temperature
5-W-43-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
5-W-51-092717	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
5-W-54-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
5-W-55-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
5-W-56-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
EW-1-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
GW-10-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature, Sample received broken
GW-1-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
GW-20-092617	#2 Diesel (C10-C24)	J	High cooler receipt temperature
GW-20-092617	Motor Oil (>C24-C36)	UJ	High cooler receipt temperature
GW-2-092617	#2 Diesel (C10-C24)	J	High cooler receipt temperature
GW-2-092617	Motor Oil (>C24-C36)	UJ	High cooler receipt temperature
MW-16-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	High cooler receipt temperature
MW-3-092617	Motor Oil (>C24-C36)	J	High CCV Recovery, High cooler receipt temperature
MW-3-092617	#2 Diesel (C10-C24)	J	High cooler receipt temperature
MW-380R-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
MW-38R-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
MW-4-092617	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	High cooler receipt temperature
S3-AU-092517	Motor Oil (>C24-C36)	J	High CCV Recovery
S3-BU-092517	Motor Oil (>C24-C36)	J	High CCV Recovery
S4-AD-092517	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	High cooler receipt temperature
S4-AU-092517	Motor Oil (>C24-C36)	J	High CCV Recovery, High cooler receipt temperature
S4-AU-092517	#2 Diesel (C10-C24)	UJ	High cooler receipt temperature
S4-BD-092517	Motor Oil (>C24-C36)	J	High CCV Recovery, High cooler receipt temperature
S4-BD-092517	#2 Diesel (C10-C24)	J	High cooler receipt temperature
S4-BU-092517	Motor Oil (>C24-C36)	J	High CCV Recovery, High cooler receipt temperature
S4-BU-092517	#2 Diesel (C10-C24)	J	High cooler receipt temperature
S4-CD-092517	Motor Oil (>C24-C36)	J	High CCV Recovery, High cooler receipt temperature

Client ID	Analyte(s)	Qualifier	Reason
S4-CD-092517	#2 Diesel (C10-C24)	J	High cooler receipt temperature
S4-CU-092517	Motor Oil (>C24-C36)	J	High CCV Recovery, High cooler receipt temperature
S4-CU-092517	#2 Diesel (C10-C24)	J	High cooler receipt temperature

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.
N	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	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 Contract Laboratory Program National Functional Guidelines For Superfund Organic Methods Data Review, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency, June 2008, USEPA-540-R-008-01.

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.

Sayler Data Solutions, Inc.
14257 93rd Court NE Kirkland, Washington 98034 (425) 820-7504 cari.say@saylerdata.com

DATA VALIDATION REPORT

Skykomish Groundwater Monitoring December 2017 Data

Prepared for:
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, Washington 98027

January 26, 2018

1.0 Introduction

Data Validation was performed on the following water samples:

Sample ID	Sample Date/Time	Lab ID	Analyses
5-W-19-121217	12/12/2017 09:58	580-73612-1	TPH-Dx
GW-4-121217	12/12/2017 12:25	580-73612-10	TPH-Dx
5-W-14-121217	12/12/2017 13:19	580-73612-11	TPH-Dx
1C-W-8-121217	12/12/2017 14:10	580-73612-12	TPH-Dx
1C-W-1-121217	12/12/2017 14:20	580-73612-13	TPH-Dx
5-W-17-121217	12/12/2017 14:41	580-73612-14	TPH-Dx
1C-W-7-121217	12/12/2017 15:10	580-73612-15	TPH-Dx
2A-W-42-121217	12/12/2017 15:20	580-73612-16	TPH-Dx
5-W-15-121217	12/12/2017 15:58	580-73612-17	TPH-Dx
1B-W-23-121217	12/12/2017 16:25	580-73612-18	TPH-Dx
GW-3-121217	12/12/2017 16:25	580-73612-19	TPH-Dx
MW-3-121217	12/12/2017 09:58	580-73612-2	TPH-Dx
GW-30-121217	12/12/2017 16:30	580-73612-20	TPH-Dx
2A-W-41-121317	12/13/2017 09:55	580-73612-21	TPH-Dx
2A-W-410-121317	12/13/2017 10:00	580-73612-22	TPH-Dx
2A-W-40-121317	12/13/2017 09:50	580-73612-23	TPH-Dx
GW-2-121317	12/13/2017 11:00	580-73612-24	TPH-Dx
GW-1-121317	12/13/2017 11:20	580-73612-25	TPH-Dx
EW-1-121317	12/13/2017 12:15	580-73612-26	TPH-Dx
5-W-43-121317	12/13/2017 12:15	580-73612-27	TPH-Dx
2B-W-4-121317	12/13/2017 09:39	580-73612-28	TPH-Dx
1B-W-3-121317	12/13/2017 11:12	580-73612-29	TPH-Dx
MW-4-121217	12/12/2017 10:05	580-73612-3	TPH-Dx
5-W-16-121217	12/12/2017 10:56	580-73612-4	TPH-Dx
2A-W-9-121217	12/12/2017 11:15	580-73612-5	TPH-Dx
2A-W-10-121217	12/12/2017 11:15	580-73612-6	TPH-Dx
5-W-18-121217	12/12/2017 11:55	580-73612-7	TPH-Dx
5-W-180-121217	12/12/2017 11:56	580-73612-8	TPH-Dx
EW-2A-121217	12/12/2017 12:25	580-73612-9	TPH-Dx

Please note: Sample EW-2A-1217 was reported by the laboratory with a space for one of the dashes, as EW 2A-1217. The corrected sample ID was used throughout this report.

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 of this report.

2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

Sample analysis frequencies: Quarterly sampling includes 26 water sample locations, and semi-annual sampling includes an additional 31 water sample locations. Additionally, 20 of the 31 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. For this round of sampling, only quarterly locations were required. Samples were collected from all required locations and the required analysis was completed by the laboratory for each collected sample.

Analysis methods: Samples were analyzed by method NWTPH-Dx and prepared by method SW3510C. These methods are approved EPA methods and therefore meet comparability requirements.

Precision, accuracy and completeness: Accuracy measurements were within control limits. Results were estimated due to laboratory control sample RPDs and blank contamination. A data completeness of 100% was calculated based on 26 of 26 intended sample analyses completed. This meets the project goal of 90%.

3.0 Diesel Range Petroleum Hydrocarbon Analysis

Quality control analysis frequencies: 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.

Holding times: 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 time.

Laboratory blank results: Criteria for blanks are that analyte concentrations must be below the PQL, or below 5% of the lowest associated sample concentration. The following target compounds were detected in the method blanks at levels below the PQL:

Blank ID	Analyte	Concentration	RL
MB 580-263830/1-A	#2 Diesel (C10-C24)	0.0161J	0.025
MB 580-263830/1-A	Motor Oil (>C24-C36)	0.0122J	0.05

Associated samples containing these compounds at levels within five times the blank amount are qualified "U" and should be considered not detected at the reported concentration. Associated samples containing these compounds at levels between five and ten times the blank amount are qualified as estimated. Associated samples containing these compounds at levels above ten times the blank amount are considered unaffected.

Surrogate recoveries: Laboratory control limits ranged were 50-150%. Surrogate recoveries were within limits.

LCS recoveries: Laboratory control limits ranged from 59-112% to 64-120%. LCS recoveries were within limits.

LCS/LCSD RPDs: The laboratory control limit ranged from <16 to <17%. LCS/LCSD RPD values were within limits with one exception:

QC ID	Analyte	RPD	Lab Control Limit
LCSD 580-263750/3-A	#2 Diesel (C10-C24)	22	16

Positive results in the associated samples are qualified as estimated for this analyte.

Field duplicate RPDs: For concentrations below five times the reporting limits, concentrations were within +/- two times the reporting limit. For concentrations above five times the reporting limit, RPDs were below 50%.

Multiple reported results: No multiple reported results were present in this laboratory report.

Reporting limits: The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met.

Laboratory narrative and flags: 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 Qualifier Summary

Client ID	Analyte(s)	Qualifier	Reason
1B-W-23-121217	#2 Diesel (C10-C24)	J	High LCS/LCSD RPD
1B-W-3-121317	#2 Diesel (C10-C24)	U	Lab blank contamination
1B-W-3-121317	Motor Oil (>C24-C36)	UJ	Lab blank contamination
1C-W-1-121217	#2 Diesel (C10-C24)	J	High LCS/LCSD RPD
1C-W-7-121217	#2 Diesel (C10-C24)	J	High LCS/LCSD RPD
1C-W-8-121217	#2 Diesel (C10-C24)	J	High LCS/LCSD RPD
2A-W-10-121217	#2 Diesel (C10-C24)	J	High LCS/LCSD RPD
2A-W-40-121317	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	Lab blank contamination
2A-W-410-121317	Motor Oil (>C24-C36)	J	Lab blank contamination
2A-W-41-121317	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	Lab blank contamination
2A-W-42-121217	#2 Diesel (C10-C24)	J	High LCS/LCSD RPD

Client ID	Analyte(s)	Qualifier	Reason
2A-W-9-121217	#2 Diesel (C10-C24)	J	High LCS/LCSD RPD
5-W-15-121217	#2 Diesel (C10-C24)	J	High LCS/LCSD RPD
5-W-16-121217	#2 Diesel (C10-C24)	J	High LCS/LCSD RPD
5-W-180-121217	#2 Diesel (C10-C24)	J	High LCS/LCSD RPD
5-W-18-121217	#2 Diesel (C10-C24)	J	High LCS/LCSD RPD
5-W-43-121317	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	Lab blank contamination
EW-2A-121217	#2 Diesel (C10-C24)	J	High LCS/LCSD RPD
EW-1-121317	#2 Diesel (C10-C24)	U	Lab blank contamination
EW-1-121317	Motor Oil (>C24-C36)	UJ	Lab blank contamination
GW-1-121317	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	U	Lab blank contamination
GW-2-121317	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	Lab blank contamination
GW-30-121217	#2 Diesel (C10-C24)	J	High LCS/LCSD RPD
GW-4-121217	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	U	Lab blank contamination
MW-3-121217	#2 Diesel (C10-C24)	J	High LCS/LCSD RPD
MW-4-121217	#2 Diesel (C10-C24)	J	High LCS/LCSD RPD

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.
N	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	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 Contract Laboratory Program National Functional Guidelines For Superfund Organic Methods Data Review, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency, June 2008, USEPA-540-R-008-01.

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.

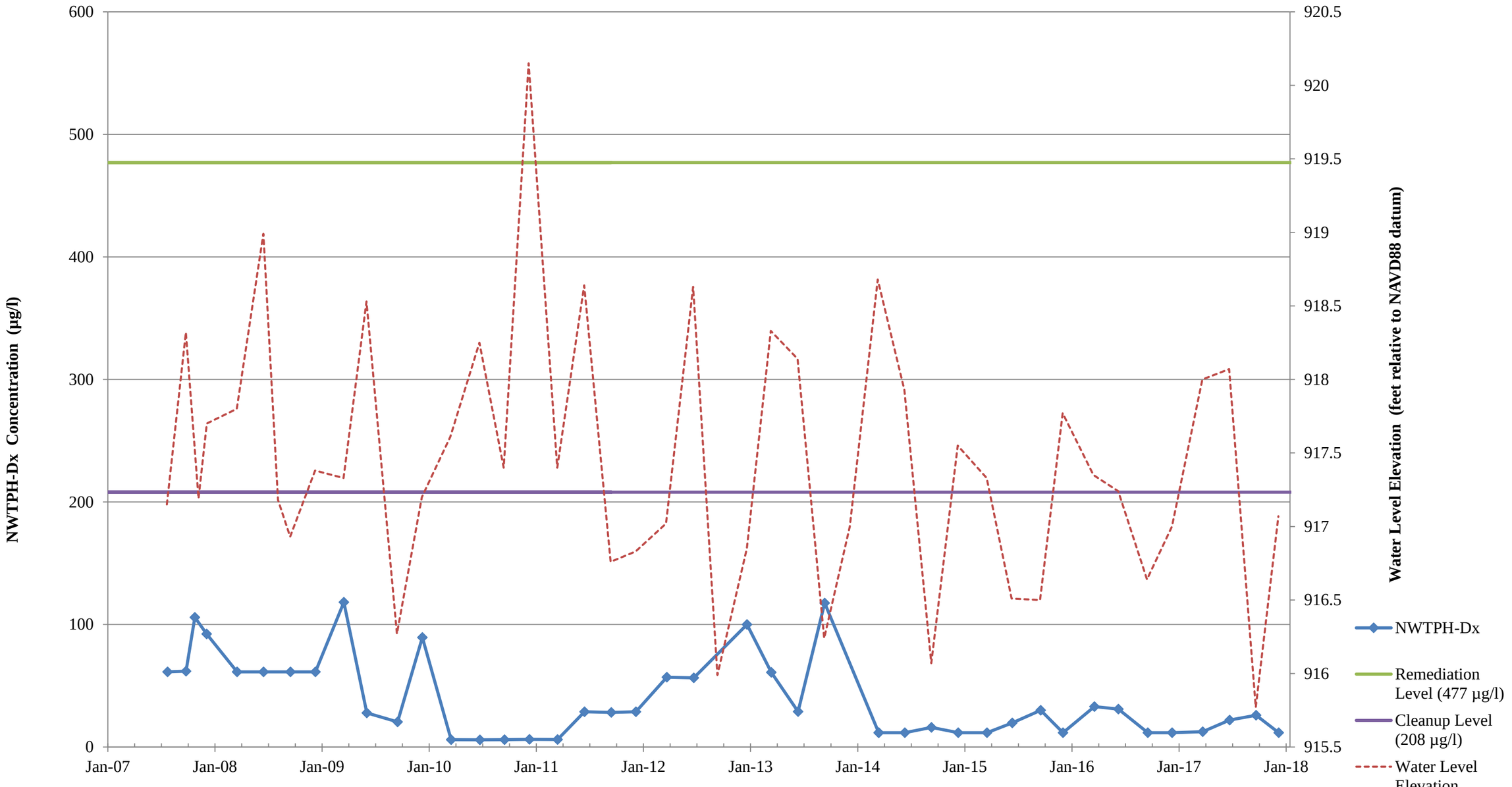
APPENDIX C
NWTPH-Dx TREND PLOTS

2017 SITE-WIDE GROUNDWATER MONITORING REPORT
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Consent Decree No. 07-2-33672-9 SEA

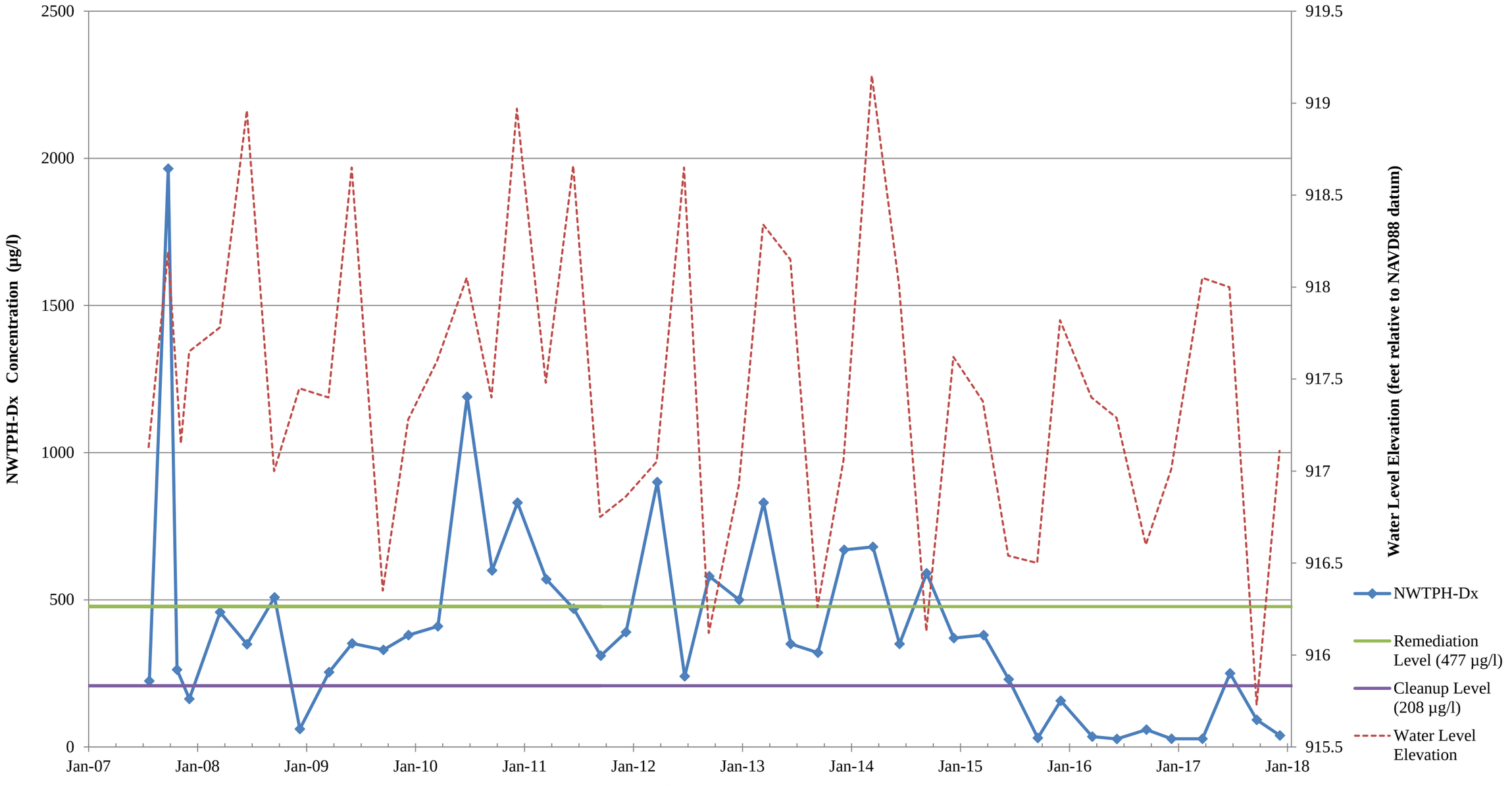
Farallon PN: 683-067

Levee Zone Monitoring Wells

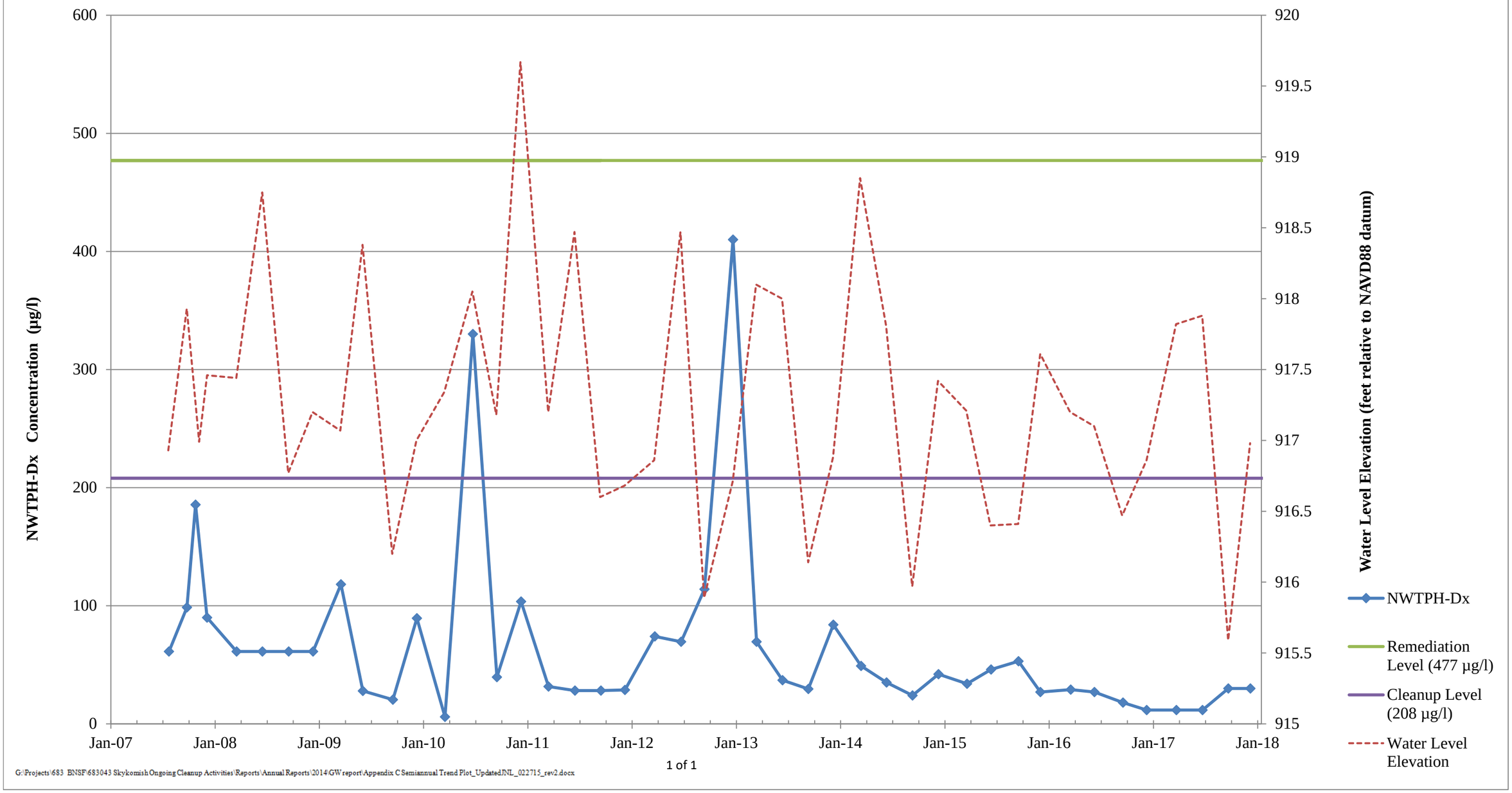
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 5-W-14



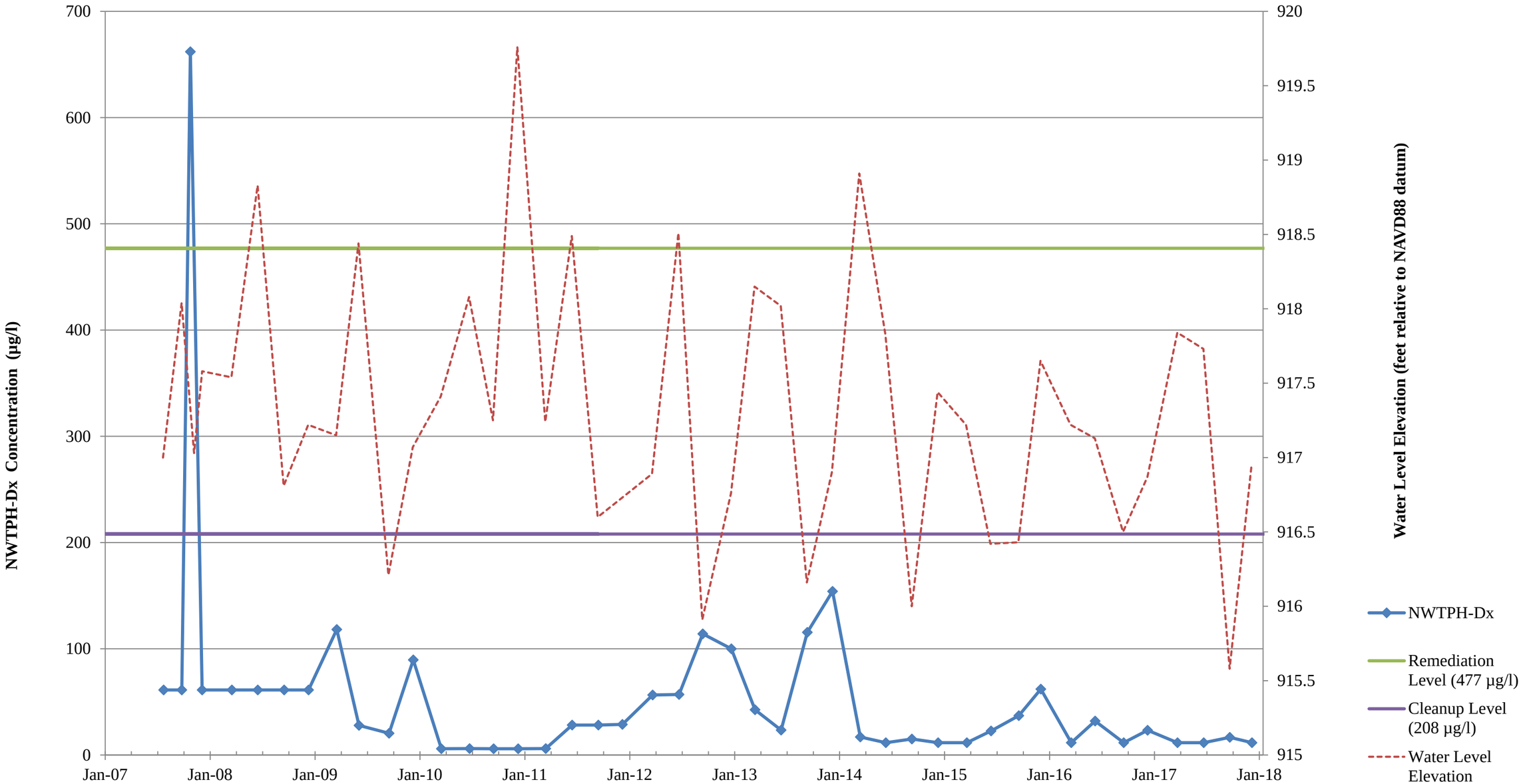
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 5-W-15



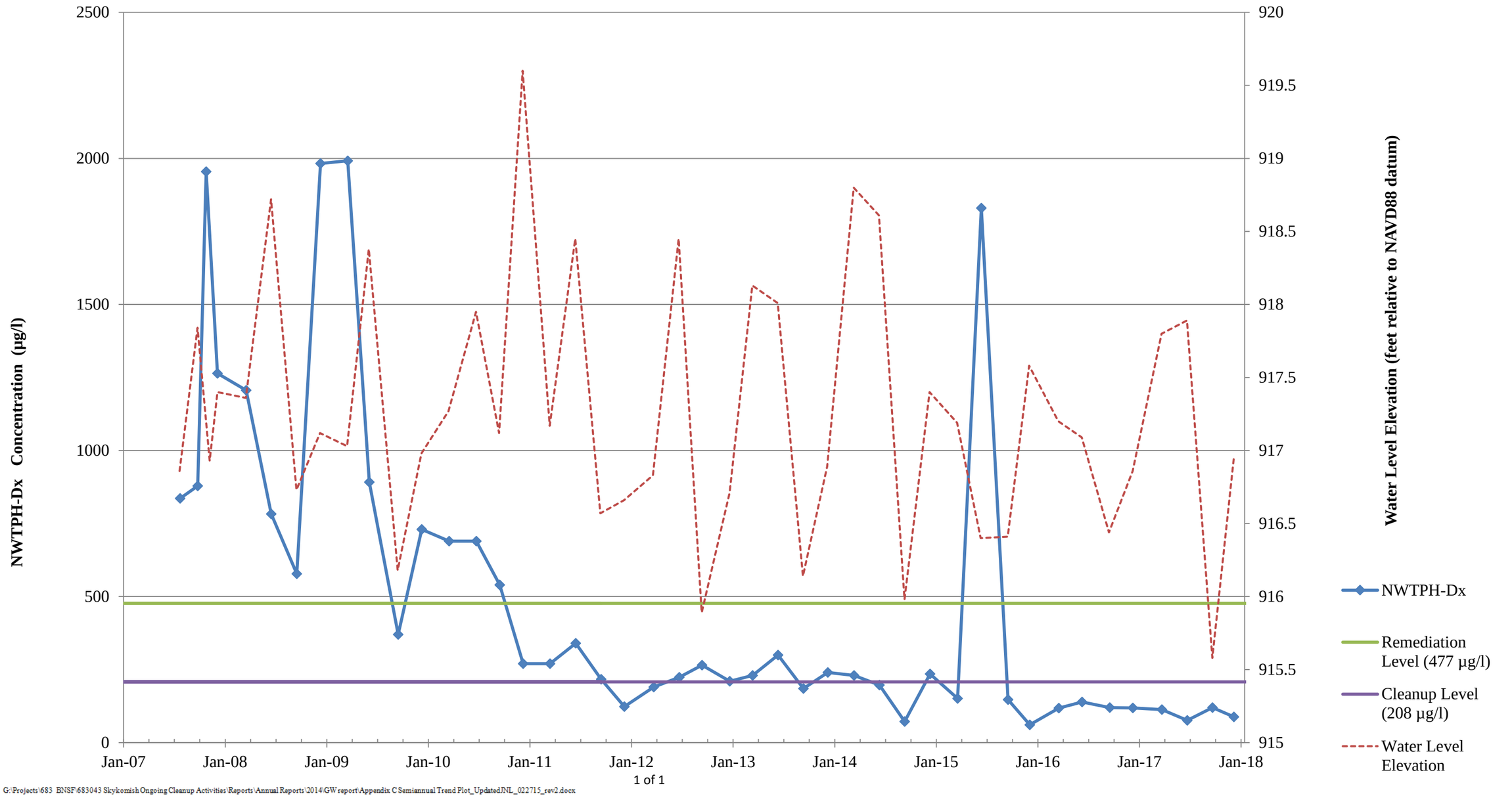
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 5-W-16



NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 5-W-17

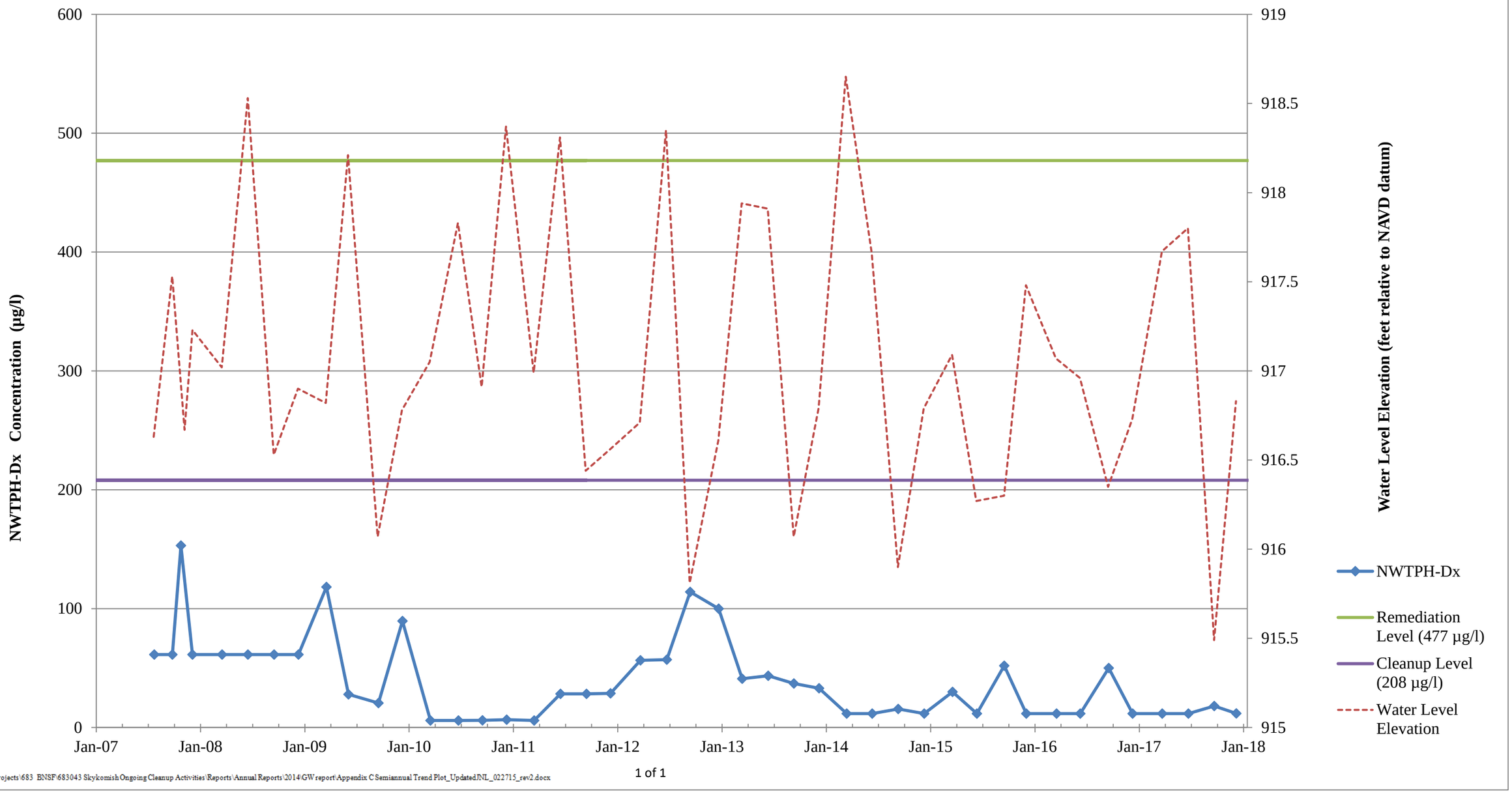


NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 5-W-18



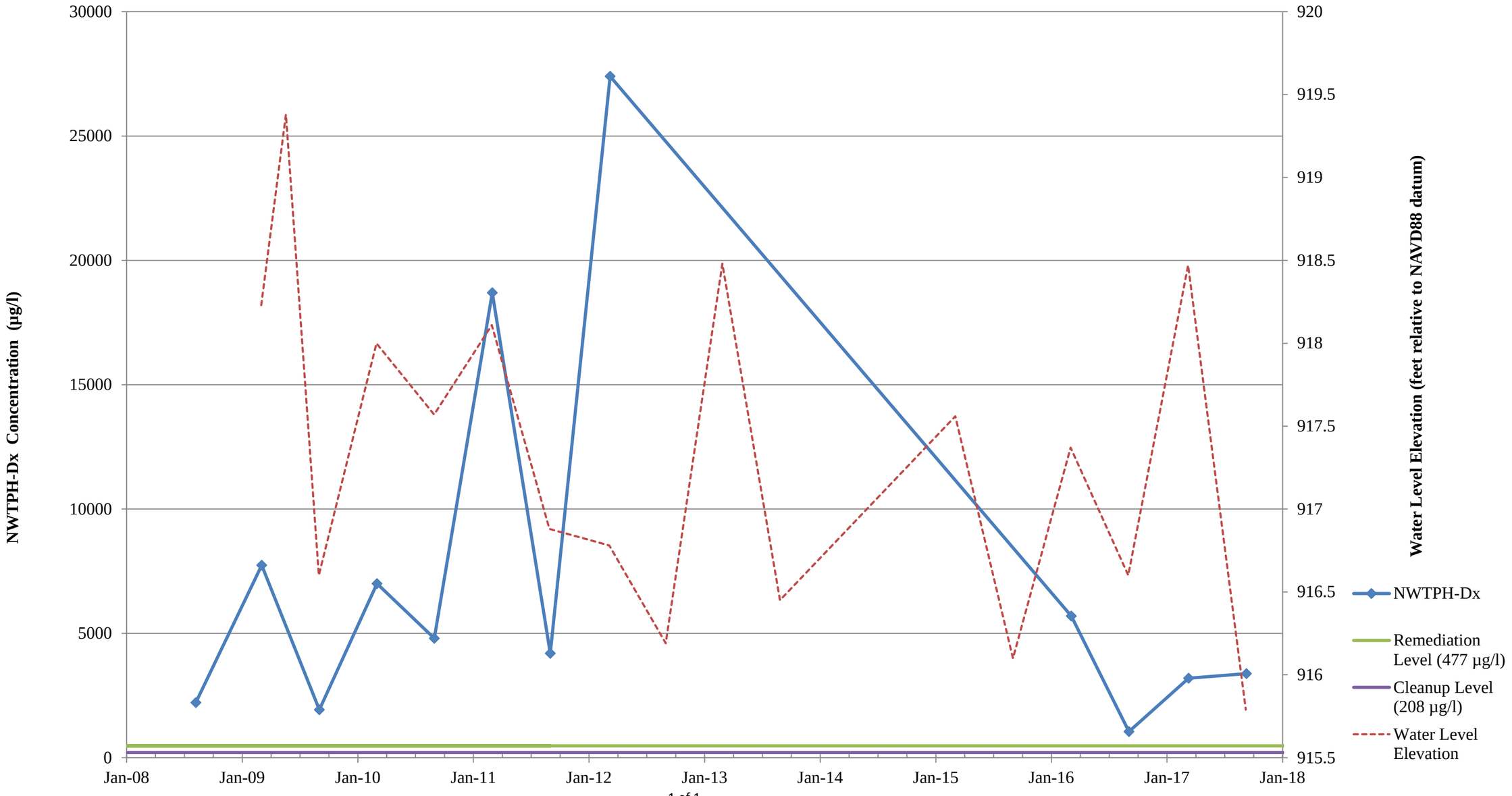
G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 5-W-19

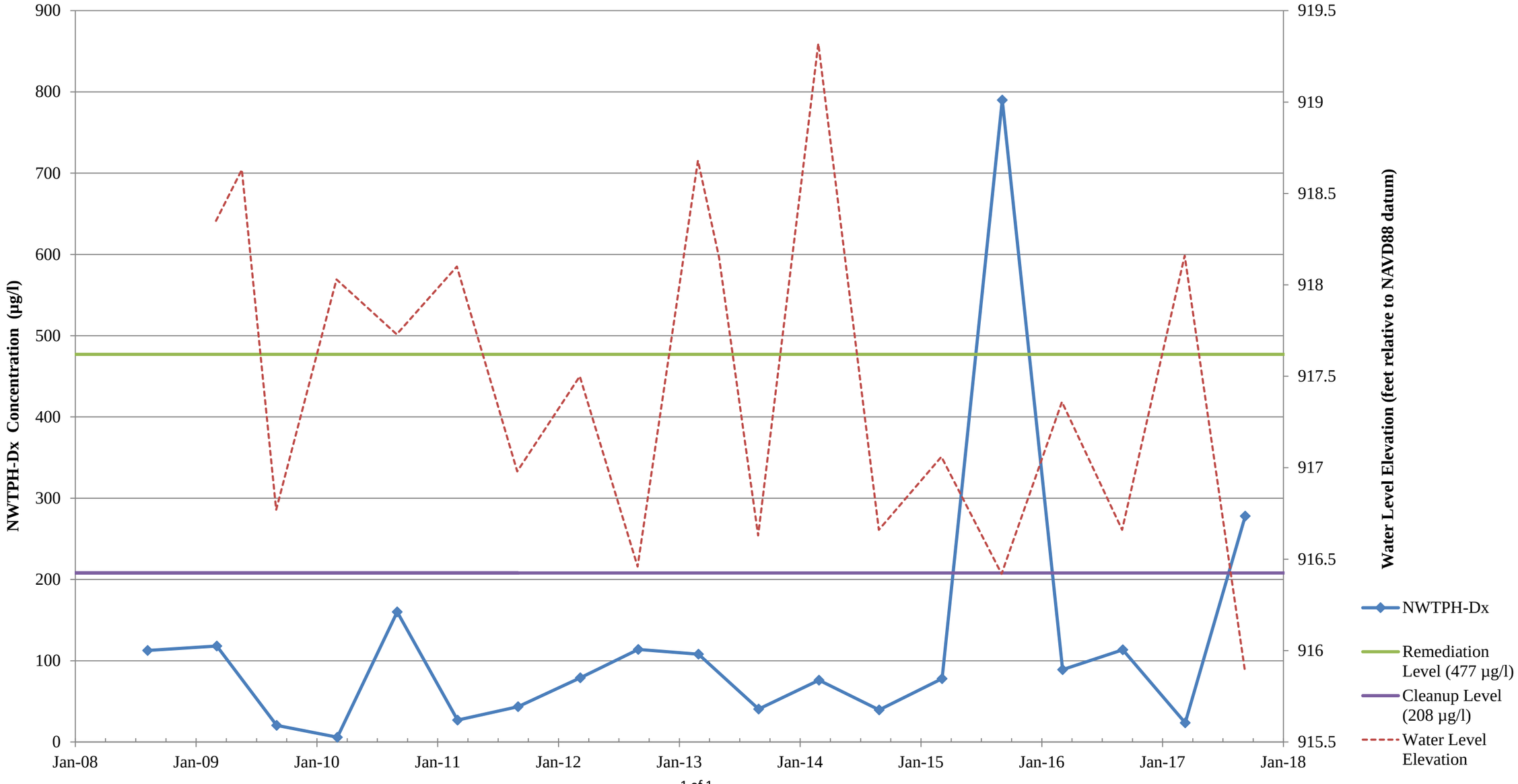


Schoolyard Monitoring Wells

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 5-W-51

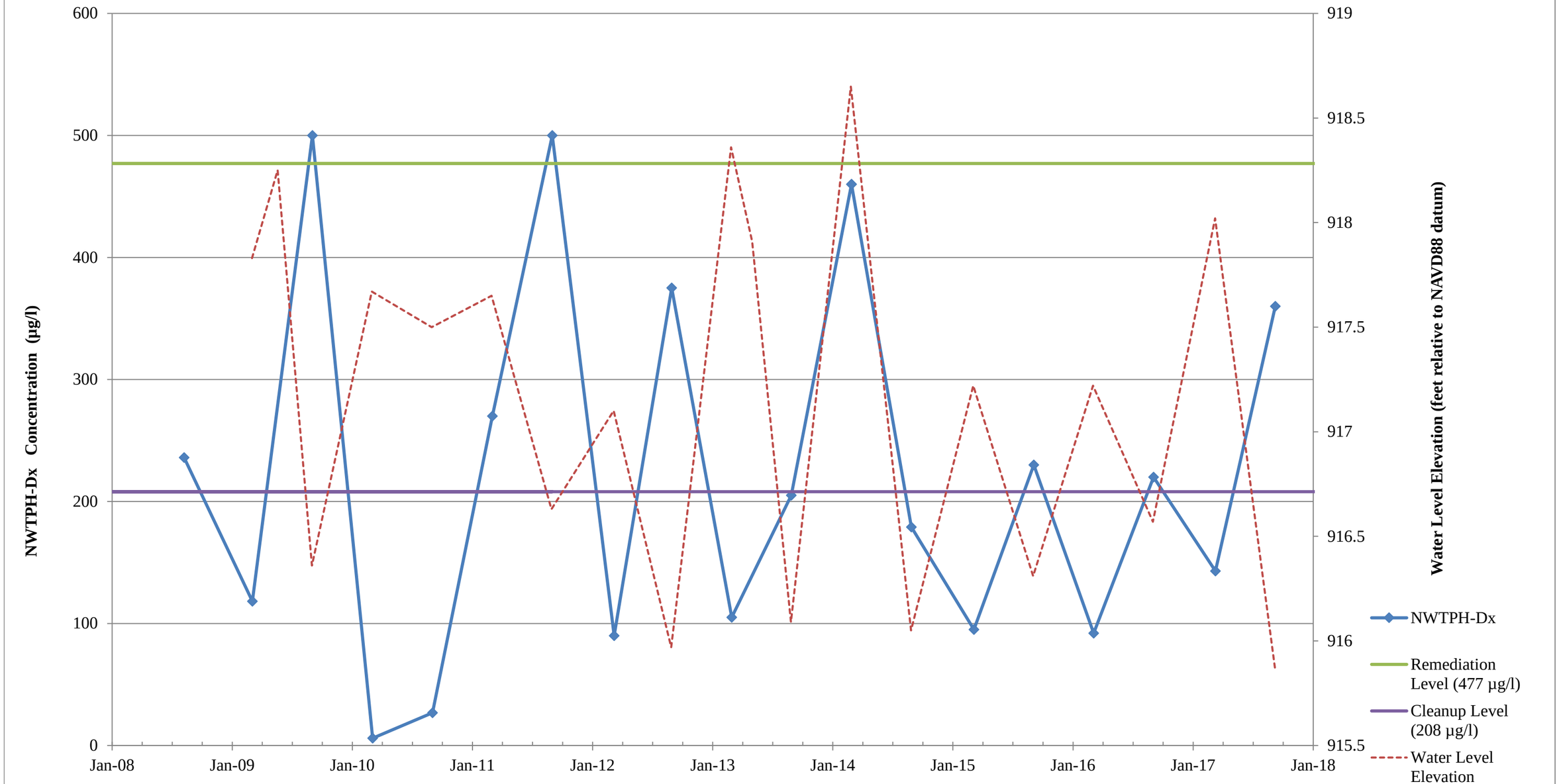


NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 5-W-54

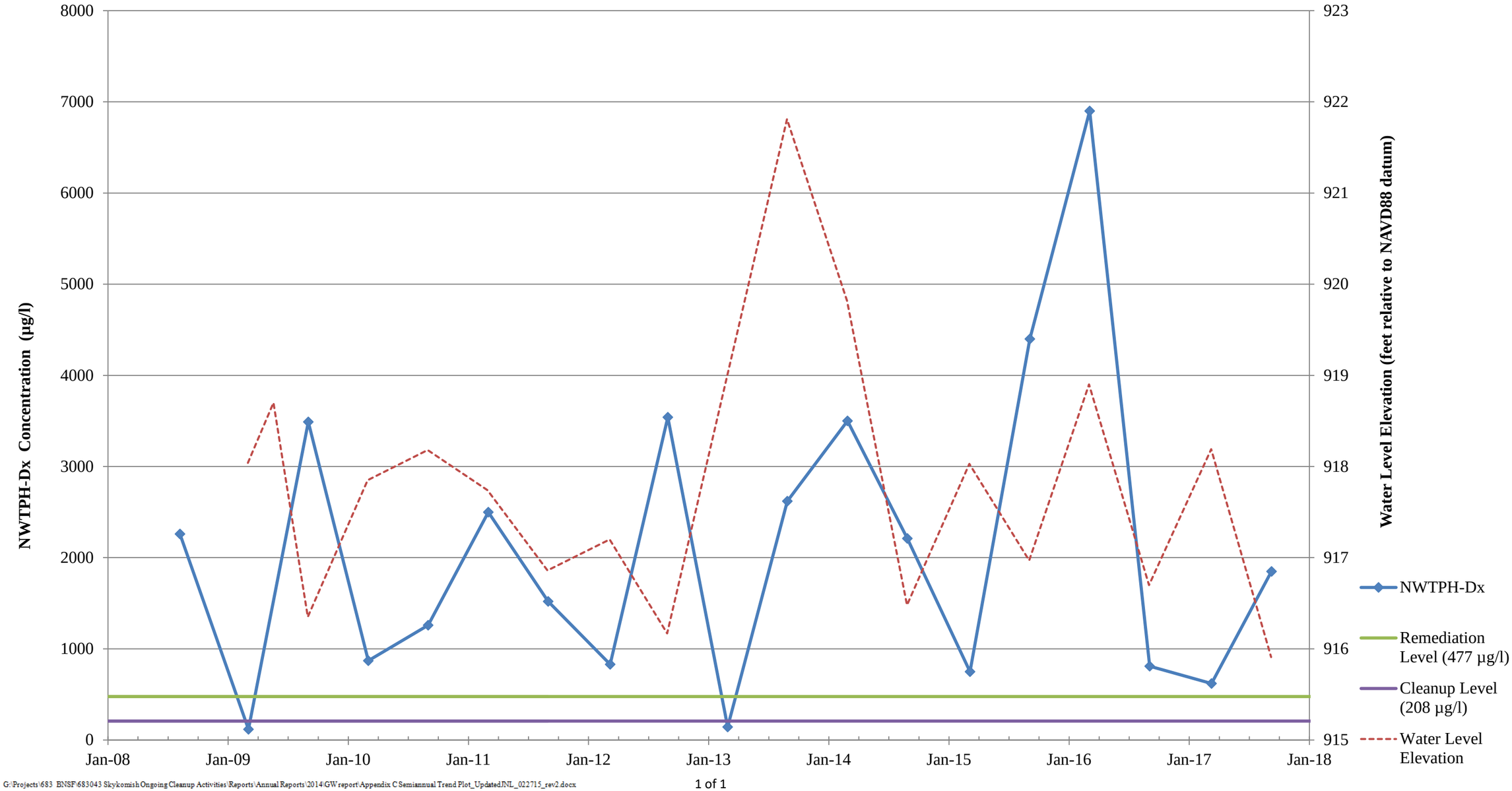


G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 5-W-55

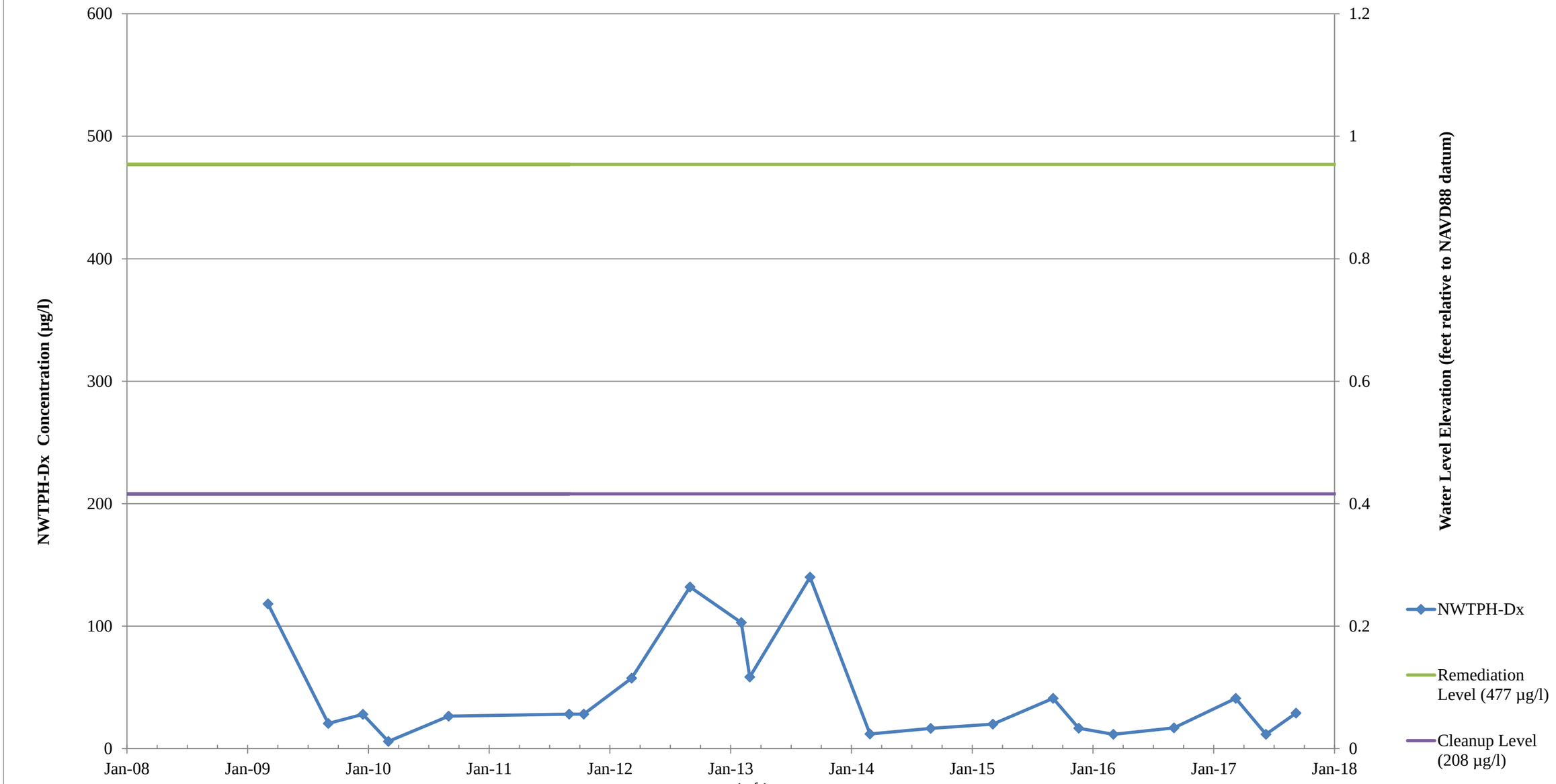


NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 5-W-56

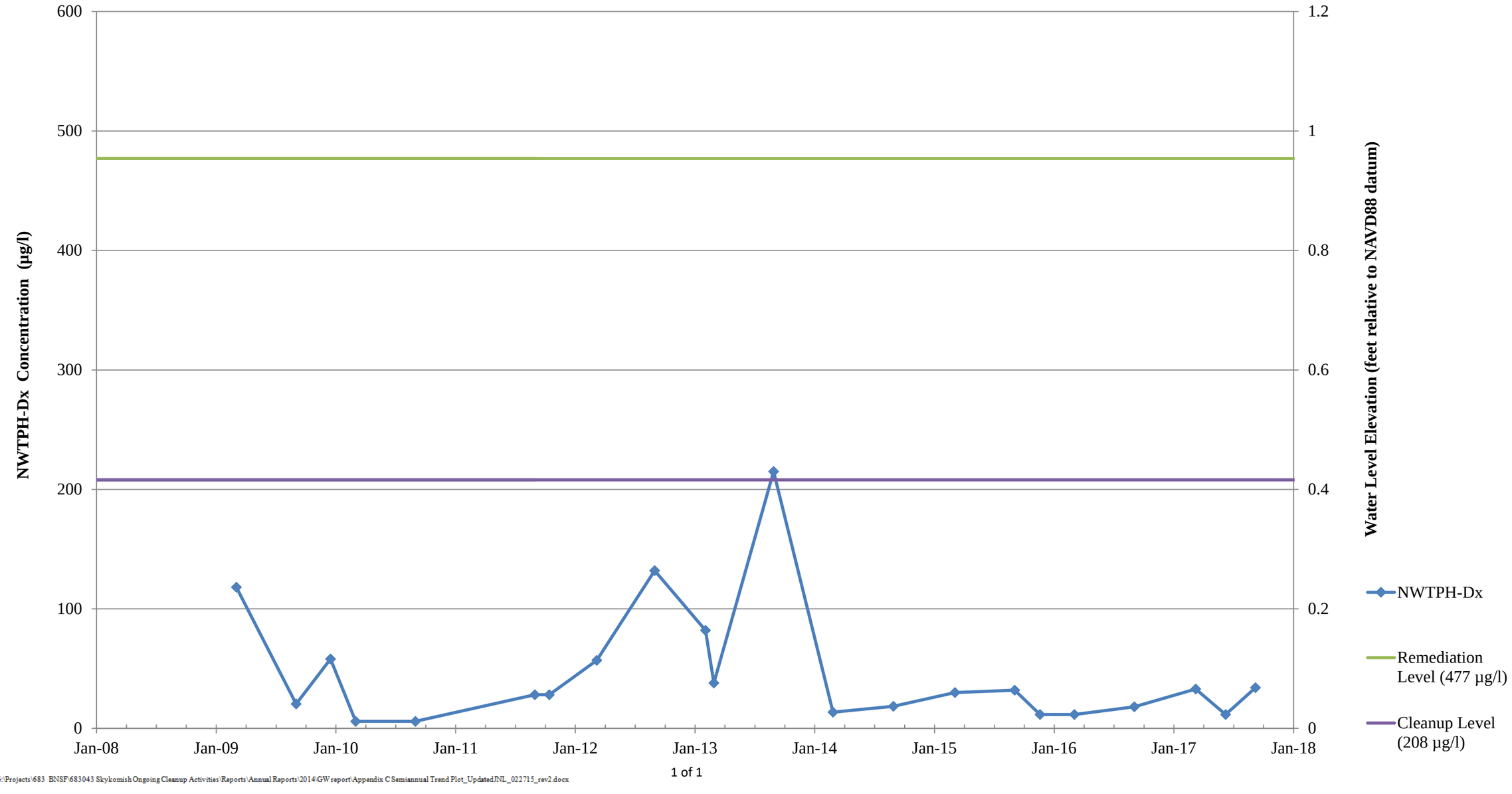


Hydraulic Control and Containment System Sentry Wells and Monitoring Wells

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S1-AD

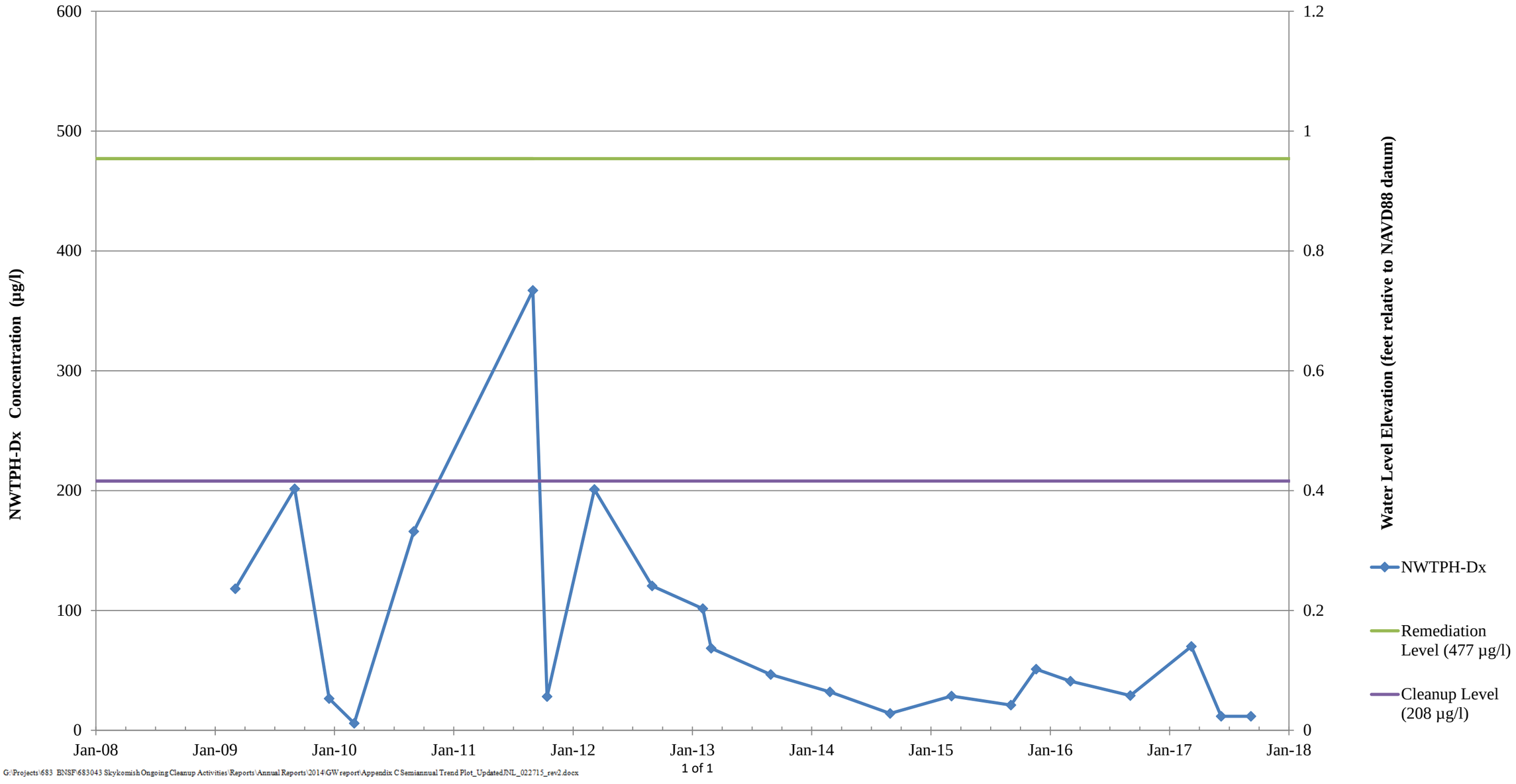


NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S1-AU

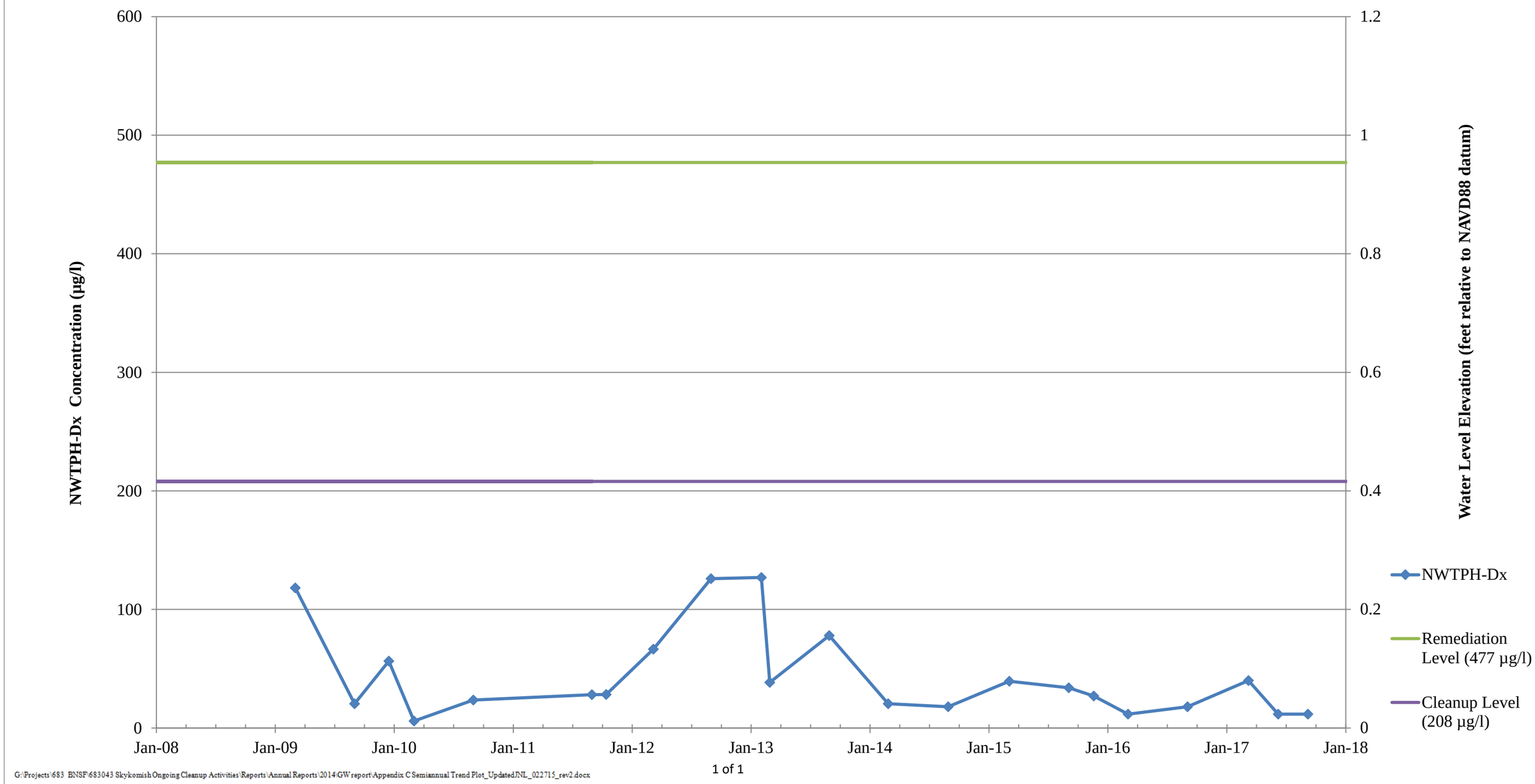


G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

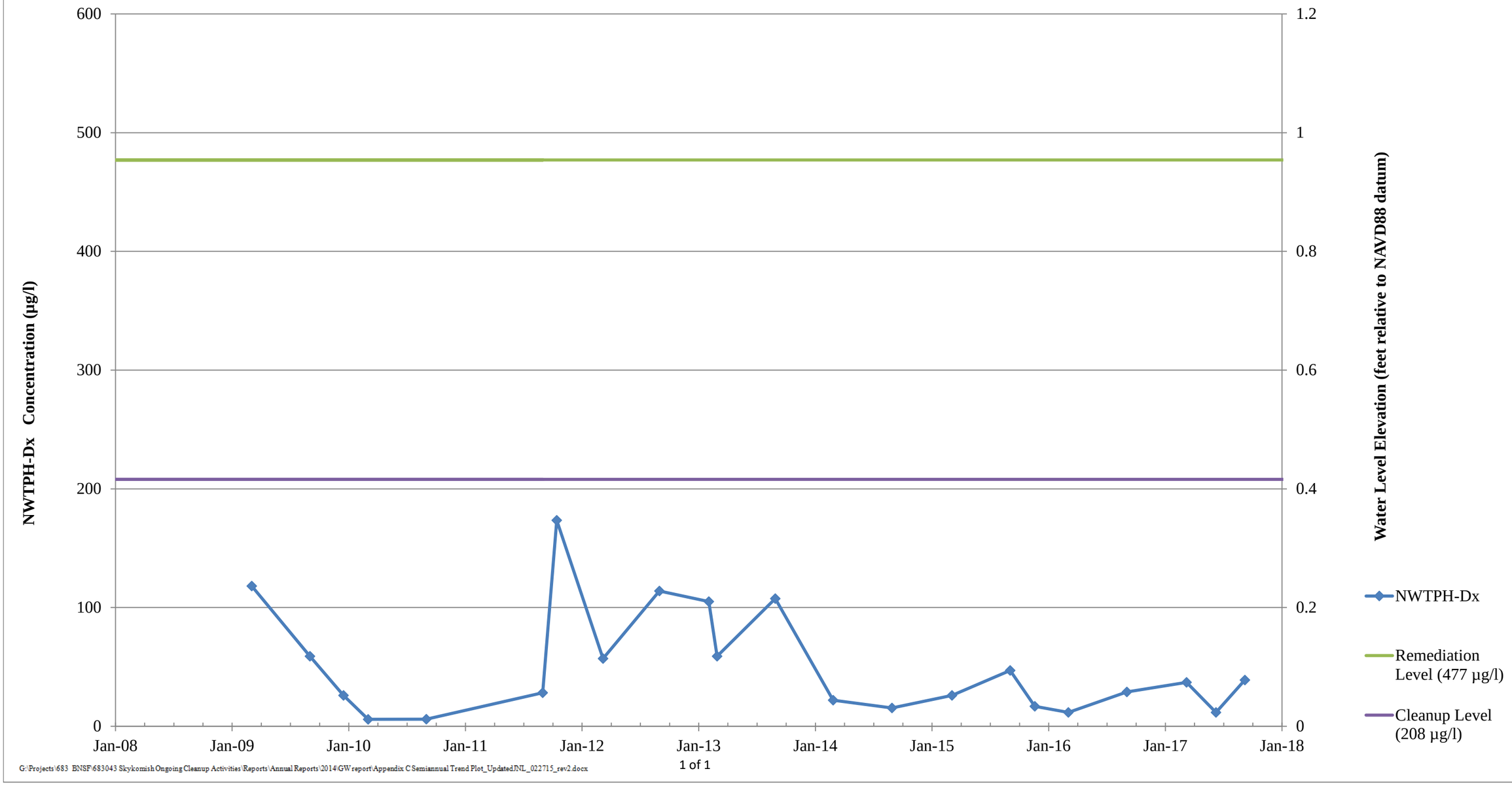
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S1-BD



NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S1-BU

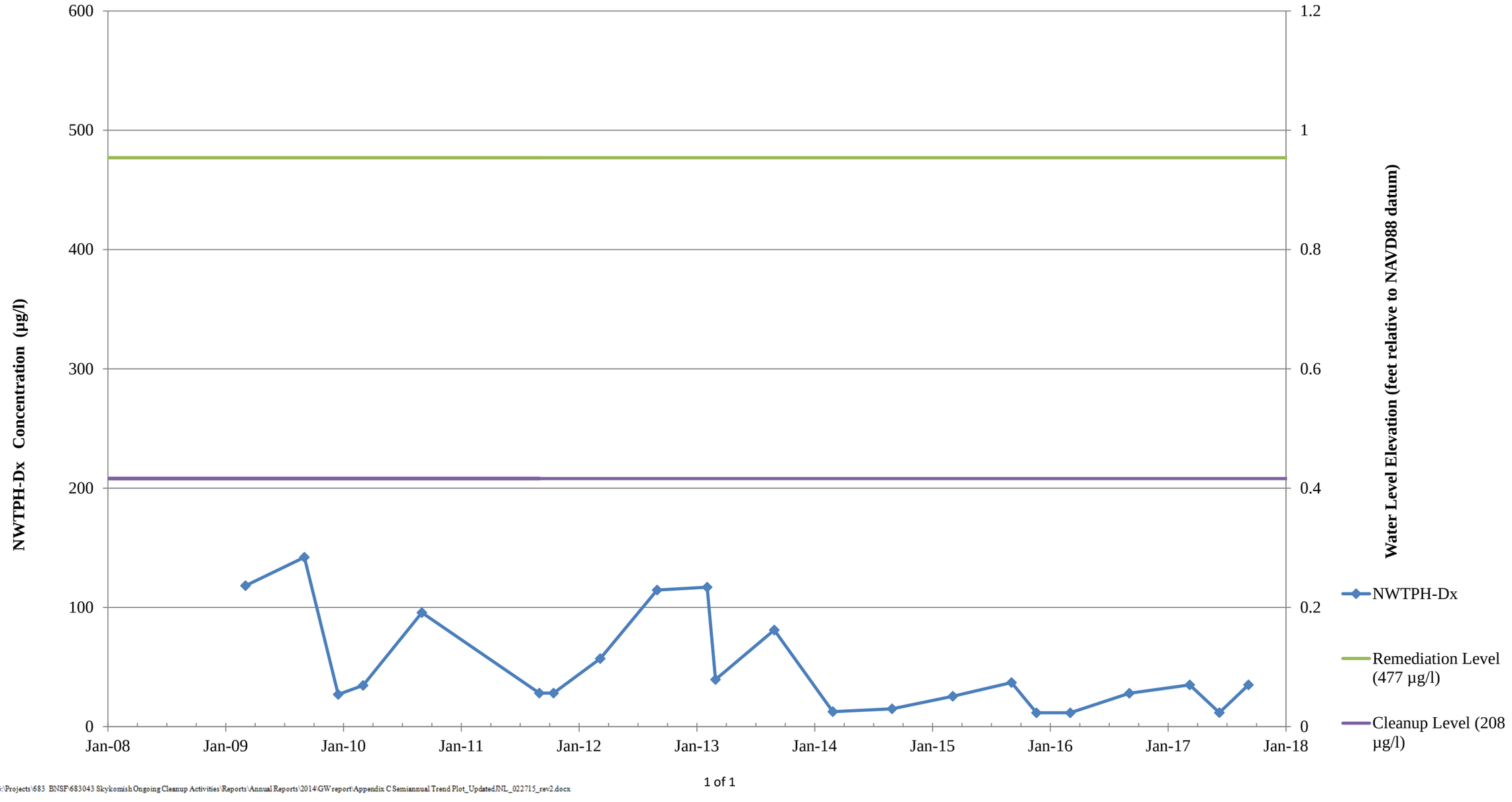


NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S2-AD

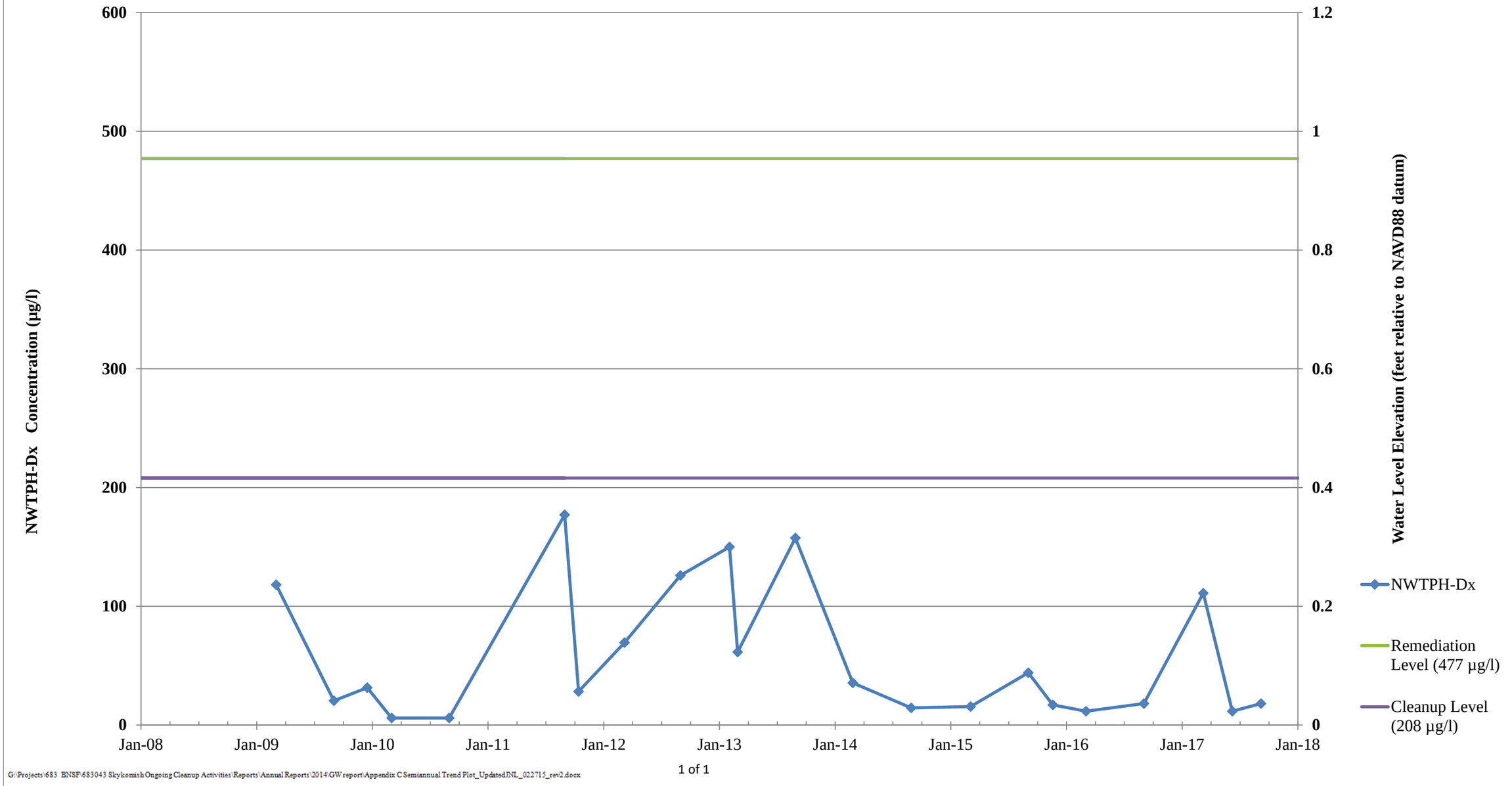


G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

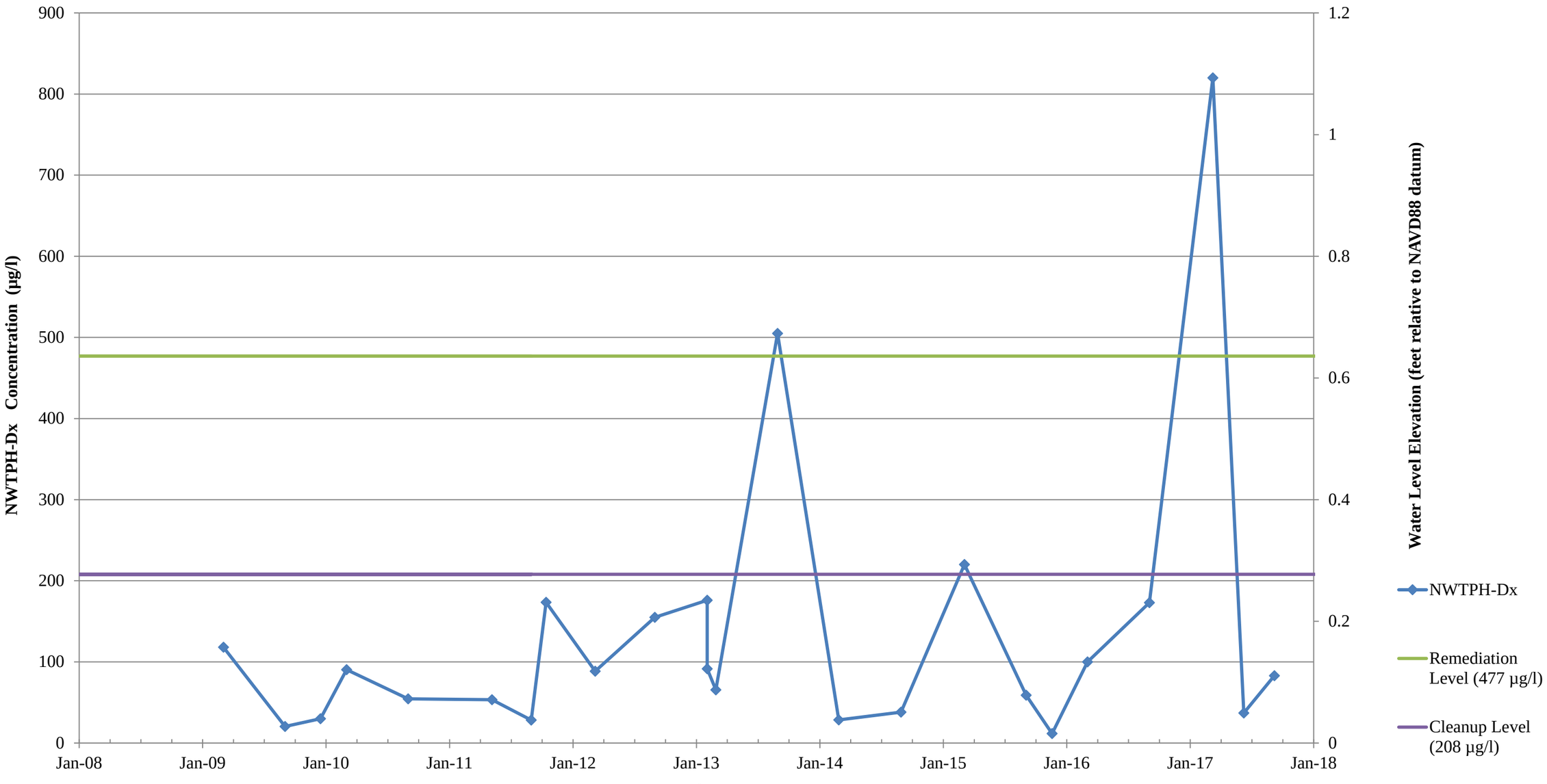
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S2-AU



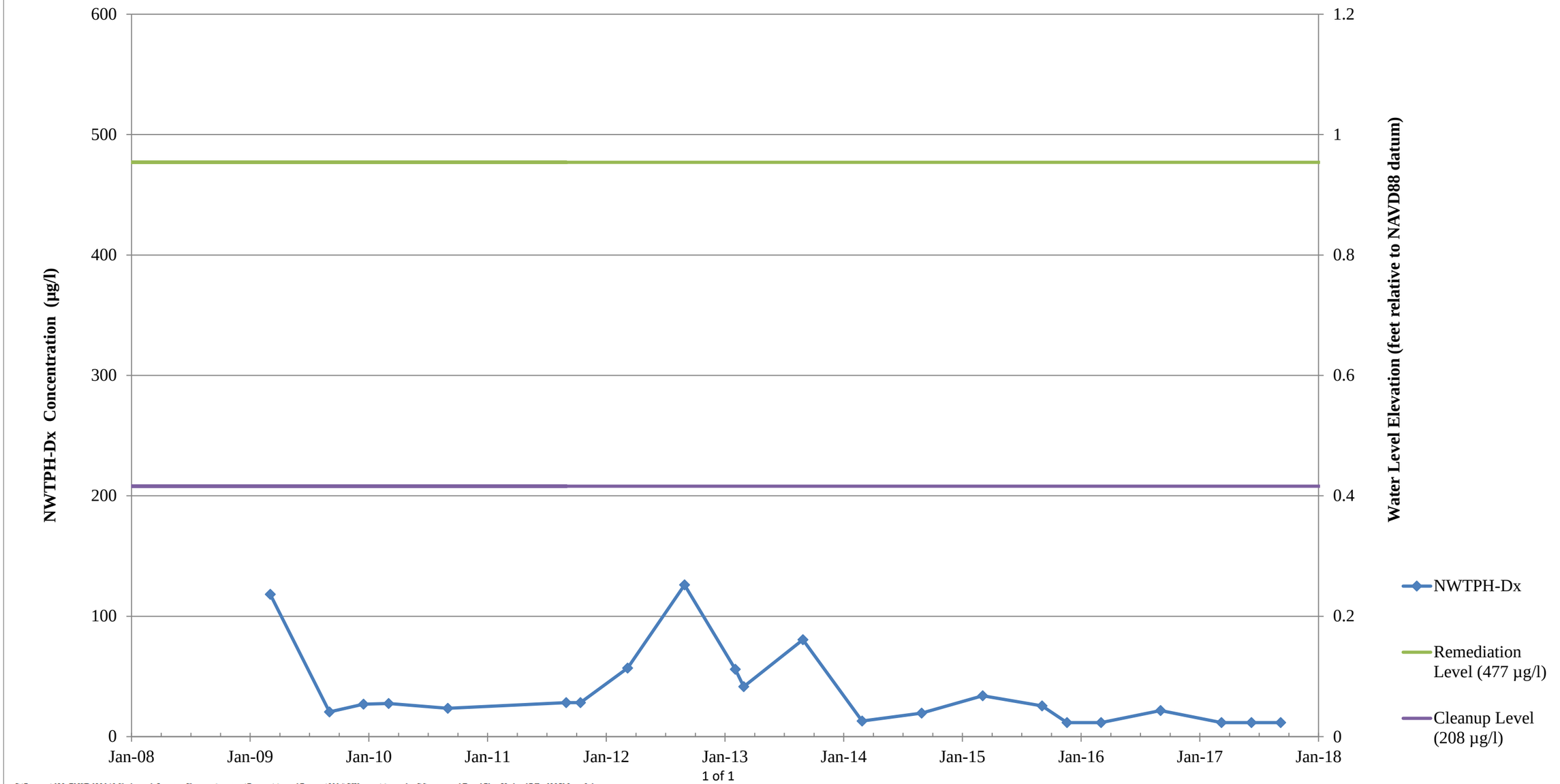
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S2-BD



NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S2-BU

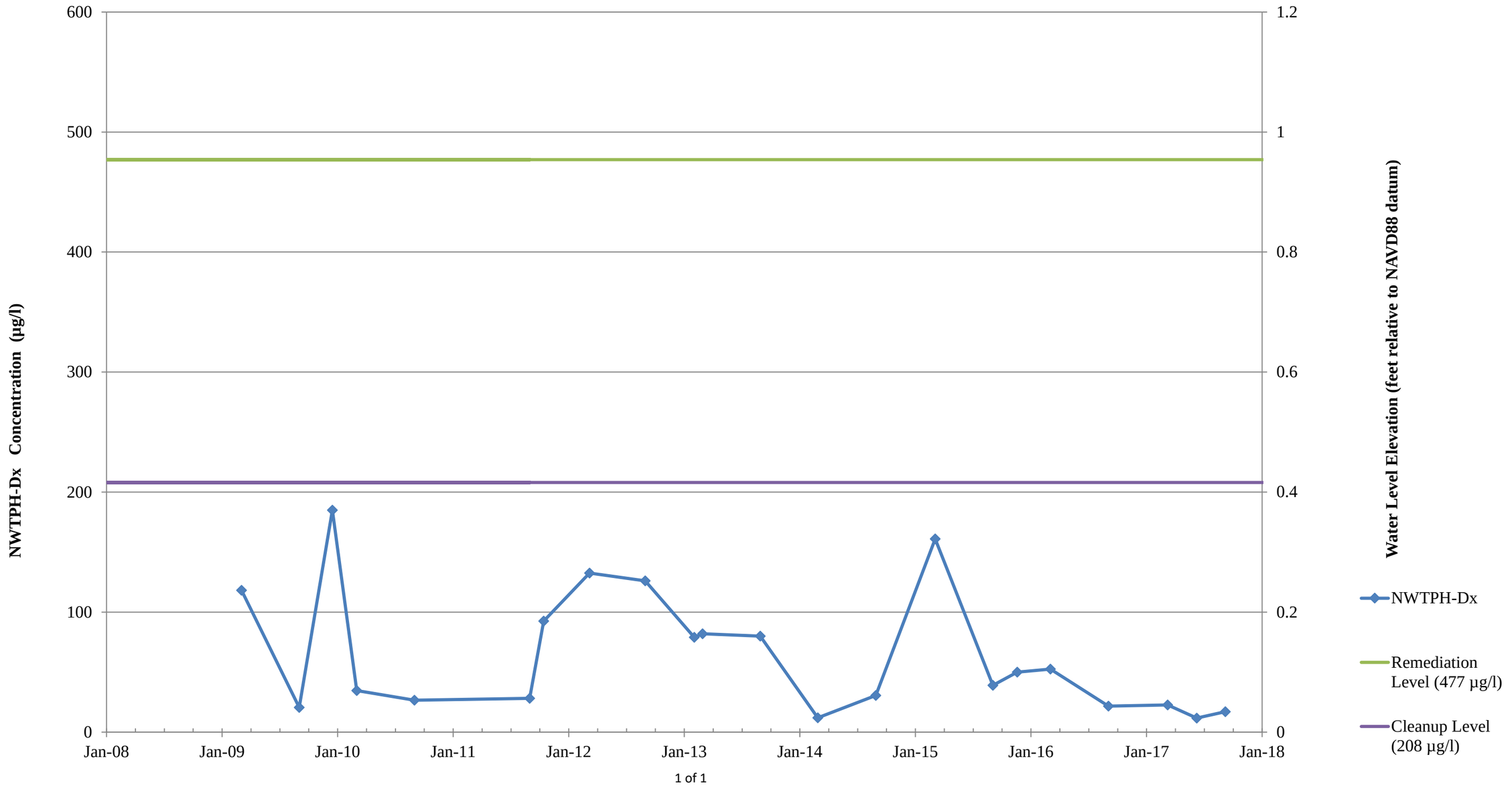


NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S3-AD



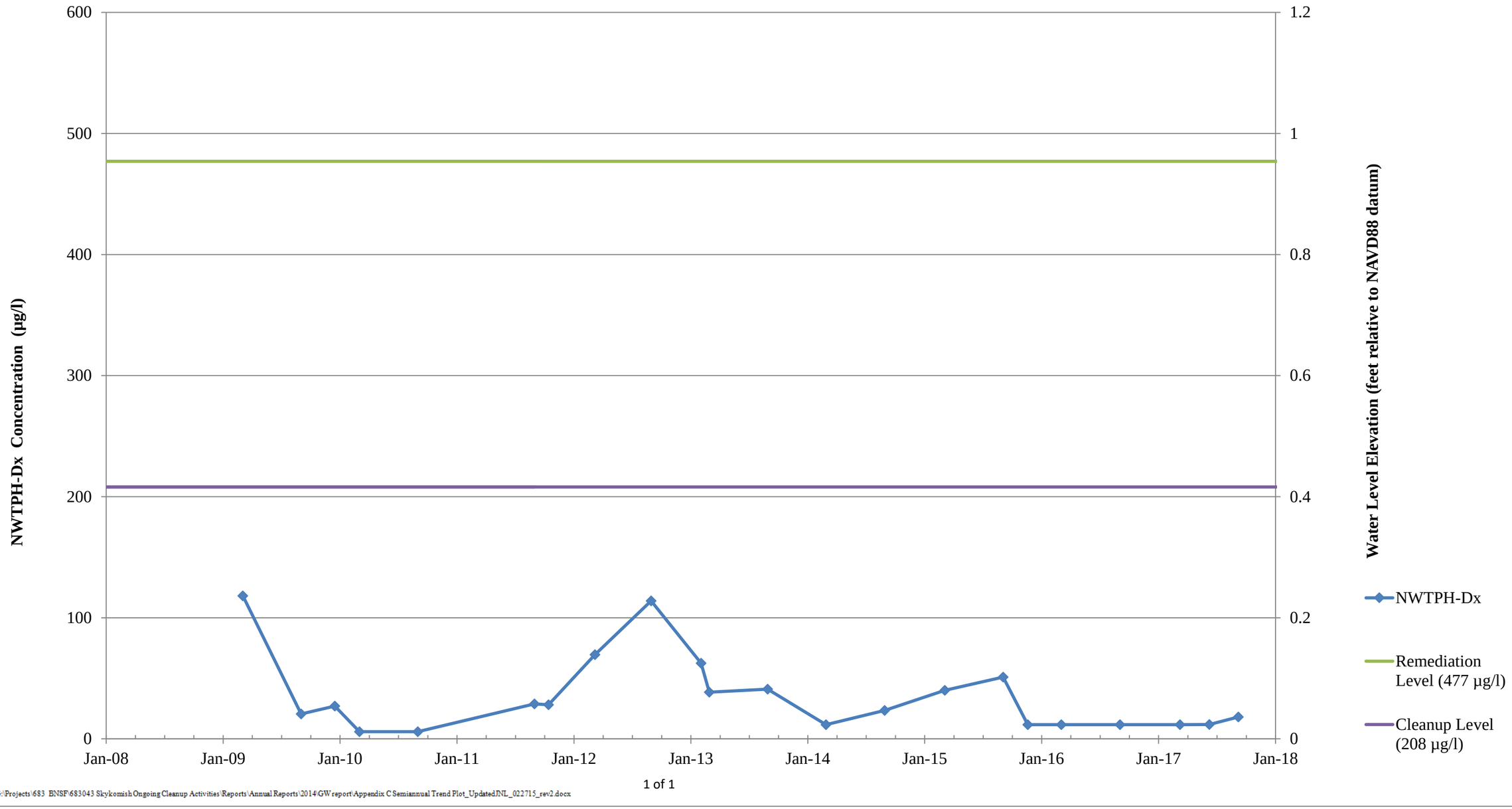
G:\Projects\683_BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S3-AU



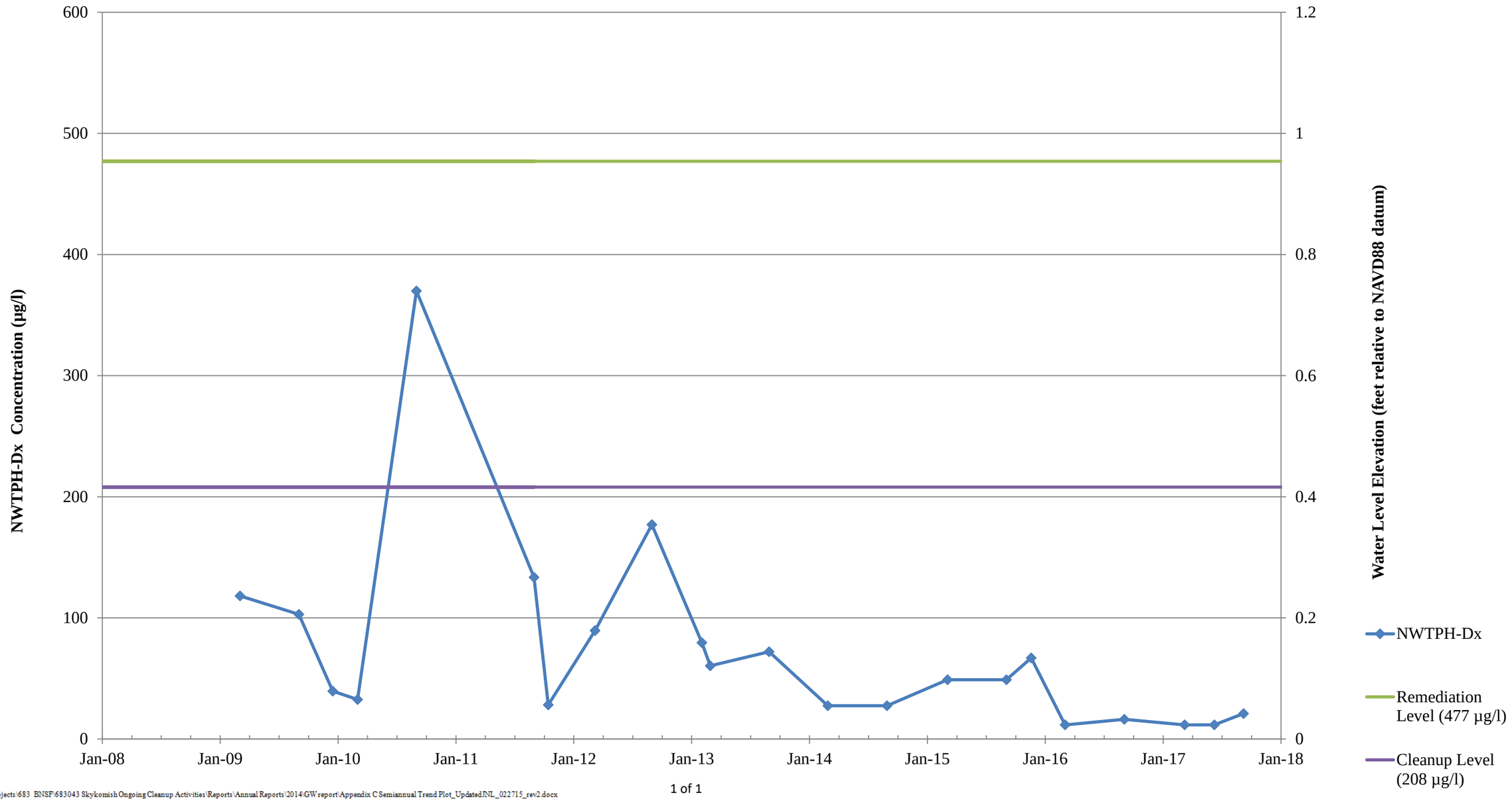
G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_Updated JNL_022715_rev2.docx

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S3-BD

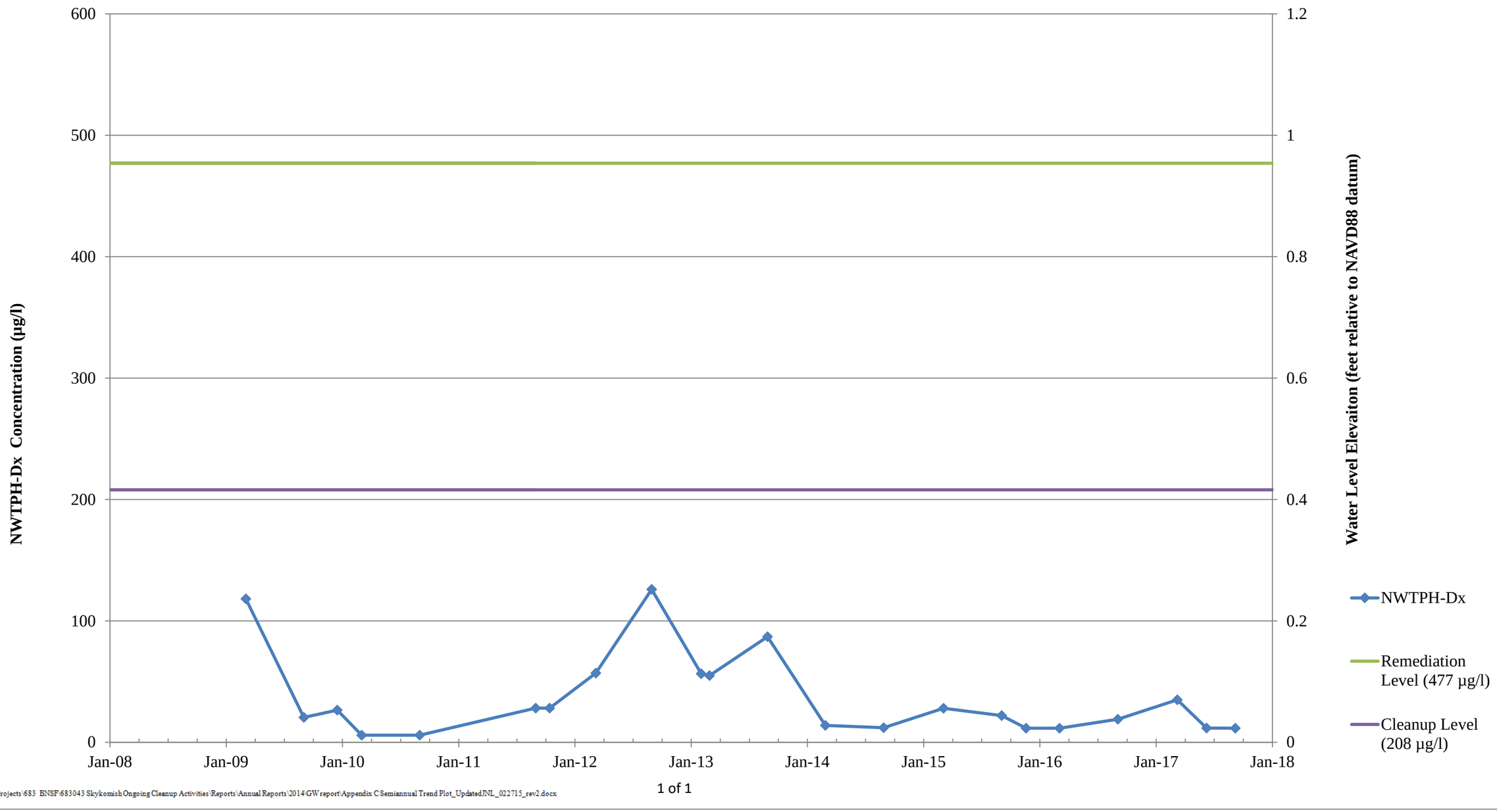


G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

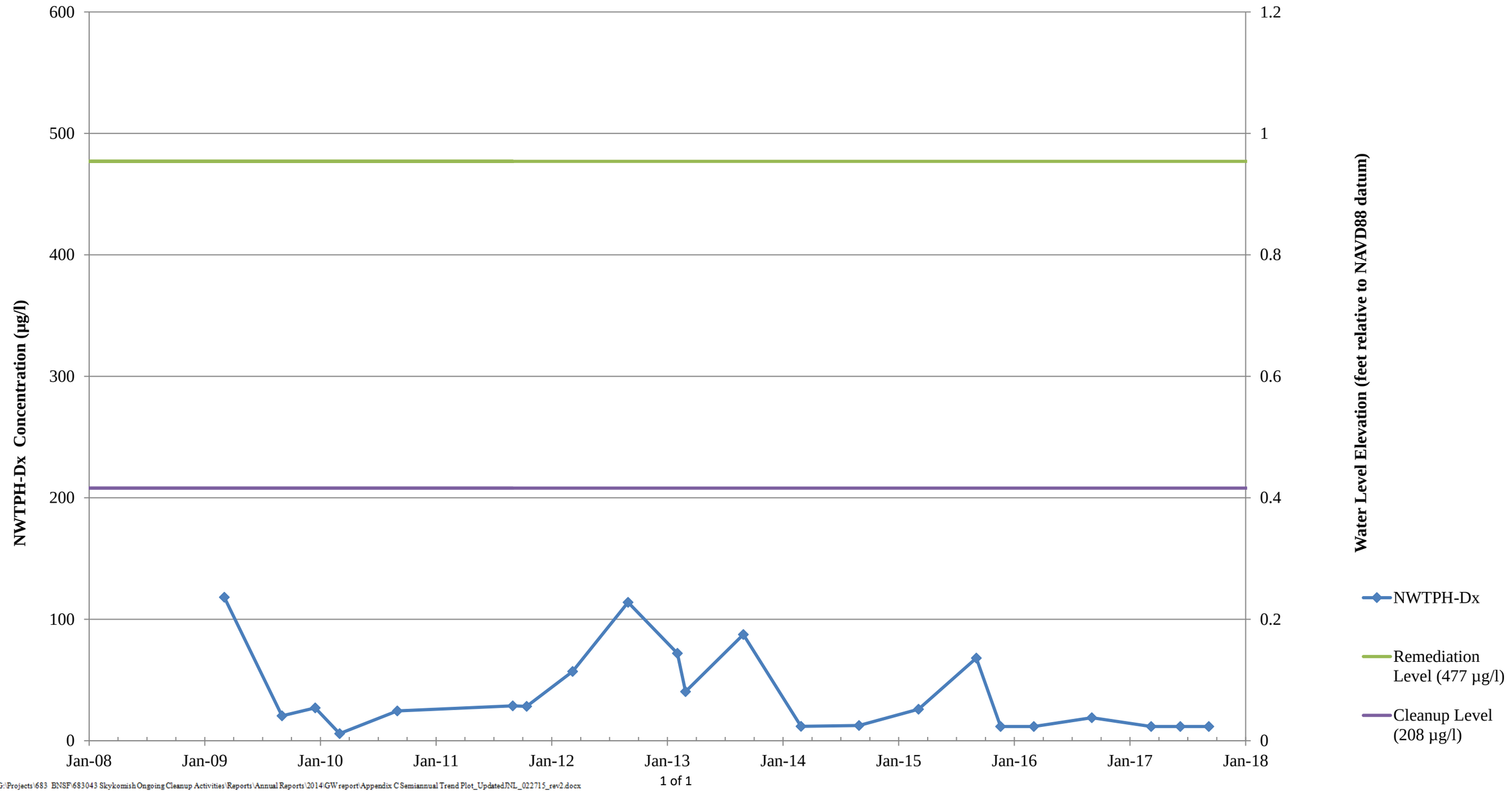
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S3-BU



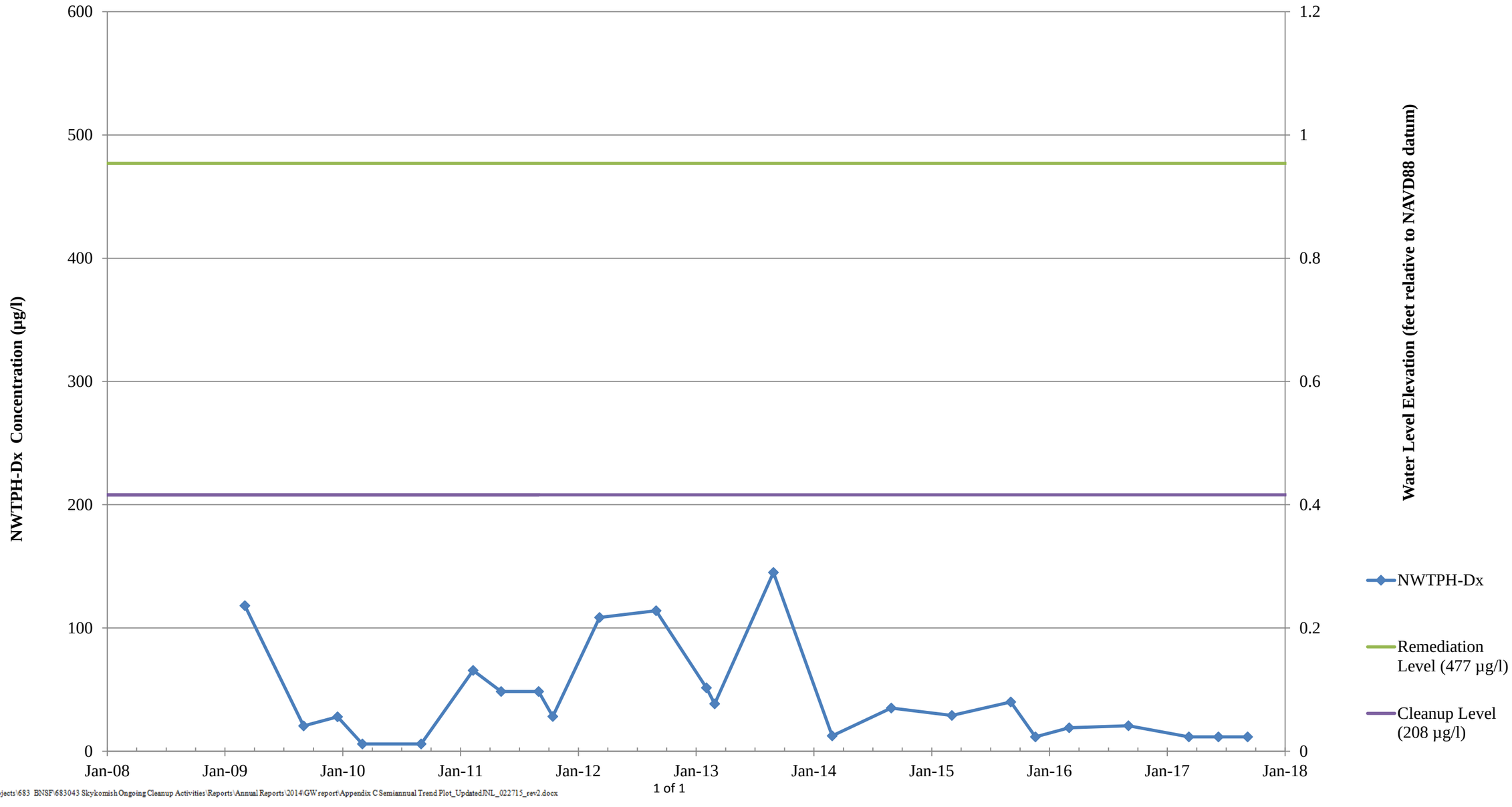
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S3-CD



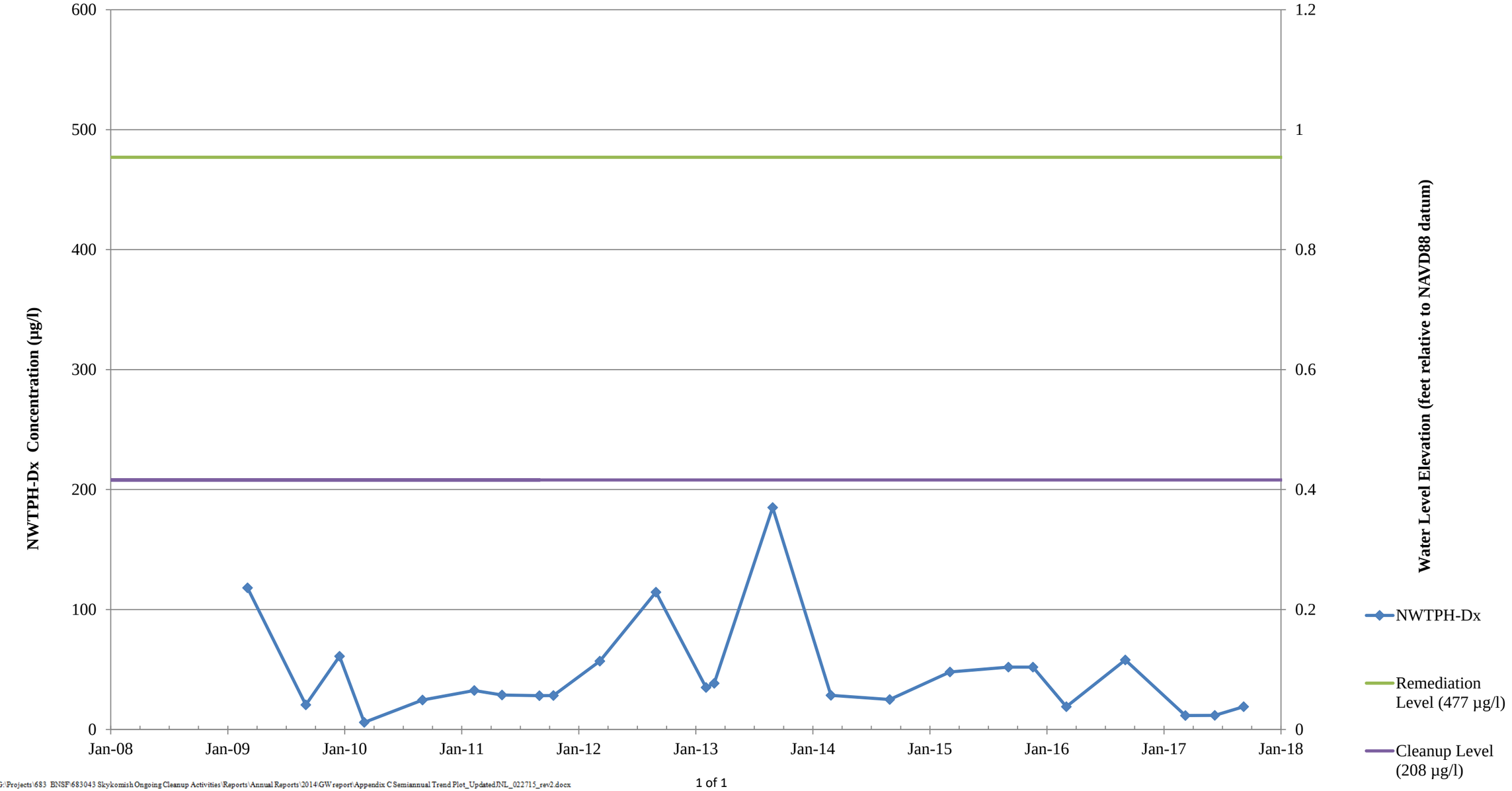
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S3-CU



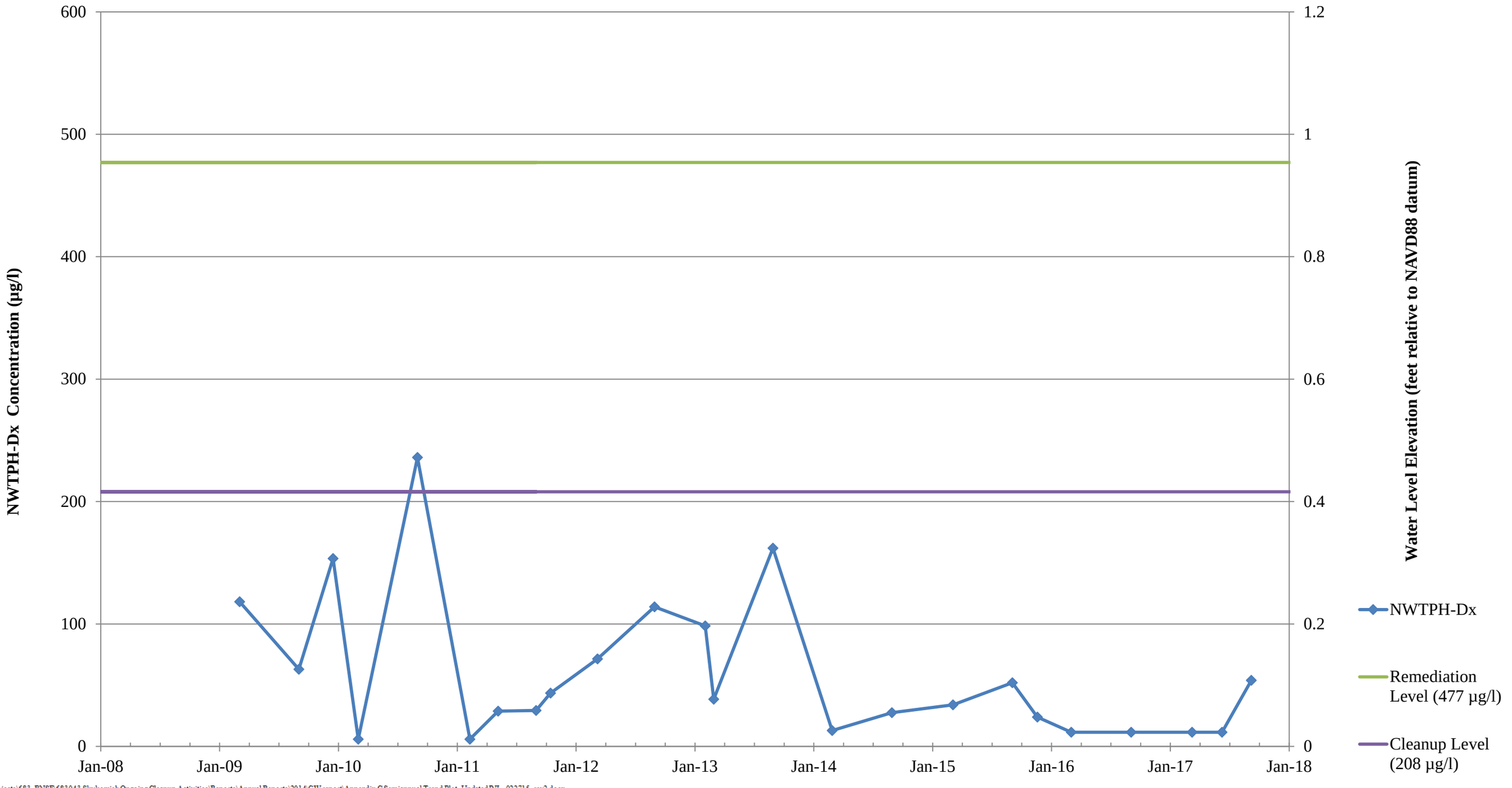
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S4-AD



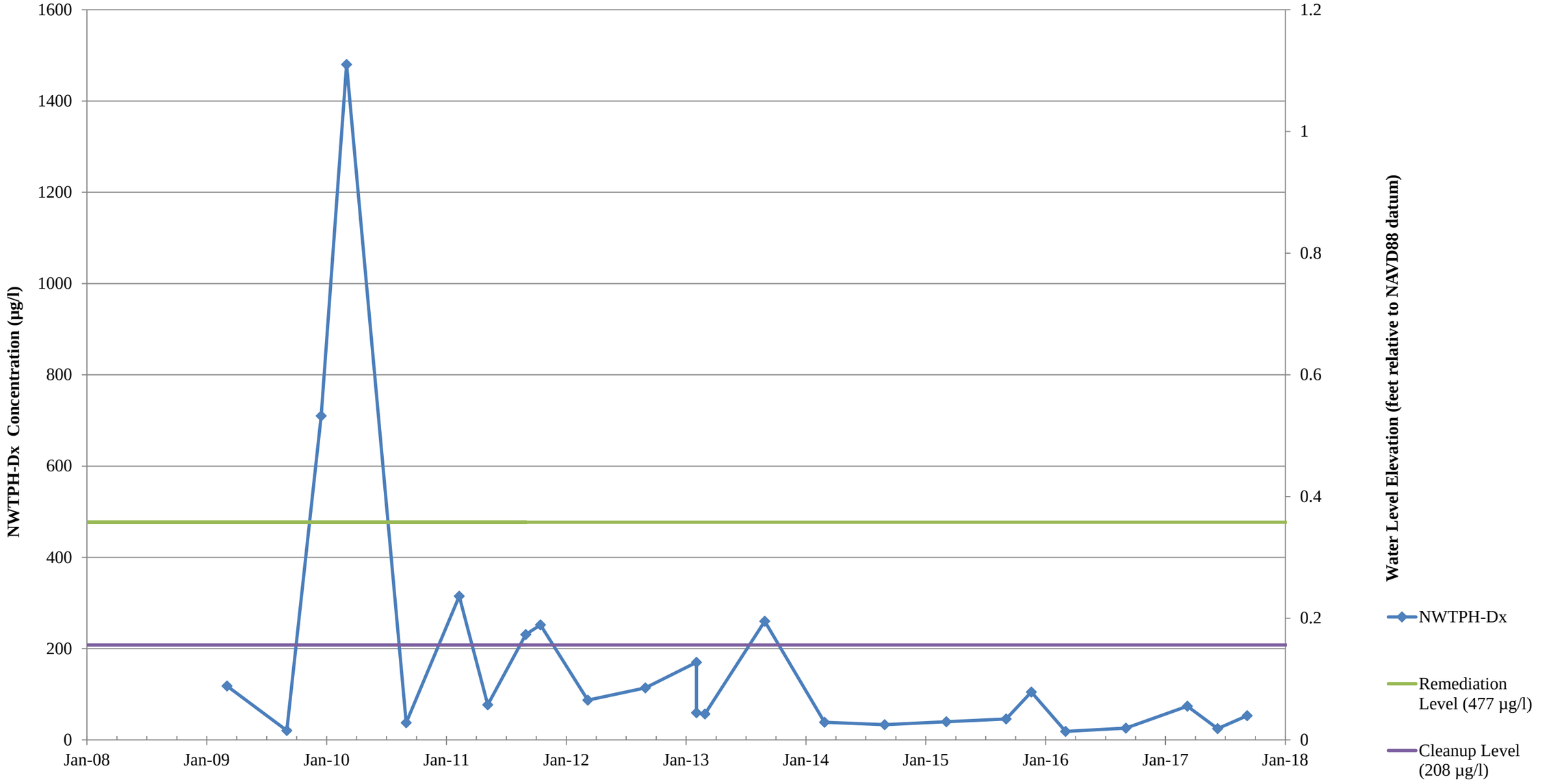
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S4-AU



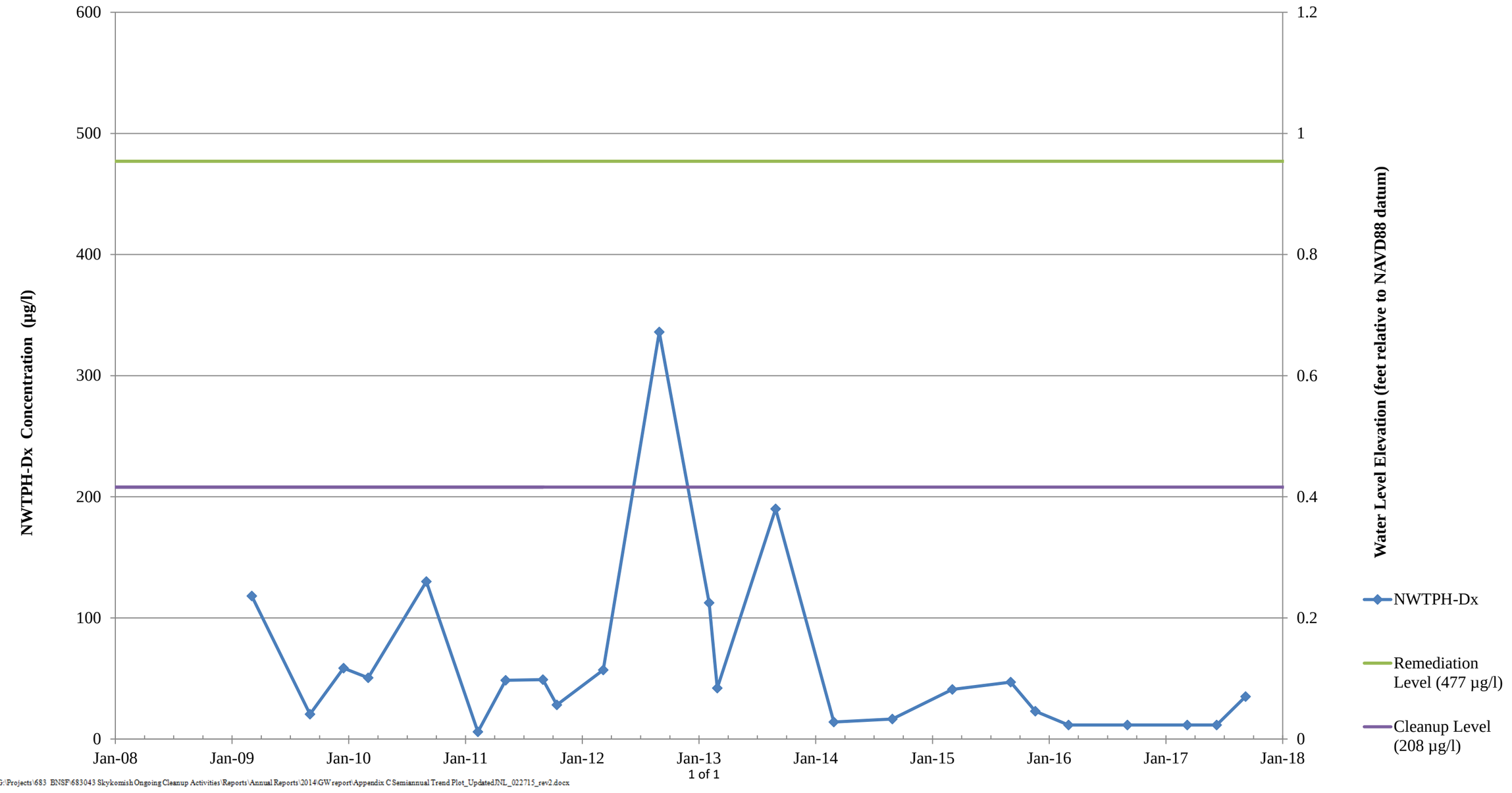
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S4-BD



NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S4-BU

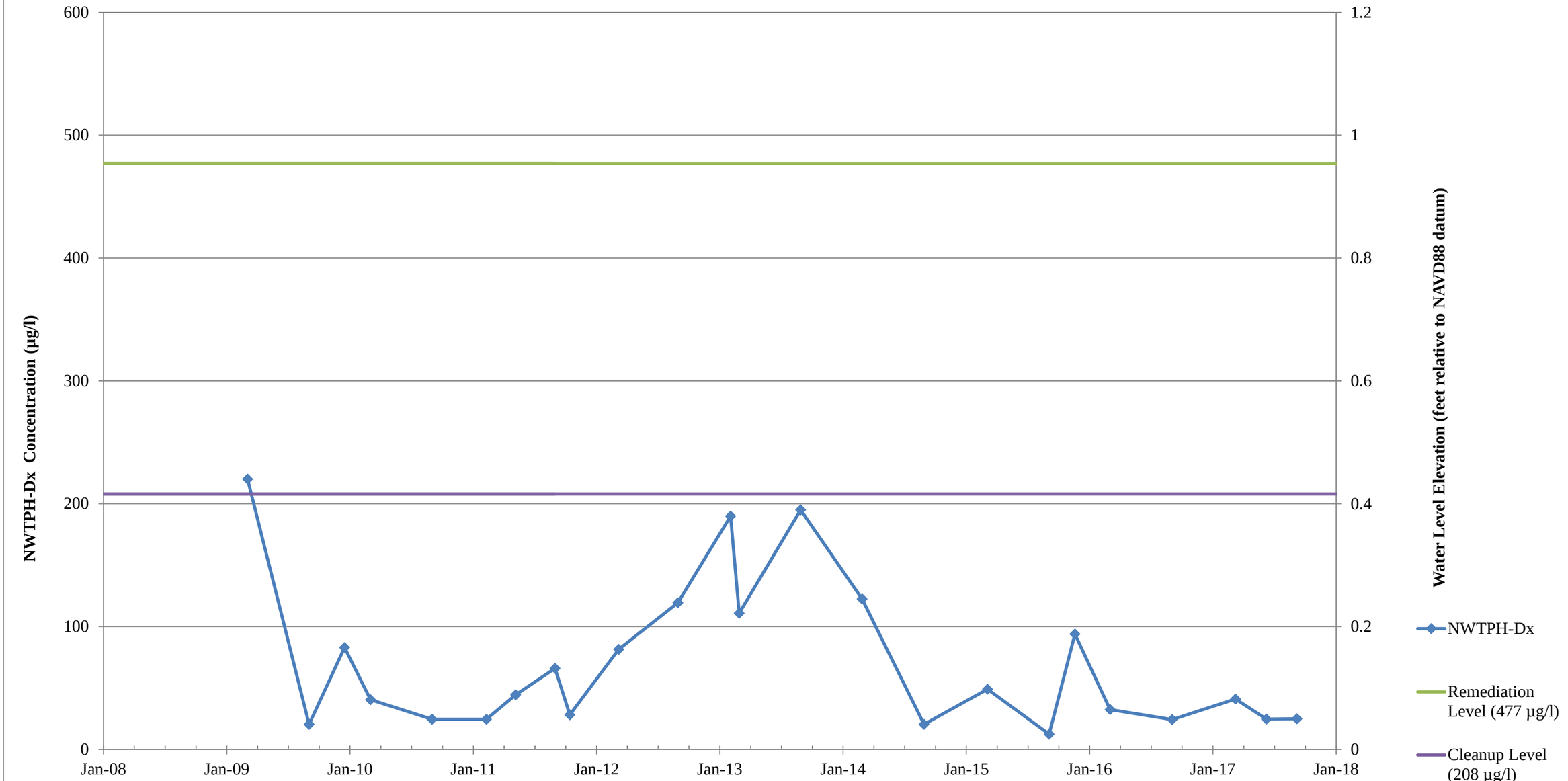


NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S4-CD

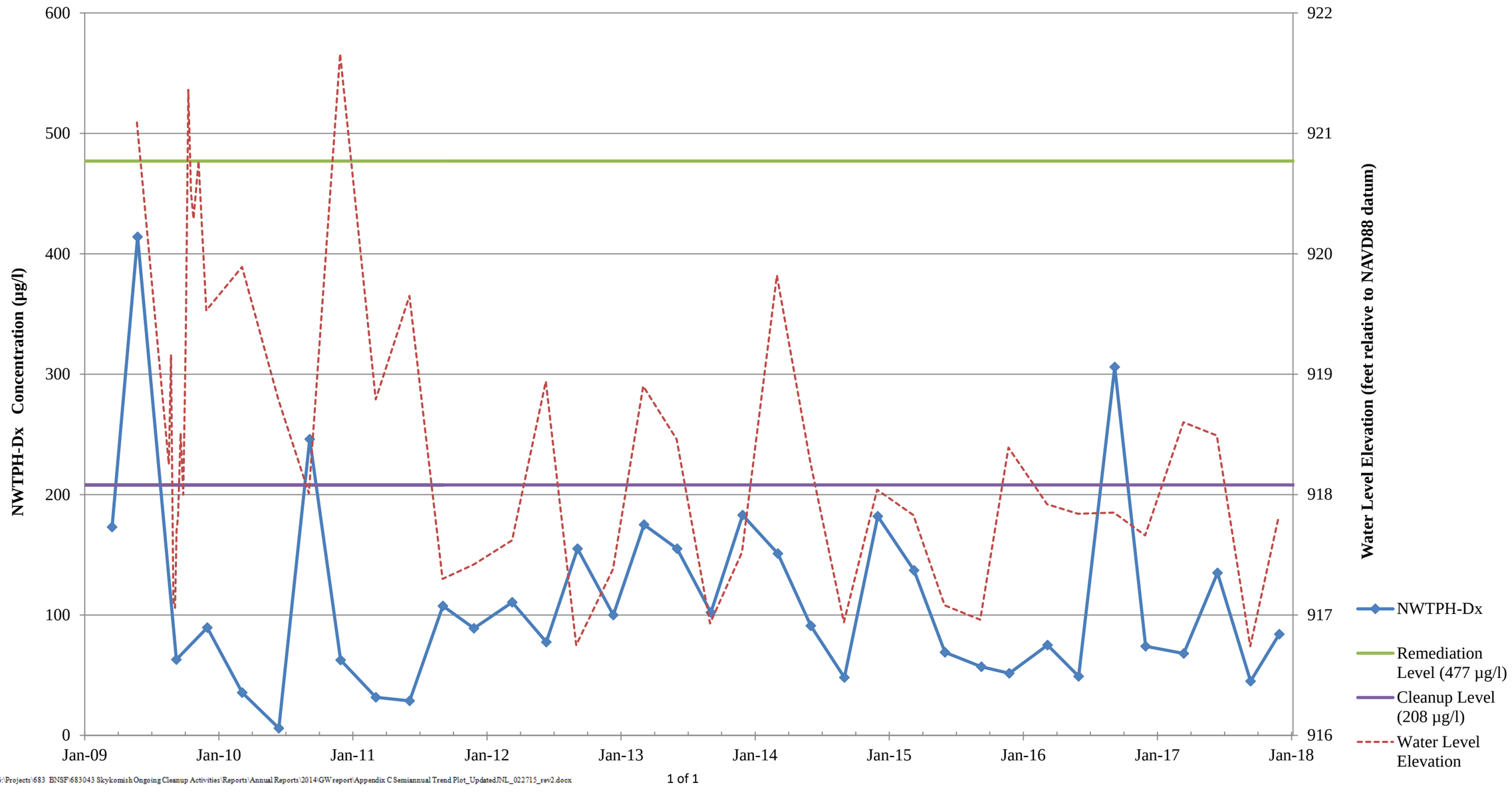


G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

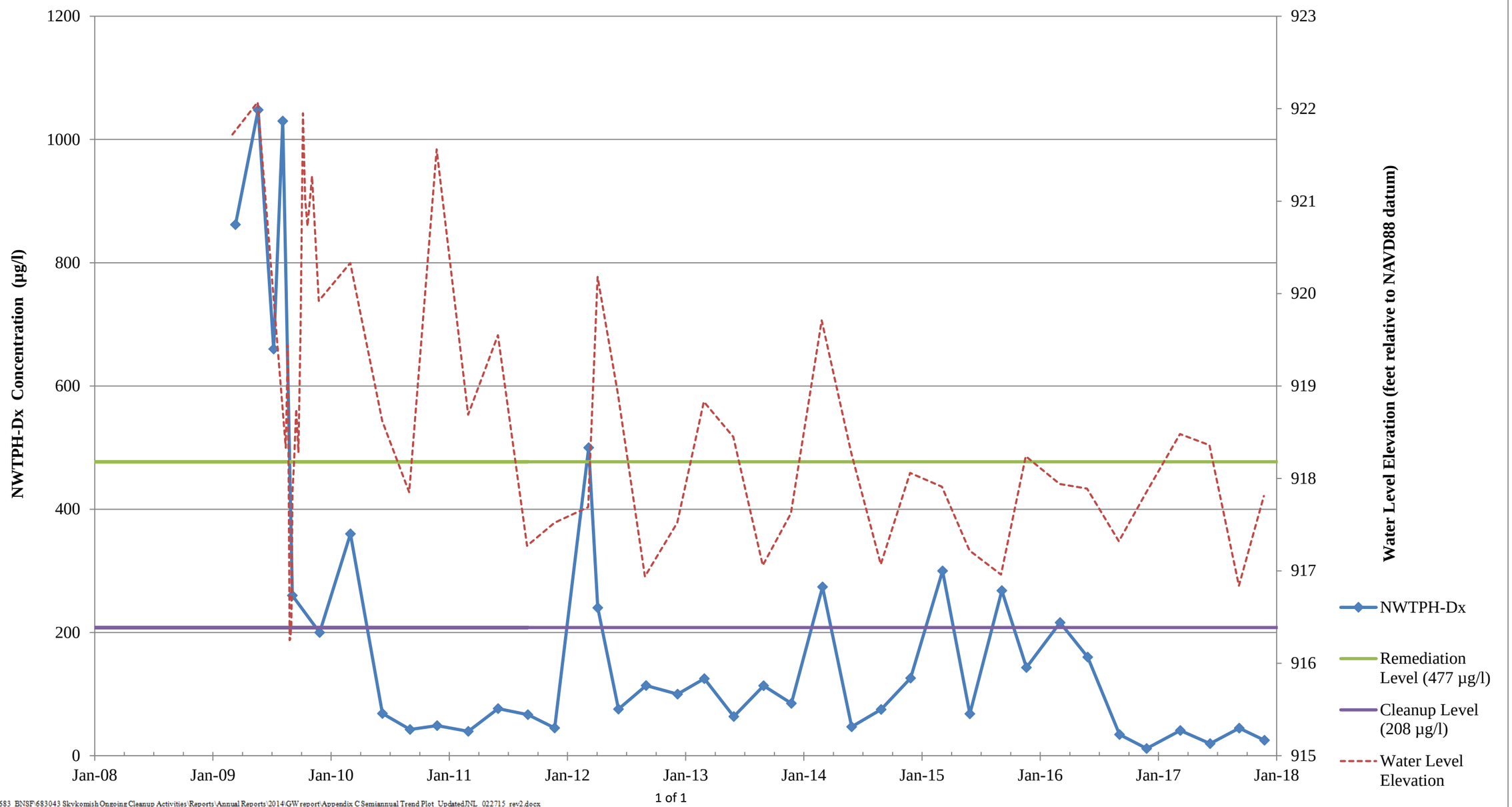
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well S4-CU



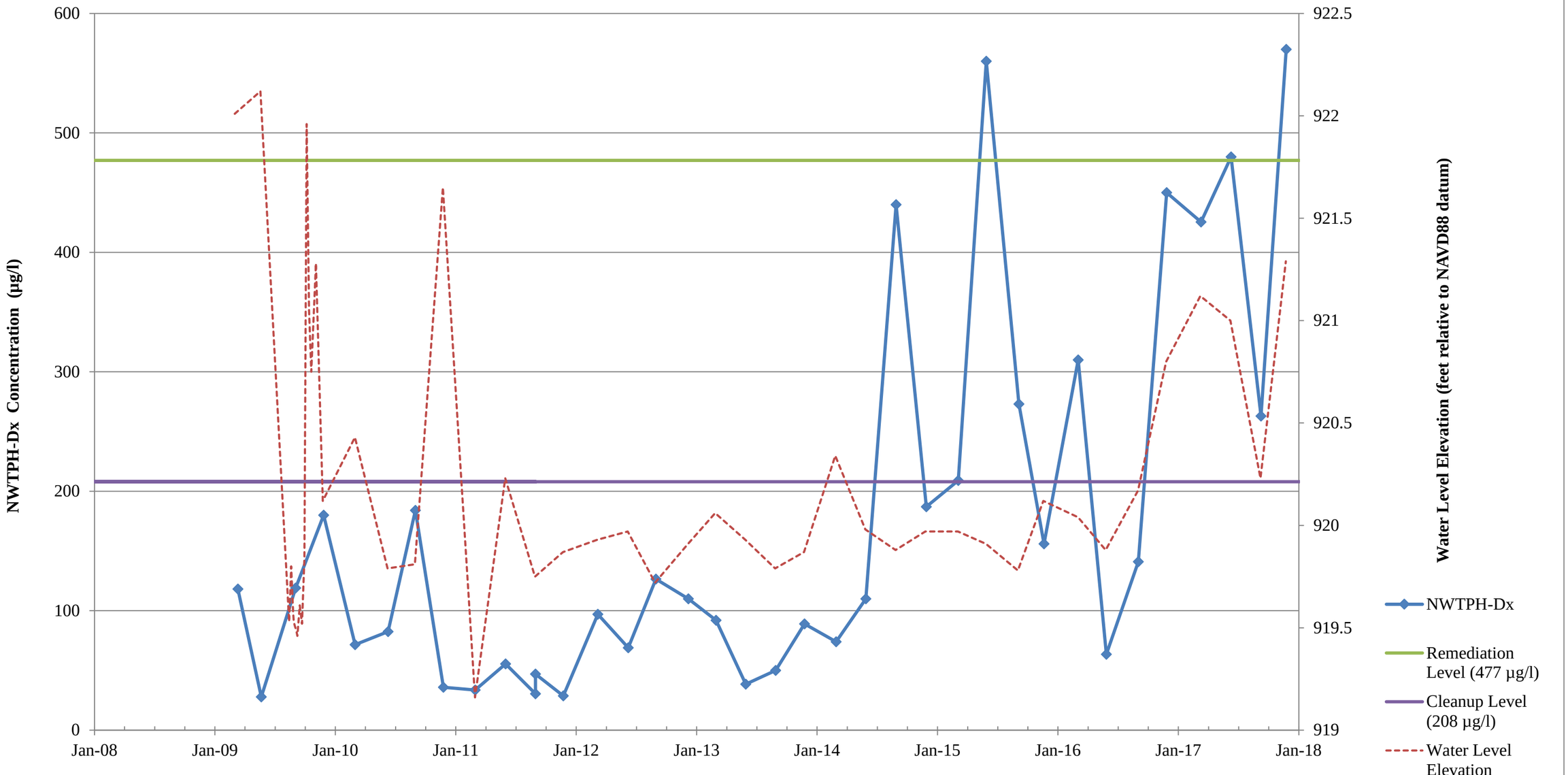
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well GW-1



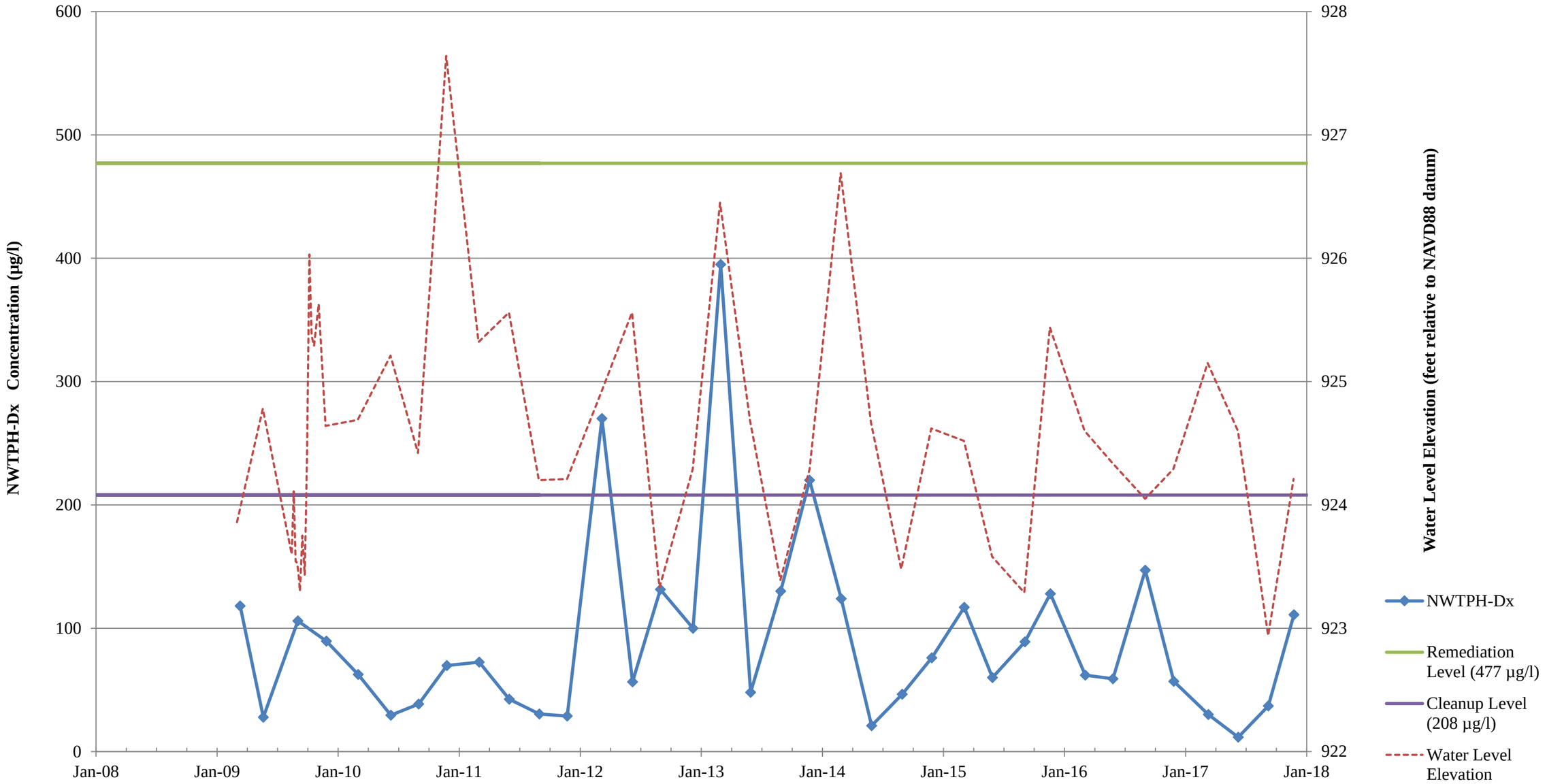
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well GW-2



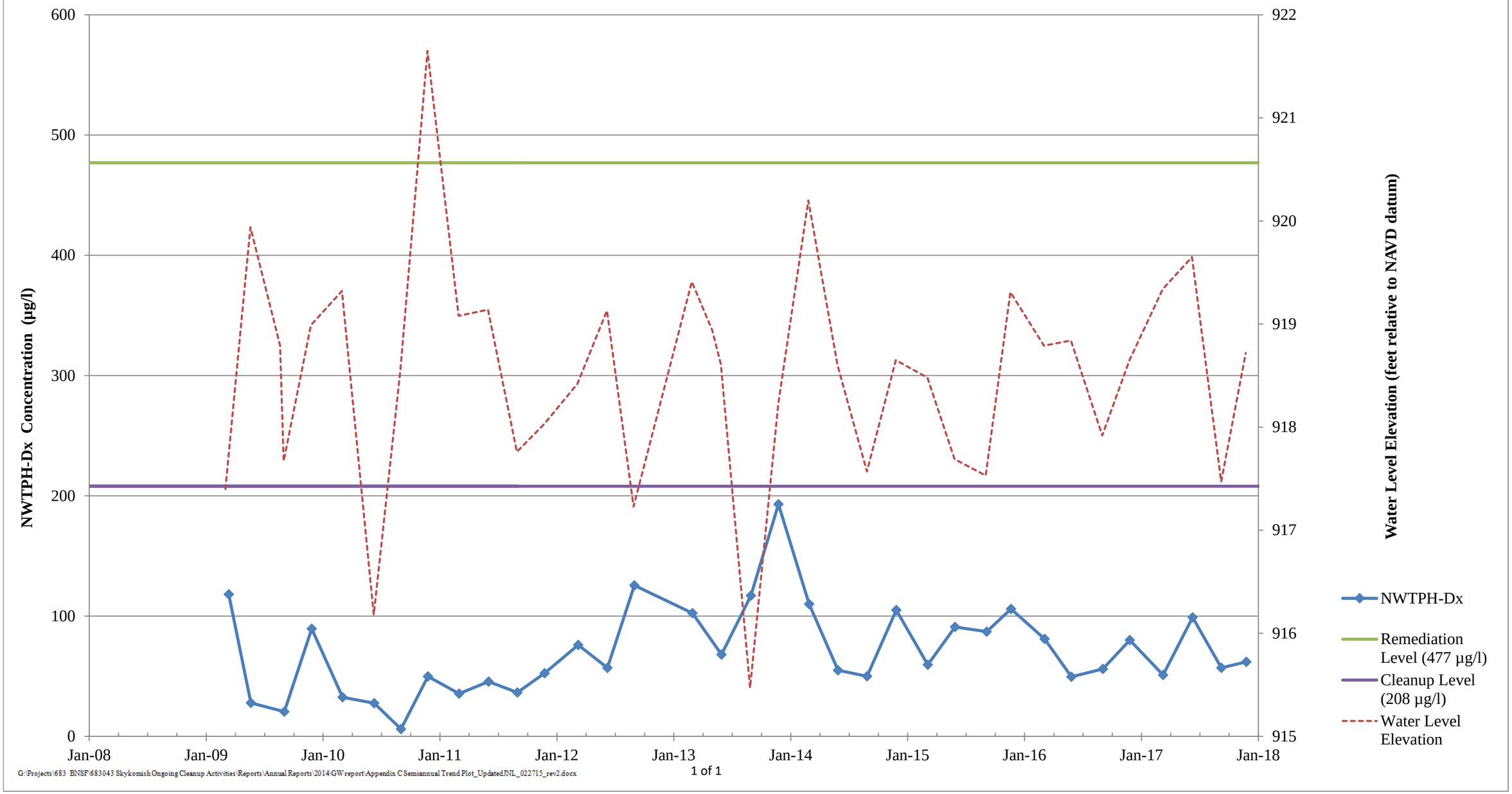
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well GW-3



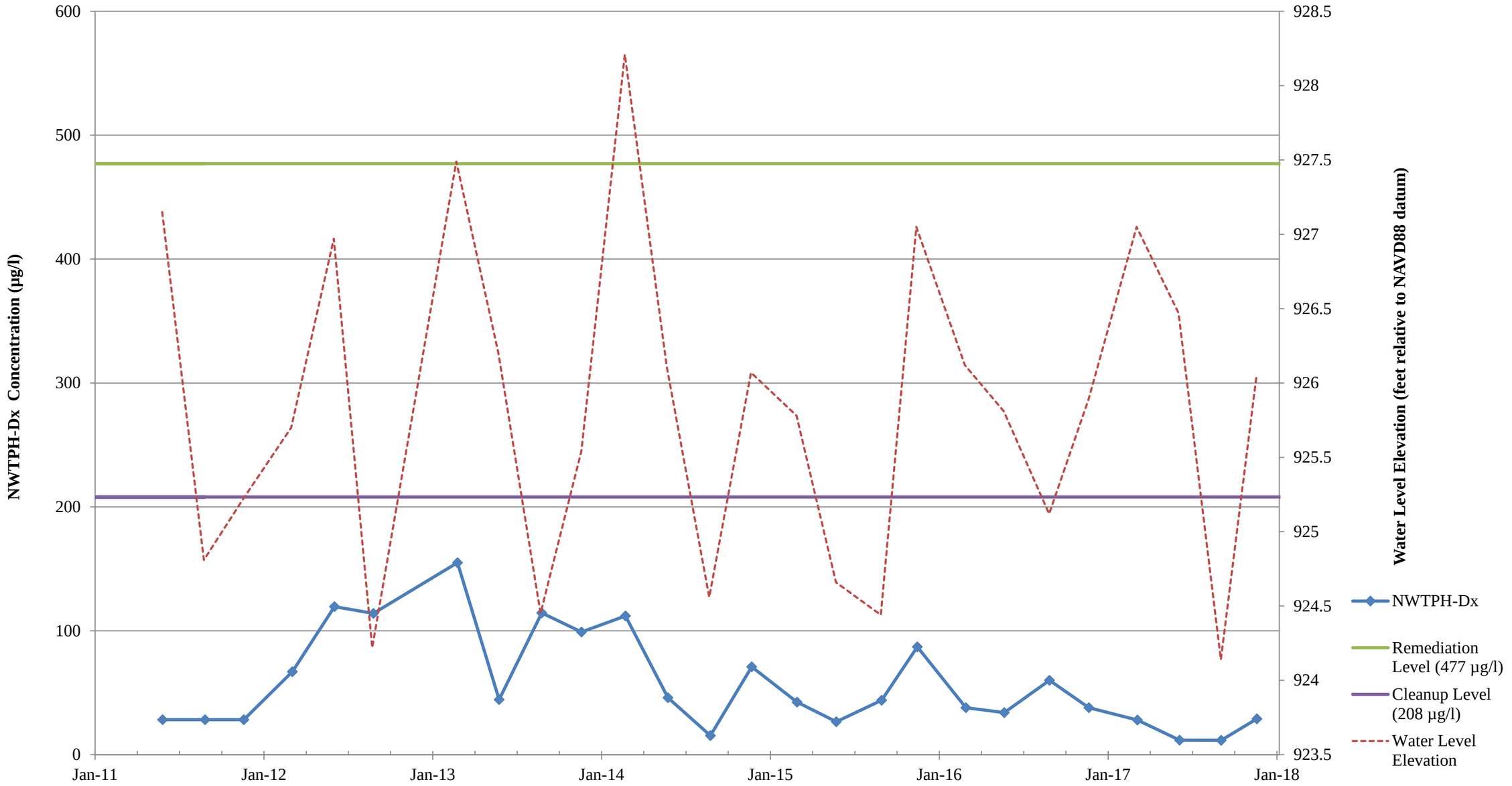
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well GW-4



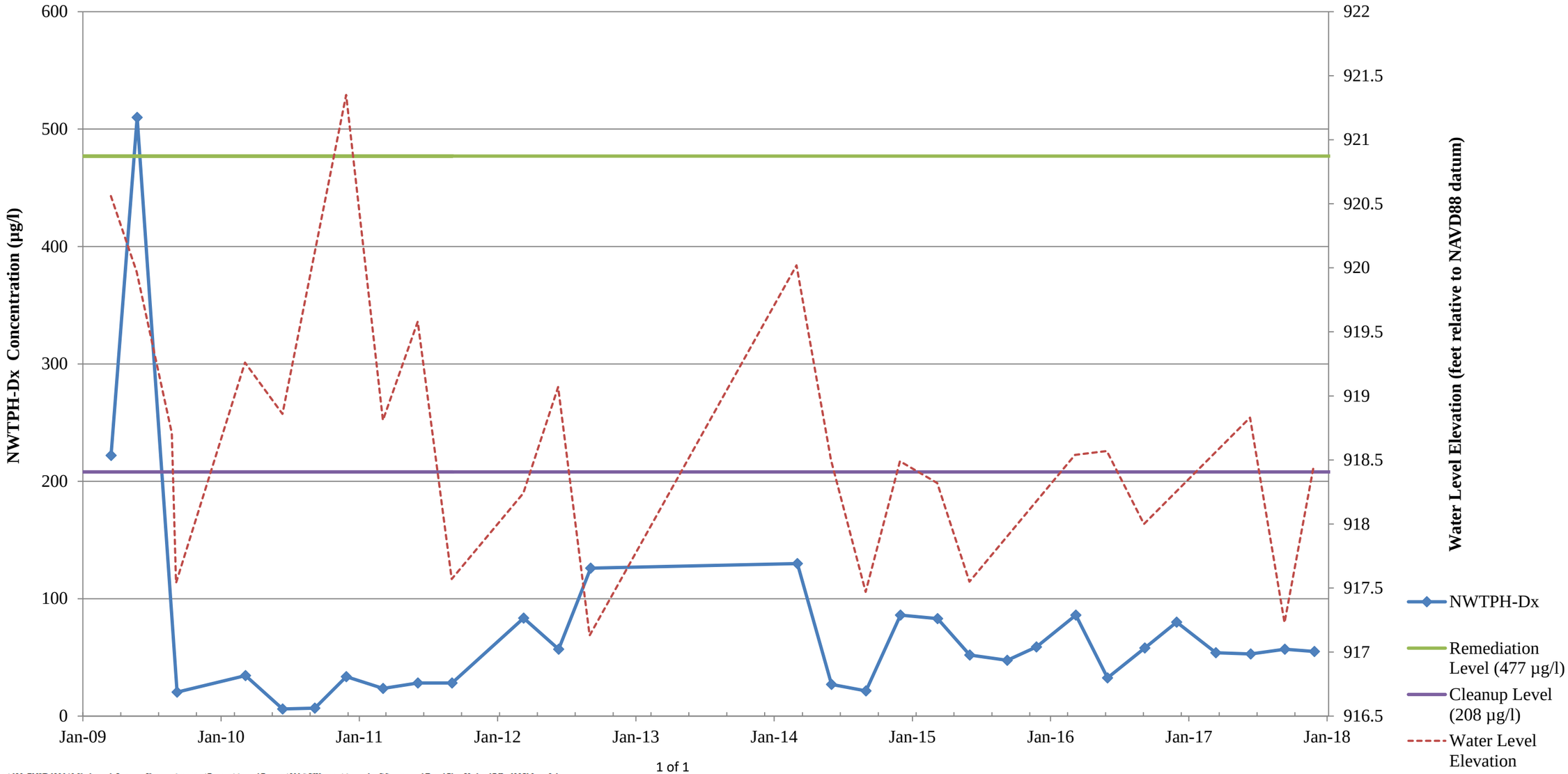
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well EW-1



NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well EW-2A

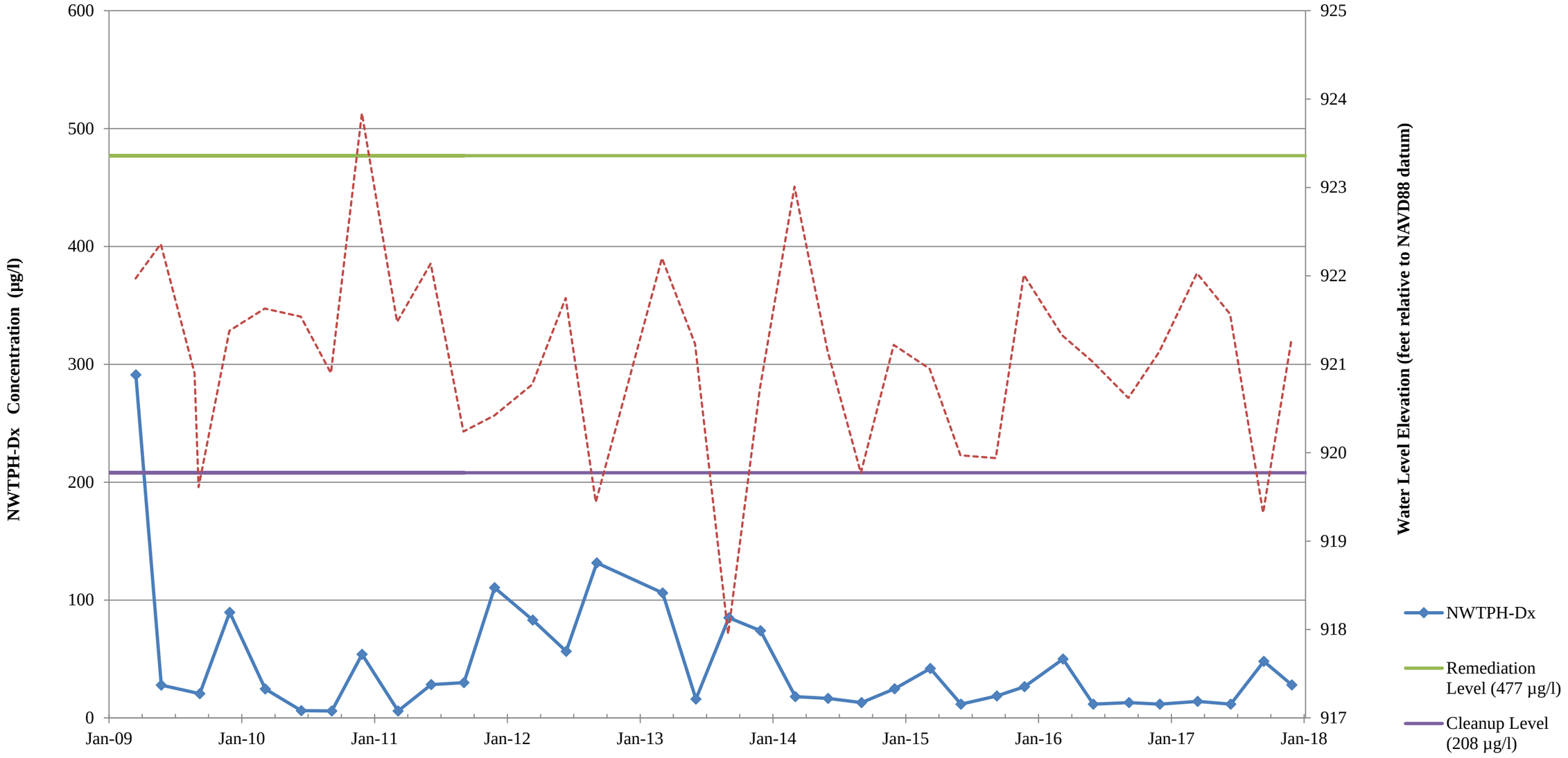


NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 5-W-43

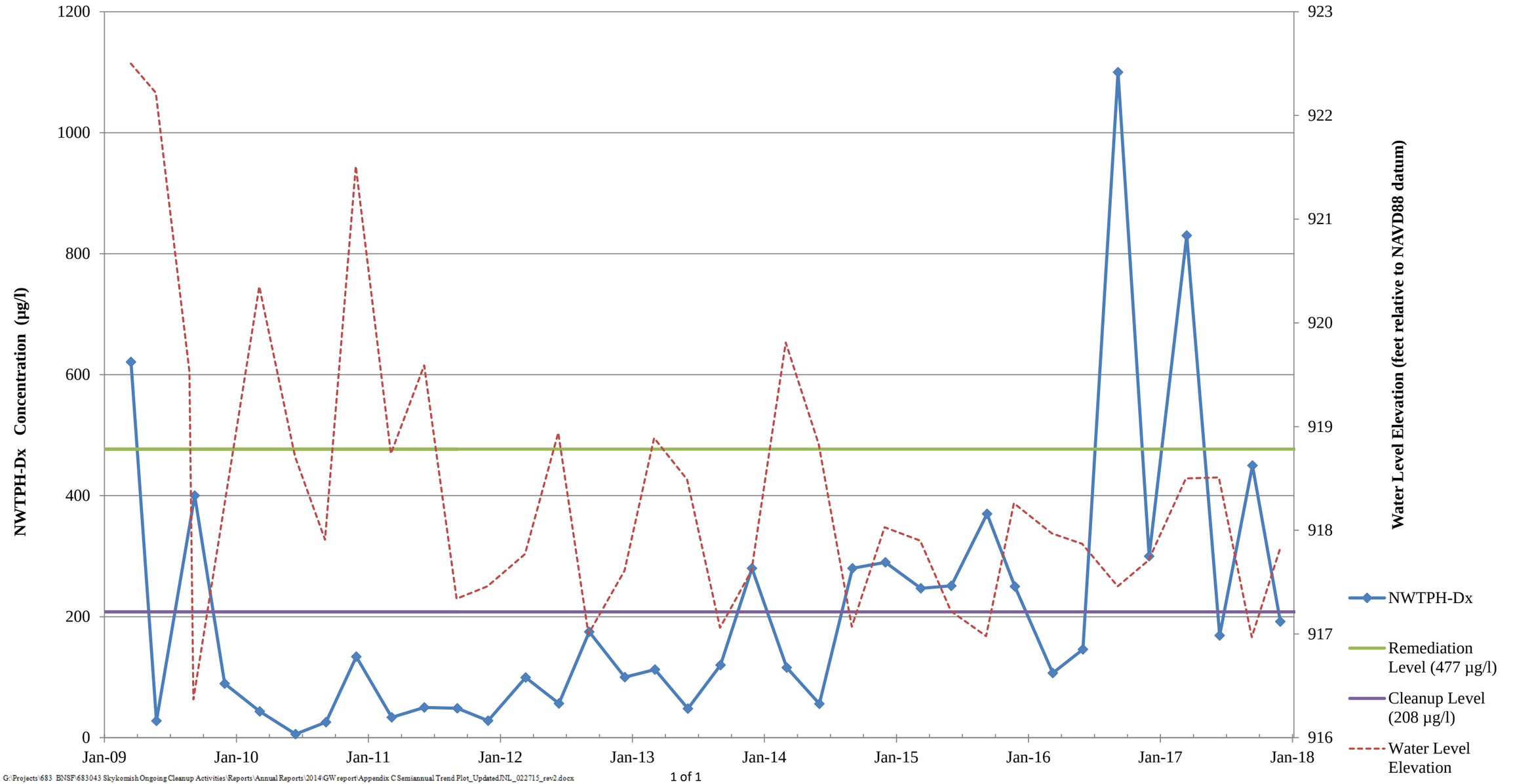


G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

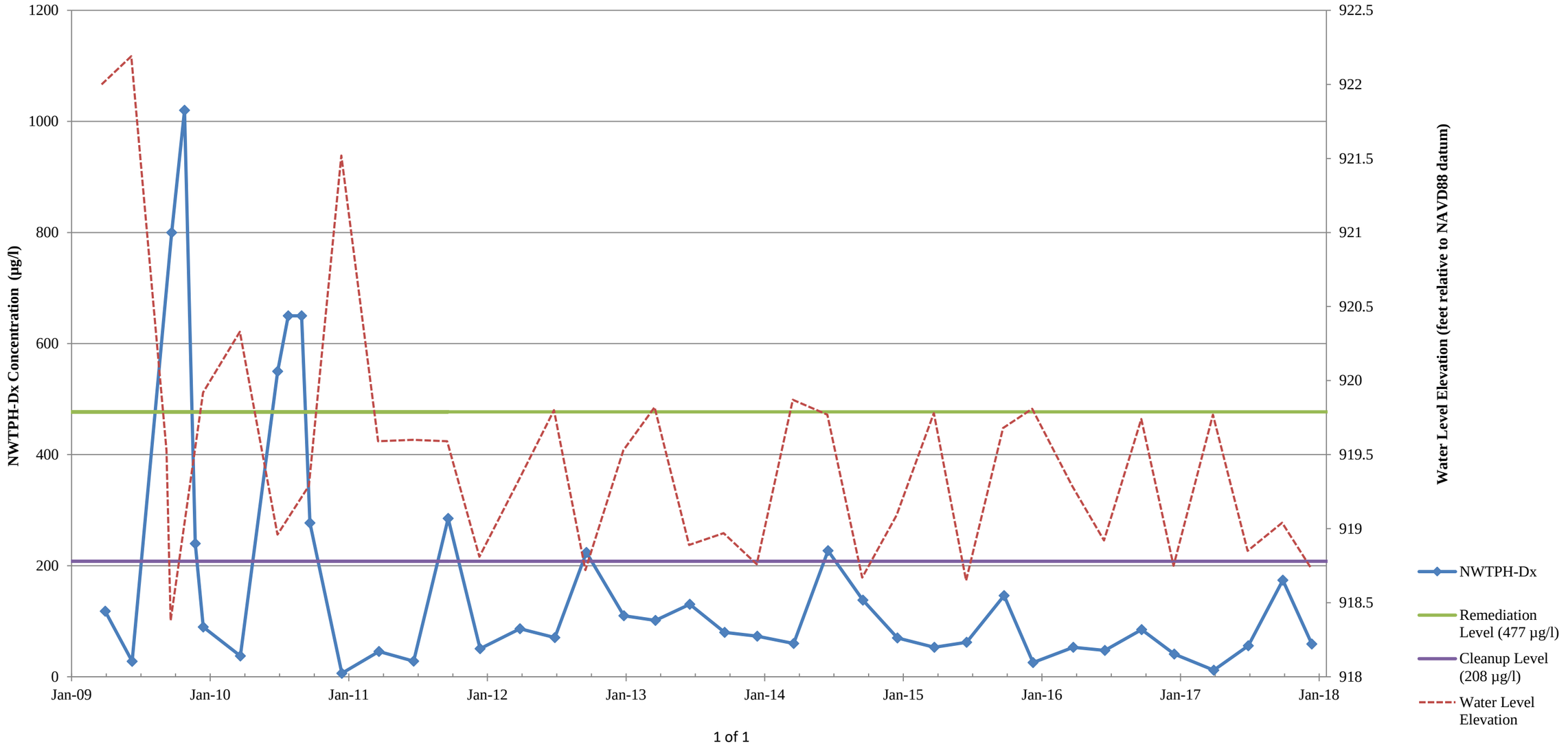
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 2A-W-40



NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 2A-W-41

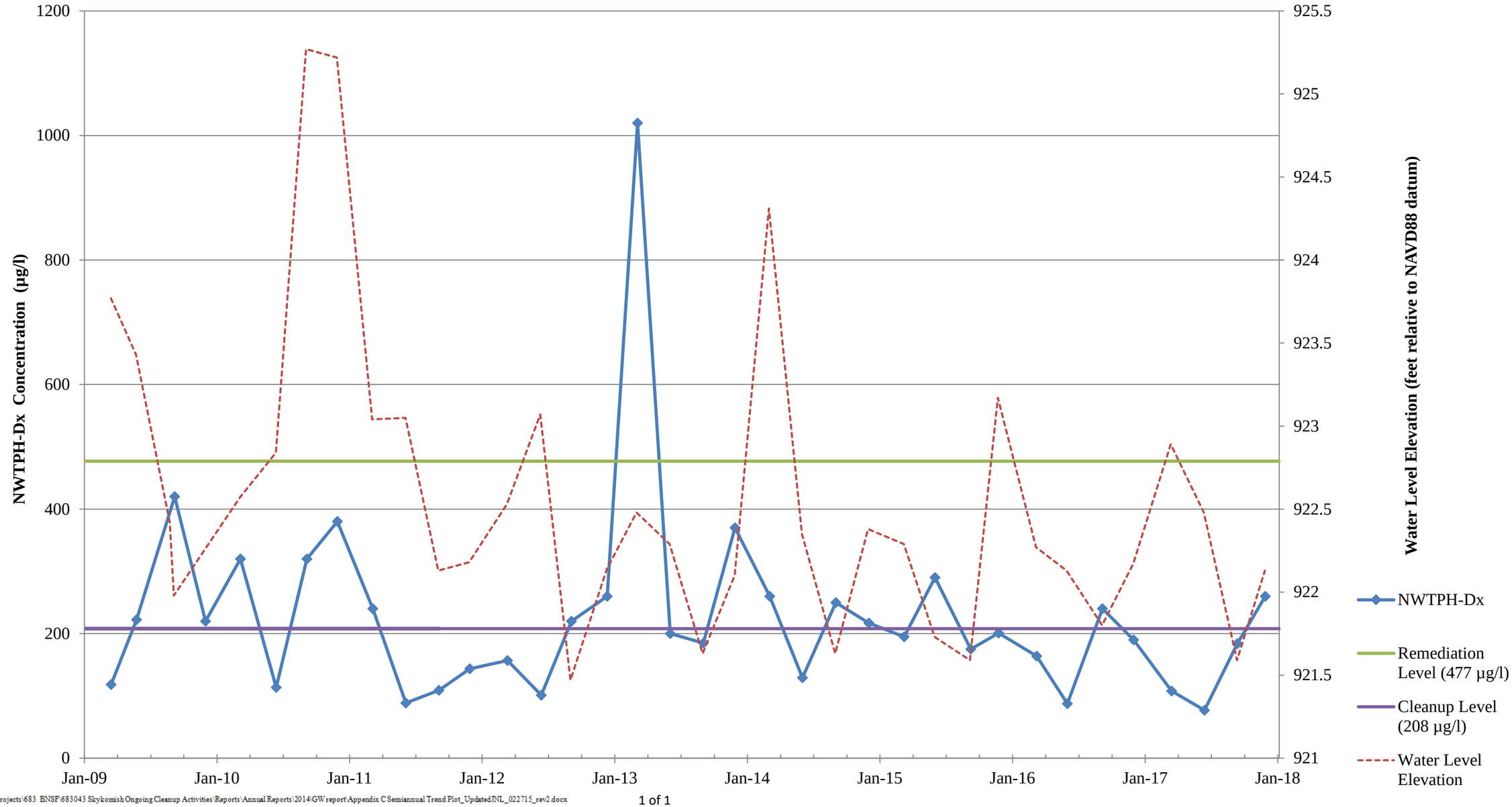


NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 1B-W-23



G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

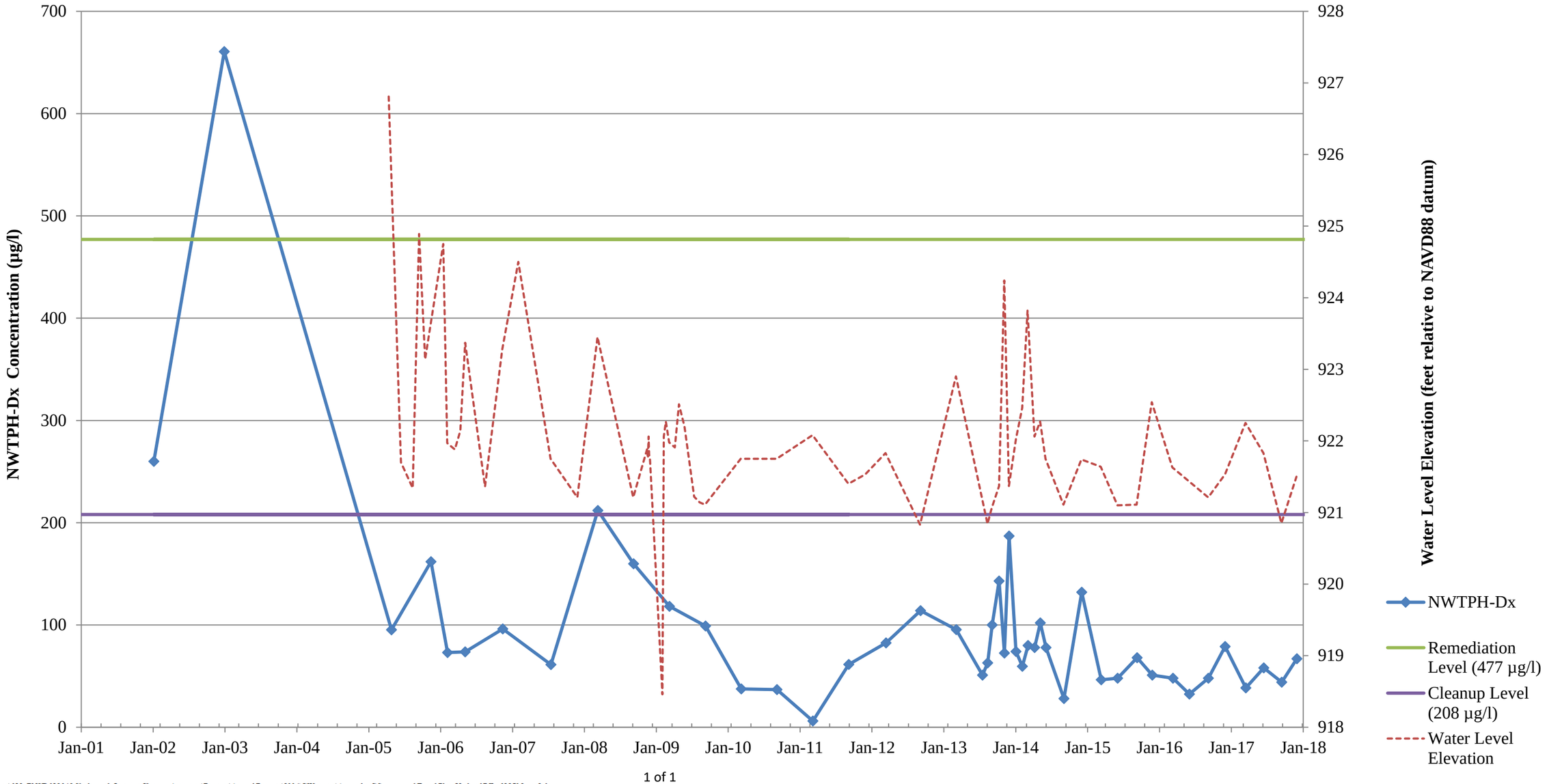
NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 2A-W-42



G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

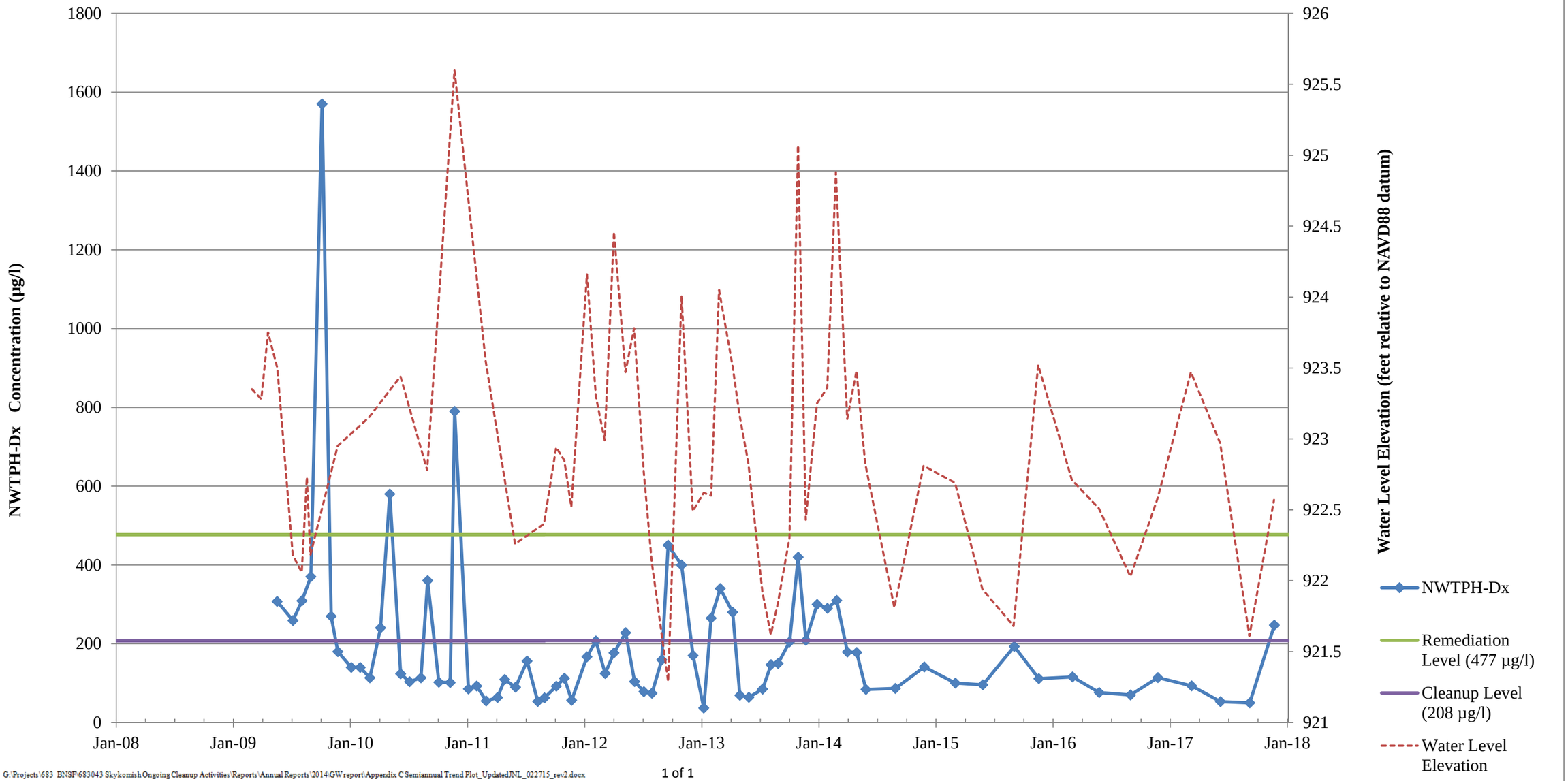
Former Air Sparge Area Monitoring Wells

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 1B-W-3

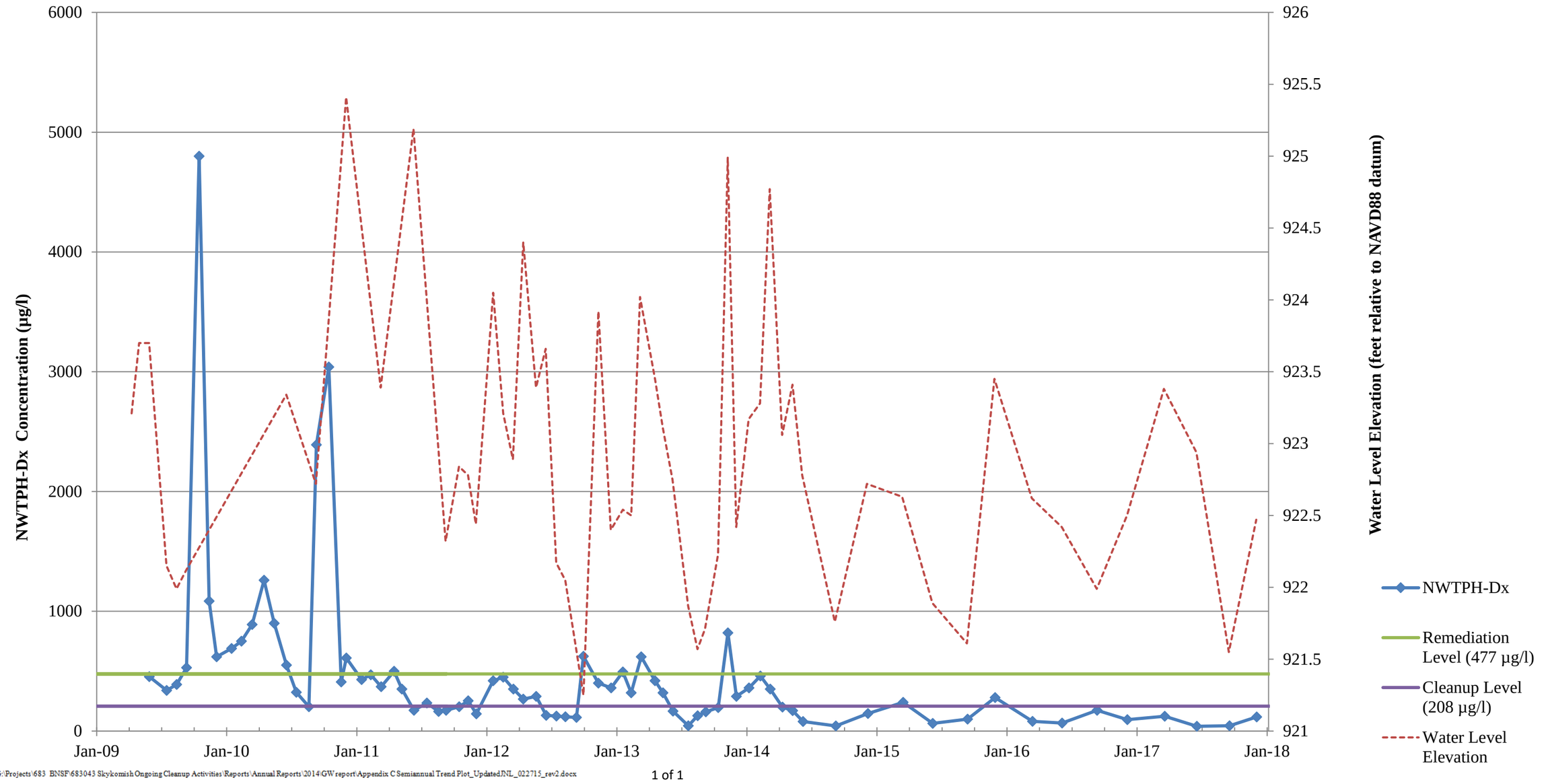


G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 1C-W-7

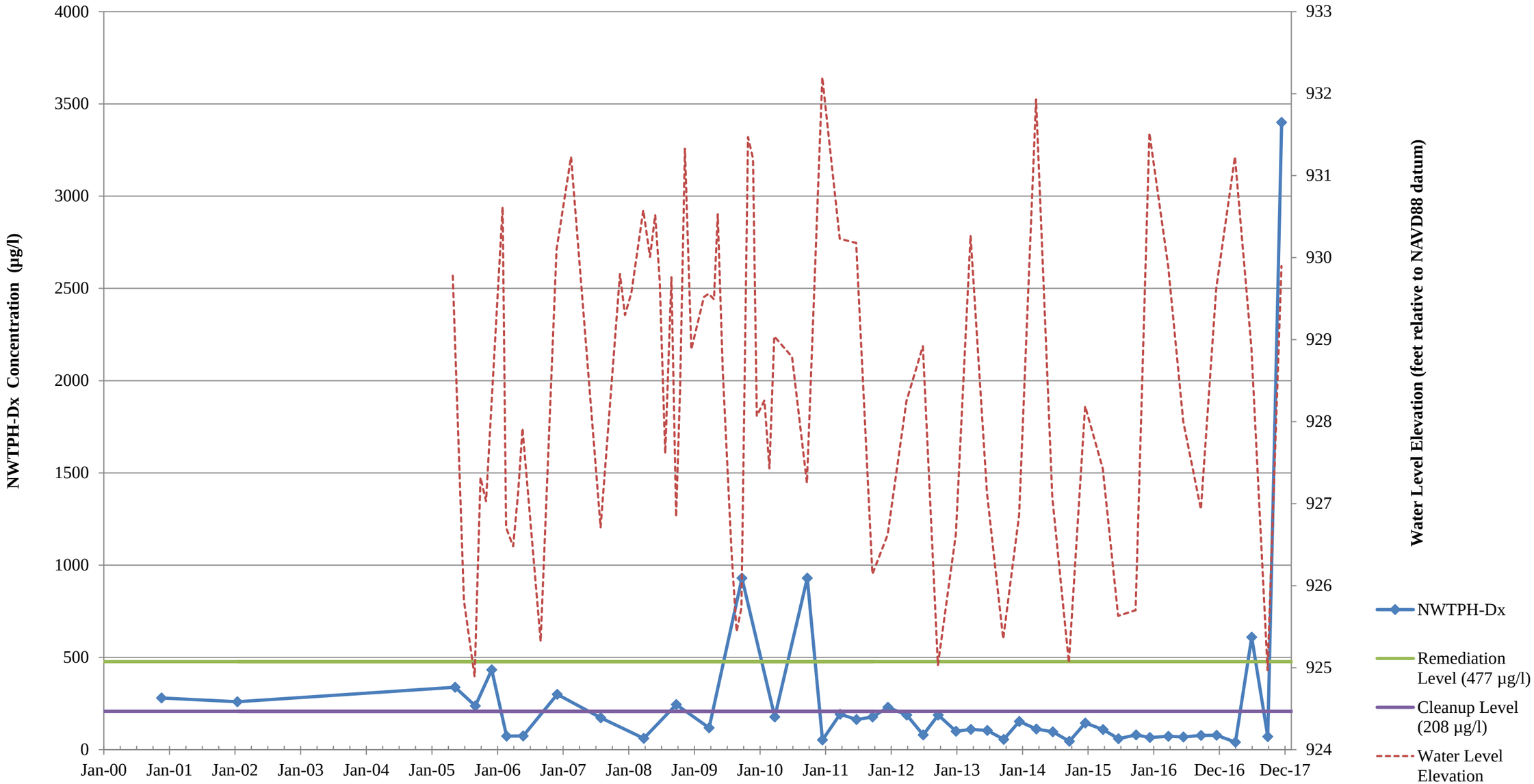


NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 1C-W-8



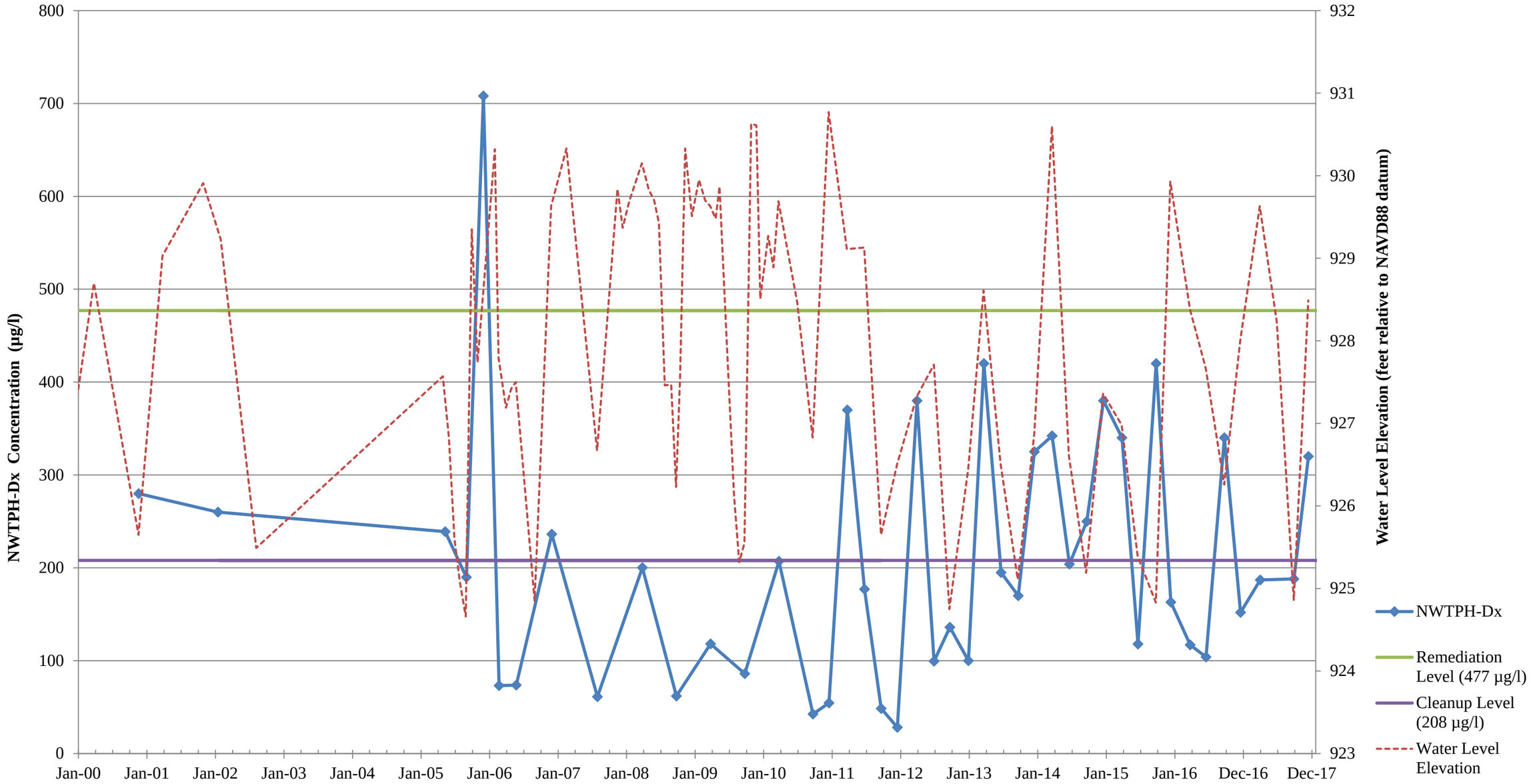
Former Maloney Creek Zone Monitoring Wells

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well MW-3



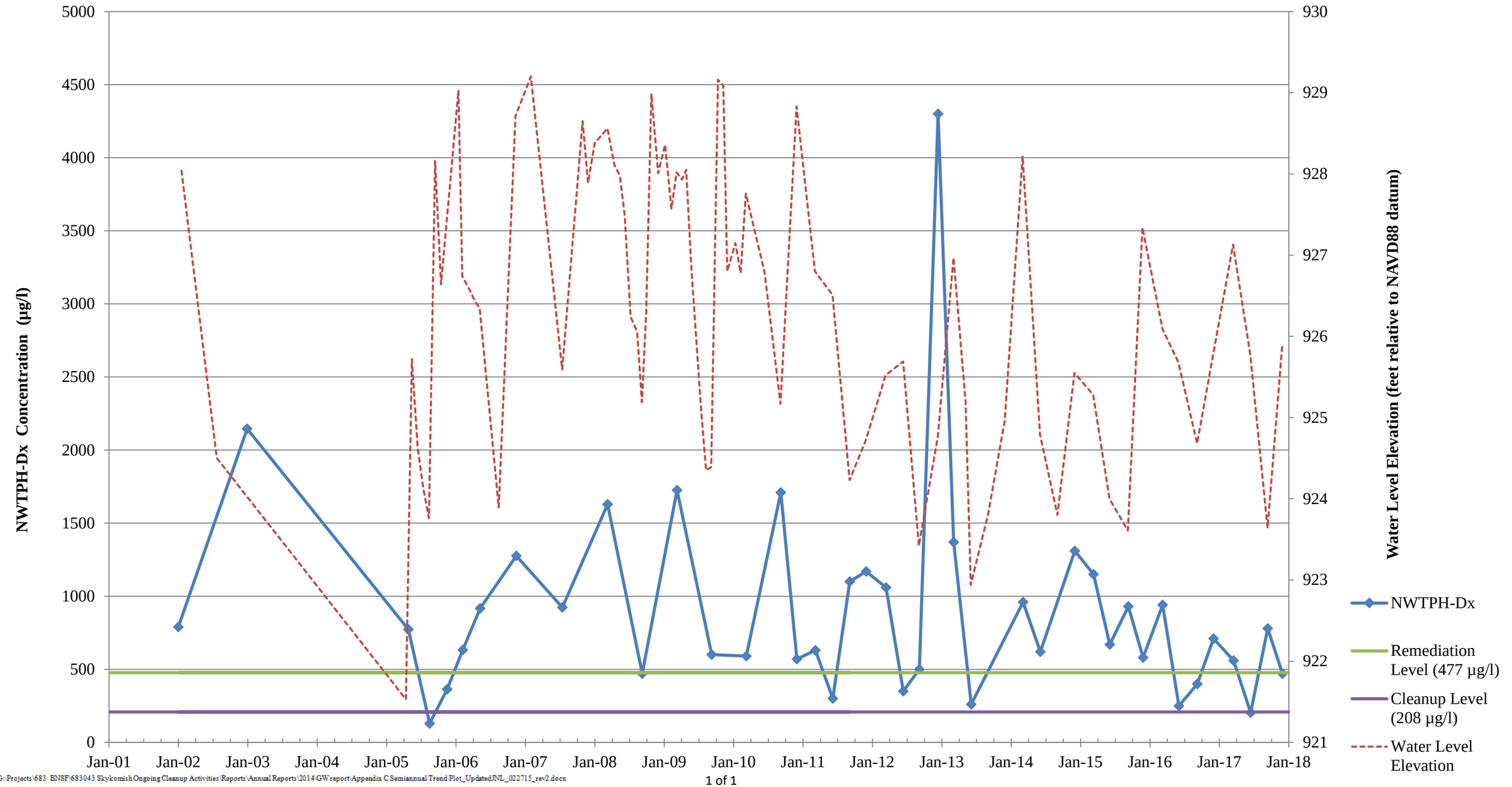
G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_Updated JNL_022715_rev2.docx

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well MW-4



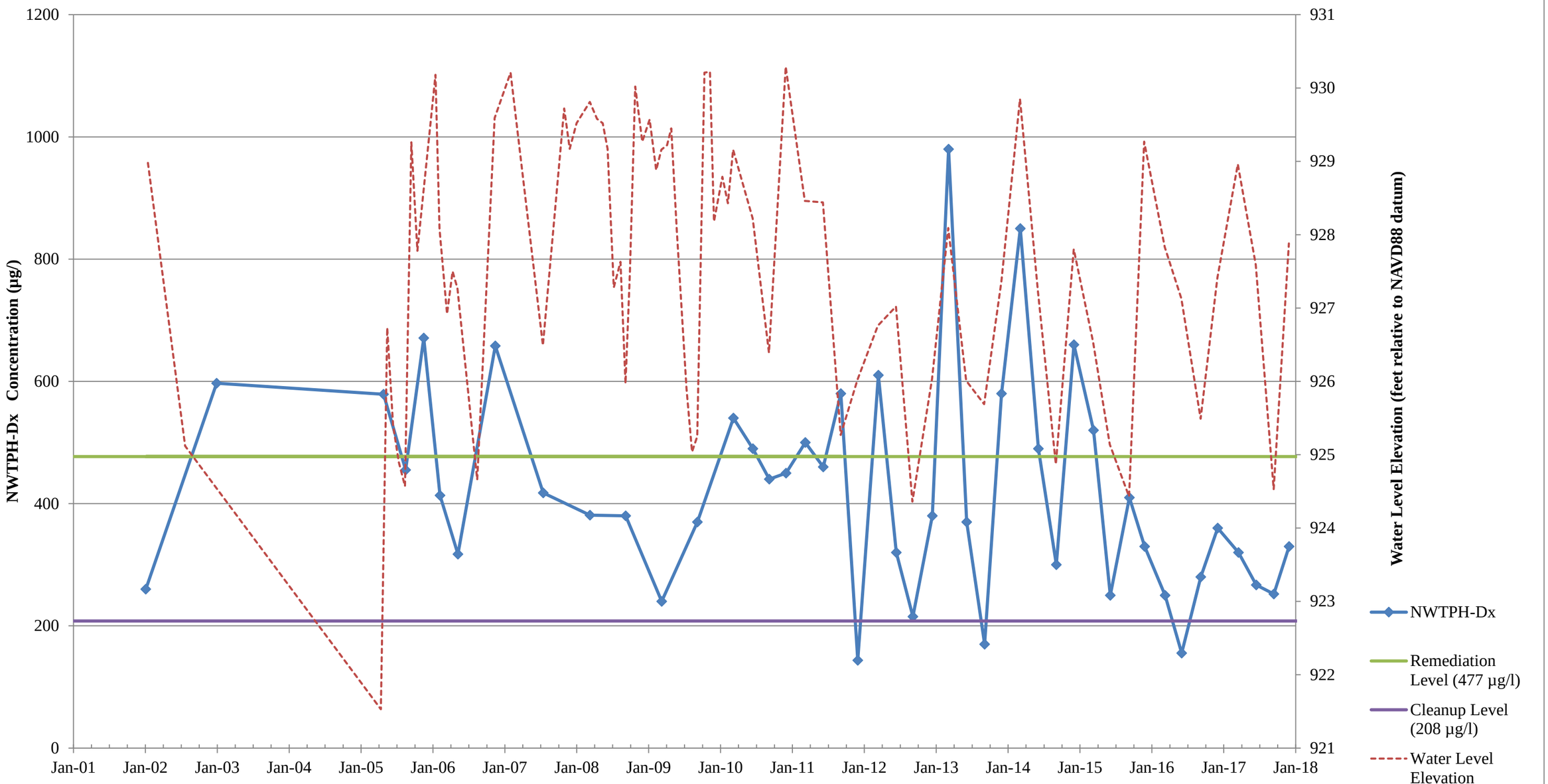
G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 2A-W-9



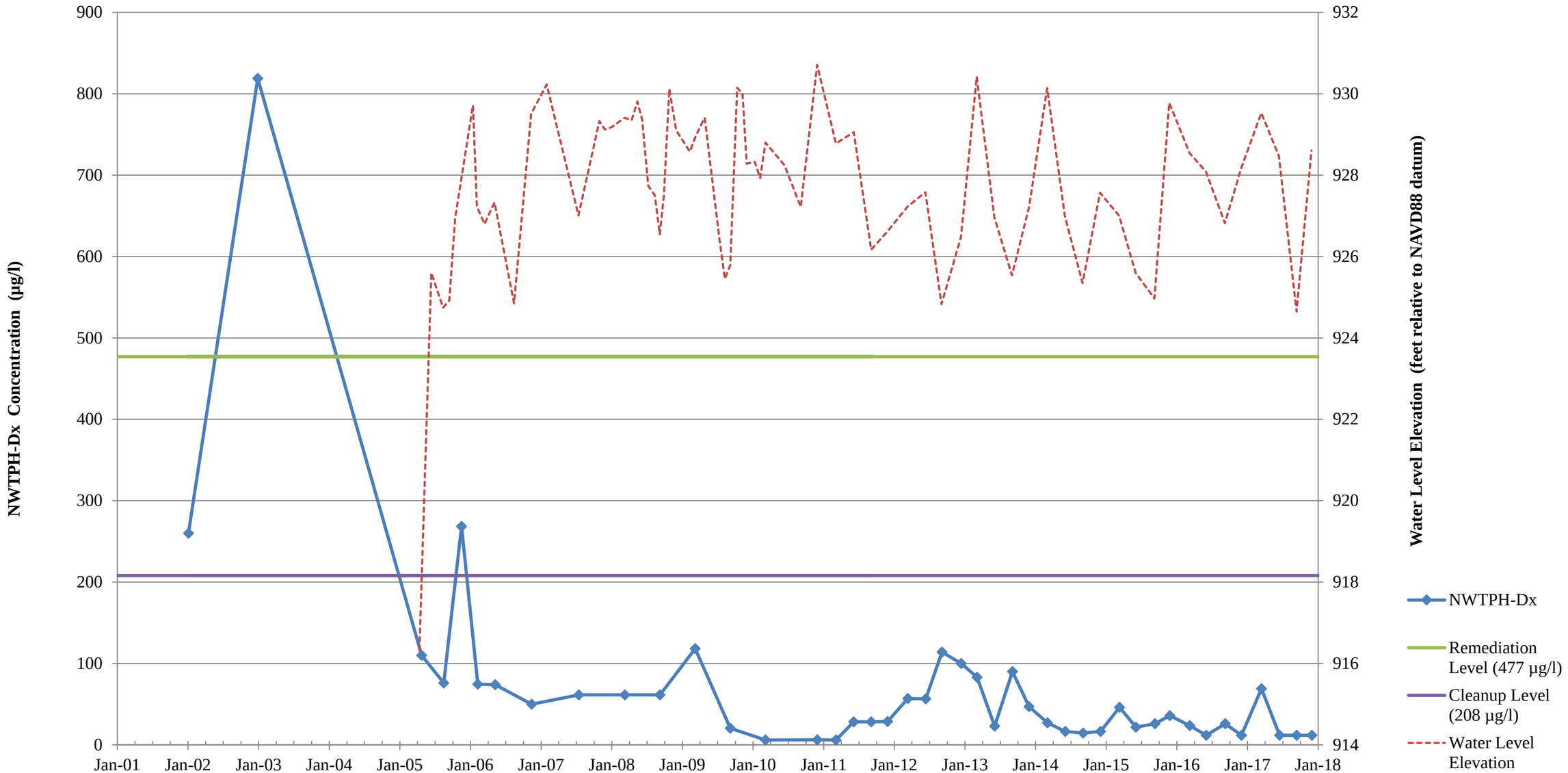
G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 2A-W-10



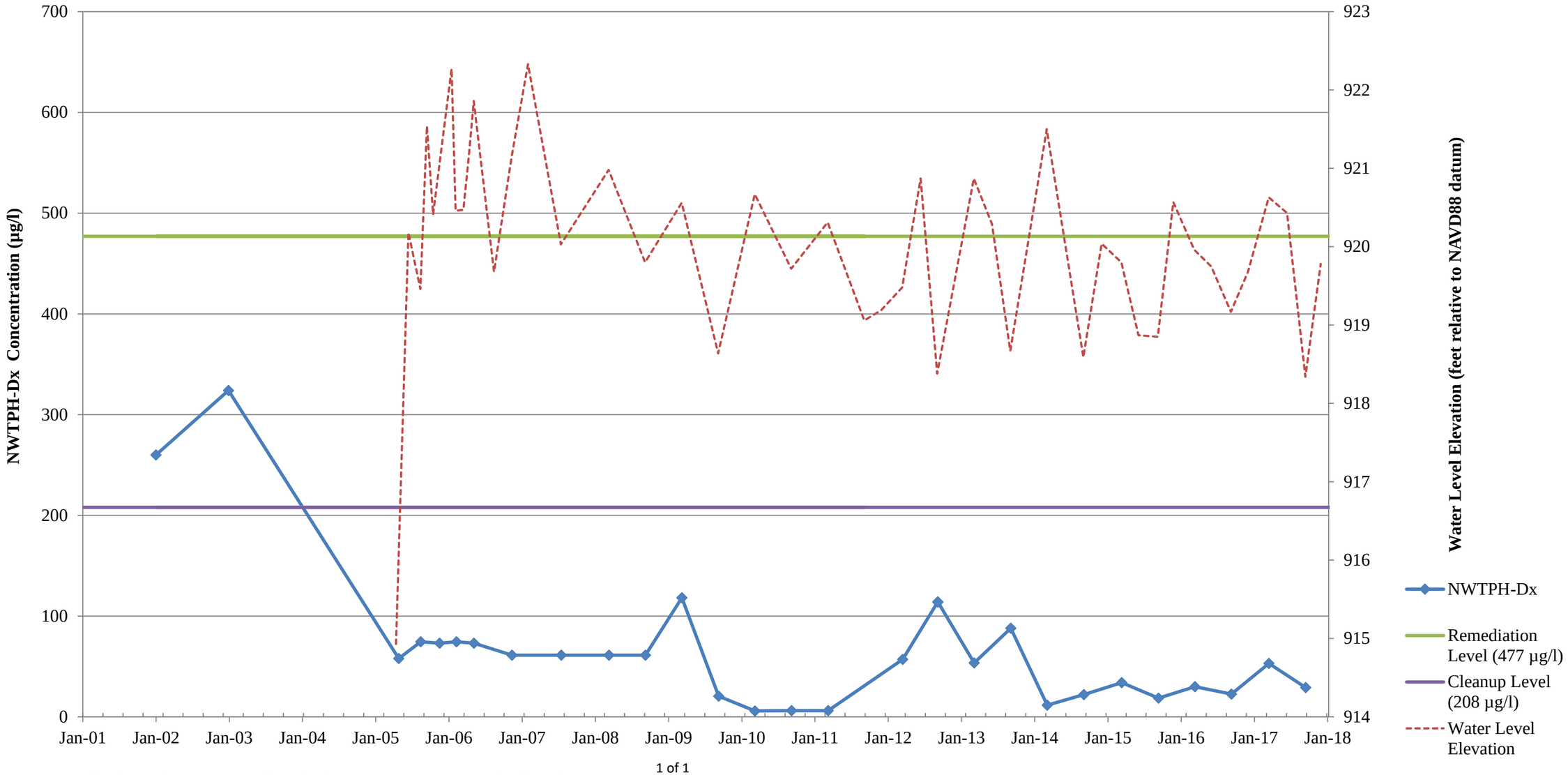
G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 2B-W-4



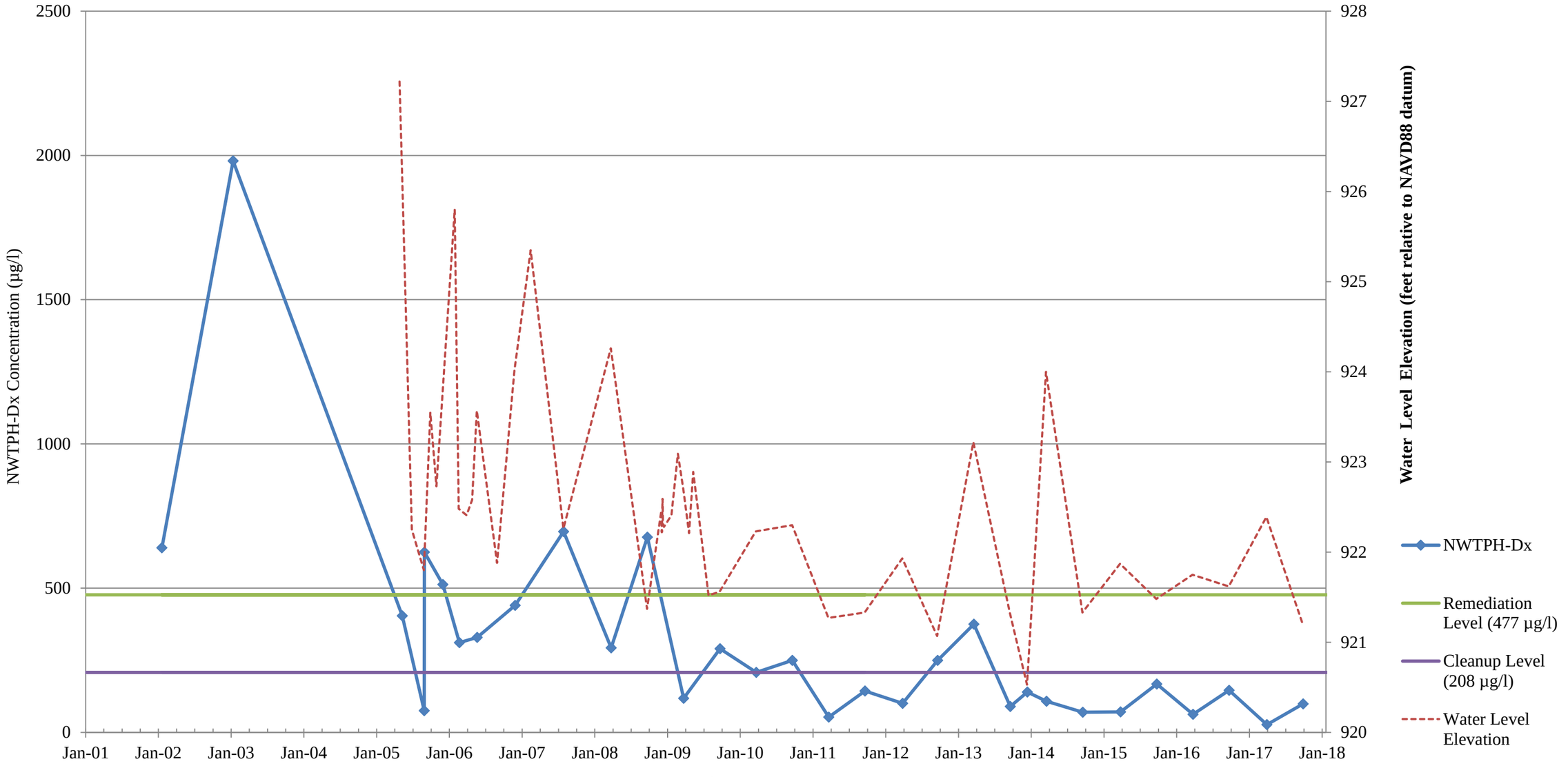
Site-Wide Monitoring Wells

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 1A-W-4

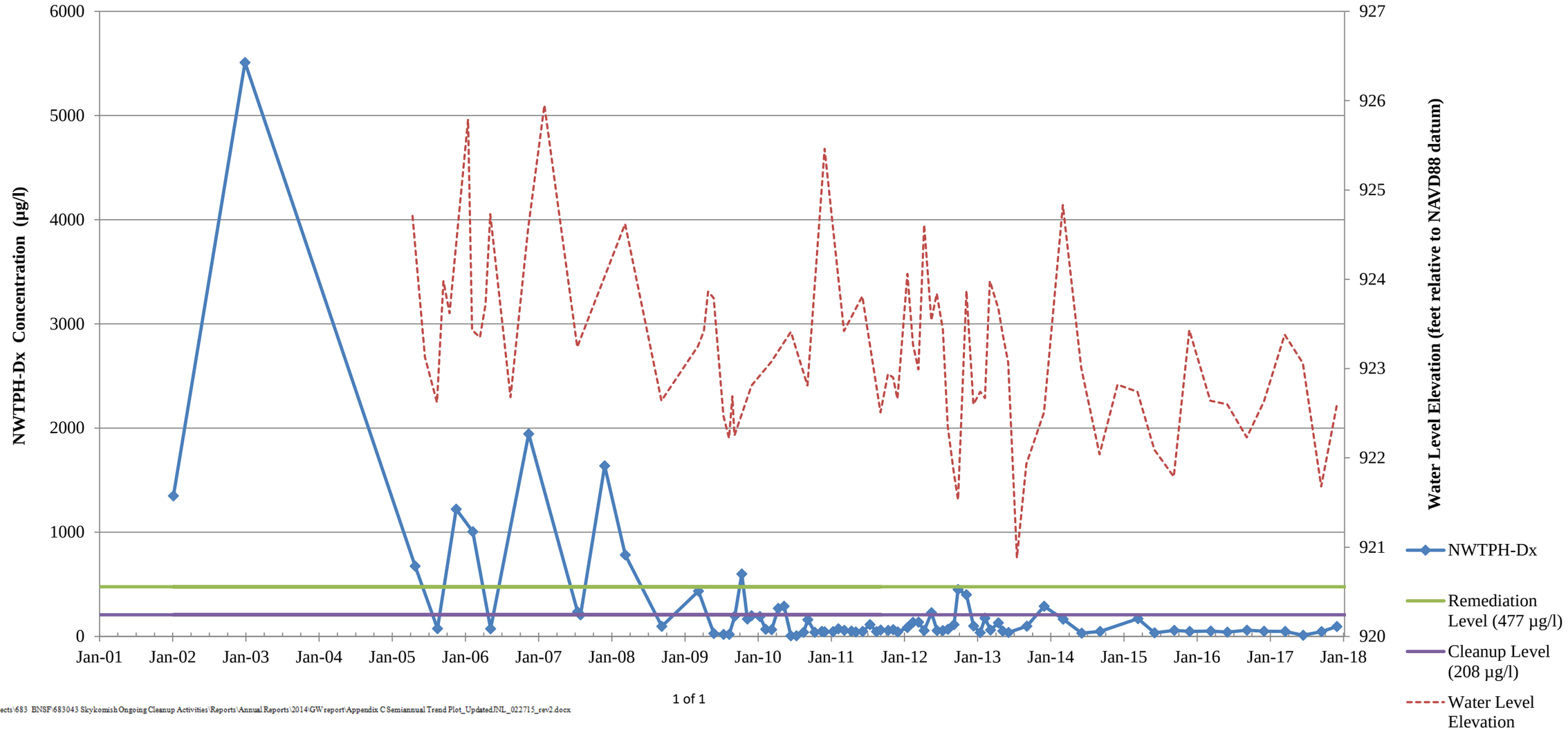


G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Working Folder\Annual Farallon reporting\2013 Groundwater Rpt\SemiannualTrendPlot rev2.xlxs

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 1B-W-2

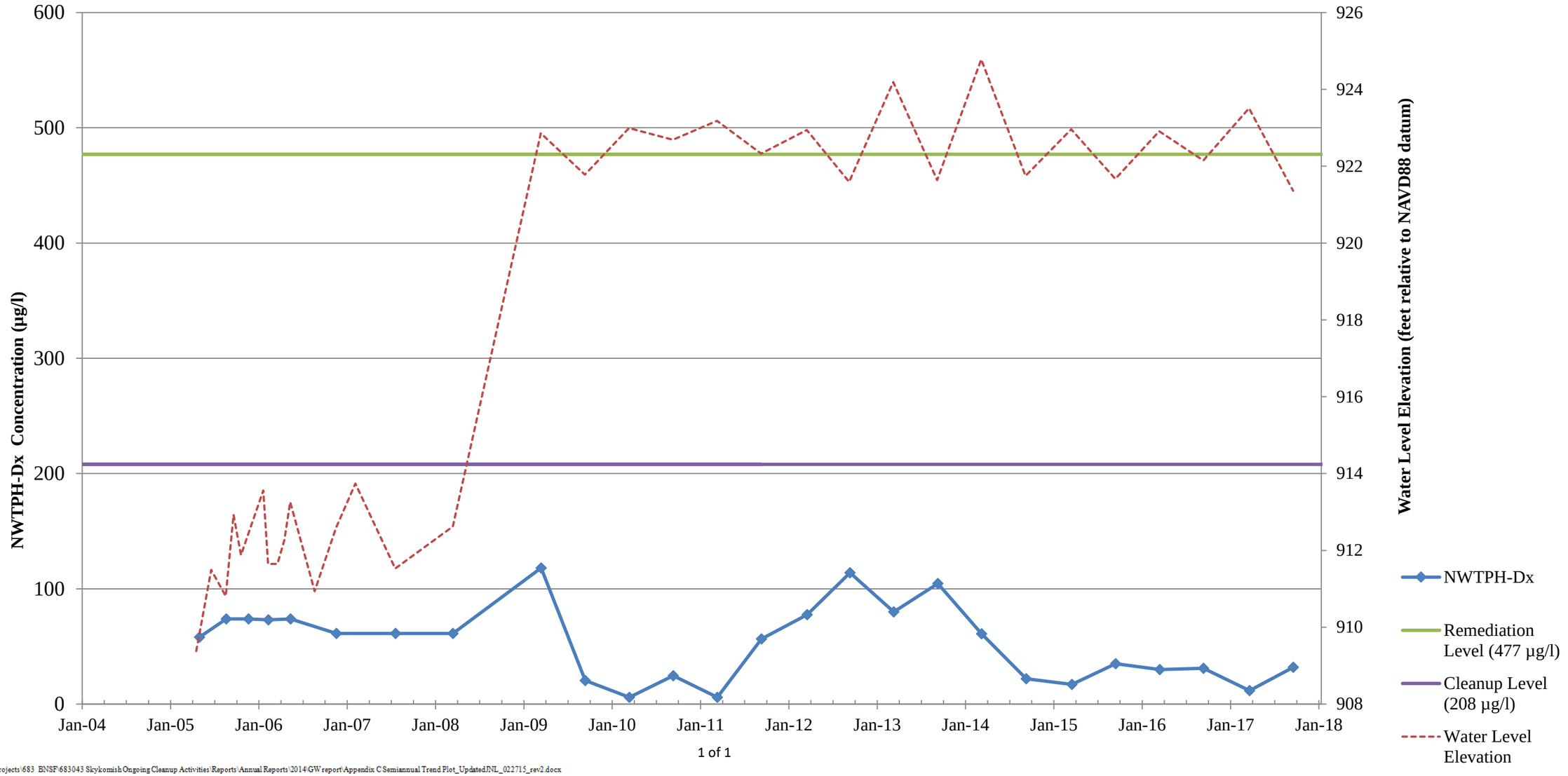


NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 1C-W-1



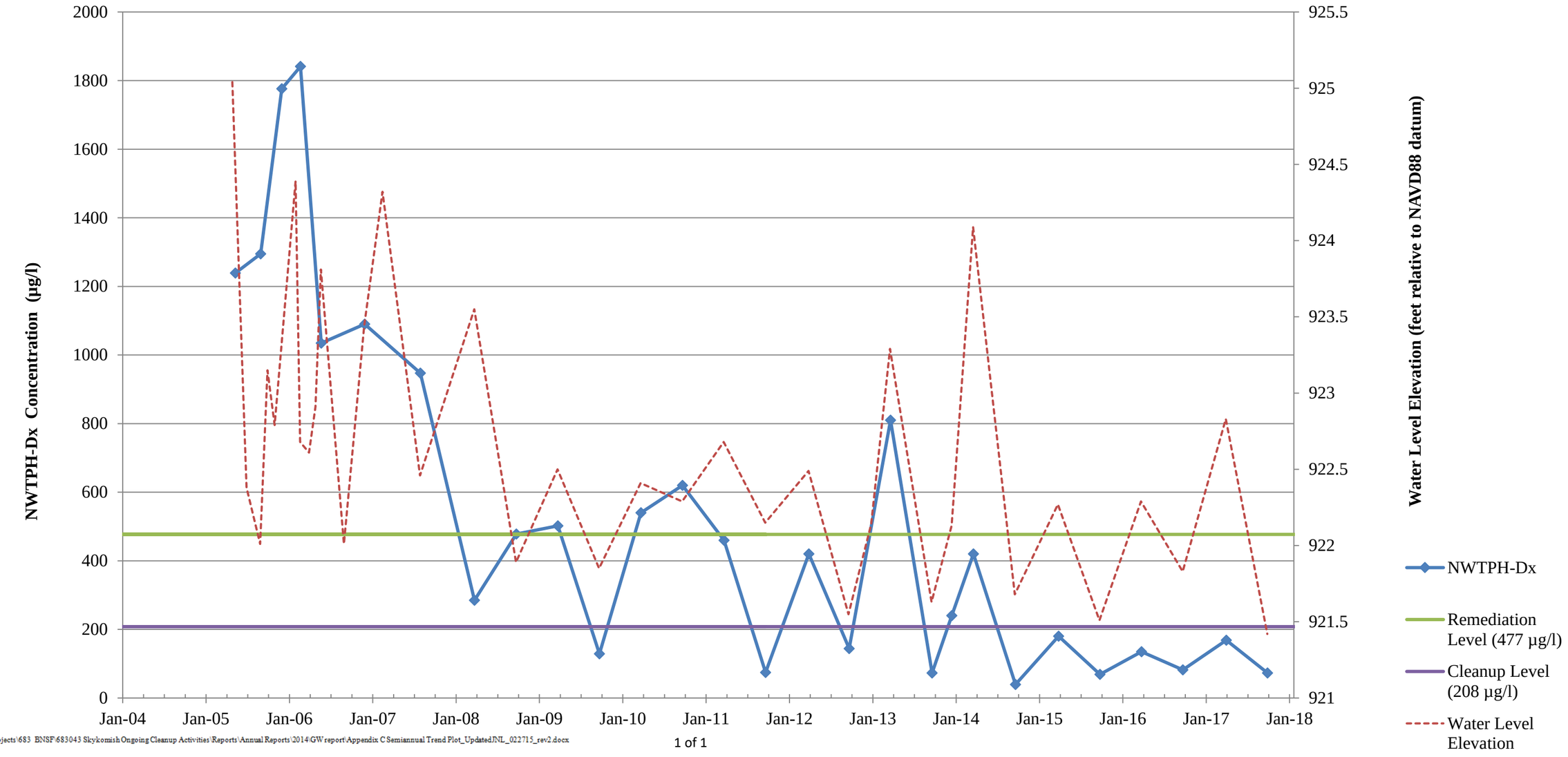
G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 1C-W-3

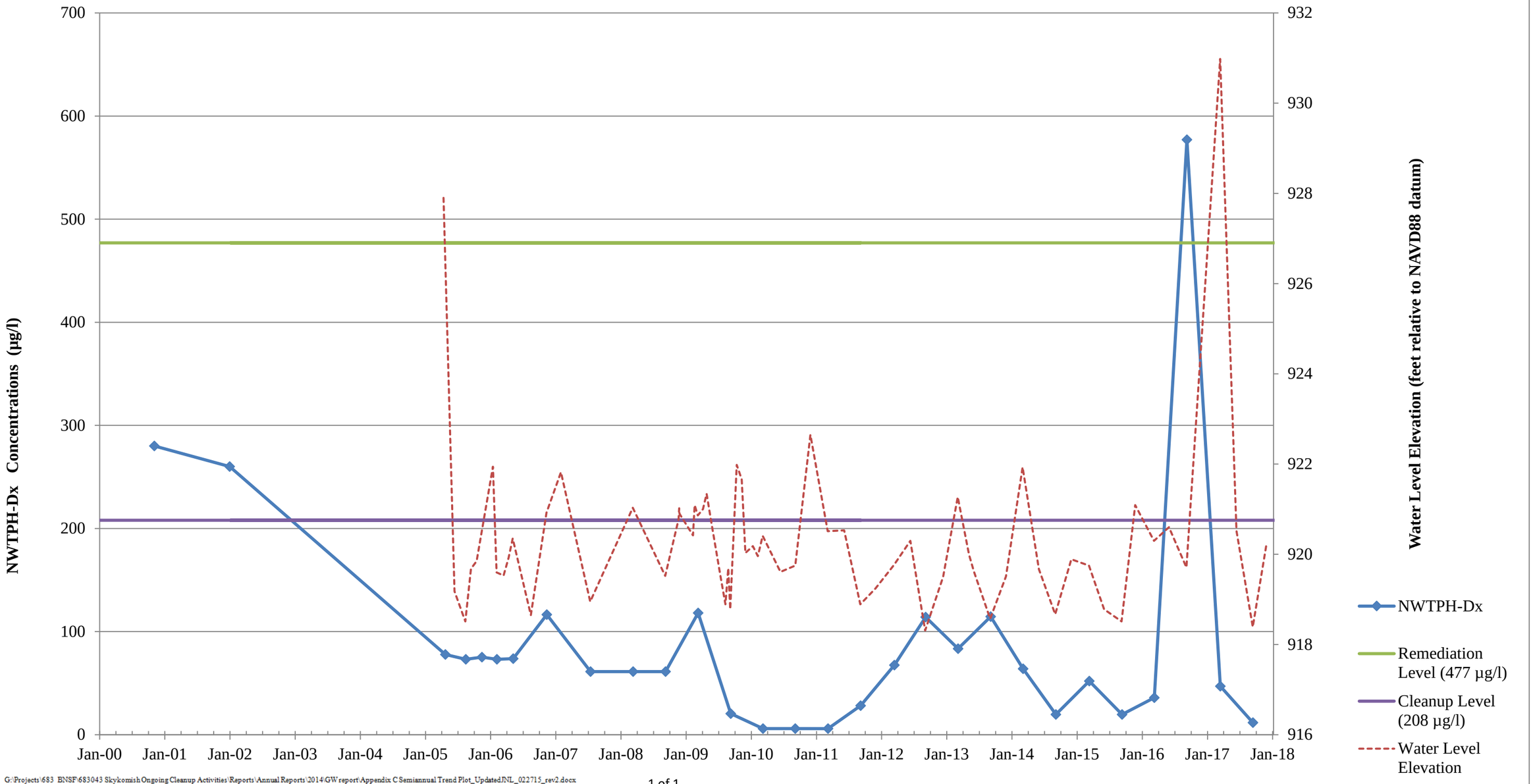


G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well 1C-W-4

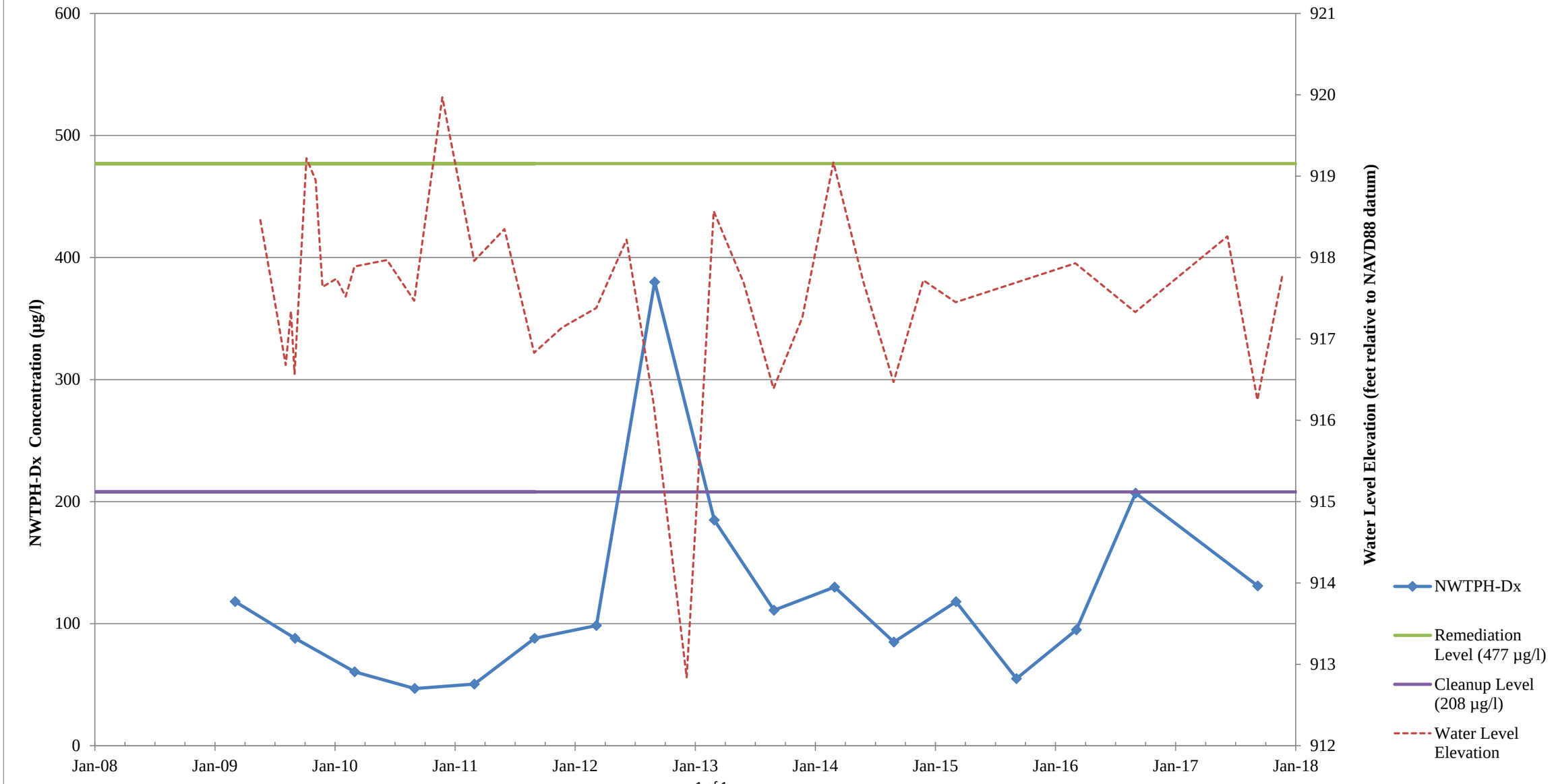


NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well MW-16



G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx

NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-067
Well MW-38R



G:\Projects\683 BNSF\683043 Skykomish Ongoing Cleanup Activities\Reports\Annual Reports\2014\GW report\Appendix C Semiannual Trend Plot_UpdatedJNL_022715_rev2.docx