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# 2014 SITE-WIDE GROUNDWATER MONITORING REPORT

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

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#### 1.0 INTRODUCTION

This 2014 Groundwater Monitoring Report was prepared on behalf of BNSF Railway Company (BNSF) and describes the 2014 groundwater monitoring activities performed at the BNSF Former Maintenance and Fueling Facility in Skykomish, Washington (herein referred to as the Site). Groundwater monitoring is being conducted as part of the Site remediation activities being completed in accordance with the *Cleanup Action Plan for BNSF Former Maintenance and Fueling Facility, Skykomish, Washington* dated October 2007, prepared by the Washington State Department of Ecology (Ecology) (2007a) (CAP). The groundwater monitoring activities completed at the Site in 2014 were conducted by BNSF pursuant to Consent Decree No. 07-2-33672-9 SEA between BNSF and Ecology (2007b) (Consent Decree) and are part of an integrated and comprehensive remedial action being performed at the Site. Groundwater monitoring activities were performed in accordance with the 2010 Groundwater Monitoring Plan, Appendix E of the 2010 Compliance Monitoring Plan Update (AECOM Environment [AECOM] 2010a) (2010 GWMP).

This document summarizes the groundwater monitoring completed at the Site during 2014 (Reporting Period) and includes:

- Semiannual Site-wide monitoring events completed in March and September 2014;
- Quarterly monitoring events conducted in June and December 2014; and
- Monthly monitoring of the air sparging system wells from January through June 2014.

#### 1.1 GROUNDWATER MONITORING OBJECTIVES

The objectives for the groundwater monitoring program described in the 2010 GWMP are to:

- Monitor any changes in contaminant distribution during and after implementation of cleanup actions throughout the Site;
- Provide monitoring data for groundwater in the Levee Zone to assess the effect of the cleanup actions on groundwater quality;
- Provide monitoring data to evaluate 2008 through 2014 remediation impacts on groundwater quality; and
- Provide fluid level gauging data to assess groundwater gradients and the extent of light non-aqueous-phase liquid (LNAPL) on the groundwater surface.

#### 1.2 SITE DESCRIPTION

The Site includes BNSF property and public and private properties within the Town of Skykomish in King County, Washington, and encompasses an area of about 40 acres. The Site is approximately bounded by the South Fork Skykomish River to the north, Town of Skykomish



city limits to the east, Old Cascade Highway to the south, and Maloney Creek to the west. Railroad Avenue separates BNSF property from the main commercial district of the Town of Skykomish.

Additional Site history and background information was presented in the Consent Decree, CAP, and in Supplemental Remedial Investigation Volume 1: Text, Tables, Figures, and Appendices A through D (The RETEC Group, Inc. [RETEC] 2002b).

#### 1.3 REPORT ORGANIZATION

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

- Section 2—Groundwater Monitoring Network. This section describes the monitoring well network and changes made to the network during the Reporting Period.
- Section 3—Sampling, Analysis, and Reporting. This section describes the procedures and protocols used to perform the monitoring activities, laboratory analyses and reporting, and subsequent data management and validation activities.
- Section 4—Results and Discussion. This section describes the results of the 2014 monitoring activities; specifically the fluid level gauging and analytical results from the groundwater sampling.
- **Section 5—Conclusions**. This section provides an overview of the groundwater monitoring activities conducted at the Site during the Reporting Period, and includes a summary of the data trends, and recommendations for future sampling events.
- **Section 6—Bibliography**. This section includes a listing of the documents cited in this report and other relevant documents providing additional background information.



#### 2.0 GROUNDWATER MONITORING NETWORK

This section describes the wells, piezometers, and vaults that were included in the groundwater monitoring network for fluid level gauging and groundwater sampling during the Reporting Period. The wells, piezometers, and vaults sampled and the frequency of the sampling were defined in the 2010 GWMP. Groundwater monitoring locations are shown on Figure 1.

#### 2.1 MODIFICATIONS TO THE MONITORING NETWORK

This section describes monitoring network changes implemented during the Reporting Period, including well refurbishment, well damage, and well abandonment. Modifications to the groundwater monitoring network are summarized in Table 1. Modification plans and construction and/or abandonment details prior to the Reporting Period were presented in previous Site documents. During the Reporting Period, one modification occurred to the monitoring network. Monitoring well 5-W-43 at the Site that had been inadvertently covered during grading activities and was relocated and returned to service for the four monitoring events conducted during 2014.

Monitoring wells 1B-W-3, 1C-W-7, and 1C-W-8 were monitored on a monthly basis from January through June 2014 to assess groundwater quality at and down-gradient of the air sparge system operating area at the Site. With concurrence from Ecology, beginning in July 2014, the frequency of monitoring at these three well locations at the Site was revised to include sampling during the quarterly and semiannual monitoring events.

#### 2.2 SUMMARY OF GROUNDWATER MONITORING NETWORK

The current network of wells and piezometers at the Site is shown on Figure 1. Figure 1 includes only those wells and piezometers used in the monitoring network.

Table 2 summarizes monitoring activities during the Reporting Period and corresponding event dates. Tables 3 and 4 present additional details regarding the sampling and gauging frequencies of wells and vaults used in the groundwater monitoring network.

The conditional points of compliance (CPOCs) for groundwater are generally described in Section 3.4 and on Figure 6 of the CAP. The monitoring network was partially established before the CAP was issued by Ecology in October 2007. However, all wells in the network are within the area bounded by the CPOC well locations, and the locations and designations of compliance wells were approved by Ecology in the 2010 Compliance Monitoring Plan Update (AECOM 2010a). Point of compliance wells will be defined in a Long-Term Confirmational Monitoring Plan to be developed at the conclusion of active remediation pursuant to Exhibit C of the Consent Decree.



#### 3.0 SAMPLING, ANALYSIS, AND REPORTING

This section summarizes the groundwater monitoring program sampling methods, laboratory analysis and reporting procedures, and data management and validation protocols. Groundwater samples collected during the Reporting Period were analyzed by TestAmerica Laboratories, Inc. in Tacoma, Washington (TestAmerica) for all sampling events.

#### 3.1 SAMPLING METHODS

The sampling methodology used to gauge fluid levels and collect groundwater samples was described in the 2010 GWMP. The procedures were established for gauging and sampling monitoring wells, although these procedures apply also to the piezometer and vault locations.

#### 3.2 ANALYTICAL METHODS

The groundwater samples were analyzed for total petroleum hydrocarbons as diesel-range organics (DRO) and as oil-range organics (ORO) by Northwest Method NWTPH-Dx (herein referred to cumulatively as NWTPH-Dx). The analytical laboratory reported detected sample concentrations relative to the method detection limit (MDL) rather than the method reporting limit (MRL), which usually is higher. Because analyte concentrations detected exceeding the MDL and less than the MRL have a degree of uncertainty, these results were considered to be estimated values, and were qualified with a J-flag as indicating that the reported value is an estimate. Using the MDL to report results was intended to minimize the occurrence of non-detected results with an MRL greater than the cleanup level.

#### 3.3 DATA MANAGEMENT AND VALIDATION

The analytical laboratory provided both text data reports (Appendix A) and electronic data deliverables that were directly imported into the project environmental data management system. A quality control check was performed on the imported data to ensure that it was accurately uploaded and that transfer errors did not occur.

Each laboratory analytical report included copies of the Chain of Custody forms and a case narrative containing the following information: a description of the case, comments on sample condition upon receipt, and a description of sample preparation and analysis. The following data were included in the data report: MDL, MRL, units of measure, dilution factor, batch number, date received, date prepared, date analyzed, analytical method, and any notes or qualifiers. The report also contained the details and results of laboratory quality assurance/quality control procedures that were performed on the samples. Analytical data were checked for completeness by a Farallon Project Scientist and data were then independently validated by Sayler Data Solutions, Inc. of Bothell, Washington.



Sayler Data Solutions, Inc. evaluated the groundwater data to assess whether the analytical results met the quality control/validation standards described in the 2010 GWMP. These metrics included precision, accuracy, method compliance, and completeness of the data set. Validation results were then used to evaluate whether the data were suitable for their intended use.

Data validation procedures, criteria, and findings are provided in Appendix B. Procedures used in the data validation are based on U.S. Environmental Protection Agency (EPA) (2008) guidelines for organic methods data review.



#### 4.0 RESULTS AND DISCUSSION

This section presents a summary and evaluation of results from the groundwater monitoring during the Reporting Period.

#### 4.1 GROUNDWATER LEVELS

Table 4 summarizes the frequency of groundwater level elevation gauging at Site locations. With the exception of monitoring wells associated with the HCC system, locations are gauged on a quarterly schedule, with additional locations gauged during the semiannual monitoring events in March and September. Table 5 presents the groundwater elevation and LNAPL thickness measurements obtained during the Reporting Period. Groundwater flow direction, variations in groundwater elevations and LNAPL thickness, and changes in groundwater gradients in relation to seasonal variations and remediation activities are discussed below.

Quarterly and semiannual groundwater surface elevation maps for the Reporting Period are shown on Figures 2 through 5. As shown on these figures, the groundwater flow direction is generally consistent, given seasonal variation and periodic adjustments to pumping rates along the HCC system barrier wall. Groundwater elevations did fluctuate seasonally by approximately 5.5 feet (ranging from 3.52 to 7.63 feet) in piezometers adjacent to and south of the HCC system barrier wall, and by approximately 1.5 (ranging from 0.11 to 3.03) feet adjacent to and north of the HCC system barrier wall, with some influence imparted by HCC system pumping rates. The difference in groundwater elevations from north to south across the central part of the HCC system barrier wall varied between approximately 5.4 feet in March 2014 and approximately 2.1 feet in September 2014 as measured in piezometers. Flow in this area is influenced by seasonal variations and HCC pumping system rates. South of the HCC system barrier wall, groundwater flow is predominantly toward the northwest or west. North of the HCC system barrier wall, groundwater typically flows to the northwest in the direction of the Skykomish River. The HCC system barrier wall acts as a barrier to groundwater flow and accentuates a westerly component to groundwater flow in the area of the HCC system barrier wall. Localized groundwater depressions are present near the HCC system barrier wall gates due to the variance in groundwater elevations between the up- and down-gradient sides of the HCC barrier wall and pumping of recovery wells on the up-gradient side of the HCC system barrier wall.

Groundwater surface elevation maps continue to show that groundwater elevations are lower in the Levee Zone due in part to the presence of impermeable liner/barrier systems along the upgradient boundaries (south and east) of the prior Levee Zone excavations in 2006 and subsequently in 2010 and 2013. The extent of the original liner/barrier system is described in the Levee Zone Interim Action for Cleanup - 2007 As-Built Completion Report, Former Maintenance and Fueling Facility – Skykomish, Washington dated August 2007, prepared by ENSR (2007). Excavation at the Skykomish School in June, July, and August 2013 occurred in the area of the underground liner which was replaced along the eastern and southern extents of the 2013



excavation. The Skykomish School excavation work is described in the 2013 As-Built Completion Report prepared by Farallon (2014a).

#### 4.2 FIELD PARAMETERS

Table 6 presents the stabilized field parameter measurements collected during the monthly, quarterly, and semiannual groundwater sampling events from each of the wells that did not contain LNAPL. Each field parameter is discussed separately below.

#### 4.2.1 pH

The average pH of groundwater across the Site during the Reporting Period was 6.07. The minimum pH was 4.97 at monitoring well 5-W-43 and the maximum pH was 7.24 at monitoring well 5-W-15, both during the September 2014 event. The average, minimum, and maximum pH measurements were consistent with past measurements at the Site.

#### 4.2.2 Temperature

The average temperature of groundwater during the Reporting Period was 10.47 degrees Celsius (°C). The minimum temperature was 4.76°C at monitoring well 5-W-50 during the March 2014 event, and the maximum temperature was 19.09°C at monitoring well GW-1 during the September 2014 event. The groundwater temperatures recorded varied seasonally consistent with prior monitoring events at the Site.

#### 4.2.3 Dissolved Oxygen

The average dissolved oxygen (DO) concentration in groundwater across the Site during the Reporting Period was 2.71 milligrams per liter (mg/l). DO levels ranged from a minimum of 0.089 mg/l at monitoring well EW-1 during the September 2014 event to a maximum of 9.42 mg/l measured at monitoring well IB-W-23 during the December 2014 event. In general, monitoring wells with no detected petroleum hydrocarbon compounds exhibited higher concentrations of DO than monitoring wells with detected petroleum hydrocarbon compounds, indicating that some biodegradation is occurring. These measurements are consistent with historical values.

#### 4.2.4 Oxidation-Reduction Potential

The average oxidation-reduction potential (ORP) in groundwater across the Site during the Reporting Period was 146.3 millivolts (mV). The minimum ORP value was -213.5 mV at monitoring well 5-W-50 during the September 2014 event and the maximum was 962.5 mV at monitoring well 5-W-19 during the December 2014 event. ORP in groundwater at the Site is most-commonly positive. A positive ORP and DO in excess of approximately 1 mg/l indicates that conditions are conducive to aerobic degradation of petroleum hydrocarbons. These measurements were consistent with historical values, with the exception of the maximum ORP value of 962.5 mV which is almost twice the highest recorded value at the Site since 2010.



#### 4.2.5 Turbidity

The mean turbidity value in groundwater across the Site during the Reporting Period was 14.4 nephelometric turbidity units (NTU). Turbidity values ranged from 0 NTU at 25 monitoring wells in 2014, to a maximum of 63.4 NTU measured at monitoring well 5-W-56 during the March 2014 event. Approximately 94 percent of the turbidity measurements during this reporting period were below 25 NTU. In the previous groundwater monitoring report, approximately 88 percent of the turbidity measurements were below 25 NTU. As noted in the two groundwater monitoring reports prepared prior to the 2014 Reporting Period, about 90 percent of the turbidity measurements were below 10 NTU.

#### 4.3 NWTPH-DX

#### 4.3.1 Applicable Groundwater Cleanup and Remediation Levels

The groundwater cleanup level (CUL) for TPH measured using NWTPH-Dx is 208 micrograms per liter ( $\mu$ g/l) and the remediation level (RL) is 477  $\mu$ g/l as specified in Section 3.4 and Table 1 of the CAP. The CAP anticipates that CULs will be attained at the CPOC following implementation of all cleanup actions specified in the CAP. The approximate CPOC boundary is shown on Figure 6 of the CAP. As described in the CAP, the CUL for petroleum hydrocarbons in groundwater is intended to protect sediments from recontamination by groundwater (e.g., near the South Fork Skykomish River and Former Maloney Creek) and the RL for petroleum hydrocarbons in groundwater is intended to be protective of drinking water resources.

#### 4.3.2 Analytical Results

Petroleum hydrocarbon concentrations in groundwater were analyzed using Northwest Method NWTPH-Dx with no silica gel cleanup. DRO and ORO hydrocarbon fractions were added together to calculate a total NWTPH-Dx petroleum hydrocarbon concentration. If both DRO and ORO fractions were detected, NWTPH-Dx was calculated to be the sum of both detected concentrations. If either the DRO or the ORO fractions were not detected at or above the MDL, half of the MDL value was used to represent the non-detected component in the NWTPH-Dx summation which was then denoted as detected. If both components were not detected at or above the MDL, half of the MDL value of both components was added to represent the NWTPH-Dx reporting value that was then denoted as not detected. Table 7 shows NWTPH-Dx results and the calculated NWTPH-Dx concentrations. Figures 6 through 9 depict the groundwater NWTPH-Dx concentrations on Site plan maps for the two quarterly and the two semiannual monitoring events conducted during the Reporting Period, and also show the estimated extent of LNAPL present at the Site.

Site-wide groundwater sampling was conducted on a semiannual schedule (March and September). In addition, select wells down-gradient of the HCC system, adjacent to the Former Maloney Creek Zone-East Wetland, the Levee Zone, and the HCC system gate and end wells were sampled on a quarterly schedule (June and December in addition to the semiannual monitoring in March and September). Air sparging system wells were monitored and sampled on a monthly schedule through June 2014 and on a quarterly basis thereafter.



Provided in the following sections is a discussion of the results of the semiannual Site-wide events (March and September 2014). Subsequent discussions pertain to results of more frequent monitoring events. Trend plots showing historical NWTPH-Dx groundwater monitoring results for the monitoring wells included in the current monitoring well network are provided in Appendix C.

#### 4.3.3 Results from Semiannual Site-Wide Groundwater Monitoring Events

A total of 56 monitoring locations were used for groundwater sampling during the March and September 2014 semiannual groundwater monitoring events (Table 3). In general, groundwater samples were not collected if monitoring wells contained LNAPL or traces of LNAPL.

Monitoring well 5-W-51 was planned for semiannual groundwater sampling but was not sampled during the Reporting Period because it contained traces of LNAPL during both semiannual monitoring events. LNAPL has historically been measured in monitoring well 5-W-51 with the highest accumulations noted during elevated groundwater conditions in March and smallest accumulation during low groundwater conditions in September. During the prior 2013 reporting period, LNAPL accumulations were measured in monitoring well 5-W-51 with thicknesses measured at 0.80 inch and 0.02 inch for the March and September 2013 monitoring events, respectively. Monitoring well 2A-W-9 was planned for quarterly and semiannual groundwater sampling during the Reporting Period but was inadvertently omitted during the September semiannual monitoring event. Monitoring well 2A-W-9 was noted to contain a light trace of LNAPL during the June monitoring event.

The Site-wide discussion below pertains to data collected during the March and September 2014 semiannual groundwater monitoring events at all sampled locations, with the exception of the air sparging system monitoring wells and the HCC system monitoring wells which are discussed separately below in Sections 4.3.4 and 4.3.5, respectively. NWTPH-Dx results from the March and September 2014 semiannual monitoring events are shown on Figures 6 and 8 as NWTPH-Dx, and the analytical results are presented in Table 7.

#### 4.3.3.1 March 2014

The March 2014 semiannual groundwater monitoring event occurred from March 17 through 20, 2014. Groundwater samples were collected from 26 monitoring wells at the Site (not including air sparging area and HCC system wells) during this Reporting Period. NWTPH-Dx was detected in 22 of the 26 groundwater samples collected during the March 2014 monitoring event. Detected NWTPH-Dx concentrations ranged from 16.9 to 3,500  $\mu$ g/l, five of which exceeded the RL of 477  $\mu$ g/l.

In March 2014, NWTPH-Dx RL exceedances occurred in groundwater samples collected from monitoring wells 5-W-15, 5-W-50, 5-W-56, 2A-W-9, and 2A-W-10. The RL exceedances in groundwater samples collected from monitoring well 5-W-15 in 6<sup>th</sup> Street and in monitoring wells 5-W-50 and 5-W-56 at the Skykomish School occurred at locations proximate to a residual LNAPL plume at the Skykomish School. NWTPH-Dx



was detected at a concentration of 680 µg/l in the groundwater sample collected from monitoring well 5-W-15. NWTPH-Dx was detected at a concentration of 830 µg/l during the prior March 2013 monitoring event with detected concentrations ranging between 350 and 830 µg/l in groundwater samples collected from monitoring well 5-W-15 during the prior 2013 reporting period. LNAPL accumulations have not been observed in monitoring well 5-W-15. NWTPH-Dx was detected at a concentration of 1,150 µg/l in the groundwater sample collected from monitoring well 5-W-50 in March 2014. NWTPH-Dx was detected at a concentration of 1,960 µg/l during the March 2013 event with concentrations ranging between 1,960 and 2,260 µg/l in groundwater samples collected from monitoring well 5-W-50 during the prior 2013 reporting period. LNAPL accumulations have not been observed in monitoring well 5-W-50. NWTPH-Dx was detected at a concentration of 3,500 µg/l in the groundwater sample collected from monitoring well 5-W-56 in March 2014. NWTPH-Dx was not detected at concentrations at or exceeding the MDLs during the March 2013 event, but was detected at a concentration of 2,620 µg/l in the groundwater sample collected from monitoring well 5-W-56 during September 2013. LNAPL accumulations have not been observed in monitoring well 5-W-56. During the March 2014 monitoring event, a light trace of LNAPL was observed in monitoring well 5-W-51, approximately 80 feet south of monitoring wells 5-W-15 and 5-W-50. During the prior 2013 reporting period, RL exceedances also occurred during the March semiannual monitoring event in the vicinity of the Skykomish School (monitoring wells 5-W-15 and 5-W-50).

NWTPH-Dx RL exceedances occurred in groundwater samples collected from monitoring wells 2A-W-9 and 2A-W-10 in the railyard near a former LNAPL area during March 2014. During the March 2014 monitoring event, NWTPH-Dx was detected at a concentration of 960  $\mu$ g/l in the groundwater sample collected from monitoring well 2A-W-9. NWTPH-Dx was detected at a concentration of 1,370  $\mu$ g/l during the March 2013 event with concentrations ranging between 260 and 1,370  $\mu$ g/l in groundwater samples collected from monitoring well 2A-W-9 during the prior 2013 reporting period. NWTPH-Dx was detected at a concentration of 850  $\mu$ g/l in the groundwater sample collected from monitoring well 2A-W-10 in March 2014. NWTPH-Dx was calculated to be 980  $\mu$ g/l during the March 2013 event with concentrations ranging from not detected at or exceeding the MDLs to 980  $\mu$ g/l in groundwater samples collected from monitoring well 2A-W-10 during the prior 2013 reporting period.

As discussed below in Section 4.3.6, during the March 2014 groundwater monitoring event, groundwater samples were collected from Levee Zone monitoring wells 5-W-14 through 5-W-19. With the exception of monitoring well 5-W-15 discussed above, NWTPH-Dx was not detected at concentrations exceeding the RL in the Levee Zone monitoring wells during the March 2014 monitoring event. NWTPH-Dx was not detected in monitoring wells 5-W-14 and 5-W-19 during the March 2014 groundwater monitoring event.



#### 4.3.3.2 September 2014

The September 2014 semiannual groundwater monitoring event occurred from September 15 through 18, 2014. Groundwater samples were collected from 25 monitoring wells at the Site (not including air sparging area and HCC system wells) during this Reporting Period. As noted previously, monitoring well 2A-W-9 was gauged but was inadvertently omitted during sampling for the September 2014 monitoring event. NWTPH-Dx was detected in 12 of the 25 groundwater samples collected during September 2014 monitoring as discussed below.

In September 2014, NWTPH-Dx detections and RL exceedances occurred in groundwater samples collected from monitoring wells 5-W-15, 5-W-50, and 5-W-56 in the vicinity of the Skykomish School. NWTPH-Dx was detected at a concentration of 590 µg/l in the groundwater sample collected from monitoring well 5-W-15. NWTPH-Dx was detected at a concentration of 1,720 µg/l in the groundwater sample collected from monitoring well 5-W-50. NWTPH-Dx was detected at a concentration of 2,260 μg/l during the September 2013 event with concentrations of 1,960 and 2,260 μg/l in groundwater samples collected from monitoring well 5-W-50 during the prior 2013 reporting period. NWTPH-Dx was detected at a concentration of 2,210 µg/l in the groundwater sample collected from monitoring well 5-W-56 in September 2014. NWTPH-Dx was detected at a concentration of 2,620 µg/l during the September 2013 monitoring event at this location. Monitoring wells 5-W-50 and 5-W-56 are proximate to a residual LNAPL plume. During this monitoring event, a heavy trace of LNAPL was noted approximately 80 feet south and southeast of monitoring wells 5-W-50 and 5-W-56 in monitoring well 5-W-51. During the prior 2013 reporting period, RL exceedances also occurred in groundwater samples collected during the September semiannual monitoring event in the vicinity of the Skykomish School (monitoring wells 5-W-50 and 5-W-56).

#### 4.3.4 Air Sparging System Monitoring

With Ecology concurrence, operation of the air sparging system was discontinued in May 2013 with air sparge area groundwater monitoring continuing on a monthly schedule. Groundwater samples were collected from air sparging system monitoring wells 1B-W-3, 1C-W-7, and 1C-W-8 on a monthly basis through June 2014. Based on the results of the groundwater monitoring conducted through June 2014, the three air sparge area monitoring wells were transitioned to a quarterly monitoring schedule beginning with the semiannual groundwater monitoring event in September 2014.

NWTPH-Dx results from the monitoring events in the air sparge area are shown on Figures 6 through 9 (for the quarterly and semiannual sampling events) and in Table 7 (six monthly events and two quarterly events). A total of 24 groundwater samples were collected from the air sparging system monitoring wells during the Reporting Period. NWTPH-Dx was detected in 23 of the 24 groundwater samples. Detected NWTPH-Dx concentrations in the samples downgradient of the air sparge area (monitoring wells 1C-W-8 and 1B-W-3) ranged from not detected at concentrations at or exceeding the MDLs to 460 µg/l. The calculated NWTPH-Dx



concentrations did not exceed the RL in groundwater samples collected from the air sparge area monitoring wells in the Reporting Period. Groundwater NWTPH-Dx concentrations have not exceeded the RL at monitoring well 1C-W-8 since November 2013, and have been less than the CUL since March 2014. NWTPH-Dx concentrations have been consistently less than the CUL at monitoring well 1B-W-3 since September 2008.

#### 4.3.5 Hydraulic Control and Containment System

The following sections summarize the groundwater analytical results from wells that monitor the HCC system and adjacent areas. Quarterly monitoring was completed during the Reporting Period for the HCC system monitoring wells in the HCC system backfill and down-gradient of the HCC system barrier wall, and for the HCC system end and gate monitoring wells. NWTPH-Dx groundwater samples collected from HCC system monitoring wells did not exceed the RL during the Reporting Period. NWTPH-Dx results for groundwater samples collected during the Reporting Period are shown on Figures 6 through 9 and in Table 7. The results from the HCC system well monitoring events are described and evaluated further in the 2014 Annual Hydraulic Control and Containment System Operations Report being prepared by Farallon (2015c).

#### 4.3.5.1 Backfill and Down-gradient of the HCC

Groundwater samples were collected quarterly from groundwater monitoring wells within the backfill placed during the HCC system barrier wall construction and downgradient of the HCC system barrier wall at monitoring wells 1B-W-23, 1C-W-7, 2A-W-40, 2A-W-41, 2A-W-42, and 5-W-43. An exception to the quarterly sampling frequency was monitoring well 1C-W-7, which was sampled monthly from January through June 2015 then quarterly in September and December 2015 because it is also used to monitor the effectiveness of the air sparging system. A total of 28 groundwater samples were collected throughout the Reporting Period from the six backfill and down-gradient monitoring wells and NWTPH-Dx was detected in 25 of the 28 groundwater samples. Detected calculated NWTPH-Dx concentrations in the groundwater samples ranged from 18 to 310  $\mu$ g/l. Of the 25 groundwater samples with detected NWTPH-Dx, NWTPH-Dx was not detected at concentrations exceeding the RL. NWTPH-Dx concentrations did not exceed the RL in groundwater samples collected from monitoring well 2A-W-42 during the 2014 monitoring events, and have exceeded the RL only once since January 2009.

#### **4.3.5.2** HCC System Performance

Groundwater samples were collected quarterly throughout the Reporting Period from monitoring wells EW-1 and EW-2A located at the west and east ends of the HCC system barrier wall, respectively. NWTPH-Dx was detected in each of the groundwater samples collected from monitoring well EW-1 on the west end of the HCC system barrier wall at concentrations ranging from 50 to 110  $\mu$ g/l, and in three of the four groundwater samples collected from monitoring well EW-2A at the east end of the HCC system barrier wall (not detected during the September 2014 monitoring event) at concentrations ranging



from 46 to 112  $\mu$ g/l. NWTPH-Dx concentrations were consistently less than the CUL in groundwater samples collected from these locations during 2014.

Groundwater samples were collected quarterly during the Reporting Period from gate monitoring wells GW-1 through GW-4. A total of 16 groundwater samples were collected from these four locations during the Reporting Period. NWTPH-Dx was detected in each of the 16 samples. Calculated NWTPH-Dx concentrations were detected at concentrations from 21 to 440  $\mu$ g/l in these 16 groundwater samples and did not exceed the RL.

Groundwater samples were collected from the gate sentry wells during the semiannual monitoring events in March and September 2014. The sentry wells are intended to enable monitoring of petroleum hydrocarbon concentrations in the reactive material in each gate to evaluate treatment capacity and exhaustion rates. Petroleum hydrocarbon constituents in groundwater at these locations are removed by the reactive media. Therefore, these results are not representative of Site groundwater conditions, and are not evaluated in this report. The groundwater results for the semiannual events are presented in Table 7 for reference.

HCC system operations occasionally were interrupted for short periods of time to perform maintenance, change out GAC, optimize system parameters, make repairs, perform pilot testing, or due to power outages. The HCC System was shut down on October 18 and restarted on October 23, 2014 for HCC optimization pilot testing. Although the shutdown from October 18 through October 23 extended longer than 48 hours, Ecology had agreed in an e-mail dated September 12, 2014 to exempt this activity from the requirement to sample the sentry wells after a shutdown lasting longer than 48 hours (Ecology 2014).

Several other shutdown events, which did not last longer than 48 hours, occurred in 2014 primarily related to power outages, GAC change-outs, or miscellaneous system repairs.

#### 4.3.6 Levee Zone

Results of groundwater sampling of Levee Zone monitoring wells 5-W-14 to 5-W-19 during the semiannual groundwater monitoring events in March and September 2014 are summarized above in Section 4.3.3. This section presents results for all four quarters including the March and September 2014 semiannual groundwater monitoring events.

Groundwater samples were collected quarterly during the Reporting Period from Levee Zone monitoring wells 5-W-14 through 5-W-19. NWTPH-Dx results from these quarterly events are shown on Figures 6 through 9, and the analytical results are presented in Table 7. A total of 24 groundwater samples were collected from Levee Zone monitoring wells during the Reporting Period. NWTPH-Dx was detected at concentrations between 16.9 to 680  $\mu$ g/l in 11 of the 24 groundwater samples. NWTPH-Dx was detected in excess of the CUL in groundwater samples collected from two of the six Levee Zone monitoring wells, including monitoring well 5-W-15



(680, 350, 590, and 370  $\mu$ g/l during the March, June, and December 2014 monitoring events, respectively); and 5-W-18 (230 and 235  $\mu$ g/l during the March and December 2014 monitoring events, respectively). NWTPH-Dx was detected in excess of the RL in the groundwater samples collected from monitoring well 5-W-15 during the March and December 2014 monitoring events.

Monitoring well 5-W-15 is located within the 2006 interim cleanup action area, and both monitoring wells 5-W-15 and 5-W-18 are proximate to the Skykomish School where accumulations of LNAPL have been measured. NWTPH-Dx has not been detected at concentrations exceeding either the CUL or the RL in Levee Zone monitoring wells 5-W-14, 5-W-16, 5-W-17, and 5-W-19.

#### 4.3.7 Former Maloney Creek Zone – East Wetland and Surrounding Area

Groundwater samples were collected quarterly from monitoring wells 2A-W-9, 2A-W-10, 2B-W-4, MW-3, and MW-4 adjacent to the Former Maloney Creek Zone-East Wetland during the Reporting Period. As discussed above, monitoring well 2A-W-9 was inadvertently omitted from sampling during the September 2014 monitoring event. NWTPH-Dx results from these events are presented in Table 7 and are shown on Figures 6 through 9.

A total of 19 groundwater samples were collected throughout the Reporting Period from the five Former Maloney Creek Zone groundwater monitoring locations. NWTPH-Dx was detected in 18 of the 19 samples collected during 2014. Detected NWTPH-Dx concentrations in these samples ranged from 16.3 to 1,310  $\mu$ g/l, with six of the seven samples from monitoring wells 2A-W-9 and 2A-W-10 exceeding the RL. There were no RL exceedances in the groundwater samples collected from the remaining three monitoring wells in the Former Maloney Creek Zone-East Wetland area.



#### 5.0 CONCLUSIONS

This report presents the results of groundwater monitoring performed during the 2014 Reporting Period. The groundwater elevation and analytical data collected throughout the Reporting Period were compared to previous monitoring data and the RL and CUL established for the Site. These data indicate that groundwater flow gradients are relatively consistent throughout the year and similar to gradients observed during previous monitoring events.

Site-wide analytical data collected during the Reporting Period indicate that the overall extent of the LNAPL and dissolved NWTPH-Dx plumes remained relatively stable. The estimated extent of LNAPL at the Site is depicted in Figures 6 through 9 for the four quarterly monitoring events in the Reporting Period and shows LNAPL thicknesses measured during each event and estimated extent of inferred LNAPL based on prior monitoring events. Thicknesses of LNAPL in excess of 4 feet were measured during the Reporting Period along sections of the south side of the HCC system barrier wall. Traces of LNAPL were measured in one monitoring well in the area proximate to the east side of the Skykomish School. The thickest accumulations were measured west of the Center Gate along the HCC system barrier wall and east of the West Gate. Heavy sheens were noted in recovery and monitoring wells in the railyard and within about 150 feet south of the thickest accumulations. As was the case in the 2013 Reporting Period, a sheen was noted in monitoring well MW-11 within about 150 feet south of the East Gate during three of the four quarterly monitoring events and, a trace was noted in monitoring well 2A-W-9 south of the railyard during the June 2014 monitoring event. LNAPL mobility is monitored as part of the HCC system operations (Farallon 2015).

Groundwater NWTPH-Dx concentrations during the Reporting Period exceeded the CUL of  $208\,\mu\text{g/l}$  and/or the RL of  $477\,\mu\text{g/l}$  at monitoring wells down-gradient of and immediately adjacent to areas currently or formerly containing LNAPL. A total of 36 wells were sampled (exclusive of the sentry wells), with samples from 34 monitoring wells collected during the Reporting Period having at least one detection of NWTPH-Dx. Of these detections, samples from two of the monitoring wells in the Levee Zone exceeded the CUL, and samples from five Site monitoring wells exceeded the RL as compared to eight during the prior 2013 Reporting Period. Two of these locations were in the former Maloney Creek Zone south of the railyard. The data do not indicate significant migration of LNAPL or changes in NWTPH-Dx concentrations during the Reporting Period. The data indicate that the HCC system is effectively preventing LNAPL and NWTPH-Dx from passing through the HCC system barrier gates.

Site-wide groundwater monitoring has been conducted quarterly at the Site since 2006 and nearly the entire Site cleanup has been performed with the exception of cleanup beneath the Skykomish School building. Treatment beneath the Skykomish School building using Hot Water Flushing will commence in 2015. Based on the results of the groundwater monitoring and sampling performed since 2006, BNSF proposes to modify the quarterly (June and December) groundwater monitoring events to focus the sampling and gauging activities in the areas proximate to the HCC barrier wall to ensure that established objectives for containment of



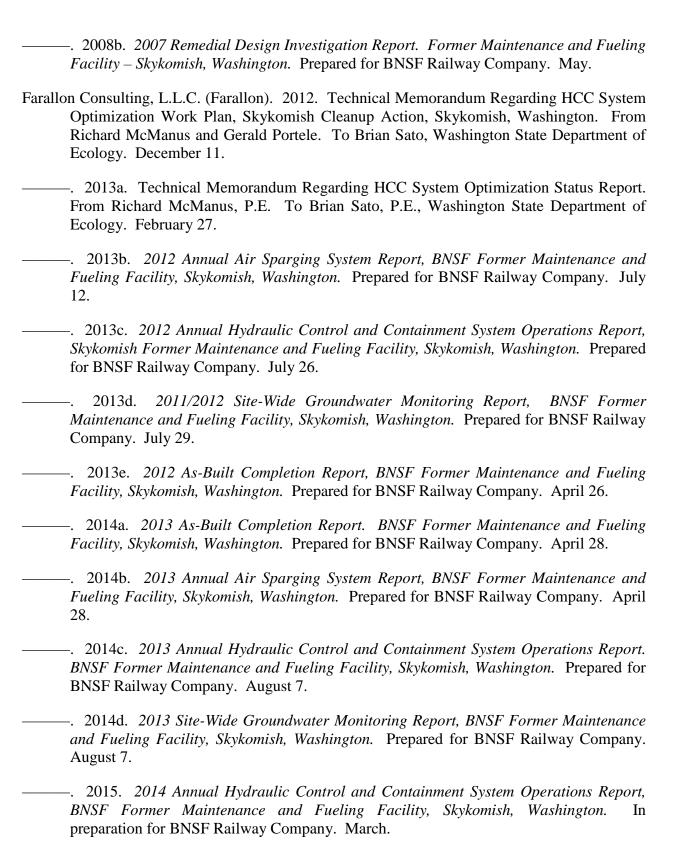
contaminated groundwater within the railyard are achieved. With Ecology concurrence, these modifications will be documented in an addendum to the Groundwater Monitoring Plan that has been prepared for the Site (AECOM 2010a). Upon completion of all cleanup actions specified in the CAP, groundwater monitoring will be conducted in accordance with a Long-Term Confirmational Monitoring Plan, which will be prepared and submitted to Ecology in accordance with Exhibit C of the Consent Decree. In advance of developing the Long-Term Confirmational Monitoring Plan, BNSF proposes the aforementioned change to the groundwater monitoring activities.



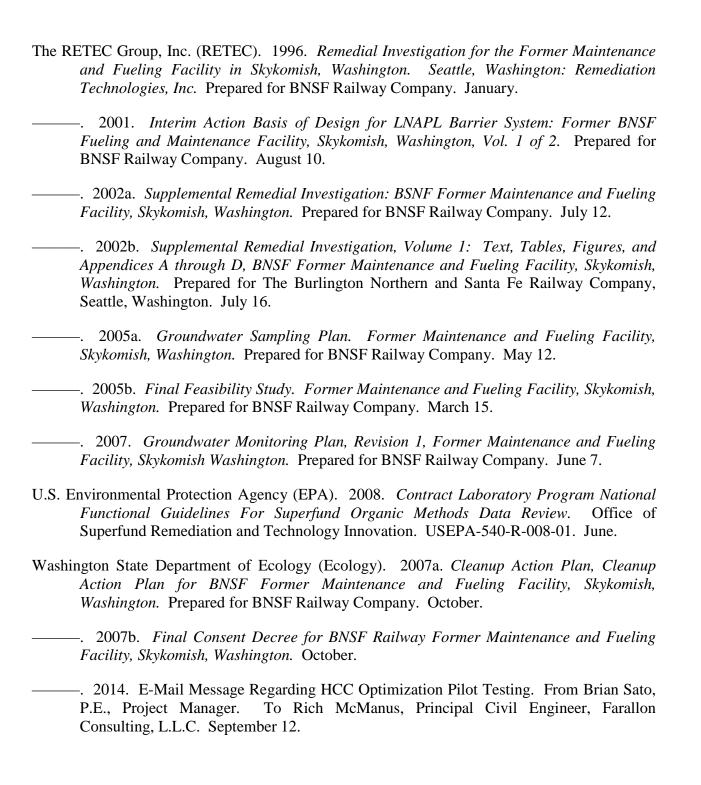
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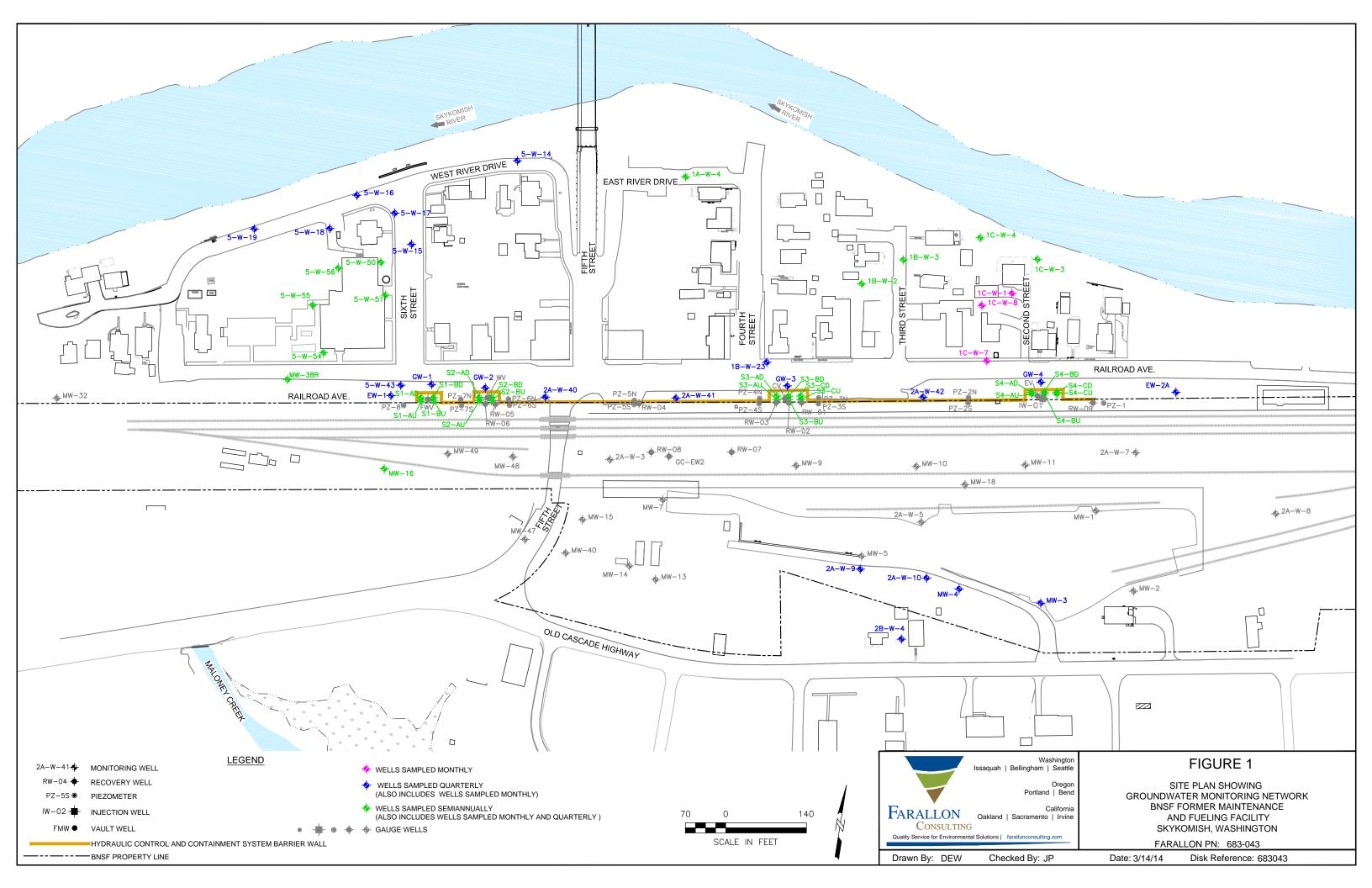


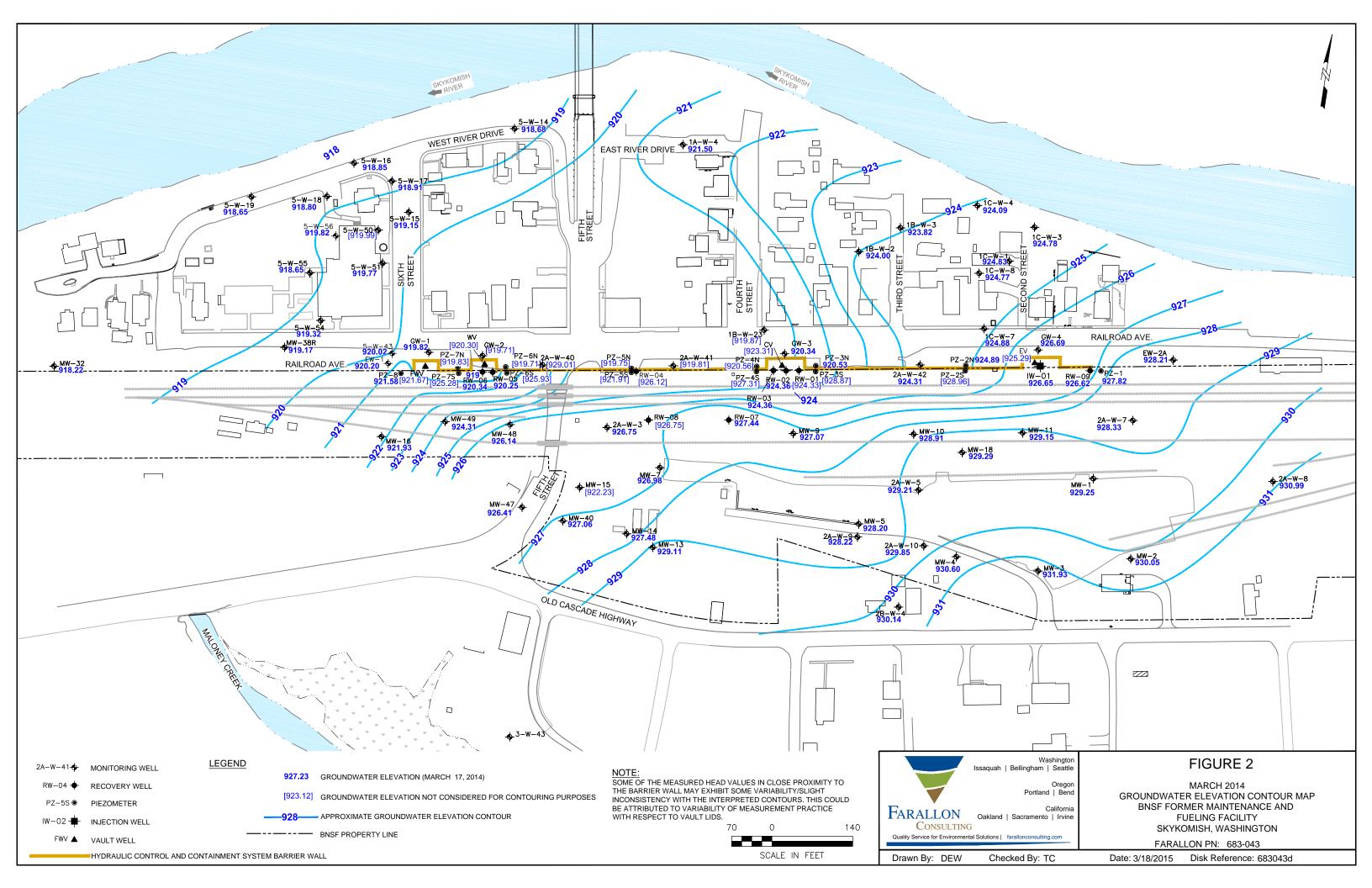


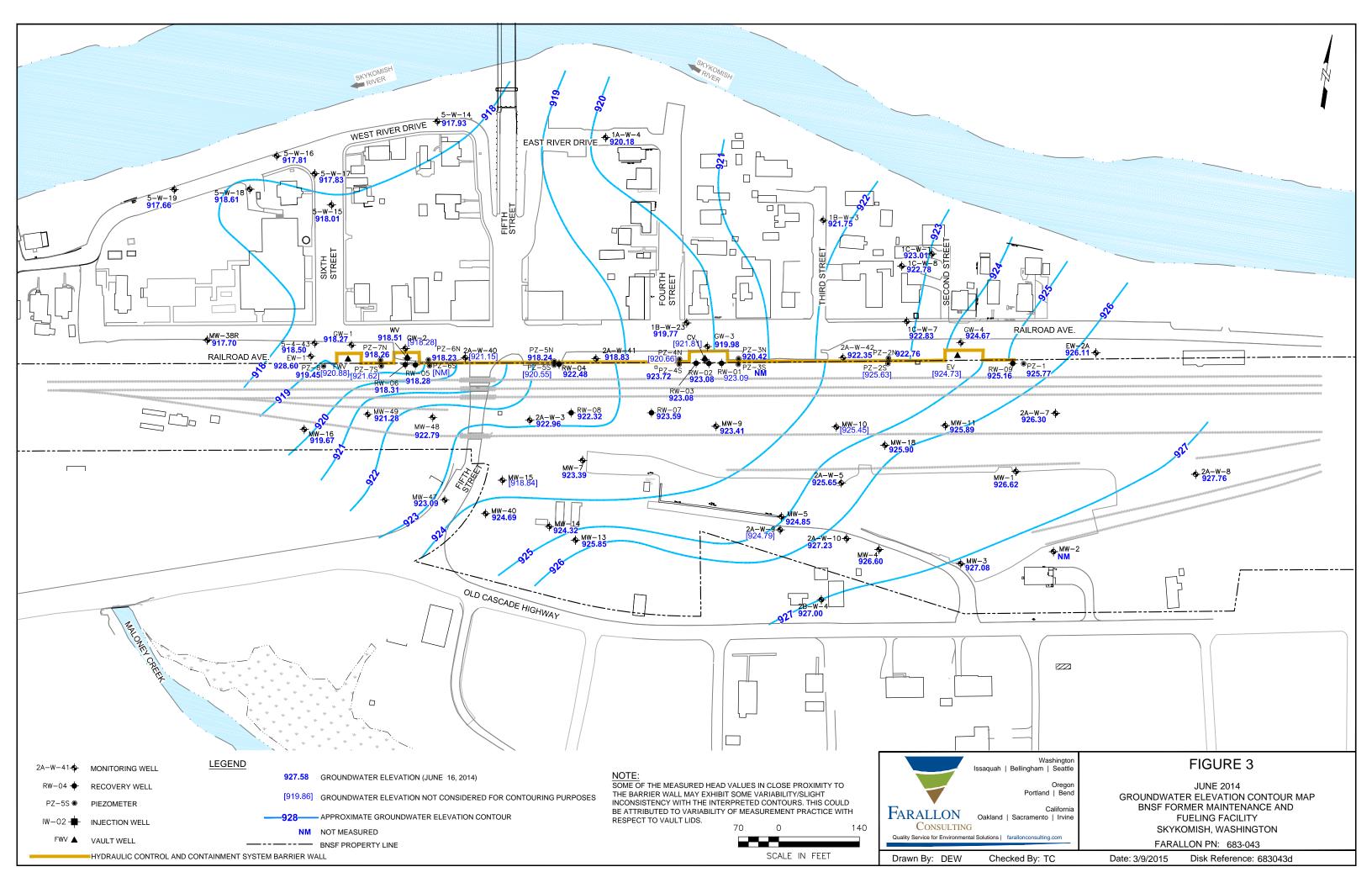
### **FIGURES**

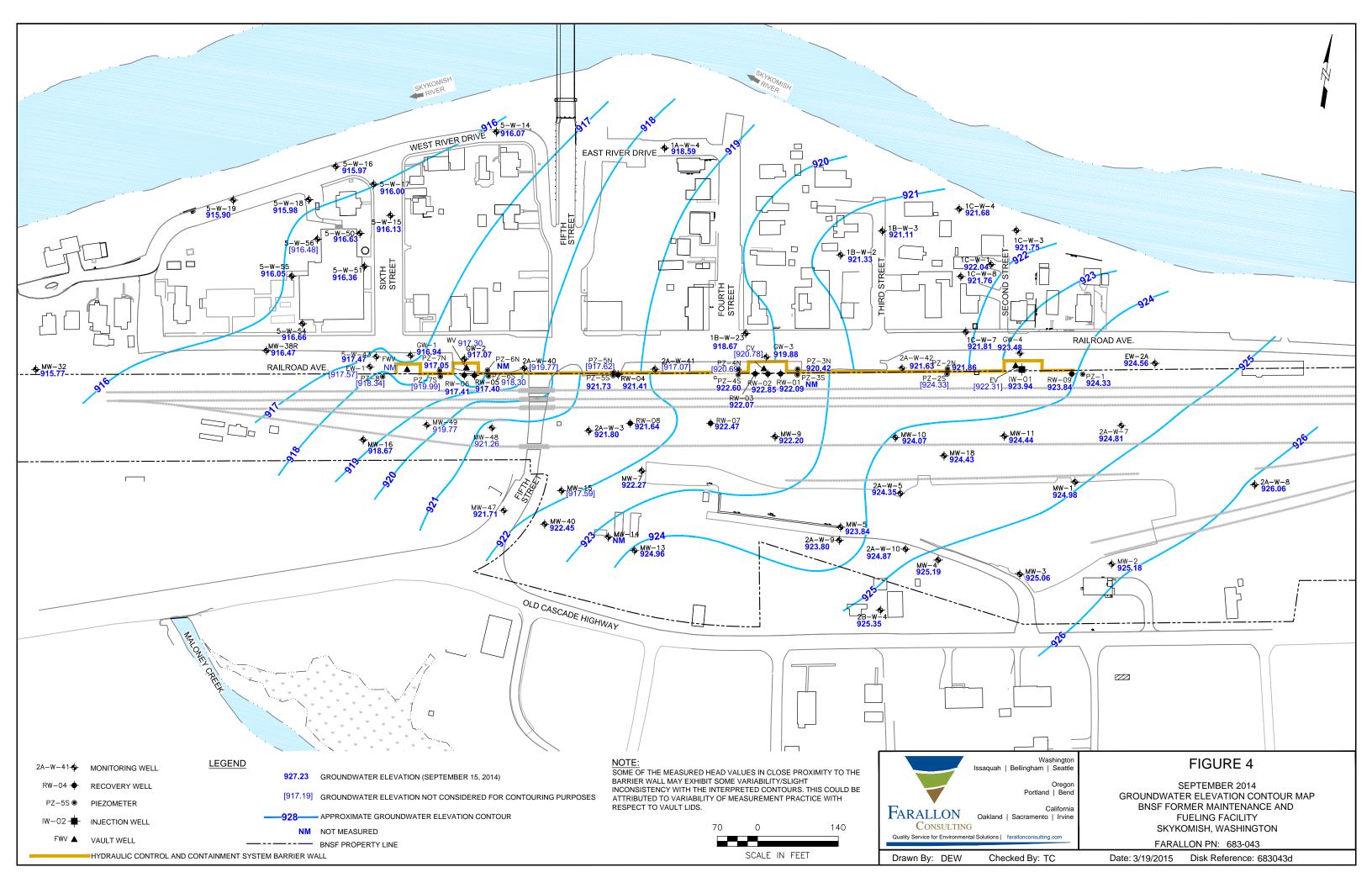
2014 SITE-WIDE GROUNDWATER MONITORING REPORT BNSF Former Maintenance and Fueling Facility Skykomish, Washington Consent Decree No. 07-2-33672-9 SEA

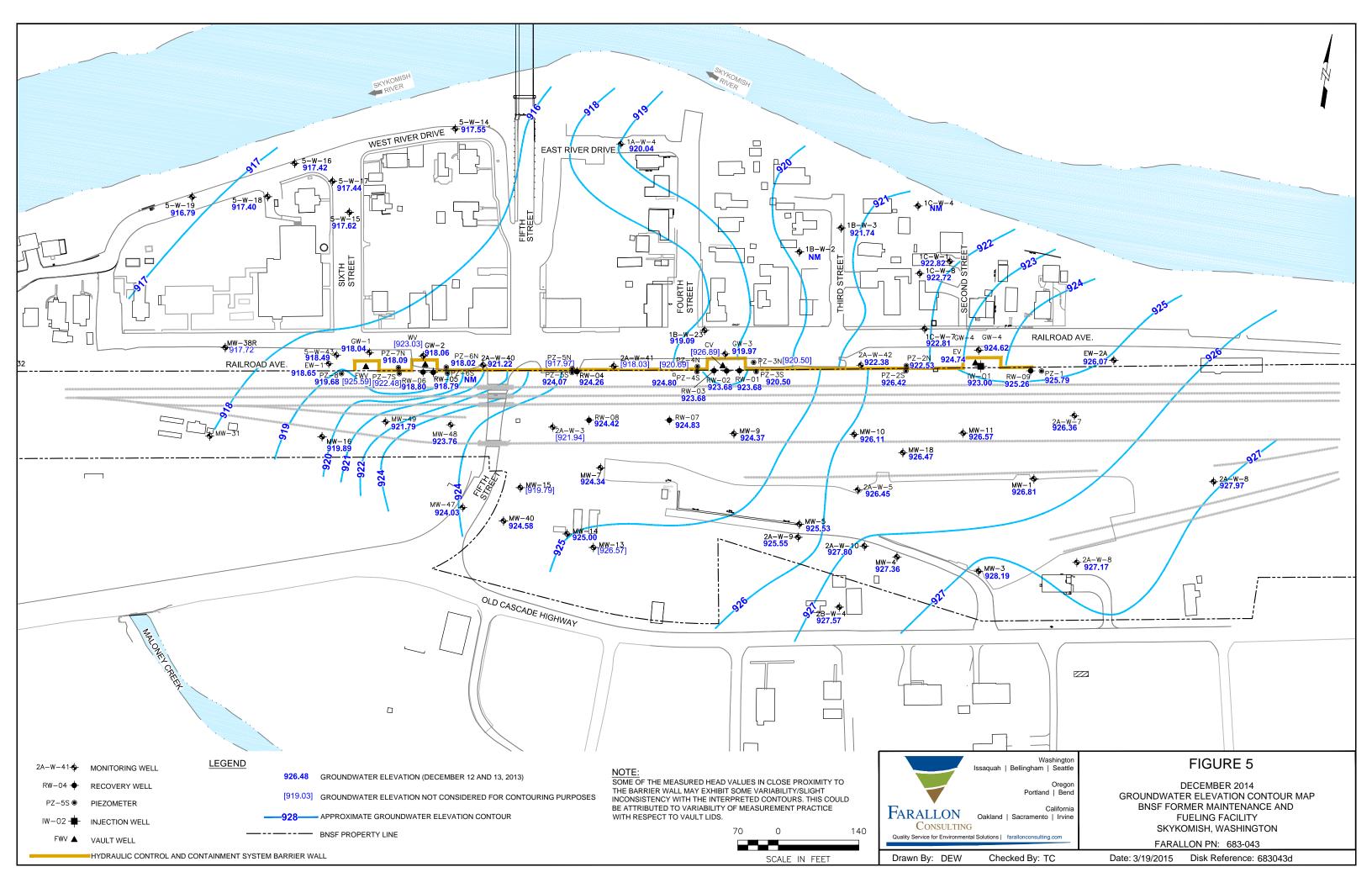
Farallon PN: 683-043

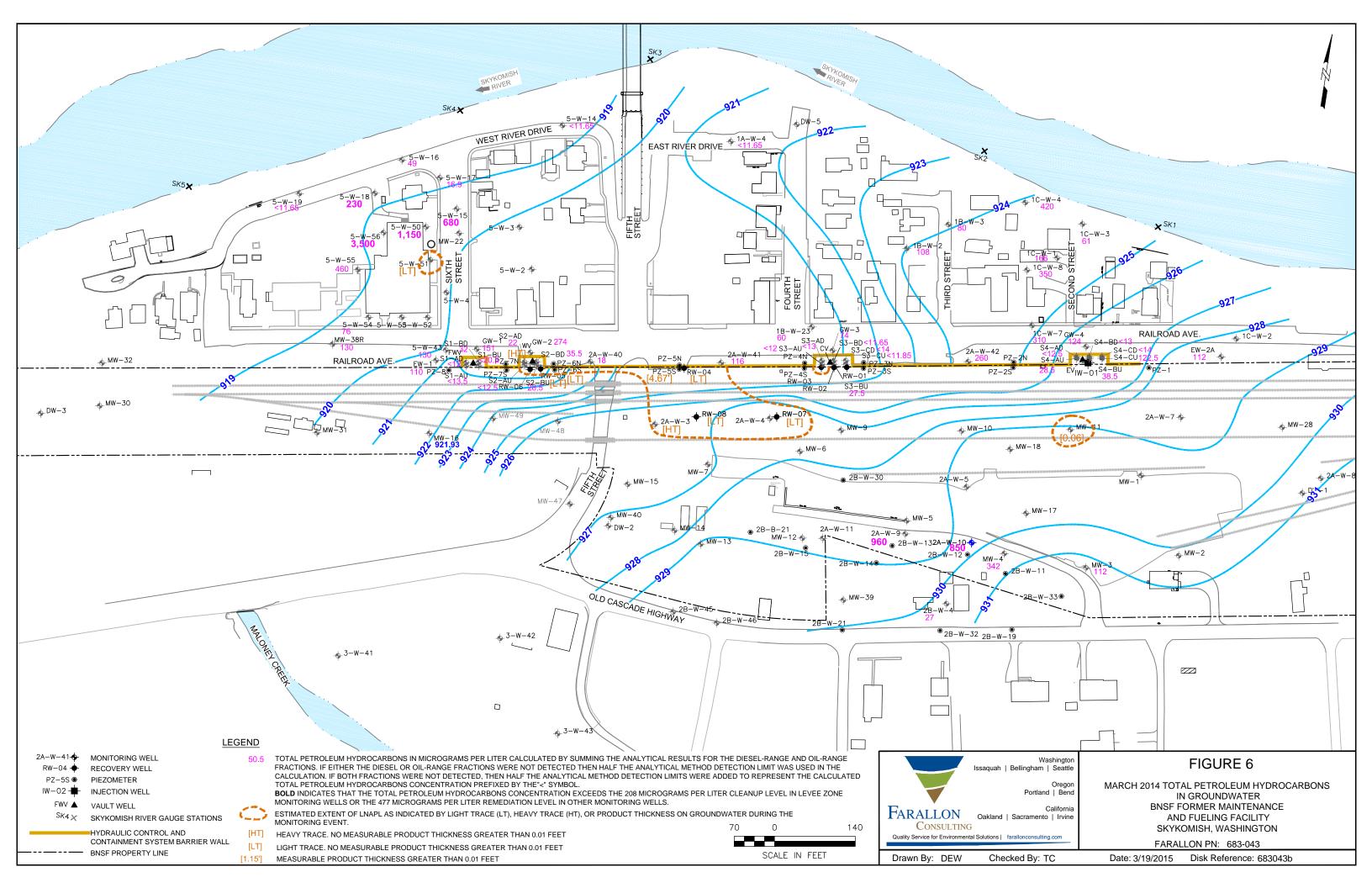


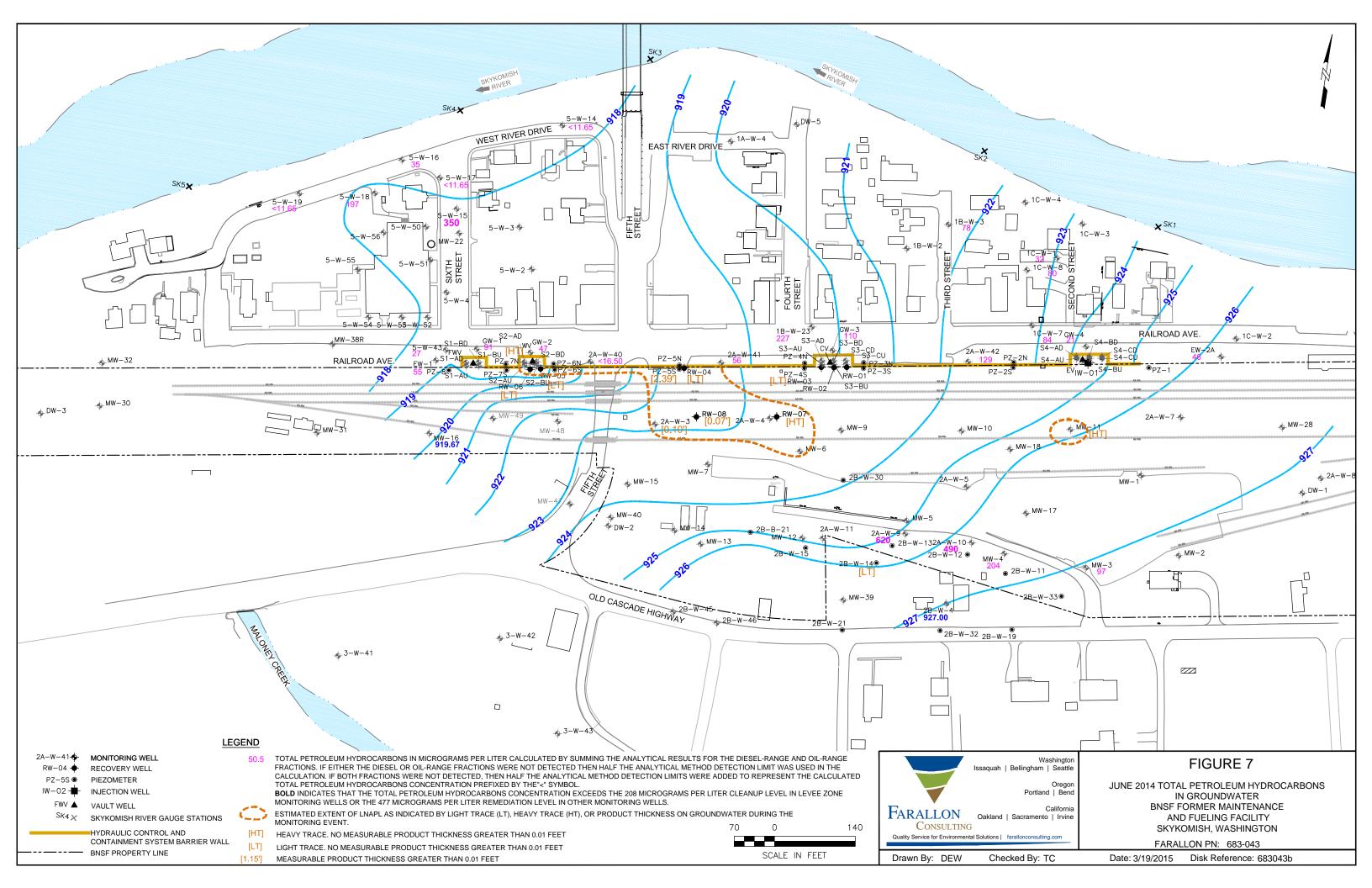


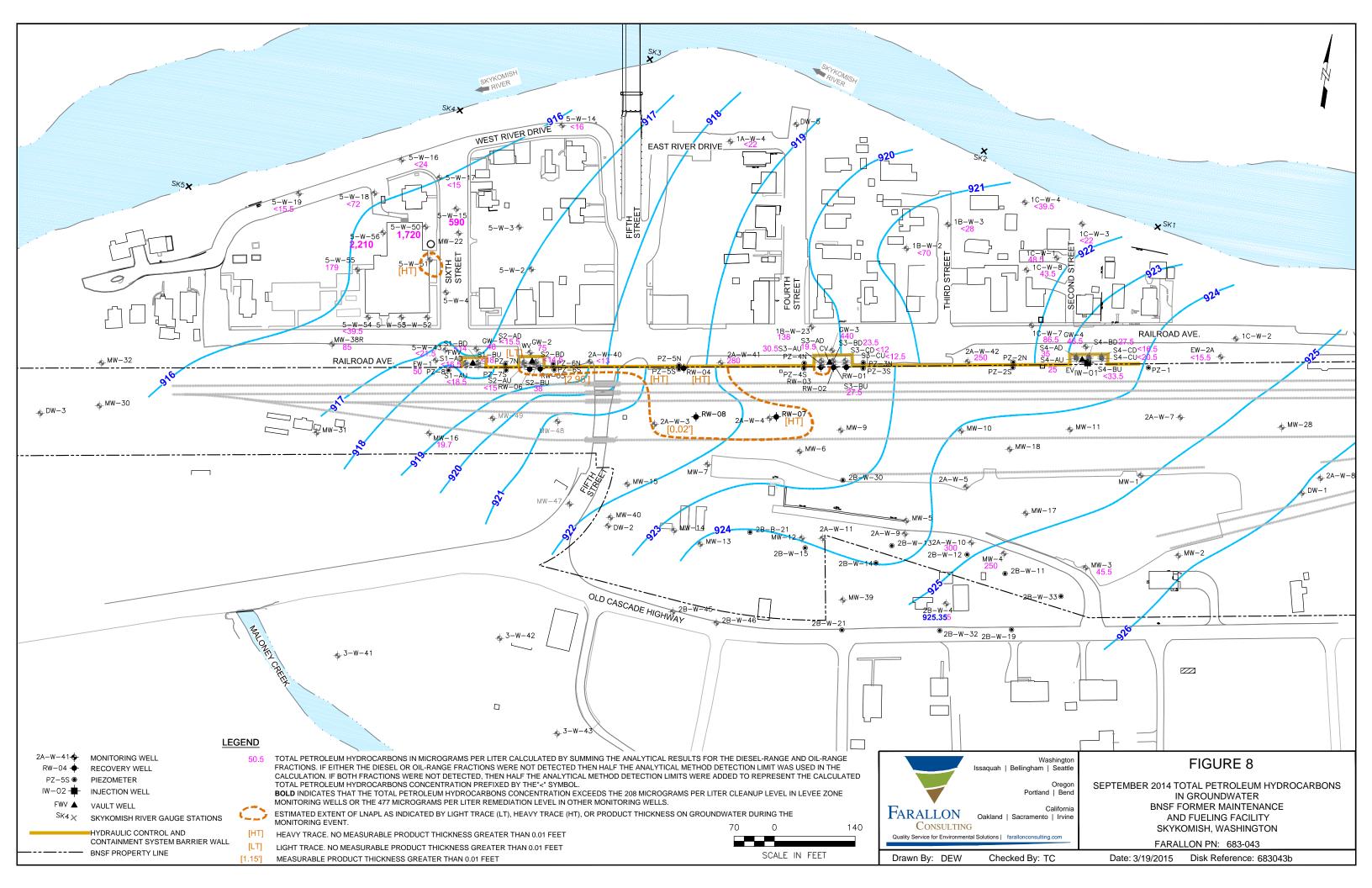


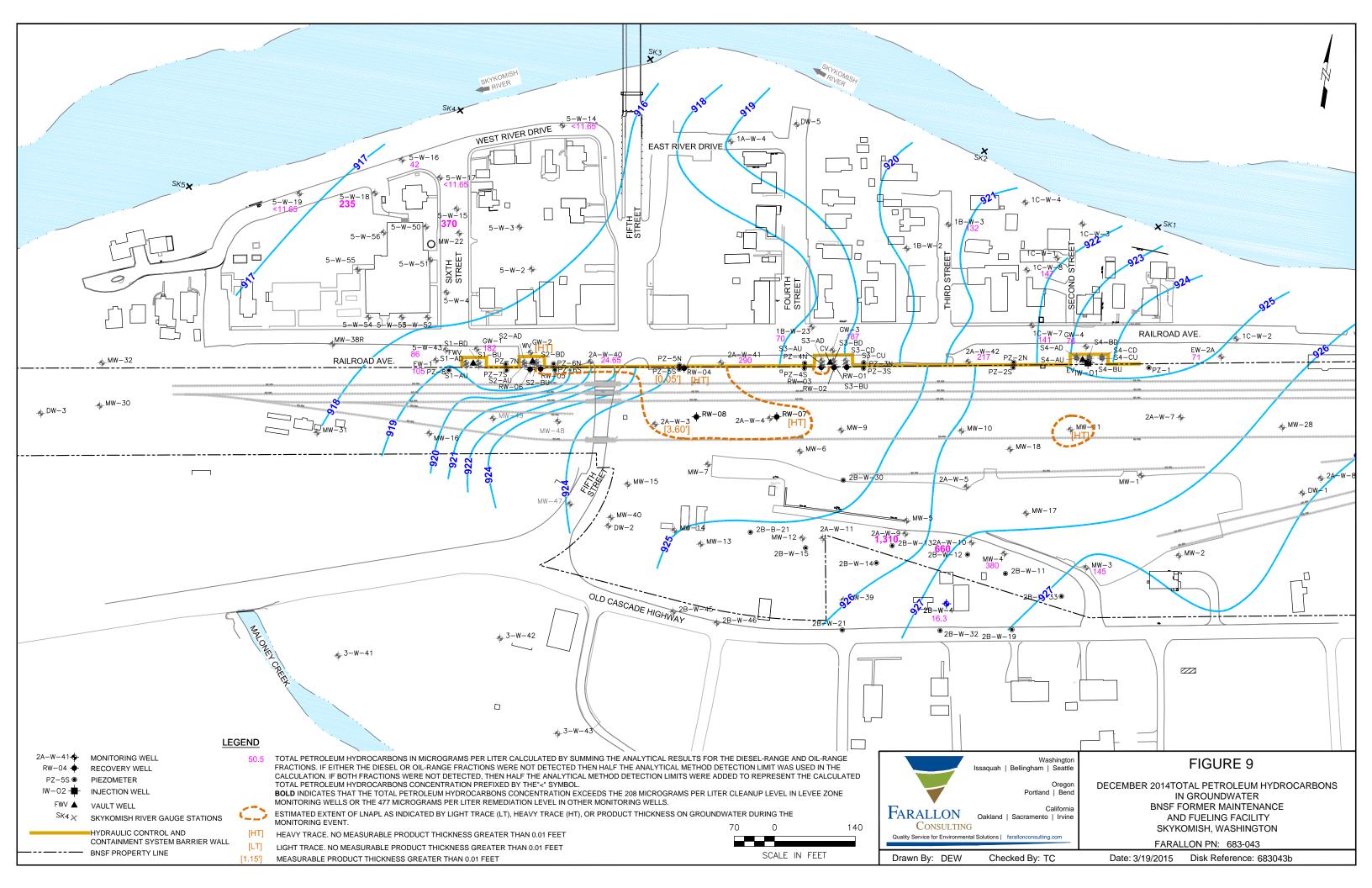












### **TABLES**

2014 SITE-WIDE GROUNDWATER MONITORING REPORT BNSF Former Maintenance and Fueling Facility Skykomish, Washington Consent Decree No. 07-2-33672-9 SEA

Farallon PN: 683-043

# Table 1 2014 Modifications to the Groundwater Monitoring Network BNSF Former Maintenance and Fueling Facility

Skykomish, Washington Farallon PN: 683-043

				Location		
		Location	Location	Monitoring	Rationale for Groundwater Monitoring	Reference for Planned
Activity	Date	Identification	Type	Function	Network Modification	Activity
Revised	6/1/2014	1B-W-3	Monitoring Well	Down-gradient of the	Air sparge system operations were shut down in	Continue to monitor during
Monitoring				air sparge system	May 2013, with continued monthly monitoring	semiannual and quarterly
Frequency					through June 2014. Monitoring frequency revised	monitoring events.
					with Ecology concurrence.	
Revised	6/1/2014	1C-W-7	Monitoring Well	Up-gradient of the air	Air sparge system operations were shut down in	Continue to monitor during
Monitoring				sparge system	May 2013, with continued monthly monitoring	semiannual and quarterly
Frequency					through June 2014. Monitoring frequency revised	monitoring events.
					with Ecology concurrence.	
Revised	6/1/2014	1C-W-8	Monitoring Well	Down-gradient of the	Air sparge system operations were shut down in	Continue to monitor during
Monitoring				air sparge system	May 2013, with continued monthly monitoring	semiannual and quarterly
Frequency					through June 2014. Monitoring frequency revised	monitoring events.
					with Ecology concurrence.	
Well Located	3/1/2014	5-W-43	Monitoring Well	Down-gradient of the	Well was located following grading activities	Continue to monitor during
and Returned to				HCC system	undertaken in this area and included in 2014	semiannual and quarterly
Service					monitoring events.	monitoring events.

NOTES:

— = not applicable

Ecology = Washington State Department of Ecology HCC = Hydraulic Control and Containment

# Table 2 2014 Groundwater Monitoring Event Dates BNSF Former Maintenance and Fueling Facility Skykomish, Washington

Farallon PN: 683-043

Event	Start Date	End Date
Air Sparge System Monthly Groundwater Sampling Event	01/17/2014	01/17/2014
Air Sparge System Monthly Groundwater Sampling Event	02/18/2014	02/18/2014
Semiannual Fluid Gauging Event	03/17/2014	03/17/2014
Semiannual Groundwater Sampling Event	03/18/2014	03/20/2014
Air Sparge System Monthly Groundwater Sampling Event	04/21/2014	04/21/2014
Air Sparge System Monthly Groundwater Sampling Event and Supplementary Fluid Level Gauging Event	05/20/2014	05/20/2014
Quarterly Fluid Gauging Event	06/16/2014	06/16/2014
Quarterly Groundwater Sampling Event	06/17/2014	06/18/2014
Semiannual Fluid Gauging Event	09/15/2014	09/15/2014
Semiannual Groundwater Sampling Event	09/16/2014	09/18/2014
Quarterly Fluid Gauging Event	12/15/2014	12/15/2014
Quarterly Groundwater Sampling Event	12/16/2014	12/17/2014

#### NOTES:

Sampling details for each monitoring event are included in Table 3.

# Table 3 2014 Groundwater Sampling Event Details BNSF Former Maintenance and Fueling Facility Skykomish, Washington

Farallon PN: 683-043

	Location	Gro			
Zone	Identification	Monthly <sup>1</sup>	Quarterly	Semiannually	Analyte
	1C-W-1	X	X	X	NWTPH-Dx
Air Sparging System	1C-W-7	X	X	X	NWTPH-Dx
	1C-W-8	X	X	X	NWTPH-Dx
	1B-W-23	_	X	X	NWTPH-Dx
Down-gradient of the	2A-W-40	_	X	X	NWTPH-Dx
HCC	2A-W-41	_	X	X	NWTPH-Dx
	2A-W-42	_	X	X	NWTPH-Dx
	2A-W-10	_	X	X	NWTPH-Dx
EMCZ EW 1	2A-W-9	_	X	X	NWTPH-Dx
FMCZ-EW and	2B-W-4	_	X	X	NWTPH-Dx
Surrounding Areas	MW-3	_	X	X	NWTPH-Dx
	MW-4		X	X	NWTPH-Dx
	EW-1		X	X	NWTPH-Dx
	EW-2A	_	X	X	NWTPH-Dx
	GW-1		X	X	NWTPH-Dx
	GW-2		X	X	NWTPH-Dx
	GW-3	_	X	X	NWTPH-Dx
	GW-4	_	X	X	NWTPH-Dx
	S1-AD		_	X	NWTPH-Dx
	S1-AU		_	X	NWTPH-Dx
	S1-BD		_	X	NWTPH-Dx
	S1-BU		_	X	NWTPH-Dx
	S2-AD		_	X	NWTPH-Dx
	S2-AU		_	X	NWTPH-Dx
LICC Contain	S2-BD		_	X	NWTPH-Dx
HCC System	S2-BU		_	X	NWTPH-Dx
	S3-AD	_	_	X	NWTPH-Dx
	S3-AU		_	X	NWTPH-Dx
	S3-BD			X	NWTPH-Dx
	S3-BU		<del>_</del>	X	NWTPH-Dx
	S3-CD		_	X	NWTPH-Dx
	S3-CU		<del>_</del>	X	NWTPH-Dx
	S4-AD			X	NWTPH-Dx
	S4-AU		_	X	NWTPH-Dx
	S4-BD			X	NWTPH-Dx
	S4-BU			X	NWTPH-Dx
	S4-CD	_	_	X	NWTPH-Dx
	S4-CU	_	_	X	NWTPH-Dx
	5-W-14	_	X	X	NWTPH-Dx
	5-W-15	_	X	X	NWTPH-Dx
Loves	5-W-16	_	X	X	NWTPH-Dx
Levee	5-W-17		X	X	NWTPH-Dx
	5-W-18	_	X	X	NWTPH-Dx
	5-W-19	_	X	X	NWTPH-Dx

### 2014 Groundwater Sampling Event Details BNSF Former Maintenance and Fueling Facility

# Skykomish, Washington Farallon PN: 683-043

	Location	Gre			
Zone	Identification	Monthly <sup>1</sup>	Quarterly	Semiannually	Analyte
	5-W-50	_	_	X	NWTPH-Dx
	5-W-51	_	_	X	NWTPH-Dx
Schoolyard	5-W-54	_	_	X	NWTPH-Dx
	5-W-55	_	_	X	NWTPH-Dx
	5-W-56	_	_	X	NWTPH-Dx
	1A-W-4	_	_	X	NWTPH-Dx
	1B-W-2	_	_	X	NWTPH-Dx
	1B-W-3	_	_	X	NWTPH-Dx
Site-Wide	1C-W-3	_	_	X	NWTPH-Dx
	1C-W-4	_	_	X	NWTPH-Dx
	MW-16	_	_	X	NWTPH-Dx
	MW-38R	_	_	X	NWTPH-Dx

#### NOTES:

<sup>1</sup>Monthly monitoring of air sparge area monitoring wells was discontinued effective July 2014.

FMCZ-EW = Former Maloney Creek Zone - East Wetland

HCC = Hydraulic Control and Containment

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

## 2014 Fluid Gauging Events Summary

## **BNSF Former Maintenance and Fueling Facility**

# Skykomish, Washington Farallon PN: 683-043

		Gauging Monitoring Frequency					
	Location						
Zone	Identification	Continuous <sup>1</sup>	Weekly	Monthly <sup>2</sup>	Quarterly	Semiannually	
	1C-W-1	_	_	X	X	X	
Air Sparging System	1C-W-7	_	_	X	X	X	
	1C-W-8	_	_	X	X	X	
	1B-W-23	_		_	X	X	
Down-gradient of the	2A-W-40	_		_	X	X	
HCC System <sup>1</sup>	2A-W-41	_		_	X	X	
	2A-W-42	_		_	X	X	
	2A-W-10	_			X	X	
	2A-W-3	_	_		X	X	
	2A-W-5	_	_	_	X	X	
	2A-W-7		_		X	X	
	2A-W-9	_	_	_	X	X	
	2B-W-4	_	_	_	X	X	
	MW-1	_	_	_	X	X	
	MW-11	_	_	_	X	X	
EMCZ EXV 1	MW-13	_	_	_	X	X	
FMCZ-EW and	MW-14	_	_	_	X	X	
Surrounding Areas	MW-15	_	_	_	X	X	
	MW-18	_	_	_	X	X	
	MW-2	_	_	_	X	X	
	MW-3	_	_	_	X	X	
-	MW-4	_	_		X	X	
-	MW-40	_		_	X	X	
	MW-5	_			X	X	
-	MW-7	_			X	X	
	MW-9	_			X	X	
	MW-10	_		<del> </del>	X	X	
	CV	X	X		X	X	
	EV	X	X	_	X	X	
	WV	X	X	_	X	X	
<u> </u>	FWV	X	X	_	X	X	
	EW-1	——————————————————————————————————————		_	X	X	
	EW-2A			_	X	X	
	GW-1	X	X	<u> </u>	X	X	
	GW-1 GW-2	X	X	_	X	X	
HCC System	GW-2 GW-3	X	X	<del>-</del>	X	X	
}	GW-4	X	X	<del>-</del>	X	X	
}	IW-01	Λ		<del>                                     </del>	Λ -	X	
	PZ-1	X		<del>                                     </del>	X	X	
-		X	<del>_</del>	<del>                                     </del>		X	
}	PZ-2N			_	X		
	PZ-2S	X	<u> </u>	<del>-</del>	X	X	
	PZ-3N	X		_	X	X	
	PZ-3S	X		_	X	X	

## 2014 Fluid Gauging Events Summary

## **BNSF Former Maintenance and Fueling Facility**

# Skykomish, Washington Farallon PN: 683-043

			Gaugin	g Monitoring I	requency	
Zone	Location Identification	Continuous <sup>1</sup>	Weekly	Monthly <sup>2</sup>	Quarterly	Semiannually
	PZ-4N	X	_	_	X	X
	PZ-4S	X	_	_	X	X
	PZ-5N	X	_		X	X
	PZ-5S	X	_		X	X
	PZ-6N	X	_	_	X	X
	PZ-6S	X	_		X	X
	PZ-7N	X	_	_	X	X
	PZ-7S	X	_	_	X	X
	PZ-8	X	_	_	X	X
	RW-01	X	_	_	X	X
	RW-02	X	_	_	X	X
	RW-03	X	_	_	X	X
	RW-04	X	_	_	X	X
	RW-05	X	_	_	X	X
	RW-06	X	_	_	X	X
	RW-07	X	_	_	X	X
	RW-08	X	_		X	X
HCC C4	RW-09	X	_	_	X	X
HCC System	S1-AD	_	_	_	_	_
(continued)	S1-AU	_	_	_	_	_
	S1-BD	_	_	_	_	_
	S1-BU	_	_	_	_	_
	S2-AD	_	_	_	_	_
	S2-AU	_	_	_	_	_
	S2-BD	_	_	_	_	_
	S2-BU	_	_		_	_
	S3-AD	_	_	_	_	_
	S3-AU	_	_	_	_	_
	S3-BD	_	_		_	_
	S3-BU	_		_	_	_
	S3-CD	_	_		_	_
	S3-CU	_	_		_	_
	S4-AD	_		_	_	_
	S4-AU	_			_	_
	S4-BD	_			_	_
	S4-BU			_	_	_
	S4-CD	_			_	_
	S4-CU	_				_

## 2014 Fluid Gauging Events Summary

### **BNSF Former Maintenance and Fueling Facility**

# Skykomish, Washington Farallon PN: 683-043

		Gauging Monitoring Frequency					
Zone	Location Identification	Continuous <sup>1</sup>	Weekly	Monthly <sup>2</sup>	Quarterly	Semiannually	
	5-W-14	_	_	_	X	X	
	5-W-15	_	_	_	X	X	
Levee	5-W-16	_	_	_	X	X	
Levee	5-W-17	_	_	_	X	X	
	5-W-18	_	_	_	X	X	
	5-W-19	_	_	_	X	X	
	5-W-50	_	_	_	_	X	
	5-W-51	_	_	_	_	X	
Schoolyard	5-W-54	_	_	_	_	X	
	5-W-55	_	_	_	_	X	
	5-W-56	_	_	_	_	X	
	1A-W-4	_	_	_	X	X	
	1B-W-2	_	_	_	_	X	
	1B-W-3	_	_	_	_	X	
	1C-W-3	_	_	_	_	X	
	1C-W-4	_	_	_	_	X	
	2A-W-8	_	_	_	X	X	
Site-Wide	MW-16	_	_	_	X	X	
	MW-32	_	_	_	_	X	
	MW-38R	_	_	_	X	X	
	MW-47 <sup>3</sup>	_	_	_	X	X	
	MW-48 <sup>3</sup>	_	_	_	X	X	
	MW-49 <sup>3</sup>	_	_	_	X	X	

#### NOTES:

 $FMCZ\text{-}EW = Former\ Maloney\ Creek\ Zone\ -\ East\ Wetland$ 

 $HCC = Hydraulic\ Control\ and\ Containment$ 

<sup>—</sup> denotes not gauged at the frequency indicated.

<sup>&</sup>lt;sup>1</sup> Water level transducers have been used to collect continuous water level measurements at these locations. Water levels are recorded daily.

 $<sup>^2</sup>$  Monthly gauging of monitoring wells in the air sparge system area was discontinued effective July 2014.

<sup>&</sup>lt;sup>3</sup> Wells installed during August 2012.

Table 5
2014 Groundwater Elevations and Product Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-043

	Top of Casing Elevation		Depth to Water	Water Level Elevation	LNAPL Thickness
Location	(feet NAVD88) <sup>1</sup>	Monitoring Date	(feet) <sup>2</sup>	(feet, NAVD88) <sup>1</sup>	(feet)
		Air Sparging System	m Monitoring Wells		
		01/17/2014	14.63	922.03	—
		02/18/2014	14.2	922.46	—
		03/17/2014	12.84	923.82	—
1B-W-3	936.66	04/21/2014	14.6	922.06	—
1D-W-3	730.00	05/20/2014	14.39	922.27	—
		06/16/2014	14.91	921.75	_
		09/15/2014	15.55	921.11	_
		12/15/2014	14.92	921.74	_
		01/17/2014	11.79	923.25	
		02/18/2014	11.68	923.36	_
		03/17/2014	10.16	924.88	
1C-W-7	935.04	04/21/2014	11.9	923.14	_
1C-W-/	933.04	05/20/2014	11.56	923.48	
		06/16/2014	12.21	922.83	_
		09/15/2014	13.23	921.81	
		12/15/2014	12.23	922.81	_
		01/17/2014	12.53	923.17	_
		02/18/2014	12.42	923.28	
		03/17/2014	10.93	924.77	_
1C-W-8	935.7	04/21/2014	12.64	923.06	<u>—</u>
	755.1	05/20/2014	12.29	923.41	_
		06/16/2014	12.92	922.78	<u> </u>
		09/15/2014	13.94	921.76	_
		12/15/2014	12.98	922.72	_

Table 5
2014 Groundwater Elevations and Product Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-043

	Top of Casing Elevation		Depth to Water	Water Level Elevation	LNAPL Thickness
Location	(feet NAVD88) <sup>1</sup>	Monitoring Date	(feet) <sup>2</sup>	(feet, NAVD88) <sup>1</sup>	(feet)
	Former Maloney Cre		, ,		
		03/17/2014	8.08	929.85	_
2A-W-10	937.93	06/16/2014	11.62	927.23	_
2A-W-10	957.95	09/15/2014	13.06	924.87	_
		12/15/2014	11.05	927.80	_
		03/17/2014	7.68	926.75	Heavy Trace
2A-W-3	934.43	06/16/2014	11.47	922.96	0.10
2A-W-3	934.43	09/15/2014	12.63	921.80	0.02
		12/15/2014	12.49	921.94	3.60
		03/17/2014	10.26	929.21	_
2A-W-5	939.47	06/16/2014	13.82	925.65	_
2A-W-3	939.47	09/15/2014	15.12	924.35	_
		12/15/2014	13.02	926.45	<del>_</del>
		03/17/2014	9.43	928.33	_
2A-W-7	937.76	06/16/2014	11.46	926.30	_
2A-W-1	937.70	09/15/2014	12.95	924.81	_
		12/15/2014	11.4	926.36	_
		03/17/2014	8.36	928.22	_
2A-W-9	936.58	06/16/2014	11.79	924.79	Light Trace
2A-W-9	930.36	09/15/2014	12.78	923.80	_
		12/15/2014	11.03	925.55	_
		03/17/2014	0.89	930.14	_
2B-W-4	931.03	06/16/2014	4.33	927.00	_
2D-W-4	951.05	09/15/2014	5.68	925.35	_
		12/15/2014	3.76	927.57	_
		03/17/2014	9.95	929.25	<u>—</u>
MW-1	939.2	06/16/2014	12.58	926.62	_
IVI VV - I	737.4	09/15/2014	14.22	924.98	<u> </u>
		12/15/2014	12.39	926.81	

Table 5
2014 Groundwater Elevations and Product Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-043

	Top of Casing Elevation		Depth to Water	Water Level Elevation	LNAPL Thickness
Location	(feet NAVD88) <sup>1</sup>	Monitoring Date	(feet) <sup>2</sup>	(feet, NAVD88) <sup>1</sup>	(feet)
	, ,	03/17/2014	9.43	928.91	
MW-10	029.24	06/16/2014	12.89	925.45	_
MW-10	938.34	09/15/2014	14.27	924.07	_
		12/15/2014	12.23	926.11	_
		03/17/2014	10.05	929.15	0.06
MW-11	939.2	06/16/2014	13.31	925.89	Heavy Trace
MIW-11	939.2	09/15/2014	14.76	924.44	<del>_</del>
		12/15/2014	12.63	926.57	Heavy Trace
		03/17/2014	7.38	929.11	_
MW-13	936.49	06/16/2014	10.64	925.85	_
IVI VV -13	930.49	09/15/2014	11.53	924.96	_
		12/15/2014	9.92	926.57	_
	936.8	03/17/2014	9.32	927.48	_
MW-14		06/16/2014	12.58	924.22	
IVI VV - 14		09/15/2014	NM	NM	_
		12/15/2014	11.8	925.00	
		03/17/2014	11.09	922.23	_
MW-15	933.32	06/16/2014	14.48	918.84	_
IVI VV -13	955.52	09/15/2014	15.73	917.59	
		12/15/2014	13.53	919.79	
		03/17/2014	11.39	929.29	
MW-18	940.68	06/16/2014	14.78	925.90	_
IVI VV - 10	940.06	09/15/2014	16.25	924.43	
		12/15/2014	14.21	926.47	_
		03/17/2014	9.15	930.05	
MW-2	939.2	6/16/2014	NM	NM	
IVI VV -∠	737.4	09/15/2014	14.02	925.18	
		12/15/2014	12.03	927.17	

Table 5
2014 Groundwater Elevations and Product Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-043

	Top of Casing Elevation		Depth to Water	Water Level Elevation	LNAPL Thickness
Location	(feet NAVD88) <sup>1</sup>	Monitoring Date	(feet) <sup>2</sup>	(feet, NAVD88) <sup>1</sup>	(feet)
		03/17/2014	6.1	931.93	<u> </u>
MW-3	938.03	06/16/2014	10.95	927.08	_
IVI VV - 3	938.03	09/15/2014	12.97	925.06	_
		12/15/2014	9.84	928.19	_
		03/17/2014	6.35	930.60	_
MW-4	936.95	06/16/2014	10.35	926.60	_
IVI VV -4	930.93	09/15/2014	11.76	925.19	_
		12/15/2014	9.59	927.36	_
		03/17/2014	9.89	927.06	_
MW-40	936.95	06/16/2014	12.26	924.69	_
IVI VV -40		09/15/2014	14.5	922.45	_
		12/15/2014	12.37	924.58	_
		03/17/2014	5.16	928.20	_
MW-5	933.36	06/16/2014	8.51	924.85	_
IVI VV -3	955.50	09/15/2014	9.52	923.84	_
		12/15/2014	7.83	925.53	_
		03/17/2014	9.91	926.98	_
MW-7	936.89	06/16/2014	13.5	923.39	_
IVI VV - /	930.69	09/15/2014	14.62	922.27	_
		12/15/2014	12.55	924.34	
		03/17/2014	10.46	927.07	_
MW-9	937.53	06/16/2014	14.12	923.41	
IVI VV -9	731.33	09/15/2014	15.33	922.20	_
		12/15/2014	13.16	924.37	_

Table 5
2014 Groundwater Elevations and Product Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-043

	Top of Casing Elevation		Depth to Water	Water Level Elevation	LNAPL Thickness
Location	(feet NAVD88) <sup>1</sup>	Monitoring Date	(feet) <sup>2</sup>	(feet, NAVD88) <sup>1</sup>	(feet)
		c Control and Contair	\ /		(====)
	·	03/17/2014	8.52	920.20	_
EW-1	029.72	06/16/2014	10.12	918.60	_
EW-I	928.72	09/15/2014	11.15	917.57	_
		12/15/2014	10.07	918.65	_
		03/17/2014	7.99	928.21	_
EW-2A	936.2	06/16/2014	10.09	926.11	_
EW-ZA	930.2	09/15/2014	11.64	924.56	_
		12/15/2014	10.13	926.07	_
	928.24	03/17/2014	8.42	919.82	_
GW-1		06/16/2014	9.97	918.27	_
G W - 1		09/15/2014	11.3	916.94	_
		12/15/2014	10.2	918.04	_
		03/17/2014	10.58	919.71	_
GW-2	930.29	06/16/2014	12.01	918.28	_
GW-2	930.29	09/15/2014	13.22	917.07	_
		12/15/2014	12.23	918.06	_
		03/17/2014	15.48	920.34	_
GW-3	935.82	06/16/2014	15.84	919.98	—
G W-3	955.62	09/15/2014	15.94	919.88	_
		12/15/2014	15.85	919.97	—
		03/17/2014	7.99	926.69	
GW-4	934.68	06/16/2014	10.01	924.67	_
0117-7	757.00	09/15/2014	11.2	923.48	_
		12/15/2014	10.06	924.62	_

Table 5
2014 Groundwater Elevations and Product Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-043

Location	Top of Casing Elevation (feet NAVD88) <sup>1</sup>	Monitoring Date	Depth to Water (feet) <sup>2</sup>	Water Level Elevation (feet, NAVD88) <sup>1</sup>	LNAPL Thickness (feet)
IW-01	933.49	03/17/2014	6.84	926.65	_
1 W -01	933.49	09/15/2014	9.55	923.94	_
		03/17/2014	7.56	927.82	_
PZ-1	935.38	06/16/2014	9.61	925.77	_
rz-i	933.36	09/15/2014	11.05	924.33	_
		12/15/2014	9.59	925.79	_
		03/17/2014	9.46	924.89	_
PZ-2N	934.35	06/16/2014	11.59	922.76	_
FZ-21V	934.33	09/15/2014	12.49	921.86	_
		12/15/2014	11.82	922.53	_
		03/17/2014	5.98	928.96	_
PZ-2S	934.94	06/16/2014	9.31	925.63	_
I Z-23	734.74	09/15/2014	10.61	924.33	_
		12/15/2014	8.52	926.42	_
		03/17/2014	13.88	920.53	_
PZ-3N	934.41	06/16/2014	13.99	920.42	_
1 Z-31V	734.41	09/15/2014	13.99	920.42	_
		12/15/2014	13.91	920.50	_
PZ-3S	934.45	03/17/2014	5.58	928.87	_
1 2-33	734.43	09/15/2014	NM	NM	_
		03/17/2014	14.71	920.56	_
PZ-4N	935.27	06/16/2014	14.61	920.66	
Γ <b>Δ-4</b> ΙΝ	733.41	09/15/2014	14.58	920.69	
		12/15/2014	14.58	920.69	_

Table 5
2014 Groundwater Elevations and Product Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-043

	Top of Casing Elevation		Depth to Water	Water Level Elevation	LNAPL Thickness
Location	(feet NAVD88) <sup>1</sup>	Monitoring Date	(feet) <sup>2</sup>	(feet, NAVD88) <sup>1</sup>	(feet)
		03/17/2014	8	927.31	_
PZ-4S	935.31	06/16/2014	11.59	923.72	_
FZ-43	933.31	09/15/2014	12.71	922.60	_
		12/15/2014	10.51	924.80	_
		03/17/2014	13.4	919.75	_
PZ-5N	933.15	06/16/2014	14.91	918.24	_
FZ-JIN	933.13	09/15/2014	15.53	917.62	
		12/15/2014	15.18	917.97	—
		03/17/2014	11.55	921.91	4.67
PZ-5S	933.46	06/16/2014	12.91	920.55	2.39
F Z-35	933.40	09/15/2014	11.73	921.73	Heavy Trace
		12/15/2014	9.39	924.07	0.05
	931.17	03/17/2014	11.46	919.71	_
PZ-6N		06/16/2014	12.94	918.23	_
12501		9/15/2014	NM	NM	
		12/15/2014	13.15	918.02	—
		03/17/2014	5.48	925.93	Light Trace
PZ-6S	931.41	06/16/2014	NM	NM	—
12-05	751.41	09/15/2014	13.11	918.30	2.95
		12/15/2014	NM	NM	_
		03/17/2014	10.54	919.83	—
PZ-7N	930.37	06/16/2014	12.11	918.26	
12-/1	730.37	09/15/2014	13.32	917.05	_
		12/15/2014	12.28	918.09	_
		03/17/2014	5.12	925.28	_
PZ-7S	930.4	06/16/2014	8.78	921.62	_
12-75	750.4	09/15/2014	10.41	919.99	_
		12/15/2014	7.92	922.48	_

Table 5
2014 Groundwater Elevations and Product Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington

Farallo	n PN:	683-	043
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Location	Top of Casing Elevation (feet NAVD88) <sup>1</sup>	Monitoring Date	Depth to Water (feet) <sup>2</sup>	Water Level Elevation (feet, NAVD88) <sup>1</sup>	LNAPL Thickness (feet)
		03/17/2014	7.9	921.58	<u> </u>
PZ-8	929.48	06/16/2014	10.03	919.45	_
PZ-8	929.48	09/15/2014	11.14	918.34	_
		12/15/2014	9.8	919.68	_
		03/17/2014	8.51	924.33	_
RW-01	932.84	06/16/2014	9.75	923.09	_
KW-01	932.84	09/15/2014	10.75	922.09	_
		12/15/2014	9.16	923.68	_
		03/17/2014	9.48	924.36	_
RW-02	933.84	06/16/2014	10.76	923.08	_
KW-02		09/15/2014	10.99	922.85	_
		12/15/2014	10.16	923.68	_
	933.8	03/17/2014	9.44	924.36	_
RW-03		06/16/2014	10.72	923.08	Light Trace
KW-03		09/15/2014	11.73	922.07	_
		12/15/2014	10.12	923.68	_
		03/17/2014	5.74	926.12	Light Trace
RW-04	931.86	06/16/2014	9.38	922.48	Light Trace
K W -04	931.60	09/15/2014	10.45	921.41	Heavy Trace
		12/15/2014	7.6	924.26	Heavy Trace
		03/17/2014	8.28	920.25	Light Trace
RW-05	928.53	06/16/2014	10.25	918.28	Light Trace
KW-03	920.33	09/15/2014	11.13	917.40	_
		12/15/2014	9.74	918.79	_
		03/17/2014	8.19	920.34	
RW-06	928.53	06/16/2014	10.22	918.31	Light Trace
IX VV -UU	720.33	09/15/2014	11.12	917.41	
		12/15/2014	9.73	918.80	

Table 5
2014 Groundwater Elevations and Product Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-043

	Top of Casing Elevation		Depth to Water	Water Level Elevation	LNAPL Thickness
Location	(feet NAVD88) <sup>1</sup>	Monitoring Date	(feet) <sup>2</sup>	(feet, NAVD88) <sup>1</sup>	(feet)
		03/17/2014	5.62	927.44	Light Trace
RW-07	933.06	06/16/2014	9.47	923.59	Heavy Trace
KW-07	955.00	09/15/2014	10.59	922.47	Heavy Trace
		12/15/2014	8.23	924.83	Heavy Trace
		03/17/2014	5.1	926.75	Light Trace
RW-08	931.85	06/16/2014	9.53	922.32	0.07
K W -00	931.63	09/15/2014	10.21	921.64	
		12/15/2014	7.43	924.42	_
	933.96	03/17/2014	7.34	926.62	_
RW-09		06/16/2014	8.8	925.16	_
K W -09		09/15/2014	10.12	923.84	_
		12/15/2014	8.7	925.26	_
		Levee Zone Mo	onitoring Wells		
		03/17/2014	7.91	918.68	
5-W-14	926.59	06/16/2014	8.66	917.93	_
J-W-14	920.39	09/15/2014	10.52	916.07	_
		12/15/2014	9.04	917.55	_
		03/17/2014	6.0	919.15	_
5-W-15	925.15	06/16/2014	7.14	918.01	
J-W-13	923.13	09/15/2014	9.02	916.13	_
		12/15/2014	7.53	917.62	_
		03/17/2014	6.35	918.85	
5-W-16	925.2	06/16/2014	7.39	917.81	
J- W -10		09/15/2014	9.23	915.97	_
		12/15/2014	7.78	917.42	

Table 5
2014 Groundwater Elevations and Product Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington

Farallon	PN:	683-043
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	Top of Casing Elevation		Depth to Water	Water Level Elevation	LNAPL Thickness
Location	(feet NAVD88) <sup>1</sup>	Monitoring Date	(feet) <sup>2</sup>	(feet, NAVD88) <sup>1</sup>	(feet)
		03/17/2014	5.69	918.91	<u> </u>
5-W-17	924.6	06/16/2014	6.77	917.83	
3-W-1/	924.0	09/15/2014	8.6	916.00	
		12/15/2014	7.16	917.44	
		03/17/2014	5.84	918.80	_
5-W-18	924.64	06/16/2014	6.03	918.61	_
3-W-18	924.04	09/15/2014	8.66	915.98	_
		12/15/2014	7.24	917.40	
		03/17/2014	5.7	918.65	_
5-W-19	924.35	06/16/2014	6.69	917.66	_
J-W-19	924.33	09/15/2014	8.45	915.90	_
		12/15/2014	7.56	916.79	
	Monitoring Wells Do	own-Gradient of the H	lydraulic Control and	<b>Containment System</b>	
	936.25	03/17/2014	16.38	919.87	_
1B-W-23		06/16/2014	16.48	919.77	_
1D-W-23		09/15/2014	17.58	918.67	_
		12/15/2014	17.16	919.09	_
		03/17/2014	10.33	923.01	_
2A-W-40	933.34	06/16/2014	12.19	921.15	
2A-W-40	755.54	09/15/2014	13.57	919.77	_
		12/15/2014	12.12	921.22	
		03/17/2014	15.41	919.81	_
2A-W-41	935.22	06/16/2014	16.39	918.83	
2A-W-41	933.22	09/15/2014	18.15	917.07	_
		12/15/2014	17.19	918.03	
		03/17/2014	11.06	924.31	
2A-W-42	935.37	06/16/2014	13.02	922.35	
∠ <i>F</i> <b>\- VV</b> -4∠	733.31	09/15/2014	13.74	921.63	
		12/15/2014	12.99	922.38	_

Table 5
2014 Groundwater Elevations and Product Thicknesses
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-043

Location	Top of Casing Elevation (feet NAVD88) <sup>1</sup>	Monitoring Date	Depth to Water (feet) <sup>2</sup>	Water Level Elevation (feet, NAVD88) <sup>1</sup>	LNAPL Thickness (feet)
Location	(leet NA v Doo)	03/17/2014	5.8	920.02	(leet)
		06/16/2014	7.32	918.50	_
5-W-43	925.82	09/15/2014	8.35	917.47	
		12/15/2014	7.33	918.49	_
5 W 50	025.40	03/17/2014	5.5	919.99	_
5-W-50	925.49	09/15/2014	8.86	916.63	_
5-W-51	025.00	03/17/2014	5.31	919.77	Light Trace
3-W-31	925.08	09/15/2014	8.72	916.36	Heavy Trace
5-W-54	924.58	03/17/2014	5.26	919.32	_
J-W-J4	924.36	09/15/2014	7.92	916.66	_
5-W-55	923.92	03/17/2014	5.27	918.65	_
J- W-JJ	923.92	09/15/2014	7.87	916.05	_
5-W-56	924.76	03/17/2014	4.94	919.82	_
J-W-30	924.70	09/15/2014	8.28	916.48	_
		Site-Wide Mo	nitoring Wells		
		03/17/2014	7.57	921.50	_
1A-W-4	929.07	06/16/2014	8.89	920.18	_
1A-W-4	929.07	09/15/2014	10.48	918.59	_
		12/15/2014	9.03	920.04	_
1B-W-2	935.81	03/17/2014	11.81	924.00	_
1D-W-2	955.61	09/15/2014	14.48	921.33	_
		03/17/2014	11.61	924.83	_
1C-W-1	936.44	06/16/2014	13.43	923.01	_
1C-W-1	730.44	09/15/2014	14.4	922.04	_
		12/15/2014	13.62	922.82	_
1C-W-3	933.56	03/17/2014	8.78	924.78	
10-11-3	933.30	09/15/2014	11.81	921.75	_
1C-W-4	932.74	03/17/2014	8.65	924.09	
10-11-4	732.17	09/15/2014	11.06	921.68	_

# Table 5 2014 Groundwater Elevations and Product Thicknesses BNSF Former Maintenance and Fueling Facility Skykomish, Washington Farallon PN: 683-043

	Top of Casing Elevation		Depth to Water	Water Level Elevation	I NIADI (DI.S.L
Location	(feet NAVD88) <sup>1</sup>	Monitoring Date	(feet) <sup>2</sup>	(feet, NAVD88) <sup>1</sup>	LNAPL Thickness (feet)
Location	(Icct 1(II v Doo)	03/17/2014	11.63	930.99	(ICCL)
		06/16/2014	14.86	927.76	
2A-W-8	942.62	09/15/2014	16.56	926.06	
		12/15/2014	14.65	927.97	_
		03/17/2014	11.39	921.93	_
		06/16/2014	13.65	919.67	_
MW-16	933.32	09/15/2014	14.65	918.67	_
		12/15/2014	13.43	919.89	
	926.06	03/17/2014	7.84	918.22	
MW-32		09/15/2014	10.29	915.77	
	922.39	03/17/2014	3.22	919.17	_
) WY 20D		06/16/2014	4.69	917.70	_
MW-38R		09/15/2014	5.92	916.47	_
		12/15/2014	4.67	917.72	_
		03/17/2014	6.2	926.41	_
NASSI 477		06/16/2014	9.52	923.09	_
MW-47	932.61	09/15/2014	10.9	921.71	_
		12/15/2014	8.58	924.03	_
		03/17/2014	7.76	926.14	_
MW-48	933.9	06/16/2014	11.11	922.79	_
IVI W -48	955.9	09/15/2014	12.64	921.26	_
		12/15/2014	10.14	923.76	
		03/17/2014	8.83	924.31	_
MW-49	022.14	06/16/2014	11.86	921.28	_
IVI VV -49	933.14	09/15/2014	13.37	919.77	_
		12/15/2014	11.35	921.79	_

#### NOTES:

— denotes light nonaqueous-phase liquid (LNAPL) was not present.

<sup>1</sup> In feet above mean sea level.

NM = not measured

<sup>&</sup>lt;sup>2</sup> In feet below top of well casing.

Table 6
2014 Stabilized Groundwater Field Parameter Measurements
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington

Sample Location	Sample Date	Sample Identification	Dissolved Oxygen (milligrams per liter)	Oxidation Reduction Potential (millivolts)	pH (Standard pH Units)	Specific Conductivity (mS/cm)	Temperature (degrees Celsius)	Turbidity (NTU)			
Air Sparging System Monitoring Wells											
	01/17/2014	1B-W-3-011714	2.3	96	6.09	0.153	10.39	0.0			
	02/18/2014	1B-W-3-021814	2.72	181	5.83	0.137	8.82	NM			
	03/19/2014	1B-W-3-031914	4.99	114.8	6.53	0.137	6.07	IE			
1B-W-3	04/21/2014	1B-W-3-042114	2.62	127	5.56	0.132	9.38	0.0			
1D-W-3	05/20/2014	1B-W-3-052014	1.35	132	6.27	0.126	10.88	0.1			
	06/18/2014	1B-W-3-061814	1.39	105	6.63	0.124	12.06	0.0			
	09/17/2014	1B-W-3-091714	NM	87.3	6.38	0.137	11.65	0.0			
	12/17/2014	1B-W-3-121714	1.98	137.9	6.3	0.145	9.29	0.0			
	01/17/2014	1C-W-7-011714	1.87	139	5.64	0.111	9.53	0.0			
	02/18/2014	1C-W-7-021814	2.52	207	5.3	0.11	6.9	NM			
	03/19/2014	1C-W-7-031914	1.64	208	6.22	0.11	6.38	0.4			
1C-W-7	04/21/2014	1C-W-7-042114	2.12	150	5.34	0.096	9.91	0.0			
1C-W-/	05/20/2014	1C-W-7-052014	2.14	243	6.03	0.082	10.32	0.0			
	06/18/2014	1C-W-7-061814	3.3	152	6.27	0.082	12.75	0.0			
	09/18/2014	IC-W-7-091814	0.86	210	5.96	0.104	13.52	0.0			
	12/17/2014	1C-W-7-121714	1.64	64	5.86	0.115	8.8	2.1			
	01/17/2014	1C-W-8-011714	2.58	151	5.54	0.106	10.21	0.0			
	02/18/2014	1C-W-8-021814	5.1	228	5.15	0.066	7.04	NM			
	03/18/2014	1C-W-8-031814	3.49	307	6.14	0.09	6.32	0.8			
1C W 0	04/21/2014	1C-W-8-042114	3.29	132	5.83	0.081	11.32	3.6			
1C-W-8	05/20/2014	1C-W-8-052014	3.64	275	6.01	0.071	15.83	0.0			
	06/18/2014	1C-W-8-061814	3.08	177	6.2	0.078	16.35	0.0			
	09/18/2014	IC-W-8-091814	NM	NM	NM	NM	NM	NM			
	12/17/2014	1C-W-8-121714	3.58	179.7	6	0.108	9.58	0.0			
		Former M	alonev Creek Zone - I	East Wetland and Surr	ounding Area Monito	ring Wells					
	03/18/2014	2A-W-10-031814	5.28	199	5.37	0.094	5.7	0.9			
24 777 10	06/18/2014	2A-W-10-061814	0.45	115	5.43	0.083	12.14	3.6			
2A-W-10	09/17/2014	2A-W-10-091714	0.46	108	5.86	0.131	13.67	0.0			
	12/16/2014	2A-W-10-121614	0.57	151	5.25	0.133	9.15	0.9			
	03/19/2014	2A-W-9-031914	0.65	47	6.36	0.075	4.82	3.2			
2A-W-9	06/18/2014	2A-W-9-061814	0.41	0	6.24	0.075	11.5	8.2			
	12/16/2014	2A-W-9-121614	0.41	-29	5.64	0.156	9.92	2.0			
	03/18/2014	2B-W-4-031814	5.04	209	5.0	0.059	7.0	5.2			
	06/18/2014	2B-W-4-061814	2.29	226	5.91	0.048	10.05	0.4			
2B-W-4	09/18/2014	2B-W-4-091814	NM	160.9	6.06	0.084	13.02	0.0			
	12/17/2014	2B-W-4-121714	1.8	177	5.26	0.079	9.3	0.8			

Table 6
2014 Stabilized Groundwater Field Parameter Measurements
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington

Sample Location	Sample Date	Sample Identification	Dissolved Oxygen (milligrams per liter)	Oxidation Reduction Potential (millivolts)	pH (Standard pH Units)	Specific Conductivity (mS/cm)	Temperature (degrees Celsius)	Turbidity (NTU)
Î	03/19/2014	MW-3-031914	5.43	215	5.24	0.044	5.95	0.0
MW 2	06/18/2014	MW-3-061814	0.54	79	6.03	0.058	11.75	9.8
MW-3	09/18/2014	MW-3-091814	NM	78.6	6.13	0.095	12.09	21.3
	12/16/2014	MW-3-121614	3.67	2.3	5.09	0.09	10.52	2.2
	03/18/2014	MW-4-031814	6.73	192	5.42	0.044	5.55	3.0
N/337_4	06/18/2014	MW-4-061814	0.48	96	5.92	0.068	10.81	0.4
MW-4	09/18/2014	MW-4-091814	1.29	142	5.83	0.096	14.75	1.1
	12/16/2014	MW-4-121614	1.6	220	5.1	0.092	8.6	3.1
			Hydraulic Control a	and Containment Syste	em Monitoring Wells			
	03/19/2014	EW-1-031914	2.2	231	6.22	0.105	6.53	1.0
FW 1	06/17/2014	EW-1-061714	1.62	229	5.71	0.084	11.01	0.0
EW-1	09/16/2014	EW-1-091614	0.089	189.8	6.3	0.086	12.81	0.0
	12/16/2014	EW-1-121614	0.71	200.2	6	0.109	10.17	0.0
	03/18/2014	EW-2A-031814	5.95	108.5	5.93	0.074	6.1	ΙE
EW-2A	06/18/2014	EW-2A-061814	3.03	246	5.94	0.066	8.69	0.0
EW-ZA	09/18/2014	EW-2A-091814	NM	157.3	5.93	0.072	10.41	0.0
	12/16/2014	EW-2A-121614	2.32	64	5.44	0.088	9.77	1.1
	03/19/2014	GW-1-031914	2.5	181	5.93	0.132	8.0	0.4
GW-1	06/17/2014	GW-1-061714	0.81	145	6.64	0.112	13.8	5.1
GW-I	09/16/2014	GW-1-091614	0.3	82	6.54	0.127	19.09	0.0
	12/16/2014	GW-1-121614	0.55	19	6.1	0.157	9.95	6.0
	03/19/2014	GW-2-031914	3.11	74	6.54	0.1	6.27	8.5
GW-2	06/17/2014	GW-2-061714	0.61	70.3	NM	111	9.39	0.0
GW-Z	09/16/2014	GW-2-091614	0.44	-17	6.07	0.116	17.71	28.6
	12/16/2014	GW-2-121614	0.41	66.8	6.16	0.143	9.73	0.0
	03/19/2014	GW-3-031914	1.12	108	6.04	0.084	9.87	7.9
GW-3	06/17/2014	GW-3-061714	1.7	61	NM	0.09	9.63	0.0
GW-3	09/17/2014	GW-3-091714	1.5	185	6.44	0.152	13.67	17.1
	12/17/2014	GW-3-121714	2.02	151.1	6.19	0.094	8.35	9.5
	03/18/2014	GW-4-031814	6.5	107.2	6.71	0.099	7.19	0.5
GW-4	06/18/2014	GW-4-061814	2.48	151	6.36	0.075	13.81	1.2
U W -4	09/18/2014	GW-4-091814	2.65	250	5.68	0.078	12.44	0.6
	12/16/2014	GW-4-121614	1.29	41	5.89	0.126	9.17	1.2

# Table 6 2014 Stabilized Groundwater Field Parameter Measurements BNSF Former Maintenance and Fueling Facility Skykomish, Washington

		Sample	Dissolved Oxygen	Oxidation Reduction Potential	pН	Specific Conductivity	Temperature	Turbidity			
Sample Location	Sample Date	Identification	(milligrams per liter)	(millivolts)	(Standard pH Units)	(mS/cm)	(degrees Celsius)	(NTU)			
Levee Zone Monitoring Wells											
	03/20/2014	5-W-14-032014	3.74	83	6.36	0.09	9.5	0.0			
5-W-14	06/17/2014	5-W-14-061714	2.82	196	6.45	0.089	10.37	0.0			
J-W-14	09/16/2014	5-W-14-091614	2.49	149	6.07	0.081	14.18	0.0			
	12/16/2014	5-W-14-121614	6.18	IE	6.41	0.081	7.05	0.0			
	03/20/2014	5-W-15-032014	0.55	-9.8	6.63	0.211	8.53	18.0			
5-W-15	06/17/2014	5-W-15-061714	1.5	-120	7.1	0.189	12.15	IE			
3-W-13	09/16/2014	5-W-15-091614	0.82	-54.8	7.24	0.223	11.84	3.8			
	12/16/2014	5-W-15-121614	0.39	-9.6	6.93	0.183	8.94	IE			
	03/20/2014	5-W-16-032014	3.37	140	6.31	0.117	8.54	4.2			
5-W-16	06/17/2014	5-W-16-061714	2.79	138	6.76	0.097	10.16	4.2			
5-W-10	09/16/2014	5-W-16-091614	4.19	260	5.39	0.092	15.95	0.0			
	12/16/2014	5-W-16-121614	5.96	146.8	6.83	0.124	7.16	5.0			
	03/20/2014	5-W-17-032014	3.16	17	6.31	0.087	9.31	0.0			
5-W-17	06/17/2014	5-W-17-061714	2.7	177	6.36	0.089	9.69	0.0			
5-W-1/	09/16/2014	5-W-17-091614	2.52	167	5.74	0.081	12.61	0.0			
	12/16/2014	5-W-17-121614	5.2	176.1	6.47	0.089	7.83	0.0			
	03/18/2014	5-W-18-031814	2.77	108.8	6.78	0.178	6.74	3.2			
5-W-18	06/17/2014	5-W-18-061714	0.71	121	6.7	0.162	10.28	1.2			
J-W-10	09/16/2014	5-W-18-091614	1.29	80.3	6.86	0.17	12.92	1.0			
	12/16/2014	5-W-18-121614	0.58	161.4	6.6	0.2	8.39	2.1			
	03/20/2014	5-W-19-032014	3.6	166	5.89	0.086	8.9	0.0			
5-W-19	06/17/2014	5-W-19-061714	3.25	224	6.36	0.078	9.47	0.7			
3-W-19	09/16/2014	5-W-19-091614	0.76	192	5.65	0.091	17.04	0.2			
	12/16/2014	5-W-19-121614	4.27	962.5	6.15	0.076	6.85	0.04			
		Monitorii	ng Wells Down-Gradio	ent of the Hydraulic C	ontrol and Containme	nt System					
	03/19/2014	1B-W-23-031914	7.63	207	6.83	0.058	5.18	15.9			
1D W 22	06/17/2014	1B-W-23-061714	5.03	152	6.62	0.099	15.59	IE			
1B-W-23	09/17/2014	IB-W-23-091714	NM	123.7	6.32	0.134	14.41	23.2			
	12/17/2014	1B-W-23-121714	9.42	203.7	6.21	0.077	9.36	IE			
	03/19/2014	2A-W-40-031914	4.14	178	6.68	0.063	6.6	5.7			
24 37/40	06/17/2014	2A-W-40-061714	6.9	71.5	NM	0.067	8.91	0.0			
2A-W-40	09/17/2014	2A-W-40-091714	2.8	162	6.56	0.058	12.37	0.0			
	12/17/2014	2A-W-40-121714	3.34	172	5.79	0.068	8.39	0.9			
	03/19/2014	2A-W-41-031914	4.27	100	5.65	0.085	8.81	0.3			
24 37 41	06/17/2014	2A-W-41-061714	5.09	160	6.02	0.086	12.23	3.1			
2A-W-41	09/17/2014	2A-W-41-091714	2.3	-4	6.26	0.126	13.57	0.0			
	12/17/2014	2A-W-41-121714	3.52	16	6.11	0.138	8.09	4.4			

# Table 6 2014 Stabilized Groundwater Field Parameter Measurements BNSF Former Maintenance and Fueling Facility

# Skykomish, Washington Farallon PN: 683-043

Sample Location	Sample Date	Sample Identification	Dissolved Oxygen (milligrams per liter)	Oxidation Reduction Potential (millivolts)	pH (Standard pH Units)	Specific Conductivity (mS/cm)	Temperature (degrees Celsius)	Turbidity (NTU)
Î	03/19/2014	2A-W-42-031914	6.37	118.9	6.11	0.147	6.51	ĪĒ
24 337 42	06/17/2014	2A-W-42-061714	0.79	133	6.13	0.134	10.17	2.5
2A-W-42	09/17/2014	2A-W-42-091714	NM	131.9	6.11	0.157	13.7	0.0
	12/17/2014	2A-W-42-121714	1.73	172.3	6.06	0.151	9.48	0.0
5-W-50	03/18/2014	5-W-50-031814	6.05	109.7	6.55	0.067	4.76	0.8
5-W-50	09/16/2014	5-W-50-091614	NM	-213.5	6.74	0.303	15.33	0.0
5-W-54	03/18/2014	5-W-54-031814	6.09	163	6.09	0.074	9.76	0.0
5-W-54	09/16/2014	5-W-54-091614	0.76	192	5.65	0.091	17.04	0.2
5-W-55	03/18/2014	5-W-55-031814	1.69	140	6.36	0.09	10.59	0.3
3-W-33	09/16/2014	5-W-55-091614	1.01	188	5.53	0.097	17.8	5.0
5-W-56	03/18/2014	5-W-56-031814	0.74	-81	6.85	0.486	9.53	63.4
3-W-30	09/16/2014	5-W-56-091614	1.3	-153.1	6.87	1.036	16.02	8.1
			Sit	e-Wide Monitoring W	ells			
1 4 337 4	03/19/2014	1A-W-4-031914	4.8	177	6.32	0.083	8.96	0.0
1A-W-4	09/17/2014	1A-W-4-091714	3.02	95	6.64	0.074	14.12	0.0
1B-W-2	03/19/2014	1B-W-2-031914	4.04	233	6.14	0.084	6.48	2.3
1B-W-2	09/17/2014	1B-W-2-091714	1.03	155	6.24	0.207	17.63	1.6
	03/18/2014	1C-W-1-031814	6.26	114.5	6.04	0.101	6.37	IE
1C-W-1	06/18/2014	1C-W-1-061814	4.04	176	6.2	0.071	13.04	0.0
	09/18/2014	IC-W-1-091814	2.07	106	6.05	0.082	13.27	0.0
1C-W-3	03/18/2014	1C-W-3-031814	5.74	2.4	5.86	0.071	5.76	2.4
1C-W-3	09/18/2014	1C-W-3-091814	2.54	183	6.06	0.082	14.87	ΙE
1C-W-4	03/18/2014	1C-W-4-031814	2.6	306	6.01	0.072	7.44	0.6
1C-W-4	09/18/2014	1C-W-4-091814	3.05	190	5.9	0.077	14.0	0.8
	03/19/2014	5-W-43-031914	2.09	178	5.79	0.105	7.99	0.0
5-W-43	06/17/2014	5-W-43-061714	2.28	247	5.35	0.092	11.29	1.1
J- W-43	09/16/2014	5-W-43-091614	1.39	237	4.97	0.083	17.69	2.3
	12/16/2014	5-W-43-121614	0.79	181.9	6.05	0.112	9.87	0.0
MW-16	03/19/2014	MW-16-031914	6.39	226	5.1	0.062	7.09	0.0
IVI VV - I O	09/18/2014	MW-16-091814	NM	155.8	5.97	0.09	12.31	4.1
MW-38R	03/20/2014	MW-38R-032014	0.75	180	5.41	0.098	9.3	0.0
NOC-W IVI	09/16/2014	MW-38R-091614	0.33	97	5.96	0.086	13.65	0.0

NOTES:

IE = instrument error

mS/cm = milliSiements per centimeter

NM = not measured

NTU = nephelometric turbidity units

Table 7
2014 Calculated Total Petroleum Hydrocarbon Concentrations in Groundwater
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington

		DRO (	micrograms per	· liter) <sup>1</sup>	ORG	) (micrograms pe	r liter) <sup>1</sup>	Calculated			
Sample Location	Sample Date	Result	MDL	MRL	Result	MDL	MRL	NWTPH-Dx <sup>2</sup> (μ/l)			
Air Sparging System Monitoring Wells											
	01/17/2014	37	14	24	37 J	9.3	48	74			
	02/18/2014	32	14	24	< 55	55	55	59.5			
	03/19/2014	35	14	24	45 J	9.3	47	80			
1D W/ 2	04/21/2014	34	14	24	44	9.3	48	78			
1B-W-3	05/20/2014	47	14	24	55	9.3	48	102			
	06/18/2014	39	14	24	39 J	9.3	48	78			
	09/17/2014	< 23 J	23	23	< 33 J	33	33	< 28			
	12/17/2014	74	14	24	58	9.3	47	132			
	01/17/2014	190	14	24	110	9.3	47	300			
	02/18/2014	160	14	24	130 J	9.3	47	290			
	03/19/2014	180	14	24	130	9.4	48	310			
10 777 5	04/21/2014	100	14	24	79	9.3	48	179			
1C-W-7	05/20/2014	100	14	24	78	9.3	48	178			
	06/18/2014	49	14	24	35 J	9.3	48	84			
	09/18/2014	65	14	24	< 43 J	43	43	86.5			
	12/17/2014	74	14	24	67	9.3	48	141			
	01/17/2014	210	14	24	150	9.3	47	360			
	02/18/2014	250	14	24	210	9.3	47	460			
	03/18/2014	190	14	24	160	9.3	47	350			
1 C W 0	04/21/2014	110	14	24	90	9.3	47	200			
1C-W-8	05/20/2014	89	14	24	82	9.3	47	171			
	06/18/2014	50	14	24	30 J	9.3	48	80			
	09/18/2014	28	14	24	< 31 J	31	31	43.5			
	12/17/2014	71	14	24	76	9.3	48	147			

Table 7
2014 Calculated Total Petroleum Hydrocarbon Concentrations in Groundwater
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington

		DRO (	micrograms per	· liter) <sup>1</sup>	ORG	) (micrograms pe	r liter) <sup>1</sup>	Calculated			
Sample Location	Sample Date	Result	MDL	MRL	Result	MDL	MRL	NWTPH-Dx <sup>2</sup> (μ/l)			
Former Maloney Creek Zone - East Wetland and Surrounding Area Monitoring Wells											
	03/18/2014	190	14	24	660	9.3	47	850			
2A-W-10	06/18/2014	190	14	24	300	9.3	48	490			
2A-W-10	09/17/2014	100	14	24	200	9.3	48	300			
	12/16/2014	180	14	24	480	9.3	47	660			
	03/19/2014	610	14	24	350	9.4	48	960			
2A-W-9	06/18/2014	390	14	24	230	9.3	47	620			
	12/16/2014	940	14	24	370	9.3	47	1,310			
	03/18/2014	< 14	14	24	20 J	9.3	47	27			
2B-W-4	06/18/2014	< 14	14	24	9.3 J	9.3	47	16.3			
2B-W-4	09/18/2014	< 14	14	24	< 15 J	15	15	< 14.5			
	12/17/2014	< 14	14	24	9.3 J	9.3	48	16.3			
	03/19/2014	37	14	24	75	9.3	48	112			
MW-3	06/18/2014	35	14	24	62	9.3	47	97			
MW-3	09/18/2014	21 J	14	24	< 49	49	49	45.5			
	12/16/2014	45	14	24	100	9.3	47	145			
	03/18/2014	82	14	24	260	9.3	48	342			
NASS7 4	06/18/2014	84	14	24	120	9.3	47	204			
MW-4	09/18/2014	110	14	24	140	9.3	47	250			
	12/16/2014	130	14	24	250	9.3	48	380			
		Hyd	raulic Control a	nd Containmen	t System Monit	oring Wells					
	03/19/2014	38	14	24	72	9.3	48	110			
EW 1	06/17/2014	23 J	14	24	32 J	9.3	47	55			
EW-1	09/16/2014	31	14	24	< 38 J	38	38	50			
	12/16/2014	39	14	24	66	9.3	48	105			

# Table 7 2014 Calculated Total Petroleum Hydrocarbon Concentrations in Groundwater BNSF Former Maintenance and Fueling Facility Skykomish, Washington

		DRO (	(micrograms per	r liter) <sup>1</sup>	OR	O (micrograms pe	r liter) <sup>1</sup>	Calculated
Sample Location	Sample Date	Result	MDL	MRL	Result	MDL	MRL	NWTPH-Dx <sup>2</sup> (μ/l)
	03/18/2014	39	14	24	73	9.3	48	112
EW 04	06/18/2014	17 J	14	24	29 J	9.3	47	46
EW-2A	09/18/2014	< 14	14	24	< 17 J	17	17	< 15.5
	12/16/2014	27	14	24	44 J	9.3	47	71
	03/19/2014	54	14	24	97	9.3	48	151
CW 1	06/17/2014	35	14	24	56	9.3	47	91
GW-1	09/16/2014	26	14	24	< 44 J	44	44	48
	12/16/2014	82	14	24	100	9.3	48	182
	03/19/2014	94	14	24	180	9.4	48	274
CW 2	06/17/2014	28	14	24	19 J	9.3	47	47
GW-2	09/16/2014	57	14	24	< 36 J	36	36	75
	12/16/2014	78	14	24	48	9.3	48	126
	03/19/2014	39	14	24	35 J	9.4	48	74
GW-3	06/17/2014	69	14	24	41 J	9.3	48	110
GW-3	09/17/2014	300	14	24	140	9.3	47	440
	12/17/2014	110	14	24	77	9.3	47	187
	03/18/2014	42	14	24	82	9.4	48	124
CWI 4	06/18/2014	< 14	14	24	14 J	9.3	48	21
GW-4	09/18/2014	28	14	24	< 37 J	37	37	46.5
	12/16/2014	32	14	24	44 J	9.3	47	76
C1 AD	03/17/2014	< 14	14	24	< 10	10	10	< 12
S1-AD	09/17/2014	< 14	14	24	< 19 J	19	19	< 16.5
C1 ATT	03/17/2014	< 14	14	24	< 13	13	13	< 13.5
S1-AU	09/17/2014	< 14	14	24	< 23 J	23	23	< 18.5
C1 DD	03/17/2014	18 J	14	24	< 28	28	28	32
S1-BD	09/17/2014	< 14	14	24	< 14 J	14	14	< 14

# Table 7 2014 Calculated Total Petroleum Hydrocarbon Concentrations in Groundwater BNSF Former Maintenance and Fueling Facility

# Skykomish, Washington Farallon PN: 683-043

		DRO (	micrograms per	r liter) <sup>1</sup>	ORC	) (micrograms pe	r liter) <sup>1</sup>	Calculated
Sample Location	Sample Date	Result	MDL	MRL	Result	MDL	MRL	NWTPH-Dx <sup>2</sup> (μ/l)
G1 DY1	03/17/2014	< 14	14	24	< 27	27	27	< 20.5
S1-BU	09/17/2014	< 14	14	24	< 22 J	22	22	< 18
G2 4 P	03/17/2014	14 J	14	24	< 16	16	16	22
S2-AD	09/17/2014	< 14	14	24	< 17 J	17	17	< 15.5
G2 AXX	03/17/2014	< 14	14	24	< 11	11	11	< 12.5
S2-AU	09/17/2014	< 14	14	24	< 16 J	16	16	< 15
GO DD	03/17/2014	25	14	24	< 21	21	21	35.5
S2-BD	09/17/2014	< 14	14	24	< 15 J	15	15	< 14.5
GO DII	03/17/2014	19 J	14	24	< 19	19	19	28.5
S2-BU	09/17/2014	27	14	24	< 22 J	22	22	38
G2 4 D	03/18/2014	< 14	14	24	< 12	12	12	< 13
S3-AD	09/17/2014	14 J	14	24	< 11 J	11	11	19.5
GQ 4.77	03/18/2014	< 14	14	24	< 10	10	10	< 12
S3-AU	09/17/2014	23 J	14	24	< 15 J	15	15	30.5
GA DD	03/18/2014	< 14	14	24	< 9.3	9.3	48	< 11.65
S3-BD	09/17/2014	17 J	14	24	< 13 J	13	13	23.5
GO DII	03/18/2014	18 J	14	24	< 19	19	19	27.5
S3-BU	09/17/2014	20 J	14	24	< 15 J	15	15	27.5
ga gp	03/18/2014	< 14	14	24	< 14	14	14	< 14
S3-CD	09/17/2014	< 14	14	24	< 10 J	10	10	< 12
G2 GIJ	03/18/2014	< 14	14	24	< 9.7	9.7	10	< 11.85
S3-CU	09/17/2014	< 14	14	24	< 11 J	11	11	< 12.5
G4 AD	03/18/2014	< 14	14	24	< 11	11	11	< 12.5
S4-AD	09/17/2014	22 J	14	24	< 26 J	26	26	35
C4 AII	03/18/2014	19 J	14	24	< 19	19	19	28.5
S4-AU	09/17/2014	19 J	14	24	< 12 J	12	12	25

Table 7
2014 Calculated Total Petroleum Hydrocarbon Concentrations in Groundwater
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington

		DRO (	micrograms per	· liter)¹	ORG	) (micrograms pe	r liter) <sup>1</sup>	Calculated
Sample Location	Sample Date	Result	MDL	MRL	Result	MDL	MRL	NWTPH-Dx <sup>2</sup> (μ/l)
24.77	03/18/2014	< 14	14	24	< 12	12	12	< 13
S4-BD	09/17/2014	18 J	14	24	< 19 J	19	19	27.5
GA DII	03/18/2014	23 J	14	24	< 31	31	31	38.5
S4-BU	09/17/2014	< 21 J	21	21	< 46 J	46	46	< 33.5
G4 GD	03/18/2014	< 14	14	24	< 14	14	14	< 14
S4-CD	09/17/2014	< 16 J	16	16	< 17 J	17	17	< 16.5
g t gyv	03/18/2014	97	14	24	< 51	51	51	122.5
S4-CU	09/17/2014	< 19 J	19	19	< 22 J	22	22	< 20.5
			Lev	ee Zone Monito	ring Wells			•
	03/20/2014	< 14	14	24	< 9.3	9.3	47	< 11.65
~ *** 4.4	06/17/2014	< 14	14	24	< 9.3	9.3	47	< 11.65
5-W-14	09/16/2014	< 15 J	15	15	< 17 J	17	17	< 16
	12/16/2014	< 14	14	24	< 9.3	9.3	47	< 11.65
	03/20/2014	390	14	24	290	9.3	48	680
5 W 15	06/17/2014	180	14	24	170	9.3	47	350
5-W-15	09/16/2014	340	14	24	250	9.3	47	590
	12/16/2014	170	14	24	200	9.3	48	370
	03/20/2014	23 J	14	24	26 J	9.3	48	49
5 W 16	06/17/2014	19 J	14	24	16 J	9.3	47	35
5-W-16	09/16/2014	< 22 J	22	22	< 26 J	26	26	< 24
	12/16/2014	21 J	14	24	21 J	9.3	47	42
	03/20/2014	< 14	14	24	9.9 J	9.3	47	16.9
5 W 17	06/17/2014	< 14	14	24	< 9.3	9.3	48	< 11.65
5-W-17	09/16/2014	< 14 J	14	14	< 16 J	16	16	< 15
	12/16/2014	< 14	14	24	< 9.3	9.3	47	< 11.65

Table 7
2014 Calculated Total Petroleum Hydrocarbon Concentrations in Groundwater
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington

		DRO (	micrograms per	· liter)¹	ORG	) (micrograms pe	r liter) <sup>1</sup>	Calculated
Sample Location	Sample Date	Result	MDL	MRL	Result	MDL	MRL	NWTPH-Dx <sup>2</sup> (μ/l)
	03/18/2014	100	14	24	130	9.4	48	230
5-W-18	06/17/2014	87	14	24	110	9.3	47	197
3-W-18	09/16/2014	< 75	75	75	< 69	69	69	< 72
	12/16/2014	95	14	24	140	9.3	47	235
	03/20/2014	< 14	14	24	< 9.3	9.3	48	< 11.65
5 W 10	06/17/2014	< 14	14	24	< 9.3	9.3	48	< 11.65
5-W-19	09/16/2014	< 14	14	24	< 17 J	17	17	< 15.5
	12/16/2014	< 14	14	24	< 9.3	9.3	47	< 11.65
	Ī	Monitoring We	lls Down-Gradie	ent of the Hydra	ulic Control an	d Containment Sy	ystem	
	03/19/2014	24	14	24	36 J	9.3	48	60
1D W 22	06/17/2014	77	14	24	150	9.3	48	227
1B-W-23	09/17/2014	45	14	24	93 J	9.3	47	138
	12/17/2014	21 J	14	24	49	9.3	48	70
	03/19/2014	< 14	14	24	11 J	9.3	48	18
24 777 40	06/17/2014	< 14 J	14	24	< 19 J	19	19	< 16.5
2A-W-40	09/17/2014	< 14	14	24	< 12 J	12	12	< 13
	12/17/2014	20 J	14	24	< 9.3	9.3	48	24.65
	03/19/2014	61	14	24	55	9.3	48	116
24 777 41	06/17/2014	37	14	24	19 J	9.3	47	56
2A-W-41	09/17/2014	160	14	24	120 J	9.3	47	280
	12/17/2014	160	14	24	130	9.3	47	290
	03/19/2014	110	14	24	150	9.4	48	260
24 117 42	06/17/2014	74	14	24	55	9.3	48	129
2A-W-42	09/17/2014	140	14	24	110 J	9.3	47	250
	12/17/2014	120	14	24	97	9.3	48	217

Table 7
2014 Calculated Total Petroleum Hydrocarbon Concentrations in Groundwater
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington

		DRO (	micrograms pei	· liter)¹	ORG	) (micrograms pe	r liter) <sup>1</sup>	Calculated
Sample Location	Sample Date	Result	MDL	MRL	Result	MDL	MRL	NWTPH-Dx <sup>2</sup> (μ/l)
	03/19/2014	43	14	24	87	9.3	48	130
5 XX 40	06/17/2014	< 14	14	24	20 J	9.3	47	27
5-W-43	09/16/2014	< 19 J	19	19	< 24 J	24	24	< 21.5
	12/16/2014	30	14	24	56	9.4	48	86
5 W 50	03/18/2014	520	14	24	630	9.3	48	1,150
5-W-50	09/16/2014	1,200	14	24	520	9.3	48	1,720
~ *** ~	03/18/2014	23 J	14	24	53	9.3	47	76
5-W-54	09/16/2014	< 37	37	37	< 42 J	42	42	< 39.5
	03/18/2014	250	14	24	210	9.3	47	460
5-W-55	09/16/2014	94 J	14	24	85 J	9.3	47	179
~ *** ~ ~ ~	03/18/2014	1,700	14	24	1,800	9.4	48	3,500
5-W-56	09/16/2014	910	14	24	1,300	9.3	47	2,210
			Site	e-Wide Monitor	ring Wells		·	
1A-W-4	03/19/2014	< 14	14	24	< 9.3	9.3	47	< 11.65
1A-W-4	09/17/2014	< 20 J	20	20	< 24 J	24	24	< 22
1B-W-2	03/19/2014	29	14	24	79	9.4	48	108
1D-W-2	09/17/2014	< 66	66	66	< 74	74	74	< 70
	03/18/2014	66	14	24	100	9.4	48	166
1C-W-1	06/18/2014	15 J	14	24	17 J	9.3	47	32
	09/18/2014	32	14	24	< 33 J	33	33	48.5
1C.W.2	03/18/2014	22 J	14	24	39 J	9.3	48	61
1C-W-3	09/18/2014	< 22 J	22	22	< 22 J	22	22	< 22
1C W 4	03/18/2014	240	14	24	180	9.3	48	420
1C-W-4	09/18/2014	< 44	44	44	< 35 J	35	35	< 39.5

# 2014 Calculated Total Petroleum Hydrocarbon Concentrations in Groundwater

## **BNSF Former Maintenance and Fueling Facility**

# Skykomish, Washington Farallon PN: 683-043

		DRO (	micrograms per	· liter)¹	ORG	O (micrograms pe	er liter) <sup>1</sup>	Calculated
Sample Location	Sample Date	Result	MDL	MRL	Result	MDL	MRL	NWTPH-Dx <sup>2</sup> (μ/l)
MW-16	03/19/2014	24	14	24	40 J	9.3	47	64
IVI W - 10	09/18/2014	15 J	14	24	< 9.4	9.4	48	19.7
MW 20D	03/20/2014	59	14	24	71	9.3	48	130
MW-38R	09/16/2014	51	14	24	34 J	9.3	47	85

#### NOTES:

**Bold** denotes concentration exceeds 208 ug/l NWTPH-Dx cleanup level (Levee Zone) or exceeds 477 ug/l TPH remediation level (all zones except Levee Zone).

J= The analyte was positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.

MDL = laboratory-specified method detection limit

MRL = laboratory-specified method reporting limit

 $\mu g/l = micrograms \ per \ liter$ 

DRO = total petroleum hydrocarbons as diesel-range organics

ORO = total petroleum hydrocarbons as oil-range organics

< J = The material was analyzed for but not detected. The associated value is an estimate and may be inaccurate or imprecise.

<sup>&</sup>lt; denotes analyte not detected at or exceeding the laboratory method detection limit listed.

<sup>&</sup>lt;sup>1</sup>Analyzed by Northwest Method NWTPH-Dx

<sup>&</sup>lt;sup>2</sup>The total NWTPH-Dx calculation uses one-half the MDL for non-detectable concentrations to derive the sum of the DRO and ORO results obtained using the NWTPH-Dx analytical method. If either the DRO or the ORO concentration was reported as a detect, then the calculated Total TPH concentration is indicated as a detect. If both DRO and ORO concentrations were reported as non-detects, then the calculated Total TPH concentration is indicated as a non-detect. Note that in some instances, data validation resulted in additional data qualification and/or updates to laboratory data. If, for example, data validation caused an update to a non-detect result value because of lab blank contamination and the data validator concluded that the result should be non-detect instead of detect, the laboratory-given method detection limit and reporting limit were updated to match the validated non-detect result value.

# APPENDIX A LABORATORY ANALYTICAL REPORTS (PROVIDED ON CD IN PRINT REPORT)

2014 SITE-WIDE GROUNDWATER MONITORING REPORT BNSF Former Maintenance and Fueling Facility Skykomish, Washington Consent Decree No. 07-2-33672-9 SEA



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: 580-42035-1

Client Project/Site: BNSF Skykomish Ground Water

For:

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

Attn: Gerald Portele

Knistiere D. allen

Authorized for release by: 1/27/2014 12:05:25 PM

Kristine Allen, Manager of Project Management (253)922-2310

kristine.allen@testamericainc.com

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**Have a Question?** 



Visit us at: www.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.

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water TestAmerica Job ID: 580-42035-1

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#### **Case Narrative**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42035-1

Job ID: 580-42035-1

#### **Laboratory: TestAmerica Seattle**

#### Narrative

#### Receipt

The samples were received on 1/22/2014 4:10 PM. The temperature of the cooler at receipt was 6.7° C.

#### Except:

The following samples were received at the laboratory outside the required temperature criteria: 1B-W-3-011714 (580-42035-1), 1C-W-70-011714 (580-42035-3), 1C-W-70-011714 (580-42035-2), 1C-W-8-011714 (580-42035-4). Temperature at receipt was 6.7°C. Samples were received with melted ice.

The chain of custody (COC) was not signed, dated as relinquished by the client.

#### GC Semi VOA - Method(s) NWTPH-Dx

In analytical batch 152626, for the following sample(s) from preparation batch 152567: 1B-W-3-011714 (580-42035-1), the results in the #2 Diesel Fuel (C10-C24) range(s) are due to what most closely resembles a complex mixture of a mineral/transformer oil range product and possible biogenic interference; method 3630 silica gel cleanup procedure is recommended. The affected analyte range(s) have been Y qualified and reported.

In analytical batch 152626, for the following sample(s) from preparation batch 152567: 1C-W-70-011714 (580-42035-3), 1C-W-7-011714 (580-42035-2), 1C-W-8-011714 (580-42035-4), the results in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) range(s) are due to what most closely resembles a complex mixture of a mineral/transformer oil range product and possible biogenic interference; method 3630 silica gel cleanup procedure is recommended. The affected analyte range(s) have been Y qualified and reported.

No other analytical or quality issues were noted.

#### **Organic Prep**

No analytical or quality issues were noted.

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## **Definitions/Glossary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42035-1

#### **Qualifiers**

#### GC Semi VOA

Qualifier	Qualifier Description
Y	The chromatographic response resembles a typical fuel pattern.
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.
a	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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

MLMinimum Level (Dioxin)

NC Not Calculated

Not detected at the reporting limit (or MDL or EDL if shown) ND

PQL Practical Quantitation Limit

**Quality Control** QC RER Relative error ratio

RLReporting 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)

TestAmerica Seattle

# **Client Sample Results**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

**Client Sample ID: 1B-W-3-011714** 

TestAmerica Job ID: 580-42035-1

Lab Sample ID: 580-42035-1

Matrix: Water

Date Collected: 01/17/14 11:29 Date Received: 01/22/14 16:10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.037	Y	0.024	0.014	mg/L		01/23/14 10:27	01/24/14 12:54	1
Motor Oil (>C24-C36)	0.037	J	0.048	0.0093	mg/L		01/23/14 10:27	01/24/14 12:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	71	-	50 - 150				01/23/14 10:27	01/24/14 12:54	1

# **Client Sample Results**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 1C-W-7-011714

TestAmerica Job ID: 580-42035-1

Lab Sample ID: 580-42035-2

Metrico Weton

Matrix: Water

Date Collected: 01/17/14 12:45 Date Received: 01/22/14 16:10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.19	Y	0.024	0.014	mg/L		01/23/14 10:27	01/24/14 13:12	1
Motor Oil (>C24-C36)	0.11	Y	0.047	0.0093	mg/L		01/23/14 10:27	01/24/14 13:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	93	-	<u>50 - 150</u>				01/23/14 10:27	01/24/14 13:12	

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# **Client Sample Results**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 1C-W-70-011714

TestAmerica Job ID: 580-42035-1

Lab Sample ID: 580-42035-3

Matrice Water

Matrix: Water

Date Collected: 01/17/14 12:50 Date Received: 01/22/14 16:10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.18	Y	0.024	0.014	mg/L		01/23/14 10:27	01/24/14 13:30	1
Motor Oil (>C24-C36)	0.11	Y	0.047	0.0093	mg/L		01/23/14 10:27	01/24/14 13:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenvl	90	-	50 - 150				01/23/14 10:27	01/24/14 13:30	

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

**Client Sample ID: 1C-W-8-011714** 

TestAmerica Job ID: 580-42035-1

Lab Sample ID: 580-42035-4

Matrix: Water

Date Collected: 01/17/14 13:36 Date Received: 01/22/14 16:10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.21	Y	0.024	0.014	mg/L		01/23/14 10:27	01/24/14 13:48	1
Motor Oil (>C24-C36)	0.15	Y	0.047	0.0093	mg/L		01/23/14 10:27	01/24/14 13:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	92		50 - 150				01/23/14 10:27	01/24/14 13:48	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42035-1

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

Lab Sample ID: MB 580-152567/1-A

Lab Sample ID: LCS 580-152567/2-A

**Matrix: Water** 

**Matrix: Water** 

Analysis Batch: 152626

Analysis Batch: 152626

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

Prep Batch: 152567

мв мв Result Qualifier RL MDL Unit D Analyte Prepared Analyzed Dil Fac 0.025 01/23/14 10:27 01/24/14 12:01 #2 Diesel (C10-C24) ND 0.015 mg/L Motor Oil (>C24-C36) 0.050 01/23/14 10:27 01/24/14 12:01 ND 0.0098 mg/L

MB MB

%Recovery Surrogate Qualifier I imits Prepared Analyzed Dil Fac o-Terphenyl 89 50 - 150 01/23/14 10:27 01/24/14 12:01

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

**Prep Batch: 152567** 

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits #2 Diesel (C10-C24) 0.500 0.484 97 70 - 140 mg/L Motor Oil (>C24-C36) 0.500 0.498 mg/L 100 66 - 125

LCS LCS

Surrogate %Recovery Qualifier Limits o-Terphenyl 102 50 - 150

Lab Sample ID: LCSD 580-152567/3-A

**Matrix: Water** 

Analysis Batch: 152626

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Prep Batch: 152567** 

LCSD LCSD Spike %Rec. RPD Analyte Added Result Qualifier Unit %Rec RPD Limit #2 Diesel (C10-C24) 0.500 0.471 94 70 - 140 27 mg/L 3 Motor Oil (>C24-C36) 0.500 0.504 mg/L 101 66 - 125 27

LCSD LCSD

Surrogate Qualifier Limits %Recovery o-Terphenyl 100 50 - 150

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Lab Sample ID: 580-42035-1

Matrix: Water

Matrix: Water

Client Sample ID: 1B-W-3-011714 Date Collected: 01/17/14 11:29

Date Received: 01/22/14 16:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			152567	01/23/14 10:27	ALC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	152626	01/24/14 12:54	EKK	TAL SEA

Client Sample ID: 1C-W-7-011714 Lab Sample ID: 580-42035-2

Date Collected: 01/17/14 12:45

Date Received: 01/22/14 16:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			152567	01/23/14 10:27	ALC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	152626	01/24/14 13:12	EKK	TAL SEA

Client Sample ID: 1C-W-70-011714 Lab Sample ID: 580-42035-3

Date Collected: 01/17/14 12:50 Matrix: Water

Date Received: 01/22/14 16:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			152567	01/23/14 10:27	ALC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	152626	01/24/14 13:30	EKK	TAL SEA

Client Sample ID: 1C-W-8-011714 Lab Sample ID: 580-42035-4

Date Collected: 01/17/14 13:36 Matrix: Water

Date Received: 01/22/14 16:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			152567	01/23/14 10:27	ALC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	152626	01/24/14 13:48	EKK	TAL SEA

#### **Laboratory References:**

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

## **Certification Summary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42035-1

#### **Laboratory: TestAmerica Seattle**

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

Authority	Program	EPA Region	Certification ID	<b>Expiration Date</b>
Alaska (UST)	State Program	10	UST-022	03-04-14
California	NELAP	9	01115CA	01-31-14
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-14
USDA	Federal		P330-11-00222	05-20-14
Washington	State Program	10	C553	02-17-14

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## **Sample Summary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42035-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-42035-1	1B-W-3-011714	Water	01/17/14 11:29	01/22/14 16:10
580-42035-2	1C-W-7-011714	Water	01/17/14 12:45	01/22/14 16:10
580-42035-3	1C-W-70-011714	Water	01/17/14 12:50	01/22/14 16:10
580-42035-4	1C-W-8-011714	Water	01/17/14 13:36	01/22/14 16:10

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		LABORATION INFORMATION	
		Project Manager:	SHIPMENT INFORMATION
RAILWAY	Address:	Phone:	Shipment Method:
CHAIN OF CUSTODY	Chy/State/ZIP:	Fax:	Tracking Number:
BNSF PROJECT INFORMATION	Project State of Origin:	CONSULTANT INFORMATION	Project Number: 683~643
NSF Project Number:	Project City.	COMPANY FARALLON CONSULTING	Project Manager. JERRY PORTELE
GROUNDWATE	i.K	Address ATH AVE NW	PORTELE @ FARALLON CONSULTING, COM
BRUCE SHEPPARD	BNSF Work Order No.:		
TURNAROUND TIME	DELIVERABLES Other D		
1-day Rush	BNSF Standard (Level II)		
2-day Rush 📝 Standard 10-Day		EDD Reg, Format?	
3-day Rush	Level IV	(0 0)	,
SAMP	SAMPLE INFORMATION	He	
	Sample Collection	i	
Sample identification	Containers Date Time Sampler	Y/N Grab) wathx	COMMENTS LAB USE
18-W-3-011714	2 2/24/24/229 20	× 3 v 2	
1c-w-7-012714	1245	×	
AC-W-70-022724	12 5e	×	
1c-w-8-011714	1 1 1 1336 1	× A	
		,	
580-42035	580-42035 Chain of Custody		
0		(25)	(2) LO) 17
11		)	169 Bill W.H.
27			ICE BUBBLE
33			W/A LAB COURTER
44			2)
6	()		
Relinquished By:	Date/Time: Repayed B1:	Date Frince:	Comments and Special Analytical Requirements:
Relinquished By:		1	
Relinquished By:			
Received by Laboratory:	Date/Time: Lab Remarks:	Lab: Custody Intact? Cu	Custody Seal No BNSF COC No.

## **Login Sample Receipt Checklist**

Client: Farallon Consulting LLC Job Number: 580-42035-1

Login Number: 42035 List Source: TestAmerica Seattle

List Number: 1

Creator: Blankinship, Tom X

Creator: Blankinship, Tom X		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
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.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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## **ANALYTICAL REPORT**

TestAmerica Laboratories, Inc.

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

TestAmerica Job ID: 580-42413-1

Client Project/Site: BNSF Skykomish Ground Water

For:

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

Attn: Gerald Portele

Knistène D. allen

Authorized for release by: 2/25/2014 3:40:41 PM

Kristine Allen, Manager of Project Management (253)922-2310

kristine.allen@testamericainc.com

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Total Access

**Have a Question?** 



Visit us at: www.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.

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water TestAmerica Job ID: 580-42413-1

# **Table of Contents**

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#### **Case Narrative**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42413-1

Job ID: 580-42413-1

**Laboratory: TestAmerica Seattle** 

Narrative

#### Receipt

The samples were received on 2/20/2014 2:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5° C.

#### GC Semi VOA - Method(s) NWTPH-Dx

In analytical batch 154192, the method blank for preparation batch 154113 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.

In analytical batch 154192, for the following sample(s) from preparation batch 154113: 1B-W-3-021814 (580-42413-1), 1C-W-70-021814 (580-42413-3), 1C-W-7-021814 (580-42413-2), 1C-W-8-021814 (580-42413-4), the results in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) ranges are due to what most closely resembles a complex mixture of heavily weathered/degraded diesel fuel, a mineral/transformer oil range product and possible biogenic interference; method 3630 silica gel cleanup procedure is recommended. The affected analyte range(s) have been Y qualified and reported.

No other analytical or quality issues were noted.

#### **Organic Prep**

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

## **Definitions/Glossary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Not detected at the reporting limit (or MDL or EDL if shown)

Relative Percent Difference, a measure of the relative difference between two points

Reporting Limit or Requested Limit (Radiochemistry)

**Practical Quantitation Limit** 

Toxicity Equivalent Factor (Dioxin)
Toxicity Equivalent Quotient (Dioxin)

**Quality Control** 

Relative error ratio

TestAmerica Job ID: 580-42413-1

#### **Qualifiers**

#### GC Semi VOA

Qualifier	Qualifier Description
Y	The chromatographic response resembles a typical fuel pattern.
В	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

ND

PQL

QC

RER

RPD

TEF

TEQ

RL

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
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

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

**Client Sample ID: 1B-W-3-021814** 

TestAmerica Job ID: 580-42413-1

Lab Sample ID: 580-42413-1

Matrice Mate

Matrix: Water

Date Collected: 02/18/14 13:14 Date Received: 02/20/14 14:00

Method: NWTPH-Dx - North Analyte		Petroleum Qualifier	Products (GC RL	) MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.032		0.024	0.014		<u>-</u>	02/24/14 10:28	02/25/14 12:26	1
Motor Oil (>C24-C36)	0.055	ВҮ	0.047	0.0093	mg/L		02/24/14 10:28	02/25/14 12:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	77		50 - 150				02/24/14 10:28	02/25/14 12:26	1

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Client: Farallon Consulting LLC

Date Received: 02/20/14 14:00

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42413-1

Lab Sample ID: 580-42413-2

Matrix: Water

Client Sample ID: 1C-W-7-021814 Date Collected: 02/18/14 14:14

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.16	Υ	0.024	0.014	mg/L		02/24/14 10:28	02/25/14 12:42	1
Motor Oil (>C24-C36)	0.13	ВҮ	0.047	0.0093	mg/L		02/24/14 10:28	02/25/14 12:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				02/24/14 10:28	02/25/14 12:42	1

TestAmerica Seattle

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 1C-W-70-021814

TestAmerica Job ID: 580-42413-1

Lab Sample ID: 580-42413-3

Matrix: Water

Date Collected: 02/18/14 14:19 Date Received: 02/20/14 14:00

Method: NWTPH-Dx - North Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.17	Y	0.024	0.014	mg/L		02/24/14 10:28	02/25/14 12:57	1
Motor Oil (>C24-C36)	0.14	ВҮ	0.047	0.0093	mg/L		02/24/14 10:28	02/25/14 12:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	92	-	50 - 150				02/24/14 10:28	02/25/14 12:57	

Client: Farallon Consulting LLC

Date Received: 02/20/14 14:00

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42413-1

Lab Sample ID: 580-42413-4

Matrix: Water

Client Sample ID: 1C-W-8-021814 Date Collected: 02/18/14 15:18

Method: NWTPH-Dx - Northwe	st - Semi-Volatile	Petroleum	Products (GC	;)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed
#2 Diesel (C10-C24)	0.25	Y	0.024	0.014	mg/L		02/24/14 10:28	02/25/14 13:13
Motor Oil (>C24-C36)	0.21	ВҮ	0.047	0.0093	mg/L		02/24/14 10:28	02/25/14 13:13

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	93	50 - 150	02/24/14 10:28	02/25/14 13:13	1

Dil Fac

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42413-1

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

Lab Sample ID: MB 580-154113/1-A

**Matrix: Water** 

Analysis Batch: 154192

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

**Prep Batch: 154113** 

Result Qualifier RL MDL Unit D Dil Fac Analyte Prepared Analyzed 0.025 02/24/14 10:09 #2 Diesel (C10-C24) ND 0.015 mg/L 02/25/14 08:01 Motor Oil (>C24-C36) 0.0157 J 0.050 02/24/14 10:09 02/25/14 08:01 0.0098 mg/L

MB MB

мв мв

%Recovery Surrogate Qualifier I imits Prepared Analyzed Dil Fac o-Terphenyl 85 50 - 150 02/24/14 10:09 02/25/14 08:01

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 580-154113/2-A Prep Type: Total/NA **Matrix: Water** 

**Prep Batch: 154113** Analysis Batch: 154192

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits #2 Diesel (C10-C24) 0.500 0.492 98 70 - 140 mg/L Motor Oil (>C24-C36) 0.500 0.596 mg/L 119 66 - 125

LCS LCS

Surrogate %Recovery Qualifier Limits o-Terphenyl 98 50 - 150

Lab Sample ID: LCSD 580-154113/3-A

**Matrix: Water** 

Analysis Batch: 154192

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Prep Batch: 154113** 

LCSD LCSD Spike %Rec. RPD Analyte Added Result Qualifier Unit %Rec RPD Limit #2 Diesel (C10-C24) 0.500 0.475 95 70 - 140 27 mg/L 3 Motor Oil (>C24-C36) 0.500 0.564 mg/L 113 66 - 125 6 27

LCSD LCSD

Surrogate Qualifier Limits %Recovery o-Terphenyl 95 50 - 150

TestAmerica Job ID: 580-42413-1

**Client Sample ID: 1B-W-3-021814** 

Date Collected: 02/18/14 13:14 Date Received: 02/20/14 14:00

Lab Sample ID: 580-42413-1

Matrix: Water

Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			154113	02/24/14 10:28	ALC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	154192	02/25/14 12:26	EKK	TAL SEA

**Client Sample ID: 1C-W-7-021814** 

Date Collected: 02/18/14 14:14

Date Received: 02/20/14 14:00

_ab Sample	:טו	580-42413-2	i
		Matrix: Water	

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			154113	02/24/14 10:28	ALC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	154192	02/25/14 12:42	EKK	TAL SEA

Client Sample ID: 1C-W-70-021814 Lab Sample ID: 580-42413-3 **Matrix: Water** 

Date Collected: 02/18/14 14:19

Date Received: 02/20/14 14:00

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			154113	02/24/14 10:28	ALC	TAL SEA
Total/NIA	Analysis	NIM/TDH DV		1	15/1102	02/25/14 12:57	EKK	TAL SEA

**Client Sample ID: 1C-W-8-021814** Lab Sample ID: 580-42413-4

Date Collected: 02/18/14 15:18

Date Received: 02/20/14 14:00

<del>-</del>	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			154113	02/24/14 10:28	ALC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	154192	02/25/14 13:13	EKK	TAL SEA

#### **Laboratory References:**

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

## **Certification Summary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42413-1

#### **Laboratory: TestAmerica Seattle**

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

Authority	Program	EPA Region	Certification ID	<b>Expiration Date</b>
Alaska (UST)	State Program	10	UST-022	03-04-14 *
California	NELAP	9	01115CA	01-31-14 *
California	State Program	9	2901	01-31-15
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-14
USDA	Federal		P330-11-00222	05-20-14
Washington	State Program	10	C553	02-17-15

<sup>\*</sup> Expired certification is currently pending renewal and is considered valid.

## **Sample Summary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42413-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-42413-1	1B-W-3-021814	Water	02/18/14 13:14	02/20/14 14:00
580-42413-2	1C-W-7-021814	Water	02/18/14 14:14	02/20/14 14:00
580-42413-3	1C-W-70-021814	Water	02/18/14 14:19	02/20/14 14:00
580-42413-4	1C-W-8-021814	Water	02/18/14 15:18	02/20/14 14:00

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## **Login Sample Receipt Checklist**

Client: Farallon Consulting LLC

Job Number: 580-42413-1

Login Number: 42413 List Source: TestAmerica Seattle

List Number: 1

Creator: Gamble, Cathy L

Creator: Gamble, Cathy L		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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TestAmerica Seattle



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: 580-42898-1

Client Project/Site: BNSF Skykomish Ground Water

#### For:

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

Attn: Gerald Portele

Kim hesley

Authorized for release by:

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Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water TestAmerica Job ID: 580-42898-1

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#### **Case Narrative**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42898-1

#### Job ID: 580-42898-1

#### **Laboratory: TestAmerica Seattle**

#### Narrative

#### Receipt

The samples were received on 3/21/2014 11:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 10 coolers at receipt time were 0.5° C, 2.4° C, 2.9° C, 2.9° C, 3.0° C, 3.2° C, 3.2° C, 3.5° C, 4.4° C and 4.4° C.

#### GC Semi VOA - Method NWTPH-Dx

For the following sample S4-CU-031814 (580-42898-27) the results in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) ranges are due to what most closely resembles a complex mixture of weathered/degraded diesel fuel and a motor oil range product.

For the following samples MW-38R-032014 (580-42898-1), 5-W-15-032014 (580-42898-4), 5-W-43-031914 (580-42898-8), 5-W-430-031914 (580-42898-9), GW-30-031914 (580-42898-10), GW-1-031914 (580-42898-11), GW-2-031914 (580-42898-12), 2A-W-9-031914 (580-42898-15), 2A-W-41-031914 (580-42898-16), 2A-W-420-031914 (580-42898-17), EW-2A-031814 (580-42898-39) the results in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) ranges are due to what most closely resembles a complex mixture of weathered/degraded diesel fuel and motor oil range products.

For the following sample GW-3-031914 (580-42898-14) the results in the #2 Diesel Fuel (C10-C24) range is due to what most closely resembles a complex mixture of weathered/degraded diesel fuel.

For the following sample EW-1-031914 (580-42898-62), the results in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) ranges are due to what most closely resembles a complex mixture of weathered/degraded diesel fuel and motor oil range products.

For the following sample 5-W-54-031814 (580-42898-51) the results in the Motor Oil (>C24-C36) range is due to what most closely resembles a complex mixture of motor oil range products.

For the following sample 5-W-56-031814 (580-42898-50) the results in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) ranges are due to what most closely resembles a complex mixture of weathered/degraded diesel fuel, motor oil range products, and a grouping of individual peak(s) that may be due to 8270/PAH analytes; analysis by 8270 GC/MS is recommended for peak identification.

For the following samples 1B-W-3-031914 (580-42898-55), MW-16-031914 (580-42898-58), 1B-W-23-031914 (580-42898-60) the results in the #2 Diesel Fuel (C10-C24) range is due to what most closely resembles a complex mixture of weathered/degraded diesel fuel.

For the following samples MW-4-031814 (580-42898-41), 1C-W-4-031814 (580-42898-42), GW-4-031814 (580-42898-43), 2A-W-10-031814 (580-42898-44), 1C-W-80-031814 (580-42898-45), 1C-W-1-031814 (580-42898-46), 1C-W-8-031814 (580-42898-47), 5-W-18-031814 (580-42898-49), 5-W-50-031914 (580-42898-52), 5-W-55-031914 (580-42898-53), 1B-W-2-031914 (580-42898-54), MW-3-031914 (580-42898-56), 1C-W-7-031914 (580-42898-57), 2A-W-42-031914 (580-42898-59) the results in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) ranges are due to what most closely resembles a complex mixture of weathered/degraded diesel fuel, motor oil range products, and possibly mineral/transformer oil range products.

All affected analyte ranges have been "Y" qualified and reported.

The method blank MB 580-156008/1-A contained Motor Oil (>C24-C36) above the method detection limit but below the reporting limit (RL). The values should be considered as estimates, and have been flagged "J". The associated sample results have been flagged "B".

No other analytical or quality issues were noted.

#### **Organic Prep**

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

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TestAmerica Seattle 4/4/2014

## **Definitions/Glossary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Not detected at the reporting limit (or MDL or EDL if shown)

Relative Percent Difference, a measure of the relative difference between two points

Reporting Limit or Requested Limit (Radiochemistry)

**Practical Quantitation Limit** 

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

**Quality Control** 

Relative error ratio

TestAmerica Job ID: 580-42898-1

#### **Qualifiers**

#### GC Semi VOA

Qualifier	Qualifier Description
Y	The chromatographic response resembles a typical fuel pattern.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
В	Compound was found in the blank and sample.

### **Glossary**

ND

PQL

QC

RER

RPD

TEF

TEQ

RL

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
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

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: MW-38R-032014

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-1

Matrix: Water

Date Collected: 03/20/14 09:38 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.059	Y	0.024	0.014	mg/L		03/27/14 17:48	03/28/14 16:25	1
Motor Oil (>C24-C36)	0.071	Y	0.048	0.0093	mg/L		03/27/14 17:48	03/28/14 16:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	87		<u>50 - 150</u>				03/27/14 17:48	03/28/14 16:25	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 5-W-19-032014

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-2

Matrix: Water

Date Collected: 03/20/14 10:39 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/27/14 17:48	03/28/14 16:49	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		03/27/14 17:48	03/28/14 16:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	74		50 - 150				03/27/14 17:48	03/28/14 16:49	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 5-W-16-032014

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-3

Matrix: Water

Date Collected: 03/20/14 11:38 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	5)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.023	J	0.024	0.014	mg/L		03/27/14 17:48	03/28/14 17:13	1
Motor Oil (>C24-C36)	0.026	J	0.048	0.0093	mg/L		03/27/14 17:48	03/28/14 17:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78	-	50 - 150				03/27/14 17:48	03/28/14 17:13	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 5-W-15-032014

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-4

Matrix: Water

Date Collected: 03/20/14 13:29 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	;)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.39	Υ	0.024	0.014	mg/L		03/27/14 17:48	03/28/14 17:37	1
Motor Oil (>C24-C36)	0.29	Y	0.048	0.0093	mg/L		03/27/14 17:48	03/28/14 17:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	93		50 - 150				03/27/14 17:48	03/28/14 17:37	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 5-W-17-032014

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-5

Matrix: Water

Date Collected: 03/20/14 14:07 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	<del>;</del> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/27/14 17:48	03/28/14 18:01	1
Motor Oil (>C24-C36)	0.0099	J	0.047	0.0093	mg/L		03/27/14 17:48	03/28/14 18:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	98		50 - 150				03/27/14 17:48	03/28/14 18:01	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-6

Matrix: Water

Client Sample ID: 5-W-14-032014 Date Collected: 03/20/14 14:58

Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/27/14 17:48	03/28/14 18:24	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		03/27/14 17:48	03/28/14 18:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	92		<u>50 - 150</u>				03/27/14 17:48	03/28/14 18:24	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 5-W-190-032014

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-7

Matrix: Water

Date Collected: 03/20/14 16:00 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/27/14 17:48	03/28/14 18:48	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		03/27/14 17:48	03/28/14 18:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	85		<u>50 - 150</u>				03/27/14 17:48	03/28/14 18:48	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 5-W-43-031914

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-8

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Matrix: Water

Date Collected: 03/19/14 12:15 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.043	Υ	0.024	0.014	mg/L		03/27/14 17:48	03/28/14 19:59	1
Motor Oil (>C24-C36)	0.087	Y	0.048	0.0093	mg/L		03/27/14 17:48	03/28/14 19:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	98		<u>50 - 150</u>				03/27/14 17:48	03/28/14 19:59	1

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TestAmerica Seattle

Client: Farallon Consulting LLC

Date Collected: 03/19/14 12:34

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 5-W-430-031914

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-9

Matrix: Water

Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.043	Y	0.024	0.014	mg/L		03/27/14 17:48	03/28/14 20:23	1
Motor Oil (>C24-C36)	0.088	Y	0.047	0.0093	mg/L		03/27/14 17:48	03/28/14 20:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	94	-	50 - 150				03/27/14 17:48	03/28/14 20:23	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: GW-30-031914

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-10

03/27/14 17:48 03/28/14 20:47

Matrix: Water

Date Collected: 03/19/14 13:57 Date Received: 03/21/14 11:05

o-Terphenyl

Method: NWTPH-Dx - Northwest -	Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.063	Υ	0.024	0.014	mg/L		03/27/14 17:48	03/28/14 20:47	1
Motor Oil (>C24-C36)	0.054	Y	0.048	0.0094	mg/L		03/27/14 17:48	03/28/14 20:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

50 - 150

84

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: GW-1-031914

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-11

Matrix: Water

Date Collected: 03/19/14 14:19 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.054	Υ	0.024	0.014	mg/L		03/27/14 17:48	03/28/14 21:10	1
Motor Oil (>C24-C36)	0.097	Y	0.048	0.0093	mg/L		03/27/14 17:48	03/28/14 21:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				03/27/14 17:48	03/28/14 21:10	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: GW-2-031914

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-12

Matrix: Water

Date Collected: 03/19/14 14:21 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.094	Υ	0.024	0.014	mg/L		03/27/14 17:48	03/28/14 21:34	1
Motor Oil (>C24-C36)	0.18	Y	0.048	0.0094	mg/L		03/27/14 17:48	03/28/14 21:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	92		50 - 150				03/27/14 17:48	03/28/14 21:34	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 2A-W-40-031914

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-13

Matrix: Water

Date Collected: 03/19/14 14:57 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/27/14 17:48	03/28/14 21:58	1
Motor Oil (>C24-C36)	0.011	J	0.048	0.0093	mg/L		03/27/14 17:48	03/28/14 21:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	69		50 - 150				03/27/14 17:48	03/28/14 21:58	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: GW-3-031914

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-14

Matrix: Water

Date Collected: 03/19/14 15:26 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.039	Y	0.024	0.014	mg/L		03/27/14 17:48	03/28/14 22:21	1
Motor Oil (>C24-C36)	0.035	J	0.048	0.0094	mg/L		03/27/14 17:48	03/28/14 22:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150				03/27/14 17:48	03/28/14 22:21	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 2A-W-9-031914

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-15

Matrix: Water

Date Collected: 03/19/14 16:20 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.61	Υ	0.024	0.014	mg/L		03/27/14 17:48	03/28/14 22:45	1
Motor Oil (>C24-C36)	0.35	Y	0.048	0.0094	mg/L		03/27/14 17:48	03/28/14 22:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78	-	50 - 150				03/27/14 17:48	03/28/14 22:45	1

Client: Farallon Consulting LLC

Date Collected: 03/19/14 17:06

o-Terphenyl

Project/Site: BNSF Skykomish Ground Water

**Client Sample ID: 2A-W-41-031914** 

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-16

Matrix: Water

Date Received: 03/21/14 11:05

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Method: NWTPH-Dx - Northwest -	Semi-Volatile	Petroleum	Products (GC)	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.061	Y	0.024	0.014	mg/L		03/27/14 17:48	03/28/14 23:09	1
Motor Oil (>C24-C36)	0.055	Y	0.048	0.0093	mg/L		03/27/14 17:48	03/28/14 23:09	1
Surrogate	%Recovery	Ovalifian	l imits				Prenared	<b>Analyzed</b>	Dil Fac

50 - 150

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 2A-W-420-031914

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-17

Matrix: Water

Date Collected: 03/19/14 17:43 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	;)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.093	Y	0.024	0.014	mg/L		03/27/14 17:48	03/28/14 23:32	1
Motor Oil (>C24-C36)	0.12	Y	0.048	0.0094	mg/L		03/27/14 17:48	03/28/14 23:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	86		50 - 150				03/27/14 17:48	03/28/14 23:32	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S1-AU-031714

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-18

Matrix: Water

Date Collected: 03/17/14 16:23 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/27/14 11:31	03/28/14 16:25	1
Motor Oil (>C24-C36)	0.013	JB	0.047	0.0093	mg/L		03/27/14 11:31	03/28/14 16:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	65		50 - 150				03/27/14 11:31	03/28/14 16:25	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S1-BU-031714

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-19

Matrix: Water

Date Collected: 03/17/14 16:13 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/27/14 11:31	03/28/14 16:49	1
Motor Oil (>C24-C36)	0.027	JB	0.047	0.0093	mg/L		03/27/14 11:31	03/28/14 16:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	67		50 - 150				03/27/14 11:31	03/28/14 16:49	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-20

Matrix: Water

Client Sample ID: S1-BD-031714 Date Collected: 03/17/14 16:34

Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North Analyte		Petroleum Qualifier	Products (GC RL	) MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.018	J	0.024	0.014	mg/L		03/27/14 11:31	03/28/14 17:13	1
Motor Oil (>C24-C36)	0.028	JB	0.047	0.0093	mg/L		03/27/14 11:31	03/28/14 17:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	72		50 - 150				03/27/14 11:31	03/28/14 17:13	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-21

Matrix: Water

Date Collected: 03/17/14 16:34 Date Received: 03/21/14 11:05

Client Sample ID: S1-AD-031714

Method: NWTPH-Dx - Northwe	est - Semi-Volatile	<b>Petroleum</b>	<b>Products (GC</b>	;)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/27/14 11:31	03/28/14 17:37	1
Motor Oil (>C24-C36)	0.010	JB	0.048	0.0093	mg/L		03/27/14 11:31	03/28/14 17:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	62		50 - 150				03/27/14 11:31	03/28/14 17:37	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S2-BU-031714

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-22

Matrix: Water

Date Collected: 03/17/14 17:10 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.019	J	0.024	0.014	mg/L		03/27/14 11:31	03/28/14 18:01	1
Motor Oil (>C24-C36)	0.019	J B	0.048	0.0093	mg/L		03/27/14 11:31	03/28/14 18:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	56		50 - 150				03/27/14 11:31	03/28/14 18:01	1

TestAmerica Seattle

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S2-AD-031714

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-23

Matrix: Water

Date Collected: 03/17/14 17:11 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.014	J	0.024	0.014	mg/L		03/27/14 11:31	03/28/14 18:24	1
Motor Oil (>C24-C36)	0.016	JB	0.048	0.0093	mg/L		03/27/14 11:31	03/28/14 18:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150				03/27/14 11:31	03/28/14 18:24	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S2-BD-031714

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-24

Date Collected: 03/17/14 17:13 Date Received: 03/21/14 11:05 Matrix: Water

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.025		0.024	0.014	mg/L		03/27/14 11:31	03/28/14 18:48	1
Motor Oil (>C24-C36)	0.021	JB	0.047	0.0093	mg/L		03/27/14 11:31	03/28/14 18:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	87		50 - 150				03/27/14 11:31	03/28/14 18:48	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S2-AU-031714

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-25

Matrix: Water

Motric Water

Date Collected: 03/17/14 17:31 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/27/14 11:31	03/28/14 19:59	1
Motor Oil (>C24-C36)	0.011	JB	0.047	0.0093	mg/L		03/27/14 11:31	03/28/14 19:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				03/27/14 11:31	03/28/14 19:59	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S4-AD-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-26

Matrix: Water

Date Collected: 03/18/14 08:28 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/27/14 11:31	03/28/14 20:23	1
Motor Oil (>C24-C36)	0.011	JB	0.048	0.0093	mg/L		03/27/14 11:31	03/28/14 20:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				03/27/14 11:31	03/28/14 20:23	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S4-CU-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-27

Matrix: Water

Date Collected: 03/18/14 08:30 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.097	Y	0.024	0.014	mg/L		03/27/14 11:31	03/28/14 20:47	1
Motor Oil (>C24-C36)	0.051	YB	0.048	0.0094	mg/L		03/27/14 11:31	03/28/14 20:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	89		50 - 150				03/27/14 11:31	03/28/14 20:47	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S4-BU-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-28

Matrix: Water

Date Collected: 03/18/14 08:33 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.023	J	0.024	0.014	mg/L		03/27/14 11:31	03/28/14 21:10	1
Motor Oil (>C24-C36)	0.031	JB	0.048	0.0094	mg/L		03/27/14 11:31	03/28/14 21:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				03/27/14 11:31	03/28/14 21:10	1

Client: Farallon Consulting LLC

o-Terphenyl

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-29

03/27/14 11:31 03/28/14 21:34

Matrix: Water

Client Sample ID: S4-CD-031814 Date Collected: 03/18/14 08:46

Date Received: 03/21/14 11:05

86

Method: NWTPH-Dx - Northwest	<ul> <li>Semi-Volatile</li> </ul>	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		03/27/14 11:31	03/28/14 21:34	1
Motor Oil (>C24-C36)	0.014	JB	0.048	0.0094	mg/L		03/27/14 11:31	03/28/14 21:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

50 - 150

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S4-AU-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-30

Matrix: Water

Date Collected: 03/18/14 08:46 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.019	J	0.024	0.014	mg/L		03/27/14 11:31	03/28/14 21:58	1
Motor Oil (>C24-C36)	0.019	JB	0.048	0.0093	mg/L		03/27/14 11:31	03/28/14 21:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	85		50 - 150				03/27/14 11:31	03/28/14 21:58	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S4-BD-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-31

Matrix: Water

Date Collected: 03/18/14 08:59 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/27/14 11:31	03/28/14 22:21	1
Motor Oil (>C24-C36)	0.012	JB	0.048	0.0094	mg/L		03/27/14 11:31	03/28/14 22:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	68	-	50 - 150				03/27/14 11:31	03/28/14 22:21	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S3-AD-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-32

Matrix: Water

Date Collected: 03/18/14 09:16 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/27/14 11:31	03/28/14 22:45	1
Motor Oil (>C24-C36)	0.012	JB	0.048	0.0093	mg/L		03/27/14 11:31	03/28/14 22:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78		50 <sub>-</sub> 150				03/27/14 11:31	03/28/14 22:45	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S3-CU-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-33

Matrix: Water

Lab Sample ID. 560-42

Date Collected: 03/18/14 09:24 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	<b>;</b> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/27/14 11:31	03/28/14 23:09	1
Motor Oil (>C24-C36)	0.0097	JB	0.048	0.0093	mg/L		03/27/14 11:31	03/28/14 23:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	81	-	50 - 150				03/27/14 11:31	03/28/14 23:09	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S3-BU-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-34

Matrix: Water

Date Collected: 03/18/14 09:31 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.018	J	0.024	0.014	mg/L		03/27/14 11:31	03/28/14 23:32	1
Motor Oil (>C24-C36)	0.019	JB	0.048	0.0093	mg/L		03/27/14 11:31	03/28/14 23:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	70	-	50 - 150				03/27/14 11:31	03/28/14 23:32	1

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Client: Farallon Consulting LLC

Date Collected: 03/18/14 09:33

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S3-AU-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-35

Matrix: Water

Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/27/14 11:31	03/29/14 00:43	1
Motor Oil (>C24-C36)	0.010	JB	0.048	0.0093	mg/L		03/27/14 11:31	03/29/14 00:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	65		50 - 150				03/27/14 11:31	03/29/14 00:43	1

Client: Farallon Consulting LLC

Date Received: 03/21/14 11:05

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S3-CD-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-36

Date Collected: 03/18/14 09:37 Matrix: Water

Method: NWTPH-Dx - Northw	est - Semi-Volatile	Petroleum	<b>Products (GC</b>	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/27/14 11:31	03/29/14 01:06	1
Motor Oil (>C24-C36)	0.014	JB	0.048	0.0093	mg/L		03/27/14 11:31	03/29/14 01:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	75		50 - 150				03/27/14 11:31	03/29/14 01:06	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S3-BD-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-37

Date Collected: 03/18/14 09:58 Date Received: 03/21/14 11:05 Matrix: Water

Method: NWTPH-Dx - North	nwest - 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		03/27/14 11:31	03/29/14 01:30	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		03/27/14 11:31	03/29/14 01:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	82		50 - 150				03/27/14 11:31	03/29/14 01:30	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

**Client Sample ID: 2B-W-4-031814** 

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-38

Matrix: Water

Date Collected: 03/18/14 11:19 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North Analyte		Petroleum Qualifier	Products (GC RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND	- Guainici	0.024	0.014			03/27/14 17:48	03/29/14 00:43	1
Motor Oil (>C24-C36)	0.020	J	0.047	0.0093	mg/L		03/27/14 17:48	03/29/14 00:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	71		50 - 150				03/27/14 17:48	03/29/14 00:43	

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: EW-2A-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-39

Matrix: Water

Date Collected: 03/18/14 11:31 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	Products (GC	<del>;</del> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.039	Υ	0.024	0.014	mg/L		03/27/14 17:48	03/29/14 01:06	1
Motor Oil (>C24-C36)	0.073	Y	0.048	0.0093	mg/L		03/27/14 17:48	03/29/14 01:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	88	-	50 - 150				03/27/14 17:48	03/29/14 01:06	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

**Client Sample ID: 1C-W-3-031814** 

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-40

Matrix: Water

Date Collected: 03/18/14 11:39 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	<b>;</b> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.022	J	0.024	0.014	mg/L		03/27/14 17:48	03/29/14 01:30	1
Motor Oil (>C24-C36)	0.039	J	0.048	0.0093	mg/L		03/27/14 17:48	03/29/14 01:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	81		50 - 150				03/27/14 17:48	03/29/14 01:30	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: MW-4-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-41

Matrix: Water

Date Collected: 03/18/14 12:18 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North Analyte		Qualifier	RL	) MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.082	Y	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 19:20	1
Motor Oil (>C24-C36)	0.26	Y	0.048	0.0093	mg/L		03/31/14 14:18	04/01/14 19:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	80		50 - 150				03/31/14 14:18	04/01/14 19:20	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

**Client Sample ID: 1C-W-4-031814** 

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-42

Matrix: Water

Date Collected: 03/18/14 12:23 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.24	Y	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 19:38	1
Motor Oil (>C24-C36)	0.18	Y	0.048	0.0093	mg/L		03/31/14 14:18	04/01/14 19:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	79		50 - 150				03/31/14 14:18	04/01/14 19:38	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: GW-4-031814 Date Collected: 03/18/14 13:03 Date Received: 03/21/14 11:05

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-43

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		Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.042	Y	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 19:56	1
Motor Oil (>C24-C36)	0.082	Y	0.048	0.0094	mg/L		03/31/14 14:18	04/01/14 19:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	90		50 - 150				03/31/14 14:18	04/01/14 19:56	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 2A-W-10-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-44

Matrix: Water

Date Collected: 03/18/14 14:31 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.19	Υ	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 20:14	1
Motor Oil (>C24-C36)	0.66	Y	0.047	0.0093	mg/L		03/31/14 14:18	04/01/14 20:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	99		50 - 150				03/31/14 14:18	04/01/14 20:14	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 1C-W-80-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-45

Matrix: Water

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Date Collected: 03/18/14 14:47 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.19	Υ	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 20:32	1
Motor Oil (>C24-C36)	0.16	Y	0.048	0.0094	mg/L		03/31/14 14:18	04/01/14 20:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	81		50 - 150				03/31/14 14:18	04/01/14 20:32	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 1C-W-1-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-46

Matrix: Water

Date Collected: 03/18/14 14:48 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North Analyte		Petroleum Qualifier	Products (GC	) MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.066	Y	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 20:50	1
Motor Oil (>C24-C36)	0.10	Y	0.048	0.0094	mg/L		03/31/14 14:18	04/01/14 20:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	81		50 - 150				03/31/14 14:18	04/01/14 20:50	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

**Client Sample ID: 1C-W-8-031814** 

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-47

. Matrix: Water

Date Collected: 03/18/14 15:03
Date Received: 03/21/14 11:05

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.19	Y	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 21:08	1
Motor Oil (>C24-C36)	0.16	Υ	0.047	0.0093	mg/L		03/31/14 14:18	04/01/14 21:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78	-	50 - 150				03/31/14 14:18	04/01/14 21:08	1

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Client: Farallon Consulting LLC

o-Terphenyl

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-48

03/31/14 14:18 04/01/14 22:01

Matrix: Water

Client Sample ID: 2B-W-40-031814 Lab Samp
Date Collected: 03/18/14 16:00

Date Received: 03/21/14 11:05

76

Method: NWTPH-DX - Northwest - 30	ann-voiaule	Petroleulli F	roducis (GC)	1					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		03/31/14 14:18	04/01/14 22:01	1
Motor Oil (>C24-C36)	0.017	J	0.048	0.0093	mg/L		03/31/14 14:18	04/01/14 22:01	1
Surrogate	%Recovery	Qualifier	l imits				Prepared	Analyzed	Dil Fac

50 - 150

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 5-W-18-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-49

Matrix: Water

Date Collected: 03/18/14 16:19 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.10	Y	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 22:19	1
Motor Oil (>C24-C36)	0.13	Y	0.048	0.0094	mg/L		03/31/14 14:18	04/01/14 22:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	85		50 - 150				03/31/14 14:18	04/01/14 22:19	1

Client: Farallon Consulting LLC

Date Collected: 03/18/14 16:36

Date Received: 03/21/14 11:05

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 5-W-56-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-50

**Matrix: Water** 

Method: NWTPH-Dx - Northwes Analyte		Petroleum Qualifier	Products (GC RL	•	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	1.7	Y	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 22:37	1
Motor Oil (>C24-C36)	1.8	Y	0.048	0.0094	mg/L		03/31/14 14:18	04/01/14 22:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	90		50 - 150				03/31/14 14:18	04/01/14 22:37	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 5-W-54-031814

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-51

Matrix: Water

Date Collected: 03/18/14 16:53

Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	;)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.023	J	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 22:55	1
Motor Oil (>C24-C36)	0.053	Y	0.047	0.0093	mg/L		03/31/14 14:18	04/01/14 22:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	82		50 - 150				03/31/14 14:18	04/01/14 22:55	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 5-W-50-031914

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-52

Matrix: Water

Date Collected: 03/18/14 17:46 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.52	Y	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 23:13	1
Motor Oil (>C24-C36)	0.63	Y	0.048	0.0093	mg/L		03/31/14 14:18	04/01/14 23:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	92		50 - 150				03/31/14 14:18	04/01/14 23:13	

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Client: Farallon Consulting LLC

Date Collected: 03/18/14 17:51

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-53

Matrix: Water

Date Received: 03/21/14 11:05

Client Sample ID: 5-W-55-031914

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.25	Y	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 23:31	1
Motor Oil (>C24-C36)	0.21	Υ	0.047	0.0093	mg/L		03/31/14 14:18	04/01/14 23:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150				03/31/14 14:18	04/01/14 23:31	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

**Client Sample ID: 1B-W-2-031914** 

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-54

Matrix: Water

Date Collected: 03/19/14 09:43 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.029	Y	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 23:49	1
Motor Oil (>C24-C36)	0.079	Y	0.048	0.0094	mg/L		03/31/14 14:18	04/01/14 23:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150				03/31/14 14:18	04/01/14 23:49	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-55

Matrix: Water

**Client Sample ID: 1B-W-3-031914** Date Collected: 03/19/14 08:57

Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.035	Y	0.024	0.014	mg/L		03/31/14 14:18	04/02/14 00:07	1
Motor Oil (>C24-C36)	0.045	J	0.047	0.0093	mg/L		03/31/14 14:18	04/02/14 00:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	68		<del>50 - 150</del>				03/31/14 14:18	04/02/14 00:07	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-56

**Matrix: Water** 

Client Sample ID: MW-3-031914 Date Collected: 03/19/14 09:29 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.037	Y	0.024	0.014	mg/L		03/31/14 14:18	04/02/14 00:25	1
Motor Oil (>C24-C36)	0.075	Y	0.048	0.0093	mg/L		03/31/14 14:18	04/02/14 00:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenvl	86		50 - 150				03/31/14 14:18	04/02/14 00:25	

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 1C-W-7-031914

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-57

Matrix: Water

Date Collected: 03/19/14 09:38 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	;)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.18	Y	0.024	0.014	mg/L		03/31/14 14:18	04/02/14 00:43	1
Motor Oil (>C24-C36)	0.13	Y	0.048	0.0094	mg/L		03/31/14 14:18	04/02/14 00:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	80		50 - 150				03/31/14 14:18	04/02/14 00:43	1

Client: Farallon Consulting LLC

Date Received: 03/21/14 11:05

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-58

Matrix: Water

Client Sample ID: MW-16-031914 Date Collected: 03/19/14 10:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.024	Y	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 17:14	1
Motor Oil (>C24-C36)	0.040	J	0.047	0.0093	mg/L		03/31/14 14:18	04/01/14 17:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	79		50 - 150				03/31/14 14:18	04/01/14 17:14	

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 2A-W-42-031914

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-59

Matrix: Water

Date Collected: 03/19/14 10:27 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.11	Y	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 17:32	1
Motor Oil (>C24-C36)	0.15	Y	0.048	0.0094	mg/L		03/31/14 14:18	04/01/14 17:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	94		50 - 150				03/31/14 14:18	04/01/14 17:32	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 1B-W-23-031914

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-60

Matrix: Water

Date Collected: 03/19/14 10:33 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North		Petroleum Qualifier	•	) MDL	Unit		Dronorod	Analyzad	Dil Fac
Analyte	Result	Qualifier	RL	MDL	Unit	U	Prepared	Analyzed	DII Fac
#2 Diesel (C10-C24)	0.024	Y	0.024	0.014	mg/L		03/31/14 14:18	04/01/14 17:50	1
Motor Oil (>C24-C36)	0.036	J	0.048	0.0093	mg/L		03/31/14 14:18	04/01/14 17:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78		50 - 150				03/31/14 14:18	04/01/14 17:50	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

**Client Sample ID: 1A-W-4-031914** 

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-61

Matrix: Water

Lab Sample ID. 300-42090-

Date Collected: 03/19/14 11:31 Date Received: 03/21/14 11:05

Method: NWTPH-Dx - North	nwest - 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		04/01/14 09:45	04/02/14 00:44	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		04/01/14 09:45	04/02/14 00:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	71		50 - 150				04/01/14 09:45	04/02/14 00:44	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: EW-1-031914

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-62

Matrix: Water

Date Collected: 03/19/14 11:59 Date Received: 03/21/14 11:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.038	Y	0.024	0.014	mg/L		04/01/14 09:45	04/02/14 01:11	1
Motor Oil (>C24-C36)	0.072	Y	0.048	0.0093	mg/L		04/01/14 09:45	04/02/14 01:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	89		50 - 150				04/01/14 09:45	04/02/14 01:11	1

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42898-1

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

Lab Sample ID: MB 580-156008/1-A

Lab Sample ID: LCS 580-156008/2-A

**Matrix: Water** 

**Matrix: Water** 

Analysis Batch: 156060

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

**Prep Batch: 156008** 

	IVID	VID							
Analyte	Result (	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		03/27/14 11:31	03/28/14 15:13	1
Motor Oil (>C24-C36)	0.0116	J	0.050	0.0098	mg/L		03/27/14 11:31	03/28/14 15:13	1

MB MB

MD MD

Surrogate %Recovery Qualifier I imits Prepared Analyzed Dil Fac o-Terphenyl 83 50 - 150 03/27/14 11:31 03/28/14 15:13

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 156008** 

Analysis Batch: 156060					Prep B	atch: 156008
	Spike L	CS LCS			%Rec.	
Analyte	Added Re	ult Qualifier	Unit D	%Rec	Limits	
#2 Diesel (C10-C24)	0.500 0.	62	mg/L	92	70 - 140	
Motor Oil (>C24-C36)	0.500 0.5	21	mg/L	104	66 - 125	

LCS LCS

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

Lab Sample ID: LCSD 580-156008/3-A

**Matrix: Water** 

Analysis Batch: 156060

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Prep Batch: 156008** 

	Spike	LCSD	LCSD			%Rec.		RPD	
Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits	RPD	Limit	
#2 Diesel (C10-C24)	0.500	0.454	mg/L		91	70 - 140	2	27	
Motor Oil (>C24-C36)	0.500	0.513	mg/L		103	66 - 125	2	27	
,	0.500	0.513	_		103	66 _ 125	2		27

LCSD LCSD

Surrogate %Recovery Qualifier Limits o-Terphenyl 87 50 - 150

Lab Sample ID: MB 580-156032/1-A

**Matrix: Water** 

**Analysis Batch: 156063** 

Client Sample ID: Method Blank

Prep Type: Total/NA

**Prep Batch: 156032** 

Analyte	Result Qu	ualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND	0.025	0.015	mg/L		03/27/14 17:48	03/28/14 15:13	1
Motor Oil (>C24-C36)	ND	0.050	0.0098	mg/L		03/27/14 17:48	03/28/14 15:13	1

MB MB

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 50 - 150 03/27/14 17:48 03/28/14 15:13 o-Terphenyl 95

Lab Sample ID: LCS 580-156032/2-A

**Matrix: Water** 

Analysis Batch: 156063

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 156032** 

١			Spike	LCS	LCS				%Rec.	
	Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
	#2 Diesel (C10-C24)		0.500	0.458		mg/L		92	70 - 140	
١	Motor Oil (>C24-C36)		0.500	0.505		mg/L		101	66 - 125	

Project/Site: BNSF Skykomish Ground Water

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

Lab Sample ID: LCS 580-156032/2-A

**Matrix: Water** 

**Analysis Batch: 156063** 

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

Client Sample ID: Lab Control Sample Dup

**Prep Batch: 156032** 

Prep Type: Total/NA

LCS LCS

Limits Surrogate %Recovery Qualifier o-Terphenyl 84 50 - 150

Lab Sample ID: LCSD 580-156032/3-A

**Matrix: Water** 

Analysis Batch: 156063

**Prep Batch: 156032** Spike LCSD LCSD RPD %Rec. RPD Limit Analyte Added Result Qualifier Unit D %Rec Limits #2 Diesel (C10-C24) 0.500 0.428 mg/L 86 70 - 140 27 0.500 0.463 93 Motor Oil (>C24-C36) mg/L 66 - 125 9 27

LCSD LCSD

Surrogate %Recovery Qualifier Limits o-Terphenyl 85 50 - 150

Lab Sample ID: MB 580-156181/1-A

**Matrix: Water** 

Analysis Batch: 156222

Prep Type: Total/NA

**Prep Batch: 156181** 

Client Sample ID: Method Blank

мв мв

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac #2 Diesel (C10-C24) 0.025 ND 0.015 mg/L 03/31/14 14:18 04/01/14 18:26 Motor Oil (>C24-C36) ND 0.050 0.0098 mg/L 03/31/14 14:18 04/01/14 18:26

MB MB

Qualifier Limits Dil Fac Surrogate %Recovery Prepared Analyzed 81 50 - 150 03/31/14 14:18 04/01/14 18:26 o-Terphenyl

Lab Sample ID: LCS 580-156181/2-A

**Matrix: Water** 

Analysis Batch: 156222

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

**Prep Batch: 156181** 

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit D %Rec Limits #2 Diesel (C10-C24) 0.500 0.426 85 70 \_ 140 mg/L Motor Oil (>C24-C36) 0.500 0.553 66 - 125 mg/L 111

LCS LCS

Surrogate %Recovery Qualifier Limits 50 - 150 o-Terphenyl 99

Lab Sample ID: LCSD 580-156181/3-A

**Matrix: Water** 

Analysis Batch: 156222

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Prep Batch: 156181** 

Spike LCSD LCSD %Rec. RPD Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec #2 Diesel (C10-C24) 0.500 0.386 mg/L 77 70 - 14010 27 Motor Oil (>C24-C36) 0.500 0.568 mg/L 114 66 - 125 27

LCSD LCSD

%Recovery Qualifier Limits Surrogate o-Terphenyl 93 50 - 150

TestAmerica Job ID: 580-42898-1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

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

Lab Sample ID: MB 580-156218/1-A

Analysis Batch: 156246

**Matrix: Water** 

Client Sample ID: Method Blank Prep Type: Total/NA **Prep Batch: 156218** MB MB

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND	0.025	0.015 mg/L		04/01/14 09:45	04/01/14 21:39	1
Motor Oil (>C24-C36)	ND	0.050	0.0098 mg/L		04/01/14 09:45	04/01/14 21:39	1

MB MB

%Recovery Prepared Surrogate Qualifier Limits Analyzed Dil Fac o-Terphenyl 82 50 - 150 04/01/14 09:45 04/01/14 21:39

Lab Sample ID: LCS 580-156218/2-A **Client Sample ID: Lab Control Sample** Prep Type: Total/NA **Matrix: Water** 

Analysis Batch: 156246

**Prep Batch: 156218** Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits #2 Diesel (C10-C24) 0.500 0.389 78 70 - 140 mg/L Motor Oil (>C24-C36) 0.500 0.475 mg/L 95 66 - 125

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

Lab Sample ID: LCSD 580-156218/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Water** 

Analysis Batch: 156246

**Prep Batch: 156218** LCSD LCSD Spike %Rec. RPD Analyte Added Result Qualifier Unit %Rec RPD Limit #2 Diesel (C10-C24) 0.500 0.398 80 70 - 140 2 27 mg/L Motor Oil (>C24-C36) 0.500 66 - 125 0.467 mg/L 93 2 27

LCSD LCSD Surrogate Qualifier Limits %Recovery o-Terphenyl 88 50 - 150

TestAmerica Seattle

Prep Type: Total/NA

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: MW-38R-032014 Lab Sample ID: 580-42898-1

Date Collected: 03/20/14 09:38

. Matrix: Water

Matrix: Water

Matrix: Water

**Matrix: Water** 

Matrix: Water

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 16:25	JJP	TAL SEA

Client Sample ID: 5-W-19-032014 Lab Sample ID: 580-42898-2

Date Collected: 03/20/14 10:39

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 16:49	JJP	TAL SEA

Client Sample ID: 5-W-16-032014 Lab Sample ID: 580-42898-3

Date Collected: 03/20/14 11:38 Matrix: Water

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 17:13	JJP	TAL SEA

Client Sample ID: 5-W-15-032014 Lab Sample ID: 580-42898-4

Date Collected: 03/20/14 13:29 Date Received: 03/21/14 11:05

Batch Dilution Batch Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab Total/NA 3510C Prep 156032 03/27/14 17:48 RBL TAL SEA Total/NA Analysis NWTPH-Dx 1 156063 03/28/14 17:37 JJP TAL SEA

Client Sample ID: 5-W-17-032014 Lab Sample ID: 580-42898-5

Date Collected: 03/20/14 14:07

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 18:01	JJP	TAL SEA

Client Sample ID: 5-W-14-032014 Lab Sample ID: 580-42898-6

Date Collected: 03/20/14 14:58 Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 18:24	JJP	TAL SEA

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 5-W-190-032014

Lab Sample ID: 580-42898-7 Date Collected: 03/20/14 16:00

Matrix: Water

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 18:48	JJP	TAL SEA

Client Sample ID: 5-W-43-031914 Lab Sample ID: 580-42898-8

**Matrix: Water** 

Date Collected: 03/19/14 12:15 Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 19:59	JJP	TAL SEA

Client Sample ID: 5-W-430-031914 Lab Sample ID: 580-42898-9

Date Collected: 03/19/14 12:34 **Matrix: Water** 

Date Received: 03/21/14 11:05

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 20:23	JJP	TAL SEA

Client Sample ID: GW-30-031914 Lab Sample ID: 580-42898-10

Date Collected: 03/19/14 13:57 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 20:47	JJP	TAL SEA

Lab Sample ID: 580-42898-11 Client Sample ID: GW-1-031914

Date Collected: 03/19/14 14:19 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 21:10	JJP	TAL SEA

Client Sample ID: GW-2-031914 Lab Sample ID: 580-42898-12

Date Collected: 03/19/14 14:21 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 21:34	JJP	TAL SEA

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 2A-W-40-031914

Lab Sample ID: 580-42898-13 Date Collected: 03/19/14 14:57 Matrix: Water

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA	-
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 21:58	JJP	TAL SEA	

Client Sample ID: GW-3-031914

Lab Sample ID: 580-42898-14

Matrix: Water

Date Collected: 03/19/14 15:26 Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 22:21	JJP	TAL SEA

Client Sample ID: 2A-W-9-031914

Lab Sample ID: 580-42898-15

**Matrix: Water** 

Date Collected: 03/19/14 16:20 Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 22:45	JJP	TAL SEA

Client Sample ID: 2A-W-41-031914

Lab Sample ID: 580-42898-16 Date Collected: 03/19/14 17:06

Matrix: Water

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 23:09	JJP	TAL SEA

Client Sample ID: 2A-W-420-031914

Date Collected: 03/19/14 17:43 **Matrix: Water** 

Lab Sample ID: 580-42898-17

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/28/14 23:32	JJP	TAL SEA

Client Sample ID: S1-AU-031714

Lab Sample ID: 580-42898-18

Date Collected: 03/17/14 16:23 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156008	03/27/14 11:31	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156060	03/28/14 16:25	JJP	TAL SEA

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S1-BU-031714

Lab Sample ID: 580-42898-19 Date Collected: 03/17/14 16:13

Matrix: Water

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156008	03/27/14 11:31	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156060	03/28/14 16:49	JJP	TAL SEA

Client Sample ID: S1-BD-031714

Lab Sample ID: 580-42898-20

Matrix: Water

Date Collected: 03/17/14 16:34 Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156008	03/27/14 11:31	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156060	03/28/14 17:13	JJP	TAL SEA

Client Sample ID: S1-AD-031714 Lab Sample ID: 580-42898-21

Date Collected: 03/17/14 16:34 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156008	03/27/14 11:31	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156060	03/28/14 17:37	JJP	TAL SEA

Client Sample ID: S2-BU-031714 Lab Sample ID: 580-42898-22

Date Collected: 03/17/14 17:10 Matrix: Water

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156008	03/27/14 11:31	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156060	03/28/14 18:01	JJP	TAL SEA

Client Sample ID: S2-AD-031714 Lab Sample ID: 580-42898-23

Date Collected: 03/17/14 17:11 Matrix: Water

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156008	03/27/14 11:31	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156060	03/28/14 18:24	JJP	TAL SEA

Client Sample ID: S2-BD-031714 Lab Sample ID: 580-42898-24

Date Collected: 03/17/14 17:13 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156008	03/27/14 11:31	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156060	03/28/14 18:48	JJP	TAL SEA

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S2-AU-031714

Date Collected: 03/17/14 17:31 Date Received: 03/21/14 11:05 Lab Sample ID: 580-42898-25

**Matrix: Water** 

Batch Batch Dilution Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Prep 3510C 156008 03/27/14 11:31 RBL TAL SEA Total/NA 156060 NWTPH-Dx 03/28/14 19:59 JJP TAL SEA Analysis 1

Client Sample ID: S4-AD-031814 Lab Sample ID: 580-42898-26

Date Collected: 03/18/14 08:28 **Matrix: Water** 

Date Received: 03/21/14 11:05

Dilution Batch Batch Batch Prepared Prep Type Туре Method Factor Number or Analyzed Analyst Run Lab Total/NA Prep 3510C 156008 03/27/14 11:31 RBL TAL SEA Total/NA NWTPH-Dx Analysis 1 156060 03/28/14 20:23 JJP TAL SEA

Client Sample ID: S4-CU-031814 Lab Sample ID: 580-42898-27

Date Collected: 03/18/14 08:30 Matrix: Water

Date Received: 03/21/14 11:05

Batch Dilution Batch Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Prep 3510C 156008 03/27/14 11:31 RBL TAL SEA Total/NA Analysis NWTPH-Dx 1 156060 03/28/14 20:47 JJP TAL SEA

Client Sample ID: S4-BU-031814 Lab Sample ID: 580-42898-28

Date Collected: 03/18/14 08:33 **Matrix: Water** 

Date Received: 03/21/14 11:05

Ratch Dilution Batch Batch Prepared Method Number Prep Type Туре Run Factor or Analyzed Analyst Lab Prep Total/NA 3510C 156008 03/27/14 11:31 RBL TAL SEA Total/NA Analysis NWTPH-Dx 156060 03/28/14 21:10 JJP TAL SEA

Client Sample ID: S4-CD-031814 Lab Sample ID: 580-42898-29

Date Collected: 03/18/14 08:46 **Matrix: Water** 

Date Received: 03/21/14 11:05

Batch Batch Dilution Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Prep 3510C 156008 03/27/14 11:31 RRI TAL SEA Total/NA Analysis NWTPH-Dx 1 156060 03/28/14 21:34 JJP TAL SEA

Client Sample ID: S4-AU-031814 Lab Sample ID: 580-42898-30

Date Collected: 03/18/14 08:46 Matrix: Water

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156008	03/27/14 11:31	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156060	03/28/14 21:58	JJP	TAL SEA

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: S4-BD-031814 Lab Sample ID: 580-42898-31

Date Collected: 03/18/14 08:59 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156008	03/27/14 11:31	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156060	03/28/14 22:21	JJP	TAL SEA

Client Sample ID: S3-AD-031814

Lab Sample ID: 580-42898-32

Date Collected: 03/18/14 09:16 Matrix: Water Date Received: 03/21/14 11:05

Dilution Batch Batch Batch Prepared Prep Type Туре Method Factor Number or Analyzed Run Analyst Total/NA Prep 3510C 156008 03/27/14 11:31 RBL TAL SEA Total/NA NWTPH-Dx 156060 TAL SEA Analysis 1 03/28/14 22:45 JJP

Client Sample ID: S3-CU-031814 Lab Sample ID: 580-42898-33

Date Collected: 03/18/14 09:24 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156008	03/27/14 11:31	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156060	03/28/14 23:09	JJP	TAL SEA

Client Sample ID: S3-BU-031814 Lab Sample ID: 580-42898-34

Date Collected: 03/18/14 09:31 Matrix: Water

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156008	03/27/14 11:31	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156060	03/28/14 23:32	JJP	TAL SEA

Client Sample ID: S3-AU-031814 Lab Sample ID: 580-42898-35

Date Collected: 03/18/14 09:33 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156008	03/27/14 11:31	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156060	03/29/14 00:43	JJP	TAL SEA

Client Sample ID: S3-CD-031814 Lab Sample ID: 580-42898-36

Date Collected: 03/18/14 09:37 Matrix: Water

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156008	03/27/14 11:31	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156060	03/29/14 01:06	JJP	TAL SEA

Project/Site: BNSF Skykomish Ground Water

Lab Sample ID: 580-42898-37 Client Sample ID: S3-BD-031814

Date Collected: 03/18/14 09:58 Matrix: Water

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156008	03/27/14 11:31	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156060	03/29/14 01:30	JJP	TAL SEA

Client Sample ID: 2B-W-4-031814

Lab Sample ID: 580-42898-38

Date Collected: 03/18/14 11:19 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/29/14 00:43	JJP	TAL SEA

Client Sample ID: EW-2A-031814 Lab Sample ID: 580-42898-39

Date Collected: 03/18/14 11:31 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/29/14 01:06	JJP	TAL SEA

**Client Sample ID: 1C-W-3-031814** Lab Sample ID: 580-42898-40

Date Collected: 03/18/14 11:39 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156032	03/27/14 17:48	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156063	03/29/14 01:30	JJP	TAL SEA

Lab Sample ID: 580-42898-41 Client Sample ID: MW-4-031814

Date Collected: 03/18/14 12:18 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/01/14 19:20	JJP	TAL SEA

Client Sample ID: 1C-W-4-031814 Lab Sample ID: 580-42898-42

Date Collected: 03/18/14 12:23 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/01/14 19:38	JJP	TAL SEA

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: GW-4-031814

Lab Sample ID: 580-42898-43 Date Collected: 03/18/14 13:03 Matrix: Water

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/01/14 19:56	JJP	TAL SEA

Client Sample ID: 2A-W-10-031814

Lab Sample ID: 580-42898-44

Matrix: Water

Date Collected: 03/18/14 14:31 Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C	<del></del>		156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/01/14 20:14	JJP	TAL SEA

Client Sample ID: 1C-W-80-031814

Lab Sample ID: 580-42898-45

**Matrix: Water** 

Date Collected: 03/18/14 14:47 Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/01/14 20:32	JJP	TAL SEA

**Client Sample ID: 1C-W-1-031814** 

Lab Sample ID: 580-42898-46

**Matrix: Water** 

Date Collected: 03/18/14 14:48 Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/01/14 20:50	JJP	TAL SEA

Client Sample ID: 1C-W-8-031814

Lab Sample ID: 580-42898-47

**Matrix: Water** 

Date Collected: 03/18/14 15:03 Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/01/14 21:08	JJP	TAL SEA

Client Sample ID: 2B-W-40-031814

Lab Sample ID: 580-42898-48

**Matrix: Water** 

Date Collected: 03/18/14 16:00 Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/01/14 22:01	JJP	TAL SEA

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 5-W-18-031814

Lab Sample ID: 580-42898-49

**Matrix: Water** 

Date Collected: 03/18/14 16:19 Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C	<del></del> -		156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/01/14 22:19	JJP	TAL SEA

Lab Sample ID: 580-42898-50

Client Sample ID: 5-W-56-031814

Date Collected: 03/18/14 16:36 **Matrix: Water** Date Received: 03/21/14 11:05

Dilution Batch Batch Batch Prepared Prep Type Туре Method Factor Number or Analyzed Analyst Run Total/NA Prep 3510C 156181 03/31/14 14:18 RBL TAL SEA Total/NA NWTPH-Dx TAL SEA Analysis 1 156222 04/01/14 22:37 JJP

Client Sample ID: 5-W-54-031814 Lab Sample ID: 580-42898-51

Date Collected: 03/18/14 16:53 Matrix: Water

Date Received: 03/21/14 11:05

Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab 3510C 156181 Total/NA Prep 03/31/14 14:18 RBL TAL SEA Total/NA NWTPH-Dx TAL SEA Analysis 1 156222 04/01/14 22:55 JJP

Client Sample ID: 5-W-50-031914 Lab Sample ID: 580-42898-52

Date Collected: 03/18/14 17:46 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/01/14 23:13	JJP	TAL SEA

Client Sample ID: 5-W-55-031914 Lab Sample ID: 580-42898-53

Date Collected: 03/18/14 17:51 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/01/14 23:31	JJP	TAL SEA

Client Sample ID: 1B-W-2-031914 Lab Sample ID: 580-42898-54

Date Collected: 03/19/14 09:43 Matrix: Water

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/01/14 23:49	JJP	TAL SEA

Project/Site: BNSF Skykomish Ground Water

**Client Sample ID: 1B-W-3-031914** 

Lab Sample ID: 580-42898-55 Date Collected: 03/19/14 08:57 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/02/14 00:07	JJP	TAL SEA

Client Sample ID: MW-3-031914

Lab Sample ID: 580-42898-56

Date Collected: 03/19/14 09:29 **Matrix: Water** Date Received: 03/21/14 11:05

Dilution Batch Batch Batch Prepared Prep Type Туре Method Factor Number or Analyzed Analyst Run Total/NA Prep 3510C 156181 03/31/14 14:18 RBL TAL SEA Total/NA NWTPH-Dx TAL SEA Analysis 1 156222 04/02/14 00:25 JJP

Client Sample ID: 1C-W-7-031914 Lab Sample ID: 580-42898-57

Date Collected: 03/19/14 09:38 Matrix: Water

Date Received: 03/21/14 11:05

Batch Batch Dilution Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab 156181 Total/NA Prep 3510C 03/31/14 14:18 RBL TAL SEA NWTPH-Dx TAL SEA Total/NA Analysis 1 156222 04/02/14 00:43 JJP

Client Sample ID: MW-16-031914 Lab Sample ID: 580-42898-58

Date Collected: 03/19/14 10:20 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/01/14 17:14	JJP	TAL SEA

Client Sample ID: 2A-W-42-031914 Lab Sample ID: 580-42898-59

Date Collected: 03/19/14 10:27 **Matrix: Water** 

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/01/14 17:32	JJP	TAL SEA

Client Sample ID: 1B-W-23-031914 Lab Sample ID: 580-42898-60

Date Collected: 03/19/14 10:33 Matrix: Water

Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156181	03/31/14 14:18	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156222	04/01/14 17:50	JJP	TAL SEA

#### **Lab Chronicle**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

**Client Sample ID: 1A-W-4-031914** 

TestAmerica Job ID: 580-42898-1

Lab Sample ID: 580-42898-61

Matrix: Water

Date Collected: 03/19/14 11:31 Date Received: 03/21/14 11:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			156218	04/01/14 09:45	ALC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	156246	04/02/14 00:44	JJP	TAL SEA

Client Sample ID: EW-1-031914 Lab Sample ID: 580-42898-62

Date Collected: 03/19/14 11:59 Matrix: Water

Date Received: 03/21/14 11:05

	Batc	h Bato	ch .		Dilution	Batch	Prepared		
Prep Ty	ре Туре	e Meth	nod F	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510	OC .			156218	04/01/14 09:45	ALC	TAL SEA
Total/NA	A Analy	ysis NW	TPH-Dx		1	156246	04/02/14 01:11	JJP	TAL SEA

Laboratory References:

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

## **Certification Summary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42898-1

#### **Laboratory: TestAmerica Seattle**

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-04-14 *
California	NELAP	9	01115CA	01-31-14 *
California	State Program	9	2901	01-31-15
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-14
USDA	Federal		P330-11-00222	05-20-14
Washington	State Program	10	C553	02-17-15

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<sup>\*</sup> Expired certification is currently pending renewal and is considered valid.

# **Sample Summary**

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

TestAmerica Job ID: 580-42898-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-42898-1	MW-38R-032014	Water	03/20/14 09:38	03/21/14 11:05
580-42898-2	5-W-19-032014	Water	03/20/14 10:39	03/21/14 11:05
580-42898-3	5-W-16-032014	Water	03/20/14 11:38	03/21/14 11:05
580-42898-4	5-W-15-032014	Water	03/20/14 13:29	03/21/14 11:05
580-42898-5	5-W-17-032014	Water	03/20/14 14:07	03/21/14 11:05
580-42898-6	5-W-14-032014	Water	03/20/14 14:58	03/21/14 11:05
580-42898-7	5-W-190-032014	Water	03/20/14 16:00	03/21/14 11:05
580-42898-8	5-W-43-031914	Water	03/19/14 12:15	03/21/14 11:05
580-42898-9	5-W-430-031914	Water	03/19/14 12:34	03/21/14 11:05
580-42898-10	GW-30-031914	Water	03/19/14 13:57	03/21/14 11:05
580-42898-11	GW-1-031914	Water	03/19/14 14:19	03/21/14 11:05
580-42898-12	GW-2-031914	Water	03/19/14 14:21	03/21/14 11:05
580-42898-13	2A-W-40-031914	Water	03/19/14 14:57	03/21/14 11:05
580-42898-14	GW-3-031914	Water	03/19/14 15:26	03/21/14 11:05
580-42898-15	2A-W-9-031914	Water	03/19/14 16:20	03/21/14 11:05
580-42898-16	2A-W-41-031914	Water	03/19/14 17:06	03/21/14 11:05
580-42898-17	2A-W-420-031914	Water	03/19/14 17:43	03/21/14 11:05
580-42898-18	S1-AU-031714	Water	03/17/14 16:23	03/21/14 11:05
580-42898-19	S1-BU-031714	Water	03/17/14 16:13	03/21/14 11:05
580-42898-20	S1-BD-031714	Water	03/17/14 16:34	03/21/14 11:05
580-42898-21	S1-AD-031714	Water	03/17/14 16:34	03/21/14 11:05
580-42898-22	S2-BU-031714	Water	03/17/14 17:10	03/21/14 11:05
580-42898-23	S2-AD-031714	Water	03/17/14 17:11	03/21/14 11:05
580-42898-24	S2-BD-031714	Water	03/17/14 17:13	03/21/14 11:05
580-42898-25	S2-AU-031714	Water	03/17/14 17:31	03/21/14 11:05
580-42898-26	S4-AD-031814	Water	03/18/14 08:28	03/21/14 11:05
580-42898-27	S4-CU-031814	Water	03/18/14 08:30	03/21/14 11:05
580-42898-28	S4-BU-031814		03/18/14 08:33	
		Water		03/21/14 11:05
580-42898-29	S4-CD-031814	Water	03/18/14 08:46	03/21/14 11:05
580-42898-30	S4-AU-031814	Water	03/18/14 08:46	03/21/14 11:05
580-42898-31	S4-BD-031814	Water	03/18/14 08:59	03/21/14 11:05
580-42898-32	S3-AD-031814	Water	03/18/14 09:16	03/21/14 11:05
580-42898-33	S3-CU-031814	Water	03/18/14 09:24	03/21/14 11:05
580-42898-34	S3-BU-031814	Water	03/18/14 09:31	03/21/14 11:05
580-42898-35	S3-AU-031814	Water	03/18/14 09:33	03/21/14 11:05
580-42898-36	S3-CD-031814	Water	03/18/14 09:37	03/21/14 11:05
580-42898-37	S3-BD-031814	Water	03/18/14 09:58	03/21/14 11:05
580-42898-38	2B-W-4-031814	Water	03/18/14 11:19	03/21/14 11:05
580-42898-39	EW-2A-031814	Water	03/18/14 11:31	03/21/14 11:05
580-42898-40	1C-W-3-031814	Water	03/18/14 11:39	03/21/14 11:05
580-42898-41	MW-4-031814	Water	03/18/14 12:18	03/21/14 11:05
580-42898-42	1C-W-4-031814	Water	03/18/14 12:23	03/21/14 11:05
580-42898-43	GW-4-031814	Water	03/18/14 13:03	03/21/14 11:05
580-42898-44	2A-W-10-031814	Water	03/18/14 14:31	03/21/14 11:05
580-42898-45	1C-W-80-031814	Water	03/18/14 14:47	03/21/14 11:05
580-42898-46	1C-W-1-031814	Water	03/18/14 14:48	03/21/14 11:05
580-42898-47	1C-W-8-031814	Water	03/18/14 15:03	03/21/14 11:05
580-42898-48	2B-W-40-031814	Water	03/18/14 16:00	03/21/14 11:05
580-42898-49	5-W-18-031814	Water	03/18/14 16:19	03/21/14 11:05
580-42898-50	5-W-56-031814	Water	03/18/14 16:36	03/21/14 11:05
580-42898-51	5-W-54-031814	Water	03/18/14 16:53	03/21/14 11:05
580-42898-52	5-W-50-031914	Water	03/18/14 17:46	03/21/14 11:05
580-42898-53	5-W-55-031914	Water	03/18/14 17:51	03/21/14 11:05

TestAmerica Seattle

4/4/2014

## **Sample Summary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-42898-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-42898-54	1B-W-2-031914	Water	03/19/14 09:43	03/21/14 11:05
580-42898-55	1B-W-3-031914	Water	03/19/14 08:57	03/21/14 11:05
580-42898-56	MW-3-031914	Water	03/19/14 09:29	03/21/14 11:05
580-42898-57	1C-W-7-031914	Water	03/19/14 09:38	03/21/14 11:05
580-42898-58	MW-16-031914	Water	03/19/14 10:20	03/21/14 11:05
580-42898-59	2A-W-42-031914	Water	03/19/14 10:27	03/21/14 11:05
580-42898-60	1B-W-23-031914	Water	03/19/14 10:33	03/21/14 11:05
580-42898-61	1A-W-4-031914	Water	03/19/14 11:31	03/21/14 11:05
580-42898-62	EW-1-031914	Water	03/19/14 11:59	03/21/14 11:05

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Rec Cooler/TB Dig/Recor2 4 un 23  Cooler Dsc 45 sul un a Lab  Verpacks Packing Bullate  who	Relinguished B:	1	" 5-W-190-032014	5-W-14-032014	5-03201	3-W-16-032014	MW-38R-032014	Sample identification	SAMP	3-day Rush Other	2-day Rush  Sandard 10-Day	TURNA	BNSF CONTROL BRUCE SHEPPARD	BNSF Project Name: SKILOMIST	BNSF Project Number:	BNSF PROJECT INFORMATION	CHAIN OF CUSTODY		
ate/Time:	DAIOTINE   4 18 35 RECEIVED (18 10 15 COL)	Courticos Chain of Custody	4 4 4 00011	\$ 4 4 8 85 July 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	1329	1138	2 3/20/14 0938 DIC N G V	Containers Sample Collection Filtered (Compt N Grab)	SAMPLE INFORMATION	Level IV	Level III EDD Req. Format?	DELIVERABLES Other Deliverables?		Stb Stauppy	Project City.  Company:  C	Project State of Origin:	Wans of M	Cooler Dsc Packing Lab  We)Packs Packing Zuger-	Cooler/TR Dicaso 2 7 1
Cooler/TB Dig BConz-Zunge   Cooler Dsc C BC Ma (a) Lab  CopPacks Packing Busse	Date/fine: 0/1/1/18% Comments and Date/fine: 1/1/1/18%	Cooler/IB Big/IR con. 3 und 5. Cooler Dsc & GR BUL @ Lab CetPacks Packing Busies  Let Packs Packing Busies	 *	*>	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	* >	- 8	Matrix P	PH ·	- D	×	METHODS FOR ANALYSIS		E 24	Project Manager.	CONSULTANT INFORMATION Project Number	The second secon	Cooler Ds 6 Packing 1 (PM)	
Cooler BSASU 4 @ Lab	Cooler/TB Dig/(\$202.9 unc.)	Cooler/IB Dig (R) corf-Yunc 3 Cooler Dsall G Sul @ Lab Cet Packs Packing 34 35 C	Cooler/TB Dig R cos. O was?	Cooler Dsc Le GRANG Lab  Packing Bussle	Cooler/TB Dig/Bcorff ufic 30	Wel/Packs Packing Dubble 84	Cooler Dsc Let III Web Lab	A) A 5.05			Cooler/TB Dig/IR cor2 quace		125 215 - 0800 4L5 295 0850	TO STRUE @ FARALONCON SULTING-CON	nager TERRY PORTELE	mber (083-043	hod:	HIPMENT	るの子

TAL LOCA (COLO)				DUPLICATE - CONSULTANT	UPLICATE - 0	D			RETURN TO LABORATORY WITH SAMPLES	ORIGINAL - RETU
ENSF COC No	Custody Seal No.	Lab: Custody Intact?				narks:	Lab Remarks:	Date/Time:		Received by Laboratory
		Date/Time:			;	d By:	Received By:	Date/Time:		Relinquished By:
	\\	*	Ļ				Receive	Date/Time:	Conce	Relinquisted By:
Comments and Special Analytical Requirements:	Comments an	L	4			2	- 1		K. t.	Relinquis ad By:
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			×			12 R	1706		U-41-031914	, 2A - W
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			×.			34 25	1234		W-430-031914	25-W-
			×	5	2	N R	1.9/14 1215	2 03	1-43-031914	55-6
COMMENTS LAB USE			N	Grab)	Ϋ́N	ne Sampler	Date Time	Contamica	Contribute total attributation	
			WT		Filtered	tion	Sample Collection	tainers		
			PI					SAMPLE INFORMATION	SAMPLE	
			<u>1 -</u>					Level IV	Other	3-day Rush
			Dy		q, Format?	EDD Req, Format?		Level III	X Standard 10-Day	2-day Rush
			_				(Level II)	BNSF Standard (Level II)	5- to 8-day Rush	1-day Rush
		_≅	,	7	Other Deliverables?	Other Do	DELIVERABLES	DELIVE	ROL	
425-295-0839 425-295-880	Phone:	98027	-	City/State/ZIP: 155%404	City/State/ZIP			Work Order No.:	Moodard	BNSF Contact:
proto o stac	Email:	NW O	14.00	ち 5歩	Address: 975		Grown water	YOUNG!	の大く大いという	BNSF Project Name: 3/USF
Project Manager: Jorg Post to jo	Project	1+110	v (0%	Farallow	Company:		くというに	Project City:		BNSF Project Number
Project Nurriber: 623-043	Project	DRMATION	CONSULTANT INFORMATION	co			AW	Project State of Origin:	Z	В
Tracking Number:	Trackir		Fax:	F				City/State/ZIP:	CHAIN OF CUSTODY	
Shipment Method:	Shipme		Phone:	Ţ				ĸ	RAILWAY Address:	
SHIPMENT INFORMATION			Project Manager:				3	Laboratory:	TASS Labo	Q
LAB WORK ORDER:	LAB W		ž	LABORATORY INFORMATION	BORATOR					

BNSF Project Number: 2345678 **BNSF PROJECT INFORMATION** CHAIN OF CUSTODY RAILWAY Project City: \ddress: 9 10 UKYKOW!Sh LABORATORY INFORMATION Tarallon. CONSULTANT INFORMATION Phone: ξ Con Solting 18VW LAB WORK ORDER: Project Manager. Project Number: Shipment Method: Tracking Number: SUN. CK3-043

BNSF Project Name:
スパステ
BNSF Contact
ステくく 34-40-031814 254-CD-031814 1-day Rush ORIGINAL - RETURN TO LABORATORY WITH SAMPLES Relinquished By: ·S4-CU-031814 175 57 3-day Rush 2-day Rush S4-BU-031814 54-BD-031814 52-10-031714 52-80-031714 51-80-03/7/4 2 - 40 -Ugan BD-031714 AD-031714 AD-031814 BU-031714 AU-031714 ひべくべくという TURNAROUND TIME Sample Identification 0317H Standard 10-Day 5- to 8-day Rush SNOUNCE WORK Order SAMPLE INFORMATION Date/Time: Containers Level IV BNSF Standard (Level II) N DELIVERABLES 1/2//EO 03/17/14 (B) Date R 0828 02 6 0854 RO 0846 RL 0833 RO Received By: 0846 DK 0830 81 1841 とが ヹヹ ロゲロ 1634 150 50 023 Time Other Deliverables? EDD Req, Format? ワバ ワス なっ O O RO RL 8 スつ マト ST, O DUPLICATE - CONSULTANT Filtered Y/N Type (Comp/ Grab) 3 275 ι<del>Χ</del>ι X X NWTPH-DX 3-71-14 Date/Time: Date/Time: ab: Custody Intact? METHODS FOR ANALYSIS Comments and Special Analytical Requirements: ıstody Seal No. Phone: 425-295-0839 425-245 SHIPMENT INFORMATION COMMENTS 425-296-0 LAB USE TAL-1001 (0912)

Page 86 of 89

4/4/2014

TAL-1001 (0912			DUPLICATE - CONSULTANT	JPLICATE - C	סנ				ORIGINAL - RETURN TO LABORATORY WITH SAMPLES
aal No. BNSF COC No	Lab: Custody Intact? Custody Seal No.				91	Lab Remarks:		Date/Time:	Received by Laboratory:
						Received By:		Date/Time:	Relinquished By:
	Date/Time:	w			£	Received By	40/05	Date/Time:	Cour (Dilour
Comments and Special Analytical Requirements:		X	*	•	70	Recognition (C)	$\leftarrow$	Date/Time:	
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		. ×.			- 1	イカトニ	gas to t fillinge		11 7(-W-80-031814
		×	ne materi			143	TH WINTERSON	* To / Dockers	"2A-W-10-031814
		X	are areas agree.		1	1303	de della protesso,	er - company 8-7	" 4W-4-031814
		X	CThere w	* 4******	8	1223	* discussion	9 Hammer	10 10 - W - 4 - 03 18 14
		X	and supplement	*********	ワベ	1218	O TOWN	rig & Ulaharajira	· MW-4-031814
		X	de a baroluga cua	*** ***********************************	Z)	1139		a	· 1C-U-3-03RH
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		×	***************************************		DK	0933	Or Age C. Special	F LENGTH .	: 53-AU-03181H
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		×	(C) X)	7	P.	0924	M/21/E0	2	53-CU-031814
COMMENTS LAB USE		N	Grab)		Sampler	Time	Date	Consumo	Californ Invitational
		しげ	ype Matrix	L Pittered		Sample Collection	Samı	Containers	Sample Identification
		r PI					TION	SAMPLE INFORMATION	SAMPL
		H-						Level IV	3-day Rush Other
		Dx	w <sub>s</sub>	, Format?	EDD Req, Format?			Level III	2-day Rush 🔀 Standard 10-Day
		(					BNSF Standard (Level II)	BNSF Star	1-day Rush 5- to 8-day Rush
	METHODS FOR ANALYSIS	`	r	iverables?	Other Deliverables?	I1	DELIVERABLES	DE	NOONI
Prone: 425-295-0839 Fax 425-295-0850	A 98027		Torngoah	City/State/ZIP:			r No.:	NSF Work Orde	Shepand
2000	* Have		75	Address:			マカナー	いないとなったととなった	lame: アとゾハー・ハバくズンと・ジケート
Project Manager Levil Portole		Coxtalting	Farallon			is,	Kvknuish	Project City:	
Project Number: 683-043		CONSULTANT INFORMATION	co				rigin: WA	Project State of Origin:	Z
Tracking Number:		Fax:						City/State/ZIP:	
Shipment Method:		Phone:						Address:	RAILWAY
SHIPMENT INFORMATION	:	Project Manager.						Laboratory:	BNSF
LAB WORK ORDER:		ON.	LABORATORY INFORMATION	BORATORY	LA				

TAL-1001 (0912)

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## **Login Sample Receipt Checklist**

Client: Farallon Consulting LLC Job Number: 580-42898-1

Login Number: 42898 List Source: TestAmerica Seattle

List Number: 1

Creator: McDaniel, Ronald T

Creator: McDaniei, Ronald I		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
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	
s 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.	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 <a href="mailto:smm">&lt;6 mm</a> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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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: 580-43330-1

Client Project/Site: BNSF Skykomish Ground Water

For:

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

Attn: Gerald Portele

Knistiere D. allen

Authorized for release by: 5/2/2014 4:04:15 PM

Kristine Allen, Manager of Project Management (253)248-4970

kristine.allen@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water TestAmerica Job ID: 580-43330-1

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#### **Case Narrative**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-43330-1

Job ID: 580-43330-1

### **Laboratory: TestAmerica Seattle**

#### Narrative

#### Receipt

The samples were received on 4/23/2014 3:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.2° C.

#### GC Semi VOA

Method(s) NWTPH-Dx: In analytical batch 158012, for the following sample from preparation batch 157954: 1B-W-3-042114 (580-43330-1), the results in the #2 Diesel Fuel (C10-C24) range is due to what most closely resembles a complex mixture of weathered/degraded diesel fuel. The affected analyte range(s) have been Y qualified and reported.

Method(s) NWTPH-Dx: In analytical batch 158012, for the following sample(s) from preparation batch 157954: 1C-W-7-042114 (580-43330-2), 1C-W-80-042114 (580-43330-4), 1C-W-8-042114 (580-43330-3), the results in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) range(s) are due to what most closely resembles a complex mixture of weathered/degraded diesel fuel and motor oil range products. The affected analyte range(s) have been Y qualified and reported.

No other analytical or quality issues were noted.

#### **Organic Prep**

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

## **Definitions/Glossary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Minimum Level (Dioxin)

Practical Quantitation Limit

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

Not detected at the reporting limit (or MDL or EDL if shown)

Relative Percent Difference, a measure of the relative difference between two points

Reporting Limit or Requested Limit (Radiochemistry)

Not Calculated

**Quality Control** 

Relative error ratio

TestAmerica Job ID: 580-43330-1

## **Qualifiers**

## GC Semi VOA

Qualifier	Qualifier Description
Υ	The chromatographic response resembles a typical fuel pattern.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## **Glossary**

ML

NC

ND PQL

QC RER

RL

RPD

TEF TEQ

Cioosary	
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
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

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

**Client Sample ID: 1B-W-3-042114** 

TestAmerica Job ID: 580-43330-1

Lab Sample ID: 580-43330-1

...

Matrix: Water

Date Collected: 04/21/14 12:06 Date Received: 04/23/14 15:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.034	Υ	0.024	0.014	mg/L		04/28/14 15:16	04/29/14 16:05	1
Motor Oil (>C24-C36)	0.044	J	0.048	0.0093	mg/L		04/28/14 15:16	04/29/14 16:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	67	-	50 - 150				04/28/14 15:16	04/29/14 16:05	

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-43330-1

Lab Sample ID: 580-43330-2

Matrix: Water

Client Sample ID: 1C-W-7-042114

Date Collected: 04/21/14 12:54

Date Received: 04/23/14 15:50

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.10	Y	0.024	0.014	mg/L		04/28/14 15:16	04/29/14 16:23	1
Motor Oil (>C24-C36)	0.079	Y	0.048	0.0093	mg/L		04/28/14 15:16	04/29/14 16:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	79		50 - 150				04/28/14 15:16	04/29/14 16:23	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-43330-1

Lab Sample ID: 580-43330-3

Matrix: Water

**Client Sample ID: 1C-W-8-042114** Date Collected: 04/21/14 13:52

Date Received: 04/23/14 15:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.11	Y	0.024	0.014	mg/L		04/28/14 15:16	04/29/14 17:17	1
Motor Oil (>C24-C36)	0.090	Y	0.047	0.0093	mg/L		04/28/14 15:16	04/29/14 17:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	89		50 - 150				04/28/14 15:16	04/29/14 17:17	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 1C-W-80-042114

TestAmerica Job ID: 580-43330-1

Lab Sample ID: 580-43330-4

Matrix: Water

Date Collected: 04/21/14 16:00 Date Received: 04/23/14 15:50

Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.11	Υ	0.024	0.014	mg/L		04/28/14 15:16	04/29/14 17:35	1
Motor Oil (>C24-C36)	0.085	Y	0.048	0.0093	mg/L		04/28/14 15:16	04/29/14 17:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				04/28/14 15:16	04/29/14 17:35	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-43330-1

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

Lab Sample ID: MB 580-157954/1-A

**Matrix: Water** 

Analysis Batch: 158012

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

Prep Batch: 157954

мв мв Result Qualifier RL MDL Unit D Analyte Prepared Analyzed Dil Fac 0.025 04/28/14 15:16 #2 Diesel (C10-C24) ND 0.015 mg/L 04/29/14 14:53 Motor Oil (>C24-C36) 0.050 04/28/14 15:16 04/29/14 14:53 ND 0.0098 mg/L

MB MB

%Recovery Surrogate Qualifier I imits Prepared Analyzed Dil Fac o-Terphenyl 98 50 - 150 04/28/14 15:16 04/29/14 14:53

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 580-157954/2-A **Matrix: Water** Prep Type: Total/NA

**Prep Batch: 157954** 

Prep Type: Total/NA

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Analysis Batch: 158012 Spike LCS LCS %Rec.

Analyte Added Result Qualifier Unit D %Rec Limits #2 Diesel (C10-C24) 0.500 0.441 88 70 - 140 mg/L Motor Oil (>C24-C36) 0.500 0.539 mg/L 108 66 - 125

LCS LCS

Surrogate %Recovery Qualifier Limits o-Terphenyl 96 50 - 150

Lab Sample ID: LCSD 580-157954/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Water** 

Motor Oil (>C24-C36)

Analysis Batch: 158012

**Prep Batch: 157954** LCSD LCSD Spike %Rec. RPD Analyte Added Result Qualifier Unit %Rec RPD Limit #2 Diesel (C10-C24) 0.500 0.417 83 70 - 140 27 mg/L 6

0.516

mg/L

103

66 - 125

0.500

LCSD LCSD

Surrogate Qualifier Limits %Recovery o-Terphenyl 92 50 - 150

TestAmerica Seattle

Lab Sample ID: 580-43330-1

Matrix: Water

Client Sample ID: 1B-W-3-042114 Date Collected: 04/21/14 12:06

Date Received: 04/23/14 15:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			157954	04/28/14 15:16	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	158012	04/29/14 16:05	JJP	TAL SEA

**Client Sample ID: 1C-W-7-042114** Lab Sample ID: 580-43330-2

Date Collected: 04/21/14 12:54 Matrix: Water

Date Received: 04/23/14 15:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			157954	04/28/14 15:16	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	158012	04/29/14 16:23	JJP	TAL SEA

Lab Sample ID: 580-43330-3 Client Sample ID: 1C-W-8-042114

Date Collected: 04/21/14 13:52 **Matrix: Water** 

Date Received: 04/23/14 15:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			157954	04/28/14 15:16	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	158012	04/29/14 17:17	JJP	TAL SEA

Client Sample ID: 1C-W-80-042114 Lab Sample ID: 580-43330-4

Date Collected: 04/21/14 16:00 Matrix: Water

Date Received: 04/23/14 15:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			157954	04/28/14 15:16	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	158012	04/29/14 17:35	JJP	TAL SEA

#### **Laboratory References:**

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

# **Certification Summary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-43330-1

## **Laboratory: TestAmerica Seattle**

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	07-31-14 *
California	NELAP	9	01115CA	01-31-14 *
California	State Program	9	2901	01-31-15
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-14
USDA	Federal		P330-11-00222	04-08-17
Washington	State Program	10	C553	02-17-15

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<sup>\*</sup> Expired certification is currently pending renewal and is considered valid.

# **Sample Summary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-43330-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-43330-1	1B-W-3-042114	Water	04/21/14 12:06	04/23/14 15:50
580-43330-2	1C-W-7-042114	Water	04/21/14 12:54	04/23/14 15:50
580-43330-3	1C-W-8-042114	Water	04/21/14 13:52	04/23/14 15:50
580-43330-4	1C-W-80-042114	Water	04/21/14 16:00	04/23/14 15:50

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TAL-1001 (0912)		DUPLICATE - CONSULTANT		RIGINAL - RETURN TO LABORATORY WITH SAMPLES
Custody Seal No. BNSF COC No	Lab: Custody intact? Custo	Lab Remarks:	Date/Time:	ceived by Laboratory:
-	Date/Time:	Received By:	Date/Time:	linguished By:
	114 1300	Received By:	Date/Time:	Inquisited By:
Comments and Special Analytical Requirements:		Received By:		Inquished By:
~/0 A/				1
Wet/Packs Packing Bhbb/a 1850	580-43330 Chain of Custody	580-4333		
-				
Cooler/(JB Dig/IR cor 1.2 unc 1.7"				
- 4	サープ	iloco V V	4	1Cw-80-042114
7.	· ×.	1352	a Managara	4C-W-8-042114
-2	*	1254	and the state of t	1C-W-7-042119
1	<ul><li>€</li><li>₹</li></ul>	1206 DK N C	2 4/2/14	1B-W-3-042114
COMMENTS LABUSE	 		Date	
	Type J. (Comp/ Matrix 3	Sample Collection Filtered (Co.	Containers	Sample Identification
	РН		SAMPLE INFORMATION	SAMPLE
	- 0		Level IV	3-day Rush Other
	*	EDD Req, Format?	Level III	2-day Rush 🔏 Standard 10-Day
			BNSF Standard (Level II)	1-day Rush 5- to 8-day Rush
	METHODS FOR ANALYSIS	Other Deliverables?	DELIVERABLES	1
Phone 15 215 0600 425 2950850	15540VAH WA 98027	City/State/ZIP:	BNSF Work Order No.:	COAK
SPORTELE OFALLA LLON CONSULTING LON	Address 975 5The NW			BUSE SKYKOMISH
Project Manager: JERLY PORTELE	CONSULTINUT		Project City: SKYKBIN ISH WAT	SF Project Number: / Pro
Project Number 663-043	CONSULTANT INFORMATION		Project State of Origin:	Z
Tracking Number:	Fax		City/State/ZIP:	
Shipment Method:	Phone:		Address:	RAILWAY
SHIPMENT INFORMATION	Project Manager:		Laboratory:	
LAB WORK ORDER: 4005	LABORATORY INFORMATION	LABORATORY		
シィフィー		_		

## **Login Sample Receipt Checklist**

Client: Farallon Consulting LLC Job Number: 580-43330-1

Login Number: 43330 List Source: TestAmerica Seattle

List Number: 1

Creator: Blankinship, Tom X

Creator: Blankinship, Tom X		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
s 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.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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# **ANALYTICAL REPORT**

TestAmerica Laboratories, Inc.

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

TestAmerica Job ID: 580-43715-1

Client Project/Site: BNSF Skykomish Ground Water

For:

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

Attn: Gerald Portele

Kristiene D. allen

Authorized for release by: 5/28/2014 12:21:17 PM

Kristine Allen, Manager of Project Management (253)248-4970

kristine.allen@testamericainc.com

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Review your project results through

Total Access

**Have a Question?** 



Visit us at: www.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.

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Ground Water TestAmerica Job ID: 580-43715-1

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#### **Case Narrative**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-43715-1

Job ID: 580-43715-1

**Laboratory: TestAmerica Seattle** 

Narrative

Job Narrative 580-43715-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 5/23/2014 1:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.1° C.

#### GC Semi VOA

Method(s) NWTPH-Dx: In analytical batch 159787, for the following sample(s) from preparation batch 159766: 1B-W-3-052014 (580-43715-1), 1C-W-7-052014 (580-43715-2), 1C-W-80-052014 (580-43715-4), 1C-W-8-052014 (580-43715-3), the results in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) ranges are due primarily to a mineral/transformer oil range product and biogenic interference; method 3630 silica gel cleanup procedure is recommended. The affected analyte range(s) have been Y qualified and reported.

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.

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## **Definitions/Glossary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-43715-1

## **Qualifiers**

## GC Semi VOA

The chromatographic response resembles a typical fuel pattern.

## **Glossary**

MDC

Abbreviation	These commonly used abbreviations may or may not be present in this report.
n	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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

MDL Method Detection Limit ML Minimum Level (Dioxin)

NC Not Calculated

Not detected at the reporting limit (or MDL or EDL if shown) ND

Minimum detectable concentration

PQL **Practical Quantitation Limit** 

**Quality Control** QC RER Relative error ratio

Reporting Limit or Requested Limit (Radiochemistry) RL

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) TEQ Toxicity Equivalent Quotient (Dioxin)

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

**Client Sample ID: 1B-W-3-052014** 

TestAmerica Job ID: 580-43715-1

Lab Sample ID: 580-43715-1

Matrix: Water

Date Collected: 05/20/14 11:36 Date Received: 05/23/14 13:20

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.047	Y	0.024	0.014	mg/L		05/27/14 11:04	05/27/14 18:02	1
Motor Oil (>C24-C36)	0.055	Y	0.048	0.0093	mg/L		05/27/14 11:04	05/27/14 18:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	97	-	50 - 150				05/27/14 11:04	05/27/14 18:02	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 1C-W-7-052014

TestAmerica Job ID: 580-43715-1

Lab Sample ID: 580-43715-2

Matrix: Water

Date Collected: 05/20/14 12:25 Date Received: 05/23/14 13:20

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	;)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.10	Y	0.024	0.014	mg/L		05/27/14 11:04	05/27/14 18:21	1
Motor Oil (>C24-C36)	0.078	Y	0.048	0.0093	mg/L		05/27/14 11:04	05/27/14 18:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	85	-	50 - 150				05/27/14 11:04	05/27/14 18:21	1

Client: Farallon Consulting LLC

Date Collected: 05/20/14 13:24

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 1C-W-8-052014

TestAmerica Job ID: 580-43715-1

Lab Sample ID: 580-43715-3

Matrix: Water

Date Received: 05/23/14 13:20

Method: NWTPH-Dx - Northwe	st - Semi-Volatile	Petroleum	<b>Products (GC</b>	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.089	Υ	0.024	0.014	mg/L		05/27/14 11:04	05/27/14 18:40	1
Motor Oil (>C24-C36)	0.082	Y	0.047	0.0093	mg/L		05/27/14 11:04	05/27/14 18:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	86	-	50 - 150				05/27/14 11:04	05/27/14 18:40	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 1C-W-80-052014

TestAmerica Job ID: 580-43715-1

Lab Sample ID: 580-43715-4

Matrix: Water

Date Collected: 05/20/14 16:00 Date Received: 05/23/14 13:20

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.092	Y	0.024	0.014	mg/L		05/27/14 11:04	05/27/14 19:37	1
Motor Oil (>C24-C36)	0.082	Y	0.047	0.0093	mg/L		05/27/14 11:04	05/27/14 19:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	86		50 - 150				05/27/14 11:04	05/27/14 19:37	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-43715-1

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

Lab Sample ID: MB 580-159766/1-A

Lab Sample ID: LCS 580-159766/2-A

**Matrix: Water** 

**Matrix: Water** 

Analysis Batch: 159789

Analysis Batch: 159789

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

**Prep Batch: 159766** 

мв мв Result Qualifier RL MDL Unit D Analyte Prepared Analyzed Dil Fac 0.025 05/27/14 11:04 #2 Diesel (C10-C24) ND 0.015 mg/L 05/27/14 15:49 Motor Oil (>C24-C36) 0.050 05/27/14 11:04 05/27/14 15:49 ND 0.0098 mg/L

MB MB

%Recovery Surrogate Qualifier I imits Prepared Analyzed Dil Fac o-Terphenyl 73 50 - 150 05/27/14 11:04 05/27/14 15:49

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

**Prep Batch: 159766** 

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits #2 Diesel (C10-C24) 0.500 0.433 87 70 - 140 mg/L Motor Oil (>C24-C36) 0.502 0.426 mg/L 85 66 - 125

LCS LCS

Surrogate %Recovery Qualifier Limits o-Terphenyl 84 50 - 150

Lab Sample ID: LCSD 580-159766/3-A

**Matrix: Water** 

Analysis Batch: 159789

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 159766

LCSD LCSD Spike %Rec. RPD Analyte Added Result Qualifier Unit %Rec RPD Limit #2 Diesel (C10-C24) 0.500 0.474 95 70 - 140 27 mg/L 9 Motor Oil (>C24-C36) 0.502 0.442 mg/L 88 66 - 125 27

LCSD LCSD

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

TestAmerica Seattle

TestAmerica Job ID: 580-43715-1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

Client Sample ID: 1B-W-3-052014

Lab Sample ID: 580-43715-1

Matrix: Water

Date Collected: 05/20/14 11:36 Date Received: 05/23/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			159766	05/27/14 11:04	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	159789	05/27/14 18:02	EKK	TAL SEA

Lab Sample ID: 580-43715-2 Client Sample ID: 1C-W-7-052014

Date Collected: 05/20/14 12:25 Matrix: Water

Date Received: 05/23/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			159766	05/27/14 11:04	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	159789	05/27/14 18:21	EKK	TAL SEA

Client Sample ID: 1C-W-8-052014 Lab Sample ID: 580-43715-3

Date Collected: 05/20/14 13:24 **Matrix: Water** 

Date Received: 05/23/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			159766	05/27/14 11:04	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	159789	05/27/14 18:40	EKK	TAL SEA

Client Sample ID: 1C-W-80-052014 Lab Sample ID: 580-43715-4

Date Collected: 05/20/14 16:00 **Matrix: Water** 

Date Received: 05/23/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			159766	05/27/14 11:04	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	159789	05/27/14 19:37	EKK	TAL SEA

#### **Laboratory References:**

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

# **Certification Summary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-43715-1

## **Laboratory: TestAmerica Seattle**

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

Authority	Program	EPA Region	Certification ID	<b>Expiration Date</b>	
Alaska (UST)	State Program	10	UST-112	05-27-15	
California	NELAP	9	01115CA	01-31-14 *	
California	State Program	9	2901	01-31-15	
L-A-B	DoD ELAP		L2236	01-19-16	
L-A-B	ISO/IEC 17025		L2236	01-19-16	
Montana (UST)	State Program	8	N/A	04-30-20	
Oregon	NELAP	10	WA100007	11-06-14	
USDA	Federal		P330-11-00222	04-08-17	
Washington	State Program	10	C553	02-17-15	

<sup>\*</sup> Expired certification is currently pending renewal and is considered valid.

TestAmerica Seattle

# **Sample Summary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Ground Water

TestAmerica Job ID: 580-43715-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-43715-1	1B-W-3-052014	Water	05/20/14 11:36	05/23/14 13:20
580-43715-2	1C-W-7-052014	Water	05/20/14 12:25	05/23/14 13:20
580-43715-3	1C-W-8-052014	Water	05/20/14 13:24	05/23/14 13:20
580-43715-4	1C-W-80-052014	Water	05/20/14 16:00	05/23/14 13:20

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## **Login Sample Receipt Checklist**

Client: Farallon Consulting LLC Job Number: 580-43715-1

Login Number: 43715 List Source: TestAmerica Seattle

List Number: 1

Creator: Blankinship, Tom X

Creator: Blankinship, Tom X		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
s 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.	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 <a href="mailto:smm">&lt;6 mm</a> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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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: 580-44190-1

Client Project/Site: BNSF Skykomish Groundwater Quarterly

#### For:

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

Attn: Gerald Portele

Authorized for release by:

Authorized for release by: 7/11/2014 5:33:29 PM Steve Crupi, Project Manager II (253)248-4931 steve.crupi@testamericainc.com

Designee for

Kristine Allen, Manager of Project Management (253)248-4970

kristine.allen@testamericainc.com

.....LINKS .....

Review your project results through

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**Have a Question?** 



Visit us at: www.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.

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Groundwater Quarterly TestAmerica Job ID: 580-44190-1

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#### **Case Narrative**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Job ID: 580-44190-1

**Laboratory: TestAmerica Seattle** 

Narrative

Job Narrative 580-44190-1

#### Receipt

The samples were received on 6/25/2014 4:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice.

#### Except:

Cooler receipt information was not recorded at time of sample drop off at the lab. Samples were recieved on ice and the lab will proceed with analysis

The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): 1C-W-80-061814 (580-44190-4), 1C-W-8-061814 (580-44190-3). The container labels list 1C-W-8-061813 and IC-W-80-06181, while the COC lists 1C-W-8-061814 and IC-W-80-061814 respectively. The client has noted this on the COC and samples were logged in according to the COC...

The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): 5-W-17-061714 (580-44190-21). The container labels list 13:05 as the sampling time, while the COC lists 14:05. The sample was logged in according to the COC.

#### GC Semi VOA

Method NWTPH-Dx: In analytical batch 162563, samples 1B-W-23-061714 (580-44190-24), 2A-W-42-061714 (580-44190-27), 5-W-15-061714 (580-44190-19), 5-W-18-061714 (580-44190-22), GW-1-061714 (580-44190-12) in preparation batch demonstrate esults in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) ranges that appear to be due to a complex mixture of weathered/degraded diesel fuel and motor oil range products. The affected analyte ranges have been Y-qualified and reported.

Method NWTPH-Dx: In analytical batch 162563, samples 2A-W-41-061714 (580-44190-26), GW-20-061714 (580-44190-14), GW-2-061714 (580-44190-13), GW-30-061714 (580-44190-16), GW-3-061714 (580-44190-15) in preparation batch 162592 demonstrate results in the #2 Diesel Fuel (C10-C24) range that appear to be due primarily to weathered/degraded diesel fuel. The affected analyte range has been Y-qualified and reported.

Method NWTPH-Dx: In analytical batch 162627, samples 1B-W-3-061814 (580-44190-28), 1C-W-7-061814 (580-44190-2), 1C-W-80-061814 (580-44190-4), 1C-W-8-061814 (580-44190-3), 2A-W-10-061814 (580-44190-5) in preparation batch 162632: demonstrate results in the #2 Diesel Fuel (C10-C24) range that appear to be due primarily to weathered/degraded diesel fuel. The affected analyte range has been Y-qualified and reported.

Method NWTPH-Dx: In analytical batch 162627, samples 2A-W-9-061814 (580-44190-6), MW-3-061814 (580-44190-8), MW-4-061814 (580-44190-9) in preparation batch 162632: demonstrate results in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) ranges, which appear to be due to a complex mixture of weathered/degraded diesel fuel and motor oil range products. The affected analyte ranges have been Y-qualified and reported.

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

#### **Organic Prep**

Methods 3510C: In preparation batch 163023, sample 2A-W-40-061714 (580-44190-25) was re-prepared outside of preparation holding time due to low-failing surrogate recovery in the initial extraction attempt. Both the #2 Diesel and Motor Oil parameters were not detected in the initial analysis. #2 Diesel range was also ND in the reanalysis. The Motor Oil range yielded a result of 0.019 mg/L.

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

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TestAmerica Seattle 7/11/2014

## **Definitions/Glossary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

## **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.
Υ	The chromatographic response resembles a typical fuel pattern.
Н	Sample was prepped or analyzed beyond the specified holding time
В	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)

ND Not detected at the reporting limit (or MDL or EDL if shown)
PQL Practical Quantitation Limit

NC

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)

Not Calculated

Client: Farallon Consulting LLC

**Client Sample ID: 1C-W-1-061814** 

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-1

Matrix: Water

Date Collected: 06/18/14 13:05 Date Received: 06/20/14 16:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.015	J	0.024	0.014	mg/L		06/30/14 16:01	07/01/14 06:58	1
Motor Oil (>C24-C36)	0.017	J	0.047	0.0093	mg/L		06/30/14 16:01	07/01/14 06:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	60		50 - 150				06/30/14 16:01	07/01/14 06:58	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-2

Matrix: Water

Date Collected: 06/18/14 11:00 Date Received: 06/20/14 16:20

**Client Sample ID: 1C-W-7-061814** 

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.049	Y	0.024	0.014	mg/L		06/30/14 16:01	07/01/14 07:16	1
Motor Oil (>C24-C36)	0.035	J	0.048	0.0093	mg/L		06/30/14 16:01	07/01/14 07:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	65	-	50 - 150				06/30/14 16:01	07/01/14 07:16	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Client Sample ID: 1C-W-8-061814

Date Collected: 06/18/14 13:50 Date Received: 06/20/14 16:20 Lab Sample ID: 580-44190-3

Matrix: Water

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) Dil Fac Analyte Result Qualifier MDL Unit D Analyzed Prepared #2 Diesel (C10-C24) 0.050 Y 0.024 0.014 mg/L 06/30/14 16:01 07/01/14 07:34 06/30/14 16:01 07/01/14 07:34 0.048 0.0093 mg/L Motor Oil (>C24-C36) 0.030 J Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac o-Terphenyl 69 50 - 150 06/30/14 16:01 07/01/14 07:34

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Client Sample ID: 1C-W-80-061814

Lab Sample ID: 580-44190-4 Date Collected: 06/18/14 16:00

Matrix: Water

Date Received: 06/20/14 16:20

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.048	Y	0.024	0.014	mg/L		06/30/14 16:01	07/01/14 07:52	1
Motor Oil (>C24-C36)	0.029	J	0.048	0.0093	mg/L		06/30/14 16:01	07/01/14 07:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	62		50 - 150				06/30/14 16:01	07/01/14 07:52	1

Client: Farallon Consulting LLC

Date Collected: 06/18/14 12:35

Project/Site: BNSF Skykomish Groundwater Quarterly

Client Sample ID: 2A-W-10-061814

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-5

Metric Meter

Matrix: Water

Date Received: 06/20/14 16:20

Method: NWTPH-DX - Northwest -	Semi-voiame	Petroleum	Products (GC)	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.19	Y	0.024	0.014	mg/L		06/30/14 16:01	07/01/14 08:10	1
Motor Oil (>C24-C36)	0.30		0.048	0.0093	mg/L		06/30/14 16:01	07/01/14 08:10	1

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 %Recovery on the properties of the

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

**Client Sample ID: 2A-W-9-061814** 

Lab Sample ID: 580-44190-6

Date Collected: 06/18/14 13:10 Date Received: 06/20/14 16:20

Lab	Jampie	ID.	300-44	130-0
			Matrix:	Water

Method: NWTPH-Dx - Northwest	- Semi-Volatile	Petroleum	<b>Products (GC</b>	•					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.39	Y	0.024	0.014	mg/L		06/30/14 16:01	07/01/14 08:28	1
Motor Oil (>C24-C36)	0.23		0.047	0.0093	mg/L		06/30/14 16:01	07/01/14 08:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	81		50 - 150				06/30/14 16:01	07/01/14 08:28	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

**Client Sample ID: 2B-W-4-061814** 

Lab Sample ID: 580-44190-7 Date Collected: 06/18/14 09:45 Matrix: Water

Date Received: 06/20/14 16:20

Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	Products (GC	<del>;</del> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		06/30/14 16:01	07/01/14 09:05	1
Motor Oil (>C24-C36)	0.0093	J	0.047	0.0093	mg/L		06/30/14 16:01	07/01/14 09:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	82		50 - 150				06/30/14 16:01	07/01/14 09:05	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Client Sample ID: MW-3-061814

Date Collected: 06/18/14 11:30 Date Received: 06/20/14 16:20 Lab Sample ID: 580-44190-8

Matrix: Water

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) Dil Fac Analyte Result Qualifier MDL Unit D Prepared Analyzed #2 Diesel (C10-C24) 0.035 Y 0.024 0.014 mg/L 06/30/14 16:01 07/01/14 09:23 06/30/14 16:01 07/01/14 09:23 0.047 0.0093 mg/L Motor Oil (>C24-C36) 0.062 Y Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac o-Terphenyl 78 50 - 150 06/30/14 16:01 07/01/14 09:23

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Client Sample ID: MW-4-061814 Lab Sample ID: 580-44190-9

Date Collected: 06/18/14 12:05 Matrix: Water

Date Received: 06/20/14 16:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.084	Y	0.024	0.014	mg/L		06/30/14 16:01	07/01/14 09:41	1
Motor Oil (>C24-C36)	0.12	Y	0.047	0.0093	mg/L		06/30/14 16:01	07/01/14 09:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78		50 - 150				06/30/14 16:01	07/01/14 09:41	1

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Client: Farallon Consulting LLC

Client Sample ID: EW-1-061714

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-10

Matrix: Water

Date Collected: 06/17/14 10:42
Date Received: 06/20/14 16:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.023	J	0.024	0.014	mg/L		06/30/14 11:22	07/01/14 00:56	1
Motor Oil (>C24-C36)	0.032	J	0.047	0.0093	mg/L		06/30/14 11:22	07/01/14 00:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	53	-	<del>50 - 150</del>				06/30/14 11:22	07/01/14 00:56	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Client Sample ID: EW-2A-061814 Lab Sample ID: 580-44190-11

Date Collected: 06/18/14 10:25 Matrix: Water

Date Received: 06/20/14 16:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.017	J	0.024	0.014	mg/L		06/30/14 16:01	07/01/14 09:59	1
Motor Oil (>C24-C36)	0.029	J	0.047	0.0093	mg/L		06/30/14 16:01	07/01/14 09:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	73		50 - 150				06/30/14 16:01	07/01/14 09:59	

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Client Sample ID: GW-1-061714

Lab Sample ID: 580-44190-12

Date Collected: 06/17/14 12:03 Date Received: 06/20/14 16:20 Matrix: Water

Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.035		0.024	0.014	mg/L		06/30/14 11:22	07/01/14 01:14	1
Motor Oil (>C24-C36)	0.056		0.047	0.0093	mg/L		06/30/14 11:22	07/01/14 01:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	74		50 <sub>-</sub> 150				06/30/14 11:22	07/01/14 01:14	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Client Sample ID: GW-2-061714

Date Collected: 06/17/14 12:15 Date Received: 06/20/14 16:20 Lab Sample ID: 580-44190-13

Matrix: Water

Method: NWTPH-Dx - Northwe		Petroleum Qualifier	Products (GC	) MDL	Unit	D	Prepared	Analyzed	Dil Fac
		Qualifier							— III Fac
#2 Diesel (C10-C24)	0.028		0.024	0.014	mg/L		06/30/14 11:22	07/01/14 01:32	1
Motor Oil (>C24-C36)	0.019	J	0.047	0.0093	mg/L		06/30/14 11:22	07/01/14 01:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	66		50 - 150				06/30/14 11:22	07/01/14 01:32	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-14

Matrix: Water

Date Collected: 06/17/14 16:00 Date Received: 06/20/14 16:20

Client Sample ID: GW-20-061714

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	;)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.031		0.024	0.014	mg/L		06/30/14 11:22	07/01/14 01:50	1
Motor Oil (>C24-C36)	0.020	J	0.047	0.0092	mg/L		06/30/14 11:22	07/01/14 01:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	80		50 - 150				06/30/14 11:22	07/01/14 01:50	1

Client: Farallon Consulting LLC

Date Collected: 06/17/14 15:45

Date Received: 06/20/14 16:20

Client Sample ID: GW-3-061714

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-15

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.069		0.024	0.014	mg/L		06/30/14 11:22	07/01/14 02:08	1
Motor Oil (>C24-C36)	0.041	J	0.048	0.0093	mg/L		06/30/14 11:22	07/01/14 02:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	73		50 - 150				06/30/14 11:22	07/01/14 02:08	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-16

**Matrix: Water** 

Client Sample ID: GW-30-061714 Date Collected: 06/17/14 16:01

Date Received: 06/20/14 16:20

Method: NWTPH-Dx - North Analyte		Petroleum Qualifier	Products (GC RL	) MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.062		0.024	0.014		<u>-</u>	06/30/14 11:22	07/01/14 02:26	
Motor Oil (>C24-C36)	0.035	J	0.047	0.0093	mg/L		06/30/14 11:22	07/01/14 02:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	72		50 - 150				06/30/14 11:22	07/01/14 02:26	

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-17

Matrix: Water

Date Collected: 06/18/14 12:00 Date Received: 06/20/14 16:20

Client Sample ID: GW-4-061814

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		06/30/14 16:01	07/01/14 10:17	1
Motor Oil (>C24-C36)	0.014	J	0.048	0.0093	mg/L		06/30/14 16:01	07/01/14 10:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	67	-	50 - 150				06/30/14 16:01	07/01/14 10:17	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-18

Matrix: Water

Date Collected: 06/17/14 15:05 Date Received: 06/20/14 16:20

Client Sample ID: 5-W-14-061814

Method: NWTPH-Dx - North	nwest - Semi-Volatile	Petroleum	<b>Products (GC</b>	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND ND		0.024	0.014	mg/L		06/30/14 11:22	07/01/14 02:45	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		06/30/14 11:22	07/01/14 02:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	54		50 - 150				06/30/14 11:22	07/01/14 02:45	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-19

Matrix: Water

Date Collected: 06/17/14 13:10 Date Received: 06/20/14 16:20

Client Sample ID: 5-W-15-061714

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.18		0.024	0.014	mg/L		06/30/14 11:22	07/01/14 03:03	1
Motor Oil (>C24-C36)	0.17		0.047	0.0093	mg/L		06/30/14 11:22	07/01/14 03:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	79		50 - 150				06/30/14 11:22	07/01/14 03:03	

Client: Farallon Consulting LLC

Client Sample ID: 5-W-16-061714

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-20

. Matrix: Water

Date Collected: 06/17/14 11:50

Date Received: 06/20/14 16:20

 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
 06/30/14 11:22
 07/01/14 03:21
 1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analvzed	Dil Fac
Motor Oil (>C24-C36)	0.016	J	0.047	0.0093 mg/L	06/30/14 11:22	07/01/14 03:21	1

 Surrogate
 %Recovery o-Terphenyl
 Qualifier Limits
 Limits
 Prepared of 06/30/14 11:22
 Analyzed of 07/01/14 03:21
 Dil Fact of 06/30/14 11:22

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-21

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Matrix: Water

Date Collected: 06/17/14 14:05

Client Sample ID: 5-W-17-061714

Date Received: 06/20/14 16:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		06/30/14 11:22	07/01/14 03:39	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		06/30/14 11:22	07/01/14 03:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	79	-	<u>50 - 150</u>				06/30/14 11:22	07/01/14 03:39	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Client Sample ID: 5-W-18-061714

Lab Sample ID: 580-44190-22 Date Collected: 06/17/14 10:53 Matrix: Water

Date Received: 06/20/14 16:20

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.087		0.024	0.014	mg/L		06/30/14 11:22	07/01/14 04:15	1
Motor Oil (>C24-C36)	0.11		0.047	0.0093	mg/L		06/30/14 11:22	07/01/14 04:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150				06/30/14 11:22	07/01/14 04:15	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-23

Client Sample ID: 5-W-19-061714 Date Collected: 06/17/14 10:00 Matrix: Water

Date Received: 06/20/14 16:20

Method: NWTPH-Dx - North	nwest - 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		06/30/14 11:22	07/01/14 04:33	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		06/30/14 11:22	07/01/14 04:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	74	-	50 - 150				06/30/14 11:22	07/01/14 04:33	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Client Sample ID: 1B-W-23-061714

Lab Sample ID: 580-44190-24

Matrix: Water

Date Collected: 06/17/14 16:40 Date Received: 06/20/14 16:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.077		0.024	0.014	mg/L		06/30/14 11:22	07/01/14 04:51	1
Motor Oil (>C24-C36)	0.15		0.048	0.0093	mg/L		06/30/14 11:22	07/01/14 04:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	82		<u>50 - 150</u>				06/30/14 11:22	07/01/14 04:51	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Client Sample ID: 2A-W-40-061714

Lab Sample ID: 580-44190-25 Date Collected: 06/17/14 14:25 Matrix: Water

Date Received: 06/20/14 16:20

Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	Products (GC	<del>;</del> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND	Н	0.024	0.014	mg/L		07/03/14 16:09	07/08/14 04:37	1
Motor Oil (>C24-C36)	0.019	JHB	0.048	0.0093	mg/L		07/03/14 16:09	07/08/14 04:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	69		50 - 150				07/03/14 16:09	07/08/14 04:37	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Client Sample ID: 2A-W-41-061714 Lab Sample ID: 580-44190-26

Date Collected: 06/17/14 14:08 Matrix: Water

Date Received: 06/20/14 16:20

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.037		0.024	0.014	mg/L		06/30/14 11:22	07/01/14 05:27	1
Motor Oil (>C24-C36)	0.019	J	0.047	0.0093	mg/L		06/30/14 11:22	07/01/14 05:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	53	-	50 - 150				06/30/14 11:22	07/01/14 05:27	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-27

Matrix: Water

Date Collected: 06/17/14 15:55

Client Sample ID: 2A-W-42-061714

Date Received: 06/20/14 16:20

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.074		0.024	0.014	mg/L		06/30/14 11:22	07/01/14 05:45	1
Motor Oil (>C24-C36)	0.055		0.048	0.0093	mg/L		06/30/14 11:22	07/01/14 05:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	71	-	50 - 150				06/30/14 11:22	07/01/14 05:45	1

Client: Farallon Consulting LLC

Date Collected: 06/18/14 10:07

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-28

Matrix: Water

Date Received: 06/20/14 16:20

**Client Sample ID: 1B-W-3-061814** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.039	Υ	0.024	0.014	mg/L		06/30/14 16:01	07/01/14 10:35	1
Motor Oil (>C24-C36)	0.039	J	0.048	0.0093	mg/L		06/30/14 16:01	07/01/14 10:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	83		50 - 150				06/30/14 16:01	07/01/14 10:35	1

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Client: Farallon Consulting LLC

Client Sample ID: 5-W-43-061714

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-29

Matrix: Water

Date Collected: 06/17/14 09:58 Date Received: 06/20/14 16:20

Method: NWTPH-Dx - North Analyte		Petroleum Qualifier	Products (GC	) MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allalyte	Result	Qualifier	·	MIDE	Onit		гтератец	Allalyzeu	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		06/30/14 11:22	07/01/14 06:03	1
Motor Oil (>C24-C36)	0.020	J	0.047	0.0093	mg/L		06/30/14 11:22	07/01/14 06:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	71		50 - 150				06/30/14 11:22	07/01/14 06:03	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

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

Lab Sample ID: MB 580-162592/1-A

Lab Sample ID: LCS 580-162592/2-A

**Matrix: Water** 

**Matrix: Water** 

Analysis Batch: 162563

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

**Prep Batch: 162592** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		06/30/14 11:22	06/30/14 22:49	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		06/30/14 11:22	06/30/14 22:49	1

MB MB

MR MR

Surrogate %Recovery Qualifier I imits Prepared Analyzed Dil Fac o-Terphenyl 77 50 - 150 06/30/14 11:22 06/30/14 22:49

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 162592** 

Analysis Batch: 162563							Prep l	Batch: 162592
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
#2 Diesel (C10-C24)	0.500	0.384		mg/L		77	59 - 120	
Motor Oil (>C24-C36)	0.500	0.480		mg/L		96	71 - 140	

LCS LCS

Surrogate %Recovery Qualifier Limits o-Terphenyl 85 50 - 150

Lab Sample ID: LCSD 580-162592/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Water** 

Analysis Batch: 162563

Prep Type: Total/NA

**Prep Batch: 162592** 

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
#2 Diesel (C10-C24)	0.500	0.333		mg/L		67	59 - 120	14	27
Motor Oil (>C24-C36)	0.500	0.423		mg/L		85	71 - 140	13	27

LCSD LCSD

Surrogate %Recovery Qualifier Limits o-Terphenyl 76 50 - 150

Lab Sample ID: MB 580-162632/1-A

**Matrix: Water** 

**Analysis Batch: 162627** 

Client Sample ID: Method Blank

Prep Type: Total/NA

**Prep Batch: 162632** 

Analyte	Result Qu	ualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND	0.025	0.015	mg/L		06/30/14 16:01	07/01/14 05:45	1
Motor Oil (>C24-C36)	ND	0.050	0.0098	mg/L		06/30/14 16:01	07/01/14 05:45	1

MB MB

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 50 - 150 06/30/14 16:01 07/01/14 05:45 o-Terphenyl 65

Lab Sample ID: LCS 580-162632/2-A

**Matrix: Water** 

**Analysis Batch: 162627** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA **Prep Batch: 162632** 

-	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
#2 Diesel (C10-C24)	0.500	0.330		mg/L	_	66	59 - 120	
Motor Oil (>C24-C36)	0.500	0.422		mg/L		84	71 - 140	

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

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

Lab Sample ID: LCS 580-162632/2-A **Matrix: Water** 

**Analysis Batch: 162627** 

LCS LCS

%Recovery Qualifier

 $\overline{\mathsf{ND}}$ 

0.0189 J

LCS LCS

%Recovery Qualifier

95

MB MB

72

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

Lab Sample ID: LCSD 580-162632/3-A

**Matrix: Water** 

Analysis Batch: 162627

Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36)

LCSD LCSD

Surrogate o-Terphenyl

Lab Sample ID: MB 580-163023/1-A

Analysis Batch: 163131

**Matrix: Water** 

мв мв

Analyte

#2 Diesel (C10-C24) Motor Oil (>C24-C36)

Surrogate

o-Terphenyl Lab Sample ID: LCS 580-163023/2-A

Analyte

**Matrix: Water** 

Analysis Batch: 163131

Surrogate

o-Terphenyl

Analyte

#2 Diesel (C10-C24)

Motor Oil (>C24-C36)

Lab Sample ID: LCSD 580-163023/3-A **Matrix: Water** Analysis Batch: 163131

#2 Diesel (C10-C24) Motor Oil (>C24-C36)

Surrogate o-Terphenyl

LCSD LCSD %Recovery Qualifier 84

Limits 50 - 150 Client Sample ID: Lab Control Sample

Prep Type: Total/NA

**Prep Batch: 162632** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Prep Batch: 162632** 

RPD %Rec. RPD Limits Limit

Result Qualifier %Rec mg/L 69 59 - 120 4 27 75 mg/L 71 \_ 140 27 12

D

Limits 50 - 150

Unit

Client Sample ID: Method Blank

Prep Type: Total/NA **Prep Batch: 163023** 

Result Qualifier RL MDL Unit D Prepared

Analyzed 0.025 0.015 mg/L 07/03/14 16:09 07/08/14 03:50 0.050 0.0098 mg/L 07/03/14 16:09 07/08/14 03:50

Unit

Unit

mg/L

mg/L

Qualifier Limits %Recovery 84

50 - 150

Spike

Added

0.500

0.500

Limits

50 - 150

Spike

Added

0.500

0.500

Spike

Added

0.500

0.500

LCS LCS

LCSD LCSD

0.373

0.502

Result Qualifier

0.452

0.522

Result Qualifier

LCSD LCSD

0.345

0.376

Prepared 07/03/14 16:09

07/08/14 03:50

Analyzed

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

Dil Fac

Dil Fac

Prep Batch: 163023

%Rec. %Rec Limits 59 - 120

D 90 mg/L 104 71 - 140 mg/L

D

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Prep Batch: 163023** 

%Rec. RPD Limits RPD Limit %Rec 75 59 - 12019 27 100

71 - 140 27

Lab Sample ID: 580-44190-1

Matrix: Water

**Matrix: Water** 

Client Sample ID: 1C-W-1-061814 Date Collected: 06/18/14 13:05

Date Received: 06/20/14 16:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162632	06/30/14 16:01	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	162627	07/01/14 06:58	JJP	TAL SEA

**Client Sample ID: 1C-W-7-061814** Lab Sample ID: 580-44190-2

Date Collected: 06/18/14 11:00

Date Received: 06/20/14 16:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162632	06/30/14 16:01	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	162627	07/01/14 07:16	JJP	TAL SEA

**Client Sample ID: 1C-W-8-061814** Lab Sample ID: 580-44190-3 **Matrix: Water** 

Date Collected: 06/18/14 13:50

Date Received: 06/20/14 16:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162632	06/30/14 16:01	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	162627	07/01/14 07:34	JJP	TAL SEA

Client Sample ID: 1C-W-80-061814 Lab Sample ID: 580-44190-4 **Matrix: Water** 

Date Collected: 06/18/14 16:00

Date Received: 06/20/14 16:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162632	06/30/14 16:01	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	162627	07/01/14 07:52	JJP	TAL SEA

Client Sample ID: 2A-W-10-061814 Lab Sample ID: 580-44190-5

Date Collected: 06/18/14 12:35

Date Received: 06/20/14 16:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162632	06/30/14 16:01	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	162627	07/01/14 08:10	JJP	TAL SEA

Client Sample ID: 2A-W-9-061814 Lab Sample ID: 580-44190-6

Date Collected: 06/18/14 13:10 Date Received: 06/20/14 16:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162632	06/30/14 16:01	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	162627	07/01/14 08:28	JJP	TAL SEA

TestAmerica Seattle

**Matrix: Water** 

Matrix: Water

TestAmerica Job ID: 580-44190-1

Lab Sample ID: 580-44190-7

Client Sample ID: 2B-W-4-061814

Date Collected: 06/18/14 09:45 **Matrix: Water** 

Date Received: 06/20/14 16:20

Batch Batch Dilution Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Prep 3510C 162632 06/30/14 16:01 RBL TAL SEA Total/NA 162627 NWTPH-Dx 07/01/14 09:05 JJP TAL SEA Analysis 1

Client Sample ID: MW-3-061814 Lab Sample ID: 580-44190-8

Date Collected: 06/18/14 11:30 **Matrix: Water** Date Received: 06/20/14 16:20

Dilution Batch Batch Batch Prepared Prep Type Method Factor Number or Analyzed Analyst Type Run Lab Total/NA Prep 3510C 162632 06/30/14 16:01 RBL TAL SEA Total/NA NWTPH-Dx Analysis 1 162627 07/01/14 09:23 JJP TAL SEA

Client Sample ID: MW-4-061814 Lab Sample ID: 580-44190-9

Date Collected: 06/18/14 12:05 **Matrix: Water** 

Date Received: 06/20/14 16:20

Batch Dilution Batch Batch Prepared Prep Type Type Method Run Factor Number or Analyzed **Analyst** Lab Total/NA Prep 3510C 162632 06/30/14 16:01 RBL TAL SEA Total/NA Analysis NWTPH-Dx 1 162627 07/01/14 09:41 JJP TAL SEA

Client Sample ID: EW-1-061714 Lab Sample ID: 580-44190-10

Date Collected: 06/17/14 10:42 **Matrix: Water** 

Date Received: 06/20/14 16:20

Ratch Dilution Batch Batch Prepared Method Number Prep Type Туре Run Factor or Analyzed Analyst Lab Prep Total/NA 3510C 162592 06/30/14 11:22 RBL TAL SEA Total/NA Analysis NWTPH-Dx 162563 07/01/14 00:56 JJP TAL SEA

Client Sample ID: EW-2A-061814 Lab Sample ID: 580-44190-11

Date Collected: 06/18/14 10:25 **Matrix: Water** 

Date Received: 06/20/14 16:20

Batch Batch Dilution Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Prep 3510C 162632 06/30/14 16:01 RRI TAL SEA Total/NA Analysis NWTPH-Dx 1 162627 07/01/14 09:59 JJP TAL SEA

Client Sample ID: GW-1-061714 Lab Sample ID: 580-44190-12

Date Collected: 06/17/14 12:03 Matrix: Water

Date Received: 06/20/14 16:20

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162592	06/30/14 11:22	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	162563	07/01/14 01:14	JJP	TAL SEA

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

Client Sample ID: GW-2-061714

Lab Sample ID: 580-44190-13

Date Collected: 06/17/14 12:15 **Matrix: Water** Date Received: 06/20/14 16:20

Batch Batch Dilution Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Prep 3510C 162592 06/30/14 11:22 RBL TAL SEA Total/NA 162563 NWTPH-Dx 07/01/14 01:32 JJP TAL SEA Analysis 1

Client Sample ID: GW-20-061714

Lab Sample ID: 580-44190-14

Date Collected: 06/17/14 16:00 **Matrix: Water** Date Received: 06/20/14 16:20

Dilution Batch Batch Batch Prepared Prep Type Method Factor Number or Analyzed Analyst Type Run Lab Total/NA Prep 3510C 162592 06/30/14 11:22 RBL TAL SEA Total/NA NWTPH-Dx Analysis 1 162563 07/01/14 01:50 JJP TAL SEA

Client Sample ID: GW-3-061714 Lab Sample ID: 580-44190-15

Date Collected: 06/17/14 15:45 **Matrix: Water** 

Date Received: 06/20/14 16:20

Batch Dilution Batch Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Prep 3510C 162592 06/30/14 11:22 RBL TAL SEA Total/NA Analysis NWTPH-Dx 1 162563 07/01/14 02:08 JJP TAL SEA

Client Sample ID: GW-30-061714 Lab Sample ID: 580-44190-16

Date Collected: 06/17/14 16:01 **Matrix: Water** 

Date Received: 06/20/14 16:20

Ratch Dilution Ratch Batch Prepared Method Number Prep Type Туре Run Factor or Analyzed Analyst Lab Prep Total/NA 3510C 162592 06/30/14 11:22 RBL TAL SEA Total/NA Analysis NWTPH-Dx 162563 07/01/14 02:26 JJP TAL SEA

Client Sample ID: GW-4-061814 Lab Sample ID: 580-44190-17

Date Collected: 06/18/14 12:00 **Matrix: Water** 

Date Received: 06/20/14 16:20

Batch Batch Dilution Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Prep 3510C 162632 06/30/14 16:01 RRI TAL SEA Total/NA Analysis NWTPH-Dx 1 162627 07/01/14 10:17 JJP TAL SEA

Client Sample ID: 5-W-14-061814 Lab Sample ID: 580-44190-18

Date Collected: 06/17/14 15:05 Matrix: Water

Date Received: 06/20/14 16:20

		Batch	Batch		Dilution	Batch	Prepared		
F	Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Ī	Total/NA	Prep	3510C			162592	06/30/14 11:22	RBL	TAL SEA
1	Total/NA	Analysis	NWTPH-Dx		1	162563	07/01/14 02:45	JJP	TAL SEA

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

Client Sample ID: 5-W-15-061714

Lab Sample ID: 580-44190-19

Matrix: Water

Date Collected: 06/17/14 13:10 Date Received: 06/20/14 16:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162592	06/30/14 11:22	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	162563	07/01/14 03:03	JJP	TAL SEA

Client Sample ID: 5-W-16-061714 Lab Sample ID: 580-44190-20

. Matrix: Water

Date Collected: 06/17/14 11:50 Date Received: 06/20/14 16:20

Dilution Batch Batch Batch Prepared Prep Type Туре Method Factor Number or Analyzed Analyst Run Total/NA Prep 3510C 162592 06/30/14 11:22 RBL TAL SEA Total/NA NWTPH-Dx TAL SEA Analysis 1 162563 07/01/14 03:21 JJP

Client Sample ID: 5-W-17-061714 Lab Sample ID: 580-44190-21

Date Collected: 06/17/14 14:05 Matrix: Water

Date Collected: 06/17/14 14:05 Matrix: Water Date Received: 06/20/14 16:20

Batch Batch Dilution Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Prep 3510C 162592 06/30/14 11:22 RBL TAL SEA NWTPH-Dx 162563 TAL SEA Total/NA Analysis 1 07/01/14 03:39 JJP

Client Sample ID: 5-W-18-061714 Lab Sample ID: 580-44190-22

Date Collected: 06/17/14 10:53 Matrix: Water

Date Received: 06/20/14 16:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162592	06/30/14 11:22	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	162563	07/01/14 04:15	JJP	TAL SEA

Client Sample ID: 5-W-19-061714 Lab Sample ID: 580-44190-23

Date Collected: 06/17/14 10:00 Matrix: Water

Date Received: 06/20/14 16:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162592	06/30/14 11:22	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	162563	07/01/14 04:33	JJP	TAL SEA

Client Sample ID: 1B-W-23-061714 Lab Sample ID: 580-44190-24

Date Collected: 06/17/14 16:40 Matrix: Water

Date Received: 06/20/14 16:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162592	06/30/14 11:22	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	162563	07/01/14 04:51	JJP	TAL SEA

TestAmerica Job ID: 580-44190-1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

**Client Sample ID: 2A-W-40-061714** Lab Sample ID: 580-44190-25

Date Collected: 06/17/14 14:25 **Matrix: Water** 

Date Received: 06/20/14 16:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C	<del></del> -		163023	07/03/14 16:09	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	163131	07/08/14 04:37	JJP	TAL SEA

Client Sample ID: 2A-W-41-061714

Lab Sample ID: 580-44190-26

Date Collected: 06/17/14 14:08 Matrix: Water

Date Received: 06/20/14 16:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162592	06/30/14 11:22	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	162563	07/01/14 05:27	JJP	TAL SEA

**Client Sample ID: 2A-W-42-061714** Lab Sample ID: 580-44190-27

Date Collected: 06/17/14 15:55 **Matrix: Water** 

Date Received: 06/20/14 16:20

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162592	06/30/14 11:22	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	162563	07/01/14 05:45	JJP	TAL SEA

Client Sample ID: 1B-W-3-061814 Lab Sample ID: 580-44190-28

Date Collected: 06/18/14 10:07 **Matrix: Water** 

Date Received: 06/20/14 16:20

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162632	06/30/14 16:01	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	162627	07/01/14 10:35	JJP	TAL SEA

Client Sample ID: 5-W-43-061714 Lab Sample ID: 580-44190-29

Date Collected: 06/17/14 09:58 Matrix: Water

Date Received: 06/20/14 16:20

		Batch	Batch		Dilution	Batch	Prepared		
F	Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Ī	Total/NA	Prep	3510C			162592	06/30/14 11:22	RBL	TAL SEA
1	Γotal/NA	Analysis	NWTPH-Dx		1	162563	07/01/14 06:03	JJP	TAL SEA

Laboratory References:

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

# **Certification Summary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-44190-1

#### **Laboratory: TestAmerica Seattle**

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-112	05-27-15
California	NELAP	9	01115CA	01-31-14 *
California	State Program	9	2901	01-31-15
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-14
USDA	Federal		P330-11-00222	04-08-17
Washington	State Program	10	C553	02-17-15

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 $<sup>\</sup>ensuremath{^{\star}}$  Certification renewal pending - certification considered valid.

# **Sample Summary**

Client: Farallon Consulting LLC

580-44190-29

Project/Site: BNSF Skykomish Groundwater Quarterly

5-W-43-061714

TestAmerica Job ID: 580-44190-1

06/17/14 09:58

06/20/14 16:20

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-44190-1	1C-W-1-061814	Water	06/18/14 13:05	06/20/14 16:20
580-44190-2	1C-W-7-061814	Water	06/18/14 11:00	06/20/14 16:20
580-44190-3	1C-W-8-061814	Water	06/18/14 13:50	06/20/14 16:20
580-44190-4	1C-W-80-061814	Water	06/18/14 16:00	06/20/14 16:20
580-44190-5	2A-W-10-061814	Water	06/18/14 12:35	06/20/14 16:20
580-44190-6	2A-W-9-061814	Water	06/18/14 13:10	06/20/14 16:20
580-44190-7	2B-W-4-061814	Water	06/18/14 09:45	06/20/14 16:20
580-44190-8	MW-3-061814	Water	06/18/14 11:30	06/20/14 16:20
580-44190-9	MW-4-061814	Water	06/18/14 12:05	06/20/14 16:20
580-44190-10	EW-1-061714	Water	06/17/14 10:42	06/20/14 16:20
580-44190-11	EW-2A-061814	Water	06/18/14 10:25	06/20/14 16:20
580-44190-12	GW-1-061714	Water	06/17/14 12:03	06/20/14 16:20
580-44190-13	GW-2-061714	Water	06/17/14 12:15	06/20/14 16:20
580-44190-14	GW-20-061714	Water	06/17/14 16:00	06/20/14 16:20
580-44190-15	GW-3-061714	Water	06/17/14 15:45	06/20/14 16:20
580-44190-16	GW-30-061714	Water	06/17/14 16:01	06/20/14 16:20
580-44190-17	GW-4-061814	Water	06/18/14 12:00	06/20/14 16:20
580-44190-18	5-W-14-061814	Water	06/17/14 15:05	06/20/14 16:20
580-44190-19	5-W-15-061714	Water	06/17/14 13:10	06/20/14 16:20
580-44190-20	5-W-16-061714	Water	06/17/14 11:50	06/20/14 16:20
580-44190-21	5-W-17-061714	Water	06/17/14 14:05	06/20/14 16:20
580-44190-22	5-W-18-061714	Water	06/17/14 10:53	06/20/14 16:20
580-44190-23	5-W-19-061714	Water	06/17/14 10:00	06/20/14 16:20
580-44190-24	1B-W-23-061714	Water	06/17/14 16:40	06/20/14 16:20
580-44190-25	2A-W-40-061714	Water	06/17/14 14:25	06/20/14 16:20
580-44190-26	2A-W-41-061714	Water	06/17/14 14:08	06/20/14 16:20
580-44190-27	2A-W-42-061714	Water	06/17/14 15:55	06/20/14 16:20
580-44190-28	1B-W-3-061814	Water	06/18/14 10:07	06/20/14 16:20

Water

TAL-1001 (06/06)		DUPLICATE - CONSULTANT	סנ			<b>APLES</b>	ORIGINAL - RETURN TO LABORATORY WITH SAMPLES
Custody Seal No. BNSF COC No.	Lab: Custody intact? Custody		Lab Remarks:		Date/Time:		Received by Laboratory:
	Date/Time:		Received By:		Date/Time:		Relinquished By:
	lime:		Received By:		Date/Time:		Relinduished By:
Comments and Special Analytical Requirements:	114 1600	7	Received By	0915	Date/Time:		Relinquished By:
							15
		N water X	0458	41/41/9	1)	S S	" 5- W-43-06/7/4
		N water X	1007	6/18 /#	12	, 28	13 1B-W-3-061814
		N water X	1555	6/17/14	2	127	12 2A-W-42-061714
		N water X	1408	6/17/14	2	- 2%	" 2A-W-41-06)7H
		N water X	1425	6/17/14	12	133	10 2A-W-40-061714
turbed when singled		N water X	1640	6/17/14	2	<u>ئ</u>	. 18-W-23-061714
		N water X	1000	6/17/14	2	કે	" 5-W-19-0617H
		N water X	1053	6/17/14	2	134	7 5- W-18-061714
		N water X	1405	6/17/14	2	2	4(+190-+1-M-5 °
		N water X	1150	6/17/14	1)	23	- W-16-
		N Set X	1310	6/17/14	2		" 5-W-15-06 1714
		N water X	1505	6/17/14	2	\ 56	5-W-14-061714
		N water X	1200	6/18/14	2	-	2 GW-4-06 1814
		X mater X	1601	11/51/9	2	1	GW-30-061714
COMMENTS LAB USE		Y/N (Grab)	Time Sampler	Date	O Region		Solible use missen
		Filtered (Comp/ Matrix	Sample Collection	Sample	Containers	***	Sample identification
		грН		MATION	SAMPLE INFORMATION	SAM	
		- 0			Level IV		3-day Rush Other
		EDD Req, Format?	EDD Re		Level III		2-day Rush X Standard 10-Day
				BNSF Standard (Level II)	BNSF S		1-day Rush 5- to 8-day Rush
	METHODS FOR ANALYSIS		Other Deliverables?	DELIVERABLES			_
(425) 745-0800 Fax: 245 0850	WA 18027	City/State/ZIP: ISSaquah			BNSF Work C		
Fasall	Ave NW	Address: 975 5th	のまずにない		となる	でしているないので	BNSF Project Name:
Project Manager. Jerry Portele		Company: Farallon		Project City: SKYKLENISH	Project City:		BNSF Project Number:
Project Number: 683 - 043	LTANT INFORMATION	CONSULTANT			Project State of Origin:	Z	BNSF PROJECT INFORMATION
Tracking Number:		Fax	47488	NO WA	City/State/ZIP:		CHAIN OF CUSTODY
Shipment Method:	Phone: 253 922 2310	Phone	Suppose Supos Suppose Supos Suppose Supos Suppose Supos Suppose Supos Supos Supos Supos Supos Supos Supos Supos Supos Supos Supos Supos Supos Supos Supos Supos Supos Supos Supos Supo	۱	Address:	AY	RAILWAY
SHIPMENT INFORMATION	Project Manager:	Project	S	ANGAGE	Laboratory:		
LAB WORK ORDER:		LABORATORY INFORMATION	7.			A AND RESIDENCE (1)	
				1	5	7	3

#### **Login Sample Receipt Checklist**

Client: Farallon Consulting LLC Job Number: 580-44190-1

Login Number: 44190 List Source: TestAmerica Seattle

List Number: 1 Creator: Kim, Guerry

Creator: Kim, Guerry		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	False	samples received on ice.
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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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: 580-45475-1

Client Project/Site: BNSF Skykomish Cleanup Activities

For:

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

Attn: Gerald Portele

Knittene D. allen

Authorized for release by: 10/6/2014 3:45:51 PM

Kristine Allen, Manager of Project Management (253)248-4970

kristine.allen@testamericainc.com

·····LINKS ·······

Review your project results through

Total Access

**Have a Question?** 



Visit us at: www.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.

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Cleanup Activities TestAmerica Job ID: 580-45475-1

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#### **Case Narrative**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Job ID: 580-45475-1

Laboratory: TestAmerica Seattle

#### Narrative

#### Receipt

The samples were received on 9/19/2014 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 11 coolers at receipt time were 0.4° C, 0.7° C, 0.9° C, 0.9° C, 1.2° C, 1.4° C, 2.1° C, 2.5° C, 2.5° C, 2.9° C and 3.7° C.

#### GC Semi VOA

Method(s) NWTPH-Dx: In analytical batch 171084, for the following samples from preparation batch 170522: (MB 580-170522/1-A), GW-1-091614 (580-45475-1), GW-20-091614 (580-45475-3), GW-2-091614 (580-45475-2), GW-30-091714 (580-45475-5), GW-3-091714 (580-45475-4), GW-4-091814 (580-45475-6), IC-W-1-091814 (580-45475-16), IC-W-7-091814 (580-45475-17), IC-W-80-091814 (580-45475-19), IC-W-8-091814 (580-45475-18), S1-AD-091714 (580-45475-7), S1-AU-091714 (580-45475-8), S1-BD-091714 (580-45475-9), S1-BU-091714 (580-45475-10), S2-AD-091714 (580-45475-11), S2-AU-091714 (580-45475-12), S2-BD-091714 (580-45475-13), S2-BDO-091714 (580-45475-14), S2-BU-091714 (580-45475-15), The method blank contained Motor Oil (>C24-C32) above the method detection limit. This target analyte concentration was less than half the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) NWTPH-Dx: In analysis batch 171351, the method blank for preparation batch 170586 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: In analysis batch 171341, for the following samples from preparation batch 171105: (MB 580-171105/1-A), 1A-W-4-091714 (580-45475-55), 1B-W-2-091714 (580-45475-56), 1B-W-3-091714 (580-45475-57), 1C-W-3-091814 (580-45475-58), 1C-W-4-091814 (580-45475-59), 5-W-14-091614 (580-45475-43), 5-W-150-091614 (580-45475-45), 5-W-15-091614 (580-45475-44), 5-W-16-091614 (580-45475-46), 5-W-17-091614 (580-45475-47), 5-W-18-091614 (580-45475-48), 5-W-19-091614 (580-45475-49), 5-W-3-091614 (580-45475-50), 5-W-50-091614 (580-45475-51), 5-W-54-091614 (580-45475-52), 5-W-55-091614 (580-45475-53), 5-W-56-091614 (580-45475-54), S4-BU-091714 (580-45475-40), S4-CD-091714 (580-45475-41), S4-CU-091714 (580-45475-42), the method blank contained #2 Diesel Fuel (C10-C24) and 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: In analysis batch 174084, for the following sample(s) from preparation batch 170522: GW-1-091614 (580-45475-1), GW-20-091614 (580-45475-3), GW-2-091614 (580-45475-2), GW-4-091814 (580-45475-6), IC-W-1-091814 (580-45475-16), IC-W-7-091814 (580-45475-17), IC-W-80-091814 (580-45475-19), IC-W-8-091814 (580-45475-18), S2-BU-091714 (580-45475-15), the results in the #2 Diesel Fuel (C10-C24) range(s) are due primarily to weathered/degraded diesel fuel. The affected analyte range(s) have beenY qualified and reported.

Method(s) NWTPH-Dx: In analysis batch 171084, for the following sample(s) from preparation batch 170522: GW-30-091714 (580-45475-5), GW-3-091714 (580-45475-4), the results in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) range(s) are due primarily to weathered/degraded diesel fuel and look to be overlapping into the Motor Oil (>C24-C36) range. The affected analyte range(s) have been Y qualified and reported.

Method(s) NWTPH-Dx: In analysis batch 171461, for the following sample from preparation batch 171156: MW-38R-091614 (580-45475-61), the results in the #2 Diesel Fuel (C10-C24) range(s) are due to what most closely resembles a mineral/transformer oil range product. The affected analyte range(s) have been Y qualified and reported.

Method(s) NWTPH-Dx: In analysis batch 171341, for the following sample from preparation batch 171105: 5-W-56-091614 (580-45475-54), the results in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) ranges are due to what most closely resembles a complex mixture of heavily weathered/degraded diesel fuel, a mineral/transformer oil range product, and possible biogenic interference; method 3630 silica gel cleanup procedure is recommended. The affected analyte range(s) have been Y qualified and reported.

Method(s) NWTPH-Dx: In analysis batch 171341, for the following sample from preparation batch 171105: 1B-W-2-091714 (580-45475-56), 5-W-150-091614 (580-45475-45), 5-W-15-091614 (580-45475-44), 5-W-18-091614 (580-45475-48), 5-W-50-091614 (580-45475-51), 5-W-55-091614 (580-45475-53), the results in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) range(s) are due to a complex mixture of what most closely resembles heavily weathered/degraded diesel fuel and a mineral/transformer oil range product. The affected analyte range(s) have been Y qualified and reported.

Method(s) NWTPH-Dx: In analysis batch 171341, for the following sample(s) from preparation batch 171105: 1C-W-4-091814 (580-45475-59), 5-W-54-091614 (580-45475-52), the results in the #2 Diesel Fuel (C10-C24) range are due to what most closely

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#### **Case Narrative**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

#### Job ID: 580-45475-1 (Continued)

#### Laboratory: TestAmerica Seattle (Continued)

resembles a mineral/transformer oil range product. The affected analyte range(s) have been Y qualified and reported.

Method(s) NWTPH-Dx: In analysis batch 171351, for the following samples from preparation batch 170586: 2A-W-100-091814 (580-45475-25), 2A-W-10-091714 (580-45475-24), IB-W-23-091714 (580-45475-20), the results in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) ranges are due to what most closely resembles a complex mixture of a hydraulic oil or similar product, motor oil and possible biogenic interference; method 3630 silica gel cleanup procedure is recommended. The affected analyte ranges have been Y qualified and reported.

Method(s) NWTPH-Dx: In analysis batch 171351, for the following samples from preparation batch 170586: MW-3-091814 (580-45475-27), the results in the Motor Oil (>C24-C36) range are due to what most closely resembles a complex mixture of a hydraulic oil or similar product, motor oil and possible biogenic interference; method 3630 silica gel cleanup procedure is recommended. The affected analyte range has been Y qualified and reported.

Method(s) NWTPH-Dx: In analysis batch 171351, for the following samples from preparation batch 170586: 2A-W-41-091714 (580-45475-22), 2A-W-42-091714 (580-45475-23), MW-4-091814 (580-45475-28), the results in the #2 Diesel Fuel (C10-C24) and Motor Oil (>C24-C36) ranges are due to what most closely resembles a complex mixture of a mineral/transformer oil range product and possible biogenic interference; method 3630 silica gel cleanup procedure is recommended. The affected analyte ranges have been Y qualified and reported.

Method(s) NWTPH-Dx: In analysis batch 171351, for the following samples from preparation batch 170586: EW-1-091614 (580-45475-29), the results in the #2 Diesel Fuel (C10-C24) range are due to what most closely resembles a complex mixture of a mineral/transformer oil range product and possible biogenic interference; method 3630 silica gel cleanup procedure is recommended. The affected analyte range has been Y qualified and reported.

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.

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#### **Definitions/Glossary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

Not detected at the reporting limit (or MDL or EDL if shown)

Relative Percent Difference, a measure of the relative difference between two points

Reporting Limit or Requested Limit (Radiochemistry)

Practical Quantitation Limit

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

**Quality Control** 

Relative error ratio

TestAmerica Job ID: 580-45475-1

#### **Qualifiers**

#### **GC Semi VOA**

Qualifier	Qualifier Description
Y	The chromatographic response resembles a typical fuel pattern.
В	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

ND PQL

QC

RER

RL RPD

TEF

**TEQ** 

Listed under the "D" column to designate that the result is reported on a dry weight basis
Percent Recovery
Contains Free Liquid
Contains no Free Liquid
Duplicate error ratio (normalized absolute difference)
Dilution Factor
Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
Decision level concentration
Minimum detectable activity
Estimated Detection Limit
Minimum detectable concentration
Method Detection Limit
Minimum Level (Dioxin)
Not Calculated

TestAmerica Seattle

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-1

Matrix: Water

Date Collected: 09/16/14 17:58 Date Received: 09/19/14 16:50

Client Sample ID: GW-1-091614

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.026	Y	0.024	0.014	mg/L		09/23/14 10:47	09/29/14 22:27	1
Motor Oil (>C24-C36)	0.044	JB	0.047	0.0093	mg/L		09/23/14 10:47	09/29/14 22:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenvl	96	-	50 - 150				09/23/14 10:47	09/29/14 22:27	

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: GW-2-091614 Lab Sample ID: 580-45475-2

Date Collected: 09/16/14 16:09 Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	etroleum Products (GC)	<del>;</del> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.057	Y	0.024	0.014	mg/L		09/23/14 10:47	09/29/14 22:46	1
Motor Oil (>C24-C36)	0.036	JB	0.048	0.0094	mg/L		09/23/14 10:47	09/29/14 22:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	94		50 - 150				09/23/14 10:47	09/29/14 22:46	1

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Client: Farallon Consulting LLC

Date Received: 09/19/14 16:50

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-3

**Matrix: Water** 

Client Sample ID: GW-20-091614 Date Collected: 09/16/14 16:12

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.054	Υ	0.024	0.014	mg/L		09/23/14 10:47	09/29/14 23:05	1
Motor Oil (>C24-C36)	0.032	J B	0.048	0.0093	mg/L		09/23/14 10:47	09/29/14 23:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150				09/23/14 10:47	09/29/14 23:05	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-4

Matrix: Water

Date Collected: 09/17/14 09:20 Date Received: 09/19/14 16:50

Client Sample ID: GW-3-091714

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.30	Y	0.024	0.014	mg/L		09/23/14 10:47	09/29/14 23:24	1
Motor Oil (>C24-C36)	0.14	ВҮ	0.047	0.0093	mg/L		09/23/14 10:47	09/29/14 23:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	92		<u>50 - 150</u>				09/23/14 10:47	09/29/14 23:24	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-5

Matrix: Water

Date Collected: 09/17/14 13:00 Date Received: 09/19/14 16:50

Client Sample ID: GW-30-091714

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.29	Υ	0.024	0.014	mg/L		09/23/14 10:47	09/29/14 23:43	1
Motor Oil (>C24-C36)	0.14	ВҮ	0.047	0.0093	mg/L		09/23/14 10:47	09/29/14 23:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	89		50 - 150				09/23/14 10:47	09/29/14 23:43	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: GW-4-091814

Lab Sample ID: 580-45475-6 Date Collected: 09/18/14 10:05

Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	oleum Products (GC)	;)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.028	Y	0.024	0.014	mg/L		09/23/14 10:47	09/30/14 00:02	1
Motor Oil (>C24-C36)	0.037	JB	0.047	0.0093	mg/L		09/23/14 10:47	09/30/14 00:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	103		50 - 150				09/23/14 10:47	09/30/14 00:02	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: S1-AD-091714

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-7

Matrix: Water

Date Collected: 09/17/14 16:12 Date Received: 09/19/14 16:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		09/23/14 10:47	09/30/14 00:21	1
Motor Oil (>C24-C36)	0.019	JB	0.047	0.0093	mg/L		09/23/14 10:47	09/30/14 00:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	90	-	<u>50 - 150</u>				09/23/14 10:47	09/30/14 00:21	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-8

Matrix: Water

Date Collected: 09/17/14 16:35 Date Received: 09/19/14 16:50

Client Sample ID: S1-AU-091714

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		09/23/14 10:47	09/30/14 00:40	1
Motor Oil (>C24-C36)	0.023	JB	0.047	0.0093	mg/L		09/23/14 10:47	09/30/14 00:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	66		50 - 150				09/23/14 10:47	09/30/14 00:40	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: S1-BD-091714

Lab Sample ID: 580-45475-9 Date Collected: 09/17/14 16:10

Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	nwest - Semi-Volatile	e Petroleum	Products (GC	5)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		09/23/14 10:47	09/30/14 00:59	1
Motor Oil (>C24-C36)	0.014	JB	0.047	0.0093	mg/L		09/23/14 10:47	09/30/14 00:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	79		50 - 150				09/23/14 10:47	09/30/14 00:59	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: S1-BU-091714

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-10

. Matrix: Water

Date Collected: 09/17/14 16:35
Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	west - Semi-Volatile	<b>Petroleum</b>	<b>Products (GC</b>	<b>(</b> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		09/23/14 10:47	09/30/14 01:18	1
Motor Oil (>C24-C36)	0.022	JB	0.047	0.0093	mg/L		09/23/14 10:47	09/30/14 01:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150				09/23/14 10:47	09/30/14 01:18	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: S2-AD-091714 Lab Sample ID: 580-45475-11

Date Collected: 09/17/14 17:05 Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		09/23/14 10:47	09/30/14 01:55	1
Motor Oil (>C24-C36)	0.017	JB	0.047	0.0093	mg/L		09/23/14 10:47	09/30/14 01:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	103	-	50 - 150				09/23/14 10:47	09/30/14 01:55	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-12

Matrix: Water

Client Sample ID: S2-AU-091714 Date Collected: 09/17/14 17:03

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		09/23/14 10:47	09/30/14 02:14	1
Motor Oil (>C24-C36)	0.016	JB	0.047	0.0093	mg/L		09/23/14 10:47	09/30/14 02:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	64		50 - 150				09/23/14 10:47	09/30/14 02:14	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-13

Matrix: Water

Client Sample ID: S2-BD-091714 Date Collected: 09/17/14 16:10

Date Received: 09/19/14 16:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		09/23/14 10:47	09/30/14 02:33	1
Motor Oil (>C24-C36)	0.015	JB	0.048	0.0093	mg/L		09/23/14 10:47	09/30/14 02:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	75		<u>50 - 150</u>				09/23/14 10:47	09/30/14 02:33	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-14

Matrix: Water

Client Sample ID: S2-BDO-091714

Date Collected: 09/17/14 16:20

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North			•	•	l lmi4	Б	Duamanad	Analysed	Dil Faa
Analyte	Result	Qualifier	RL	MDL	Unit	U	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		09/23/14 10:47	09/30/14 02:52	1
Motor Oil (>C24-C36)	0.014	JB	0.047	0.0093	mg/L		09/23/14 10:47	09/30/14 02:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	66		50 - 150				09/23/14 10:47	09/30/14 02:52	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: S2-BU-091714

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-15

Matrix: Water

Date Collected: 09/17/14 16:38	
Date Received: 09/19/14 16:50	

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	<b>Products (GC</b>	<del>(</del> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.027	Y	0.024	0.014	mg/L		09/23/14 10:47	09/30/14 03:10	1
Motor Oil (>C24-C36)	0.022	JB	0.047	0.0093	mg/L		09/23/14 10:47	09/30/14 03:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	103		50 - 150				09/23/14 10:47	09/30/14 03:10	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: IC-W-1-091814

Lab Sample ID: 580-45475-16 Date Collected: 09/18/14 11:28

Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	<b>Products (GC</b>	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.032	Y	0.024	0.014	mg/L		09/23/14 10:47	09/30/14 03:29	1
Motor Oil (>C24-C36)	0.033	JB	0.047	0.0093	mg/L		09/23/14 10:47	09/30/14 03:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	103	-	50 - 150				09/23/14 10:47	09/30/14 03:29	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: IC-W-7-091814 Lab Sample ID: 580-45475-17

Date Collected: 09/18/14 10:10 Matrix: Water

Date Received: 09/19/14 16:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.065	Y	0.024	0.014	mg/L		09/23/14 10:47	09/30/14 03:48	1
Motor Oil (>C24-C36)	0.043	JB	0.048	0.0093	mg/L		09/23/14 10:47	09/30/14 03:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	98		50 <sub>-</sub> 150				09/23/14 10:47	09/30/14 03:48	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: IC-W-8-091814

Lab Sample ID: 580-45475-18 Date Collected: 09/18/14 11:25 Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.028	Y	0.024	0.014	mg/L		09/23/14 10:47	09/30/14 04:07	1
Motor Oil (>C24-C36)	0.031	JB	0.047	0.0093	mg/L		09/23/14 10:47	09/30/14 04:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	97	-	50 - 150				09/23/14 10:47	09/30/14 04:07	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: IC-W-80-091814

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-19

Matrix: Water

Date Collected: 09/18/14 12:00 Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	<b>;</b> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.028	Y	0.024	0.014	mg/L		09/23/14 10:47	09/30/14 04:25	1
Motor Oil (>C24-C36)	0.032	JB	0.047	0.0093	mg/L		09/23/14 10:47	09/30/14 04:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	137		50 - 150				09/23/14 10:47	09/30/14 04:25	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: IB-W-23-091714

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-20

Matrix: Water

Date Collected: 09/17/14 09:13 Date Received: 09/19/14 16:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.045	Y	0.024	0.014	mg/L		09/23/14 17:19	10/02/14 21:25	1
Motor Oil (>C24-C36)	0.093	ВҮ	0.047	0.0093	mg/L		09/23/14 17:19	10/02/14 21:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	73	-	<del>50 - 150</del>				09/23/14 17:19	10/02/14 21:25	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: 2A-W-40-091714 Lab Sample ID: 580-45475-21

Date Collected: 09/17/14 09:33 Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		09/23/14 17:19	10/02/14 21:49	1
Motor Oil (>C24-C36)	0.012	JB	0.047	0.0093	mg/L		09/23/14 17:19	10/02/14 21:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	73		50 - 150				09/23/14 17:19	10/02/14 21:49	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: 2A-W-41-091714 Lab Sample ID: 580-45475-22

Date Collected: 09/17/14 11:09 Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	Products (GC	<b>;</b> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.16	Y	0.024	0.014	mg/L		09/23/14 17:19	10/02/14 22:13	1
Motor Oil (>C24-C36)	0.12	ВҮ	0.047	0.0093	mg/L		09/23/14 17:19	10/02/14 22:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	70		50 - 150				09/23/14 17:19	10/02/14 22:13	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: 2A-W-42-091714

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-23

Matrix: Water

Date Collected: 09/17/14 11:57 Date Received: 09/19/14 16:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.14	Y	0.024	0.014	mg/L		09/23/14 17:19	10/02/14 22:37	1
Motor Oil (>C24-C36)	0.11	ВҮ	0.047	0.0093	mg/L		09/23/14 17:19	10/02/14 22:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	73		<del>50 - 150</del>				09/23/14 17:19	10/02/14 22:37	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: 2A-W-10-091714

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-24

Date Collected: 09/17/14 14:44 Matrix: Water

Date Received: 09/19/14 16:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.10	Y	0.024	0.014	mg/L		09/23/14 17:19	10/02/14 23:01	1
Motor Oil (>C24-C36)	0.20	ВҮ	0.048	0.0093	mg/L		09/23/14 17:19	10/02/14 23:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	87		50 - 150				09/23/14 17:19	10/02/14 23:01	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: 2A-W-100-091814 Lab Sample ID: 580-45475-25

Date Collected: 09/18/14 14:54 Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North Analyte		Qualifier	Products (GC RL	) MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.11	Y	0.024	0.014	mg/L		09/23/14 17:19	10/02/14 23:25	1
Motor Oil (>C24-C36)	0.25	ВҮ	0.047	0.0093	mg/L		09/23/14 17:19	10/02/14 23:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	83		50 - 150				09/23/14 17:19	10/02/14 23:25	1

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Client: Farallon Consulting LLC

Date Received: 09/19/14 16:50

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-26

Matrix: Water

Date Collected: 09/18/14 13:33

**Client Sample ID: 2B-W-4-091814** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		09/23/14 17:19	10/02/14 23:48	1
Motor Oil (>C24-C36)	0.015	JB	0.048	0.0093	mg/L		09/23/14 17:19	10/02/14 23:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	65		50 - 150				09/23/14 17:19	10/02/14 23:48	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: MW-3-091814

Lab Sample ID: 580-45475-27

Date Collected: 09/18/14 12:33 Date Received: 09/19/14 16:50 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.021	J	0.024	0.014	mg/L		09/23/14 17:19	10/03/14 00:12	1
Motor Oil (>C24-C36)	0.049	ВҮ	0.048	0.0093	mg/L		09/23/14 17:19	10/03/14 00:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	57		<del>50 - 150</del>				09/23/14 17:19	10/03/14 00:12	

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: MW-4-091814

Lab Sample ID: 580-45475-28

Date Collected: 09/18/14 14:25
Date Received: 09/19/14 16:50

**Matrix: Water** 

Method: NWTPH-Dx - North			•	•					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.11	Υ	0.024	0.014	mg/L		09/23/14 17:19	10/03/14 00:36	1
Motor Oil (>C24-C36)	0.14	ВҮ	0.047	0.0093	mg/L		09/23/14 17:19	10/03/14 00:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150				09/23/14 17:19	10/03/14 00:36	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: EW-1-091614

Lab Sample ID: 580-45475-29

Date Collected: 09/16/14 13:08 Date Received: 09/19/14 16:50 Matrix: Water

st - Semi-Volatile	e Petroleum	Products (GC	)					
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
0.031	Y	0.024	0.014	mg/L		09/23/14 17:19	10/03/14 01:24	1
0.038	JB	0.047	0.0093	mg/L		09/23/14 17:19	10/03/14 01:24	1
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
75		50 - 150				09/23/14 17:19	10/03/14 01:24	1
	0.031 0.038 %Recovery	Result Qualifier  0.031 Y  0.038 J B  %Recovery Qualifier	Result 0.031 Y         Qualifier 0.024           0.038 J B         0.047           %Recovery Qualifier Limits	0.031         Y         0.024         0.014           0.038         J B         0.047         0.0093           %Recovery         Qualifier         Limits	Result 0.031         Qualifier Y         RL 0.024         MDL 0.014 mg/L mg/L         Unit mg/L 0.038           0.038         J B         0.047         0.0093 mg/L           %Recovery Qualifier Limits         Limits	Result 0.031         Qualifier Y         RL 0.024         MDL 0.014         Unit mg/L mg/L mg/L 0.038         D           0.038         J B 0.047         0.0093         mg/L mg/L mg/L 0.0093         mg/L mg/L mg/L 0.0093           %Recovery Qualifier Limits         Limits	Result 0.031         Qualifier Y         RL 0.024         MDL 0.014 mg/L mg/L mg/L         D 09/23/14 17:19           0.038         J B 0.047         0.0093 mg/L         09/23/14 17:19           %Recovery Qualifier Limits         Prepared	Result 0.031         Qualifier Y         RL 0.024         MDL mg/L 0.014         D 0.024         Prepared 0.014 mg/L 0.014         Analyzed 0.03/14 01:24           0.038         J B 0.047         0.0093 mg/L 0.0093         0.09/23/14 17:19 0.003/14 01:24         10/03/14 01:24           %Recovery Qualifier Limits         Prepared Analyzed

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: EW-2A-091814

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-30

Matrix: Water

Date Collected: 09/18/14 10:00 Date Received: 09/19/14 16:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		09/23/14 17:19	10/03/14 01:47	1
Motor Oil (>C24-C36)	0.017	JB	0.048	0.0093	mg/L		09/23/14 17:19	10/03/14 01:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	75	-	<del>50 - 150</del>				09/23/14 17:19	10/03/14 01:47	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: S3-AD-091714

Lab Sample ID: 580-45475-31 Date Collected: 09/17/14 15:09

Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	5)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.014	J	0.024	0.014	mg/L		09/23/14 17:19	10/03/14 02:11	1
Motor Oil (>C24-C36)	0.011	JB	0.047	0.0093	mg/L		09/23/14 17:19	10/03/14 02:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	59		50 - 150				09/23/14 17:19	10/03/14 02:11	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: S3-AU-091714 Lab Sample ID: 580-45475-32

Date Collected: 09/17/14 15:33 Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North			•	•	1114		B	A l	D!! E
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.023	J	0.024	0.014	mg/L		09/23/14 17:19	10/03/14 02:35	1
Motor Oil (>C24-C36)	0.015	JB	0.047	0.0093	mg/L		09/23/14 17:19	10/03/14 02:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78		50 <sub>-</sub> 150				09/23/14 17:19	10/03/14 02:35	1

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Client: Farallon Consulting LLC

Date Received: 09/19/14 16:50

o-Terphenyl

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: S3-BD-091714 Lab Sample ID: 580-45475-33

80

Date Collected: 09/17/14 15:13

Matrix: Water

10/03/14 02:59

09/23/14 17:19

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) Dil Fac Analyte Result Qualifier MDL Unit D Prepared Analyzed 09/23/14 17:19 10/03/14 02:59 #2 Diesel (C10-C24) 0.017 J 0.024 0.014 mg/L 09/23/14 17:19 10/03/14 02:59 0.048 0.0093 mg/L Motor Oil (>C24-C36) 0.013 JB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac

50 - 150

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: S3-BU-091714

Lab Sample ID: 580-45475-34

Date Collected: 09/17/14 15:33 Date Received: 09/19/14 16:50 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.020	J	0.024	0.014	mg/L		09/23/14 17:19	10/03/14 03:22	1
Motor Oil (>C24-C36)	0.015	JB	0.048	0.0093	mg/L		09/23/14 17:19	10/03/14 03:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	73	-	50 - 150				09/23/14 17:19	10/03/14 03:22	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: S3-CD-091714

Lab Sample ID: 580-45475-35 Date Collected: 09/17/14 15:10

Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	;)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		09/23/14 17:19	10/03/14 03:46	1
Motor Oil (>C24-C36)	0.010	JB	0.048	0.0093	mg/L		09/23/14 17:19	10/03/14 03:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	67	-	50 - 150				09/23/14 17:19	10/03/14 03:46	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: S3-CU-091714

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-36

Matrix: Water

Date Collected: 09/17/14 15:30 Date Received: 09/19/14 16:50

Analyte		Qualifier	Products (GC RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		09/23/14 17:19	10/03/14 04:10	1
Motor Oil (>C24-C36)	0.011	JB	0.048	0.0093	mg/L		09/23/14 17:19	10/03/14 04:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	93	-	50 - 150				09/23/14 17:19	10/03/14 04:10	

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: S4-AD-091714 Lab Sample ID: 580-45475-37

Date Collected: 09/17/14 14:08 Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	Products (GC	<del>;</del> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.022	J	0.024	0.014	mg/L		09/23/14 17:19	10/03/14 04:33	1
Motor Oil (>C24-C36)	0.026	JB	0.048	0.0093	mg/L		09/23/14 17:19	10/03/14 04:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	75		50 - 150				09/23/14 17:19	10/03/14 04:33	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: S4-AU-091714

Lab Sample ID: 580-45475-38

Date Collected: 09/17/14 14:25 Date Received: 09/19/14 16:50 Matrix: Water

Method: NWTPH-Dx - North Analyte		Petroleum Qualifier	Products (GC RL	) MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.019	J	0.024	0.014	mg/L		09/23/14 17:19	10/03/14 04:57	1
Motor Oil (>C24-C36)	0.012	JB	0.048	0.0093	mg/L		09/23/14 17:19	10/03/14 04:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	97	-	50 - 150				09/23/14 17:19	10/03/14 04:57	

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: S4-BD-091714

Lab Sample ID: 580-45475-39

Date Collected: 09/17/14 14:15
Date Received: 09/19/14 16:50
Matrix: Water

Method: NWTPH-Dx - North Analyte		Qualifier	RL	) MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.018	J	0.024	0.014	mg/L		09/23/14 17:19	10/03/14 05:44	1
Motor Oil (>C24-C36)	0.019	JB	0.047	0.0093	mg/L		09/23/14 17:19	10/03/14 05:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	90		50 - 150				09/23/14 17:19	10/03/14 05:44	1

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Client: Farallon Consulting LLC

o-Terphenyl

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: S4-BU-091714

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-40

09/29/14 09:53 10/02/14 07:58

Matrix: Water

Date Collected: 09/17/14 14:40 Date Received: 09/19/14 16:50

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Method: NWTPH-Dx - Northwe	est - Semi-Volatile	Semi-Volatile Petroleum Products (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.021	JB	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 07:58	1
Motor Oil (>C24-C36)	0.046	JB	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 07:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

50 - 150

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: S4-CD-091714 Lab Sample ID: 580-45475-41

Date Collected: 09/17/14 14:03 Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.016	JB	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 08:17	1
Motor Oil (>C24-C36)	0.017	JB	0.048	0.0093	mg/L		09/29/14 09:53	10/02/14 08:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150				09/29/14 09:53	10/02/14 08:17	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-42

Matrix: Water

Date Collected: 09/17/14 14:25 Date Received: 09/19/14 16:50

Client Sample ID: S4-CU-091714

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.019	J B	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 08:35	1
Motor Oil (>C24-C36)	0.022	JB	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 08:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	95		50 - 150				09/29/14 09:53	10/02/14 08:35	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: 5-W-14-091614

Lab Sample ID: 580-45475-43

Matrix: Water

Date Collected: 09/16/14 12:08 Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North Analyte		Petroleum Qualifier	Products (GC RL	) MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.015		0.024	0.014			09/29/14 09:53	10/02/14 08:54	1
Motor Oil (>C24-C36)	0.017	JB	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 08:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	106		50 - 150				09/29/14 09:53	10/02/14 08:54	1

Client: Farallon Consulting LLC

o-Terphenyl

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: 5-W-15-091614

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-44

09/29/14 09:53 10/02/14 09:13

Matrix: Water

Date Collected: 09/16/14 10:33
Date Received: 09/19/14 16:50

99

Method: NWTPH-Dx - North	west - Semi-Volatile	<b>Petroleum</b>	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.34	ΥB	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 09:13	1
Motor Oil (>C24-C36)	0.25	YB	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 09:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

50 - 150

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-45

Matrix: Water

Client Sample ID: 5-W-150-091614 Date Collected: 09/16/14 10:35

Date Received: 09/19/14 16:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.28	ΥB	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 09:31	1
Motor Oil (>C24-C36)	0.23	YB	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 09:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	82	-	<del>50 - 150</del>				09/29/14 09:53	10/02/14 09:31	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: 5-W-16-091614

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-46

Matrix: Water

Date Collected: 09/16/14 10:45 Date Received: 09/19/14 16:50

Analyte		Qualifier	Products (GC RL	•	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.022	J B	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 09:50	1
Motor Oil (>C24-C36)	0.026	JB	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 09:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	115		50 - 150				09/29/14 09:53	10/02/14 09:50	

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: 5-W-17-091614

Lab Sample ID: 580-45475-47

Matrix: Water

Date Collected: 09/16/14 10:52 Date Received: 09/19/14 16:50

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		09/29/14 09:53	10/02/14 10:28	1
Motor Oil (>C24-C36)	0.016	JB	0.048	0.0093	mg/L		09/29/14 09:53	10/02/14 10:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	106	-	50 - 150				09/29/14 09:53	10/02/14 10:28	

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Client: Farallon Consulting LLC

Date Collected: 09/16/14 11:45

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: 5-W-18-091614

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-48

Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-DX - Northwe				,					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.075	ВҮ	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 10:46	1
Motor Oil (>C24-C36)	0.069	ВҮ	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 10:46	1

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 09/29/14 09:53 10/02/14 10:46 o-Terphenyl 95 50 - 150

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: 5-W-19-091614 Lab Sample ID: 580-45475-49

Date Collected: 09/16/14 11:55 Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	;)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		09/29/14 09:53	10/02/14 11:05	1
Motor Oil (>C24-C36)	0.017	J B	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 11:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	102		50 - 150				09/29/14 09:53	10/02/14 11:05	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: 5-W-43-091614 Lab Sample ID: 580-45475-50

Date Collected: 09/16/14 13:10 Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.019	JB	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 11:25	1
Motor Oil (>C24-C36)	0.024	JB	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 11:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	106		50 - 150				09/29/14 09:53	10/02/14 11:25	1

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Client: Farallon Consulting LLC

Date Received: 09/19/14 16:50

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: 5-W-50-091614

Date Collected: 09/16/14 17:40

Lab Sample ID: 580-45475-51

Matrix: Water

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) Dil Fac Analyte Result Qualifier MDL Unit D Prepared Analyzed 09/29/14 09:53 #2 Diesel (C10-C24) 1.2 B Y 0.024 0.014 mg/L 10/02/14 11:44 10/02/14 11:44 0.048 0.0093 mg/L 09/29/14 09:53 Motor Oil (>C24-C36) 0.52 BY Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac o-Terphenyl 106 50 - 150 09/29/14 09:53 10/02/14 11:44

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: 5-W-54-091614

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-52

Matrix: Water

Date Collected: 09/16/14 17:55 Date Received: 09/19/14 16:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.037	ВҮ	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 12:03	1
Motor Oil (>C24-C36)	0.042	JB	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 12:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl		-	50 - 150				09/29/14 09:53	10/02/14 12:03	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: 5-W-55-091614 Lab Sample ID: 580-45475-53

Date Collected: 09/16/14 16:20 Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North			•	•					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.094	ВҮ	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 14:03	1
Motor Oil (>C24-C36)	0.085	ВҮ	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 14:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	108		50 - 150				09/29/14 09:53	10/02/14 14:03	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: 5-W-56-091614

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-54

Matrix: Water

Date Collected: 09/16/14 16:07 Date Received: 09/19/14 16:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.91	ВҮ	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 14:22	1
Motor Oil (>C24-C36)	1.3	ВҮ	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 14:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	114		50 - 150				09/29/14 09:53	10/02/14 14:22	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-55

Matrix: Water

**Client Sample ID: 1A-W-4-091714** Date Collected: 09/17/14 12:32

Date Received: 09/19/14 16:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.020	J B	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 14:41	1
Motor Oil (>C24-C36)	0.024	JB	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 14:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	89		50 <sub>-</sub> 150				09/29/14 09:53	10/02/14 14:41	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

**Client Sample ID: 1B-W-2-091714** 

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-56

Matrix: Water

Date Collected: 09/17/14 11:20 Date Received: 09/19/14 16:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.066	ВҮ	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 15:00	1
Motor Oil (>C24-C36)	0.074	ВҮ	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 15:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl		-	50 - 150				09/29/14 09:53	10/02/14 15:00	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

**Client Sample ID: 1B-W-3-091714** 

Lab Sample ID: 580-45475-57 Date Collected: 09/17/14 10:49 Matrix: Water

Date Received: 09/19/14 16:50

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.023	JB	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 15:38	1
Motor Oil (>C24-C36)	0.033	JB	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 15:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	88		50 - 150				09/29/14 09:53	10/02/14 15:38	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: 1C-W-3-091814 Lab Sample ID: 580-45475-58

Date Collected: 09/18/14 12:52

Date Received: 09/19/14 16:50

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.022	JB	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 15:58	1
Motor Oil (>C24-C36)	0.022	JB	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 15:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	106	-	<del>50 - 150</del>				09/29/14 09:53	10/02/14 15:58	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

**Client Sample ID: 1C-W-4-091814** 

Lab Sample ID: 580-45475-59

Matrix: Water

Date Collected: 09/18/14 13:00 Date Received: 09/19/14 16:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.044	ВҮ	0.024	0.014	mg/L		09/29/14 09:53	10/02/14 16:17	1
Motor Oil (>C24-C36)	0.035	JB	0.047	0.0093	mg/L		09/29/14 09:53	10/02/14 16:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	107		50 - 150				09/29/14 09:53	10/02/14 16:17	1

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Client: Farallon Consulting LLC

Date Received: 09/19/14 16:50

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-60

**Matrix: Water** 

Client Sample ID: MW-16-091814 Date Collected: 09/18/14 11:28

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.015	J	0.024	0.014	mg/L		09/29/14 14:26	10/02/14 09:24	1
Motor Oil (>C24-C36)	ND		0.048	0.0094	mg/L		09/29/14 14:26	10/02/14 09:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	68	-	50 - 150				09/29/14 14:26	10/02/14 09:24	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: MW-38R-091614

TestAmerica Job ID: 580-45475-1

Lab Sample ID: 580-45475-61

Matrix: Water

Date Collected: 09/16/14 13:46 Date Received: 09/19/14 16:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.051	Υ	0.024	0.014	mg/L		09/29/14 14:26	10/02/14 09:43	1
Motor Oil (>C24-C36)	0.034	J	0.047	0.0093	mg/L		09/29/14 14:26	10/02/14 09:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78		<del>50 - 150</del>				09/29/14 14:26	10/02/14 09:43	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

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

Lab Sample ID: MB 580-170522/1-A

**Matrix: Water** 

Analysis Batch: 171084

Client Sample ID: Method Blank

Prep Batch: 170522

Prep Type: Total/NA

	INID	IAID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		09/23/14 10:47	09/29/14 13:42	1
Motor Oil (>C24-C36)	0.0110	J	0.050	0.0098	mg/L		09/23/14 10:47	09/29/14 13:42	1

MB MB

MD MD

Surrogate %Recovery Qualifier I imits Prepared Analyzed Dil Fac o-Terphenyl 107 50 - 150 09/23/14 10:47 09/29/14 13:42

Lab Sample ID: LCS 580-170522/2-A Client Sample ID: Lab Control Sample

**Matrix: Water** 

Analysis Batch: 171084

Prep Type: Total/NA **Prep Batch: 170522** 

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit D %Rec Limits #2 Diesel (C10-C24) 0.500 0.392 59 - 120 mg/L 78 0.500 Motor Oil (>C24-C36) 0.486 mg/L 97 71 - 140

LCS LCS

Surrogate %Recovery Qualifier Limits 50 - 150 o-Terphenyl 98

Lab Sample ID: LCSD 580-170522/3-A

**Matrix: Water** 

Analysis Batch: 171084

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

Prep Batch: 170522

LCSD LCSD Spike %Rec. RPD Added Result Qualifier %Rec RPD Limit Analyte Unit #2 Diesel (C10-C24) 0.500 0.331 66 27 mg/L 59 - 120 17 Motor Oil (>C24-C36) 0.500 0.418 mg/L 84 71 - 14015 27

LCSD LCSD

Limits Surrogate %Recovery Qualifier o-Terphenyl 84 50 - 150

Lab Sample ID: MB 580-170586/1-A

**Matrix: Water** 

**Analysis Batch: 171351** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 170586

Analyte	Result Qualifier	r RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND	0.025	0.015	mg/L		09/23/14 17:19	10/02/14 19:49	1
Motor Oil (>C24-C36)	0.0132 J	0.050	0.0098	mg/L		09/23/14 17:19	10/02/14 19:49	1

MB MB

MB MB

Surrogate %Recovery Qualifier Limits Prepared Dil Fac Analyzed 09/23/14 17:19 o-Terphenyl 88 50 - 150 10/02/14 19:49

Lab Sample ID: LCS 580-170586/2-A

**Matrix: Water** 

Analysis Batch: 171351

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 170586

		Spike	LCS	LCS				%Rec.	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
#2 Diesel (C10-C24)	 	0.500	0.418		mg/L		84	59 - 120	
Motor Oil (>C24-C36)		0.500	0.531		mg/L		106	71 - 140	

TestAmerica Seattle

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

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

Lab Sample ID: LCS 580-170586/2-A

Lab Sample ID: LCSD 580-170586/3-A

**Matrix: Water** 

**Matrix: Water** 

Analysis Batch: 171351

Analysis Batch: 171351

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

**Prep Batch: 170586** 

LCS LCS

Limits Surrogate %Recovery Qualifier o-Terphenyl 91 50 - 150

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 170586

RPD %Rec. RPD Limit Limits

Spike LCSD LCSD Analyte Added Result Qualifier Unit D %Rec #2 Diesel (C10-C24) 0.500 0.394 mg/L 79 59 - 120 27 6 0.500 Motor Oil (>C24-C36) 0.505 mg/L 101 71 \_ 140 27 5

LCSD LCSD

Surrogate %Recovery Qualifier Limits o-Terphenyl 83 50 - 150

Lab Sample ID: MB 580-171105/1-A Client Sample ID: Method Blank

**Matrix: Water** Analysis Batch: 171341

Prep Type: Total/NA **Prep Batch: 171105** 

мв мв

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac 0.025 #2 Diesel (C10-C24) 0.0162 0.015 mg/L 09/29/14 09:53 10/02/14 07:02 Motor Oil (>C24-C36) 0.0174 J 0.050 0.0098 mg/L 09/29/14 09:53 10/02/14 07:02

MB MB

Qualifier Limits Surrogate %Recovery Prepared Analyzed Dil Fac 50 - 150 09/29/14 09:53 10/02/14 07:02 o-Terphenyl 113

Lab Sample ID: LCS 580-171105/2-A

Lab Sample ID: LCSD 580-171105/3-A

**Matrix: Water** 

**Matrix: Water** 

Analysis Batch: 171341

Analysis Batch: 171341

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

**Prep Batch: 171105** 

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit D %Rec Limits #2 Diesel (C10-C24) 0.500 0.449 90 59 - 120 mg/L Motor Oil (>C24-C36) 0.500 0.491 98 71 - 140 mg/L

LCS LCS

Surrogate %Recovery Qualifier Limits 50 - 150 o-Terphenyl 114

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Prep Batch: 171105** 

LCSD LCSD %Rec. RPD Spike Limit Added Result Qualifier Limits RPD Analyte Unit D %Rec #2 Diesel (C10-C24) 0.500 0.428 mg/L 86 59 - 1205 27 Motor Oil (>C24-C36) 0.500 0.453 mg/L 91 71 - 140 27

LCSD LCSD

%Recovery Qualifier Limits Surrogate o-Terphenyl 101 50 - 150

TestAmerica Seattle

TestAmerica Job ID: 580-45475-1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

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

Lab Sample ID: MB 580-171156/1-A

Lab Sample ID: LCS 580-171156/2-A

**Matrix: Water** 

**Matrix: Water** 

Analysis Batch: 171461

Analysis Batch: 171461

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

**Prep Batch: 171156** 

мв мв Result Qualifier RL MDL Unit D Dil Fac Analyte Prepared Analyzed 0.025 #2 Diesel (C10-C24) ND 0.015 mg/L 09/29/14 14:26 10/02/14 08:30 Motor Oil (>C24-C36) 0.050 09/29/14 14:26 10/02/14 08:30 ND 0.0098 mg/L

MB MB

%Recovery Surrogate Qualifier I imits Prepared Analyzed Dil Fac o-Terphenyl 78 50 - 150 09/29/14 14:26 10/02/14 08:30

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

**Prep Batch: 171156** 

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit D %Rec Limits #2 Diesel (C10-C24) 0.500 0.413 83 59 - 120 mg/L 0.500 Motor Oil (>C24-C36) 0.484 mg/L 97 71 - 140

LCS LCS

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

Lab Sample ID: LCSD 580-171156/3-A

**Matrix: Water** 

Analysis Batch: 171461

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Prep Batch: 171156** 

LCSD LCSD Spike %Rec. RPD Analyte Added Result Qualifier Unit %Rec RPD Limit #2 Diesel (C10-C24) 0.500 0.435 87 27 mg/L 59 - 120 5 Motor Oil (>C24-C36) 0.500 0.503 mg/L 101 71 - 14027

LCSD LCSD

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

TestAmerica Seattle

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: GW-1-091614

Date Collected: 09/16/14 17:58 Date Received: 09/19/14 16:50

Lab Sample ID: 580-45475-1

**Matrix: Water** 

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/29/14 22:27	JJP	TAL SEA

Client Sample ID: GW-2-091614

Date Collected: 09/16/14 16:09 Date Received: 09/19/14 16:50

Lab Sample ID: 580-45475-2

Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/29/14 22:46	JJP	TAL SEA

Client Sample ID: GW-20-091614

Date Collected: 09/16/14 16:12

Date Received: 09/19/14 16:50

Lab Sample ID: 580-45475-3

**Matrix: Water** 

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/29/14 23:05	JJP	TAL SEA

Client Sample ID: GW-3-091714

Date Collected: 09/17/14 09:20

Date Received: 09/19/14 16:50

Lab Sample	ID: 580-45475-4
	Matrix: Water

Batch Dilution Batch Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab Total/NA 3510C Prep 170522 09/23/14 10:47 WJR TAL SEA Total/NA Analysis NWTPH-Dx 1 171084 09/29/14 23:24 JJP TAL SEA

Client Sample ID: GW-30-091714

Date Collected: 09/17/14 13:00

Date Received: 09/19/14 16:50

Lab Sample ID: 580-45475-5

**Matrix: Water** 

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/29/14 23:43	JJP	TAL SEA

Client Sample ID: GW-4-091814

Date Collected: 09/18/14 10:05

Date Received: 09/19/14 16:50

Lab	Sample	ID:	580-45475-6
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Matrix: Water

ı		Batch	Batch		Dilution	Batch	Prepared		
	Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
	Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
	Total/NA	Analysis	NWTPH-Dx		1	171084	09/30/14 00:02	JJP	TAL SEA

TestAmerica Job ID: 580-45475-1

Client Sample ID: S1-AD-091714

Date Collected: 09/17/14 16:12 Date Received: 09/19/14 16:50

Lab Sample ID: 580-45475-7

Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/30/14 00:21	JJP	TAL SEA

Client Sample ID: S1-AU-091714

Date Collected: 09/17/14 16:35 Date Received: 09/19/14 16:50

Lab Sample ID: 580-45475-8

Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/30/14 00:40	JJP	TAL SEA

Client Sample ID: S1-BD-091714

Date Collected: 09/17/14 16:10

Date Received: 09/19/14 16:50

Lab Sample ID: 580-45475-9

**Matrix: Water** 

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/30/14 00:59	JJP	TAL SEA

Client Sample ID: S1-BU-091714

Date Collected: 09/17/14 16:35

Date Received: 09/19/14 16:50

Lab Sample ID: 5	580-45475-10
	Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/30/14 01:18	JJP	TAL SEA

Client Sample ID: S2-AD-091714

Date Collected: 09/17/14 17:05

Date Received: 09/19/14 16:50

Lab Sample ID: 580-45475-11
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**Matrix: Water** 

Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/30/14 01:55	JJP	TAL SEA

Date Collected: 09/17/14 17:03

Date Received: 09/19/14 16:50

Client Sample ID: S2-AU-091714	Lab Sample ID: 580-45475-12

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/30/14 02:14	JJP	TAL SEA

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: S2-BD-091714

Lab Sample ID: 580-45475-13

Matrix: Water

Date Collected: 09/17/14 16:10 Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/30/14 02:33	JJP	TAL SEA

Lab Sample ID: 580-45475-14

Matrix: Water

Date Collected: 09/17/14 16:20 Date Received: 09/19/14 16:50

Client Sample ID: S2-BDO-091714

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/30/14 02:52	JJP	TAL SEA

Client Sample ID: S2-BU-091714 Lab Sample ID: 580-45475-15

Date Collected: 09/17/14 16:38 **Matrix: Water** 

Matrix: Water

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/30/14 03:10	JJP	TAL SEA

Client Sample ID: IC-W-1-091814 Lab Sample ID: 580-45475-16

Date Collected: 09/18/14 11:28

**Matrix: Water** 

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/30/14 03:29	JJP	TAL SEA

Client Sample ID: IC-W-7-091814 Lab Sample ID: 580-45475-17

Date Collected: 09/18/14 10:10

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/30/14 03:48	JJP	TAL SEA

Client Sample ID: IC-W-8-091814 Lab Sample ID: 580-45475-18

Date Collected: 09/18/14 11:25 **Matrix: Water** 

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/30/14 04:07	JJP	TAL SEA

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: IC-W-80-091814

Lab Sample ID: 580-45475-19

Matrix: Water

Date Collected: 09/18/14 12:00 Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C	-		170522	09/23/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171084	09/30/14 04:25	JJP	TAL SEA

Lab Sample ID: 580-45475-20

Client Sample ID: IB-W-23-091714

Matrix: Water Date Collected: 09/17/14 09:13

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/02/14 21:25	EKK	TAL SEA

Client Sample ID: 2A-W-40-091714 Lab Sample ID: 580-45475-21

Date Collected: 09/17/14 09:33 **Matrix: Water** 

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/02/14 21:49	EKK	TAL SEA

Lab Sample ID: 580-45475-22 Client Sample ID: 2A-W-41-091714

Date Collected: 09/17/14 11:09 **Matrix: Water** 

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/02/14 22:13	EKK	TAL SEA

Client Sample ID: 2A-W-42-091714 Lab Sample ID: 580-45475-23

Date Collected: 09/17/14 11:57 **Matrix: Water** 

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/02/14 22:37	EKK	TAL SEA

Client Sample ID: 2A-W-10-091714 Lab Sample ID: 580-45475-24

Date Collected: 09/17/14 14:44 **Matrix: Water** 

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/02/14 23:01	EKK	TAL SEA

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: 2A-W-100-091814

Lab Sample ID: 580-45475-25 Date Collected: 09/18/14 14:54

Matrix: Water

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/02/14 23:25	EKK	TAL SEA

Client Sample ID: 2B-W-4-091814

Lab Sample ID: 580-45475-26

Matrix: Water

Date Collected: 09/18/14 13:33 Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/02/14 23:48	EKK	TAL SEA

Client Sample ID: MW-3-091814

Lab Sample ID: 580-45475-27

**Matrix: Water** 

Date Collected: 09/18/14 12:33 Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/03/14 00:12	EKK	TAL SEA

Client Sample ID: MW-4-091814

Lab Sample ID: 580-45475-28 Date Collected: 09/18/14 14:25

**Matrix: Water** 

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/03/14 00:36	EKK	TAL SEA

Client Sample ID: EW-1-091614

Date Collected: 09/16/14 13:08 **Matrix: Water** 

Lab Sample ID: 580-45475-29

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/03/14 01:24	EKK	TAL SEA

Client Sample ID: EW-2A-091814

Lab Sample ID: 580-45475-30

**Matrix: Water** 

Date Collected: 09/18/14 10:00 Date Received: 09/19/14 16:50

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/03/14 01:47	EKK	TAL SEA

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: S3-AD-091714

Lab Sample ID: 580-45475-31

Matrix: Water

Date Collected: 09/17/14 15:09 Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA	-
Total/NA	Analysis	NWTPH-Dx		1	171351	10/03/14 02:11	EKK	TAL SEA	

Client Sample ID: S3-AU-091714

Lab Sample ID: 580-45475-32

Matrix: Water

Date Collected: 09/17/14 15:33 Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/03/14 02:35	EKK	TAL SEA

Client Sample ID: S3-BD-091714

Lab Sample ID: 580-45475-33

Matrix: Water

Date Collected: 09/17/14 15:13 Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/03/14 02:59	EKK	TAL SEA

Client Sample ID: S3-BU-091714

Lab Sample ID: 580-45475-34

Matrix: Water

Date Collected: 09/17/14 15:33 Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/03/14 03:22	EKK	TAL SEA

Client Sample ID: S3-CD-091714

Lab Sample ID: 580-45475-35

Matrix: Water

Date Collected: 09/17/14 15:10 Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/03/14 03:46	EKK	TAL SEA

Client Sample ID: S3-CU-091714

Lab Sample ID: 580-45475-36

**Matrix: Water** 

Date Collected: 09/17/14 15:30 Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/03/14 04:10	EKK	TAL SEA

TestAmerica Job ID: 580-45475-1

Client Sample ID: S4-AD-091714

Lab Sample ID: 580-45475-37

Date Collected: 09/17/14 14:08 Date Received: 09/19/14 16:50

**Matrix: Water** 

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			170586	09/23/14 17:19	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171351	10/03/14 04:33	EKK	TAL SEA

Lab Sample ID: 580-45475-38

Client Sample ID: S4-AU-091714

Date Collected: 09/17/14 14:25 **Matrix: Water** Date Received: 09/19/14 16:50

Dilution Batch Batch Batch Prepared Prep Type Туре Method Factor Number or Analyzed Analyst Run Total/NA Prep 3510C 170586 09/23/14 17:19 WJR TAL SEA Total/NA NWTPH-Dx Analysis 1 171351 10/03/14 04:57 **EKK** TAL SEA

Client Sample ID: S4-BD-091714 Lab Sample ID: 580-45475-39

Date Collected: 09/17/14 14:15 Matrix: Water

Date Received: 09/19/14 16:50

Dilution Batch Batch Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab 170586 Total/NA Prep 3510C 09/23/14 17:19 WJR TAL SEA NWTPH-Dx TAL SEA Total/NA Analysis 1 171351 10/03/14 05:44 EKK

Client Sample ID: S4-BU-091714 Lab Sample ID: 580-45475-40

Date Collected: 09/17/14 14:40 **Matrix: Water** 

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			171105	09/29/14 09:53	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171341	10/02/14 07:58	JJP	TAL SEA

Client Sample ID: S4-CD-091714 Lab Sample ID: 580-45475-41

Date Collected: 09/17/14 14:03 **Matrix: Water** 

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			171105	09/29/14 09:53	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171341	10/02/14 08:17	JJP	TAL SEA

Client Sample ID: S4-CU-091714 Lab Sample ID: 580-45475-42

Date Collected: 09/17/14 14:25 Matrix: Water

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			171105	09/29/14 09:53	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171341	10/02/14 08:35	JJP	TAL SEA

Project/Site: BNSF Skykomish Cleanup Activities

Analysis

NWTPH-Dx

Client Sample ID: 5-W-14-091614

Lab Sample ID: 580-45475-43

**Matrix: Water** 

Date Collected: 09/16/14 12:08 Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			171105	09/29/14 09:53	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171341	10/02/14 08:54	JJP	TAL SEA

Lab Sample ID: 580-45475-44

TAL SEA

Client Sample ID: 5-W-15-091614

Date Collected: 09/16/14 10:33 **Matrix: Water** Date Received: 09/19/14 16:50

Dilution Batch Batch Batch Prepared Prep Type Туре Method Factor Number or Analyzed Analyst Run Total/NA Prep 3510C 171105 09/29/14 09:53 WJR TAL SEA

Client Sample ID: 5-W-150-091614 Lab Sample ID: 580-45475-45

171341

10/02/14 09:13

JJP

1

Matrix: Water Date Collected: 09/16/14 10:35

Date Received: 09/19/14 16:50

Total/NA

Batch Batch Dilution Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab 171105 Total/NA Prep 3510C 09/29/14 09:53 WJR TAL SEA NWTPH-Dx TAL SEA Total/NA Analysis 1 171341 10/02/14 09:31 JJP

Client Sample ID: 5-W-16-091614 Lab Sample ID: 580-45475-46

Date Collected: 09/16/14 10:45 Matrix: Water

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			171105	09/29/14 09:53	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171341	10/02/14 09:50	JJP	TAL SEA

Client Sample ID: 5-W-17-091614 Lab Sample ID: 580-45475-47

Date Collected: 09/16/14 10:52 **Matrix: Water** 

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			171105	09/29/14 09:53	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171341	10/02/14 10:28	JJP	TAL SEA

Client Sample ID: 5-W-18-091614 Lab Sample ID: 580-45475-48

Date Collected: 09/16/14 11:45 Matrix: Water

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			171105	09/29/14 09:53	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171341	10/02/14 10:46	JJP	TAL SEA

TestAmerica Job ID: 580-45475-1

Client Sample ID: 5-W-19-091614

Lab Sample ID: 580-45475-49 Date Collected: 09/16/14 11:55 **Matrix: Water** 

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C		<del></del>	171105	09/29/14 09:53	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171341	10/02/14 11:05	JJP	TAL SEA

Client Sample ID: 5-W-43-091614

Lab Sample ID: 580-45475-50

Date Collected: 09/16/14 13:10 **Matrix: Water** Date Received: 09/19/14 16:50

Dilution Batch Batch Batch Prepared Prep Type Туре Method Factor Number or Analyzed Analyst Run Total/NA Prep 3510C 171105 09/29/14 09:53 WJR TAL SEA Total/NA NWTPH-Dx Analysis 1 171341 10/02/14 11:25 JJP TAL SEA

Client Sample ID: 5-W-50-091614 Lab Sample ID: 580-45475-51

Matrix: Water Date Collected: 09/16/14 17:40

Date Received: 09/19/14 16:50

Batch Batch Dilution Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab 171105 Total/NA Prep 3510C 09/29/14 09:53 WJR TAL SEA NWTPH-Dx Total/NA Analysis 1 171341 10/02/14 11:44 JJP TAL SEA

Client Sample ID: 5-W-54-091614 Lab Sample ID: 580-45475-52

Date Collected: 09/16/14 17:55 **Matrix: Water** 

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			171105	09/29/14 09:53	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171341	10/02/14 12:03	JJP	TAL SEA

Client Sample ID: 5-W-55-091614 Lab Sample ID: 580-45475-53

Date Collected: 09/16/14 16:20 **Matrix: Water** 

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			171105	09/29/14 09:53	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171341	10/02/14 14:03	JJP	TAL SEA

Client Sample ID: 5-W-56-091614 Lab Sample ID: 580-45475-54

Date Collected: 09/16/14 16:07 Matrix: Water

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			171105	09/29/14 09:53	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171341	10/02/14 14:22	JJP	TAL SEA

Project/Site: BNSF Skykomish Cleanup Activities

Client Sample ID: 1A-W-4-091714

Lab Sample ID: 580-45475-55

Matrix: Water

**Matrix: Water** 

Date Collected: 09/17/14 12:32 Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			171105	09/29/14 09:53	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171341	10/02/14 14:41	JJP	TAL SEA

Client Sample ID: 1B-W-2-091714 Lab Sample ID: 580-45475-56

Date Collected: 09/17/14 11:20 Matrix: Water

Date Received: 09/19/14 16:50

		Batch	Batch		Dilution	Batch	Prepared		
Prep	Туре	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/	NA	Prep	3510C			171105	09/29/14 09:53	WJR	TAL SEA
Total/	NA	Analysis	NWTPH-Dx		1	171341	10/02/14 15:00	JJP	TAL SEA

Client Sample ID: 1B-W-3-091714 Lab Sample ID: 580-45475-57

Date Collected: 09/17/14 10:49 Matrix: Water

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			171105	09/29/14 09:53	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171341	10/02/14 15:38	JJP	TAL SEA

Client Sample ID: 1C-W-3-091814 Lab Sample ID: 580-45475-58

Date Collected: 09/18/14 12:52

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Ty	уре Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/N	A Prep	3510C			171105	09/29/14 09:53	WJR	TAL SEA
Total/N	A Analysis	NWTPH-Dx		1	171341	10/02/14 15:58	JJP	TAL SEA

Client Sample ID: 1C-W-4-091814 Lab Sample ID: 580-45475-59

Date Collected: 09/18/14 13:00 Matrix: Water

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			171105	09/29/14 09:53	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171341	10/02/14 16:17	JJP	TAL SEA

Client Sample ID: MW-16-091814 Lab Sample ID: 580-45475-60

Date Collected: 09/18/14 11:28 Matrix: Water

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			171156	09/29/14 14:26	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171461	10/02/14 09:24	JJP	TAL SEA

## **Lab Chronicle**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Client Sample ID: MW-38R-091614 Lab Sample ID: 580-45475-61

Date Collected: 09/16/14 13:46 Matrix: Water

Date Received: 09/19/14 16:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			171156	09/29/14 14:26	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	171461	10/02/14 09:43	JJP	TAL SEA

#### **Laboratory References:**

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

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# **Certification Summary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

## **Laboratory: TestAmerica Seattle**

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

Authority	Program	EPA Region	Certification ID	<b>Expiration Date</b>
Alaska (UST)	State Program	10	UST-113	07-25-15
California	State Program	9	2901	01-31-15
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-14
USDA	Federal		P330-11-00222	04-08-17
Washington	State Program	10	C553	02-17-15

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# **Sample Summary**

Client: Farallon Consulting LLC Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-45475-1	GW-1-091614	Water	09/16/14 17:58	09/19/14 16:50
580-45475-2	GW-2-091614	Water	09/16/14 16:09	09/19/14 16:50
580-45475-3	GW-20-091614	Water	09/16/14 16:12	09/19/14 16:50
580-45475-4	GW-3-091714	Water	09/17/14 09:20	09/19/14 16:50
580-45475-5	GW-30-091714	Water	09/17/14 13:00	09/19/14 16:50
580-45475-6	GW-4-091814	Water	09/18/14 10:05	09/19/14 16:50
580-45475-7	S1-AD-091714	Water	09/17/14 16:12	09/19/14 16:50
580-45475-8	S1-AU-091714	Water	09/17/14 16:35	09/19/14 16:50
580-45475-9	S1-BD-091714	Water	09/17/14 16:10	09/19/14 16:50
580-45475-10	S1-BU-091714	Water	09/17/14 16:35	09/19/14 16:50
580-45475-11	S2-AD-091714	Water	09/17/14 17:05	09/19/14 16:50
580-45475-12	S2-AU-091714	Water	09/17/14 17:03	09/19/14 16:50
580-45475-13	S2-BD-091714	Water	09/17/14 16:10	09/19/14 16:50
580-45475-14	S2-BDO-091714	Water	09/17/14 16:20	09/19/14 16:50
580-45475-15	S2-BU-091714	Water	09/17/14 16:38	09/19/14 16:50
580-45475-16	IC-W-1-091814	Water	09/18/14 11:28	09/19/14 16:50
580-45475-17	IC-W-7-091814	Water	09/18/14 10:10	09/19/14 16:50
580-45475-18	IC-W-8-091814	Water	09/18/14 11:25	09/19/14 16:50
580-45475-19	IC-W-80-091814	Water	09/18/14 12:00	09/19/14 16:50
580-45475-20	IB-W-23-091714	Water	09/17/14 09:13	09/19/14 16:50
580-45475-21	2A-W-40-091714	Water	09/17/14 09:33	09/19/14 16:50
580-45475-22	2A-W-41-091714	Water	09/17/14 11:09	09/19/14 16:50
580-45475-23	2A-W-42-091714	Water	09/17/14 11:57	09/19/14 16:50
580-45475-24	2A-W-10-091714	Water	09/17/14 14:44	09/19/14 16:50
580-45475-25	2A-W-100-091814	Water	09/18/14 14:54	09/19/14 16:50
580-45475-26	2B-W-4-091814	Water	09/18/14 13:33	09/19/14 16:50
580-45475-27	MW-3-091814	Water	09/18/14 12:33	09/19/14 16:50
580-45475-28	MW-4-091814			09/19/14 16:50
		Water	09/18/14 14:25	
580-45475-29 580-45475-20	EW-1-091614	Water	09/16/14 13:08	09/19/14 16:50
580-45475-30	EW-2A-091814	Water	09/18/14 10:00	09/19/14 16:50
580-45475-31	S3-AD-091714	Water	09/17/14 15:09	09/19/14 16:50
580-45475-32	S3-AU-091714	Water	09/17/14 15:33	09/19/14 16:50
580-45475-33	S3-BD-091714	Water	09/17/14 15:13	09/19/14 16:50
580-45475-34	S3-BU-091714	Water	09/17/14 15:33	09/19/14 16:50
580-45475-35	S3-CD-091714	Water	09/17/14 15:10	09/19/14 16:50
580-45475-36	S3-CU-091714	Water	09/17/14 15:30	09/19/14 16:50
580-45475-37	S4-AD-091714	Water	09/17/14 14:08	09/19/14 16:50
580-45475-38	S4-AU-091714	Water	09/17/14 14:25	09/19/14 16:50
580-45475-39	S4-BD-091714	Water	09/17/14 14:15	09/19/14 16:50
580-45475-40	S4-BU-091714	Water	09/17/14 14:40	09/19/14 16:50
580-45475-41	S4-CD-091714	Water	09/17/14 14:03	09/19/14 16:50
580-45475-42	S4-CU-091714	Water	09/17/14 14:25	09/19/14 16:50
580-45475-43	5-W-14-091614	Water	09/16/14 12:08	09/19/14 16:50
580-45475-44	5-W-15-091614	Water	09/16/14 10:33	09/19/14 16:50
580-45475-45	5-W-150-091614	Water	09/16/14 10:35	09/19/14 16:50
580-45475-46	5-W-16-091614	Water	09/16/14 10:45	09/19/14 16:50
580-45475-47	5-W-17-091614	Water	09/16/14 10:52	09/19/14 16:50
580-45475-48	5-W-18-091614	Water	09/16/14 11:45	09/19/14 16:50
580-45475-49	5-W-19-091614	Water	09/16/14 11:55	09/19/14 16:50
580-45475-50	5-W-43-091614	Water	09/16/14 13:10	09/19/14 16:50
580-45475-51	5-W-50-091614	Water	09/16/14 17:40	09/19/14 16:50
580-45475-52	5-W-54-091614	Water	09/16/14 17:55	09/19/14 16:50
580-45475-53	5-W-55-091614	Water	09/16/14 16:20	09/19/14 16:50

TestAmerica Seattle

10/6/2014

# **Sample Summary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Cleanup Activities

TestAmerica Job ID: 580-45475-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-45475-54	5-W-56-091614	Water	09/16/14 16:07	09/19/14 16:50
580-45475-55	1A-W-4-091714	Water	09/17/14 12:32	09/19/14 16:50
580-45475-56	1B-W-2-091714	Water	09/17/14 11:20	09/19/14 16:50
580-45475-57	1B-W-3-091714	Water	09/17/14 10:49	09/19/14 16:50
580-45475-58	1C-W-3-091814	Water	09/18/14 12:52	09/19/14 16:50
580-45475-59	1C-W-4-091814	Water	09/18/14 13:00	09/19/14 16:50
580-45475-60	MW-16-091814	Water	09/18/14 11:28	09/19/14 16:50
580-45475-61	MW-38R-091614	Water	09/16/14 13:46	09/19/14 16:50

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OC No.	Custody Seal No BNSF COC No.	Lab: Custody Intact? Custo				Lab Remarks:		Date/Time:	Received by Laboratory:
,		Date/Time:				Received By:		Date/Time:	Relinquished By:
2 4°			,			Received By:		Date/Time:	Relingation By
	Comments and Special Analytical Requirements:	1/0// 1650 Cor			1	Received	1315	9/19/14	Reinfinisher By
>15			X	4 4	<u>₹</u>	71 88 91	8117114	2	5 52- 80-99/14
714	580-45475 Chain of Custody	580	*		0	1620 20	9/17/14	4	" 52-300-091714
-13			×			1610 80	9/17/14	۲	" 52-8D-091714
772			×	-	,,,	1703 DK	9/17/14	2	" S2-AU-091714
			×		1	1705 716	9117114	2	" 52-AD-091714
-10			>		K	1635 44	9/17/14	2	10 SI-BU-09171A
7			7			अद	Allrile	2	\$1-80-09-12.
8			×			1635 DK	9/17/14	2	\$1-NU-091714
-7			×		<i> </i>	1612 DK	9/11/1/14	2	, SI-AP-091714
76			×		1	7K 5001	व्याष्ट्रीर	4	6-4-091814
-5			×		-	1300 JK	9117/14	2	6W-30-091714
- '			<b>&gt;</b>		, , , , , , , , , , , , , , , , , , ,	0920 JK	9117/14	2	GW-3-091714
13			*		Ö	M12 20	9/16/14	2	6-W-20-09161A
-2			ブ			त्रि ६०मा	2/10/14	2	2 GW-2-091614
			7	٩ ٤	Z.	ON BSLI	वालाक	\$2	, GW-1-091614
S LAB USE	COMMENTS		HWT	Type (Comp/ Matrix Grab)	Filtered Y/N	Sample Collection  Time Sampler	Sample Date	Containers	Sample identification
			PH				ATION	SAMPLE INFORMATION	SAM
uga Arra umpulo			- D					Level IV	3-day Rush Other
<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>			×	77	EDD Req. Format?			Level III	2-day Rush 🛚 Standard 10-Day
							BNSF Standard (Level II)	BNSF St	1-day Rush 5- to 8-day Rush
		METHODS FOR ANALYSIS		35?	Other Deliverables?	Othe	DELIVERABLES	ום	TURNAROUND TIME
42 29 C 08 SB	425-215-0800 4	98007		INDOURY ST	City/State/AP:		er No.:	BNSF Work Ord	
ICONSULTING.COM	Trouteus @ FARRLONCON SULTING-CON		2 8	S STHAME	Address:			ACTIVITIES	BNSF SKYKOMISH CLEANUP ACTIV
373.	Manager:			TARREON .	Company:		Skykomish	Project City:	BNSF Project Number
	Project Number: (083-043	ORMATION	CONSULTANT INFORMATION	CO			Origin: WA	Project State of Origin:	BNSF PROJECT INFORMATION
	Tracking Number:		Fax:		98424	7	ေ	City/State/ZIP:	CHAIN OF CUSTODY
	Shipment Method:	922 2810	Phone: 253			,		Address: 5785	RAILWAY
RMATION	SHIPMENT INFORMATION	Project Manager: CHRUS BUEN	Project Manager:		F	SUTINGS A	AMERICA	Laboratory:	
	LAB WORK ORDER:		S	ABORATORY INFORMATION	LABORAT				

		LAE	LABORATORY INFORMATION	TION	LAB WORK ORDER:
	Laboratory:	2000	ָרי ו	Project Manager.	SHIPMENT INFORMATION
11/10	Address: STS BTM A	**		-1	Shipment Method:
CHAIN OF CUSTODY	8	47	98424		Tracking Number:
BNSF PROJECT INFORMATION	Project State of Origin:			CONSULTANT INFORMATION	Project Number: (083-043
BNSF Project Number:	Project City: SKYKOMISH		Company: Company:	L	Project Manager JERRY PORTELE
BNSF Project Name:  BNSF SKYKOMISH CLEANUP ACTIV	ACTIVITIES		34442 Stb	E NW	Email: Toatfile & Franzoniconsulting.con
	BNSF Work Order No.:		ە. <b>ب</b>	WA 98027	415 245-0800 415 295 0850
TURNAROUND TIME	DELIVERABLES	Other Deliverables?	verables?	METHODS FOR ANALYSIS	
1-day Rush 5- to 8-day Rush	BNSF Standard (Level II)				
2-day Rush Standard 10-Day	Level III	EDD Req, Format?	Format?	×	
3-day Rush Other	Level IV			- D	and the state of t
SAM	SAMPLE INFORMATION			PH	
Sample identification	Containers	Sample Collection	Filtered Comp/ Matrix	TU.	
	Date	Time Sampler	Grab)	<del>                                     </del>	COMMENTS LAB USE
1C-W-1-091814	2 9/18/14	1128 Ro	Z 9		-16
*18160- L-M-JI	2 9/18/14	1010		×	-/7
31C-N-8-031814	2 9/18/14	1125 JK		×	81-
*18-10-08-W-J1	2 9/18/19	noo TK		×	
18-W-23-091714	2 9/17/14	0913 BK		X	20
2A-W-40-091714	2 9/17/14	0933 80			-21
2A-W-41-091714	2 9/17/14	1109 80		×	26-
2A-W-42-091714	2 9/17/14	1157 08		_	-27
2A-W-10-091714	2 9117/14	1444 120		×	-24
10 2A-W-100 -091814	1 9/18/14	1454 20		×	-28
" 28-W-4-091814	2 9/18/14	1333 DK	е желен бөрөр Фессиянан		-26
2 MW-3-091814	2 9/18/1A	1233 DK		×	27
" MW-4-091814	2 9/18/14	1425 14			-28
" EW-1-091614	2 9/16/14	1308 DK	a superioris	×,	-20
5 EW-2A-B 91814	2 9/18/14	1000 25	4 4 4	X	-30
Rogardustned By:	9/9/14/3/5	Received By		19/19/14 1650	Comments and Special Analytical Requirements:
Relinquished By: W	Date/Lime:	Received by:		Date) infle:	
Relinquished by:	Cate i line:	Received by:		_	
Received by Laboratory  DESCRIPTION TO LABORATORY WITH SAMPLES	Date/Time:	Lab Remarks:	DINAL HISNOS - CONSILITANT	Lab: Custody Intact? Yes No	Custody Seal No BNSF COC No.
ORIGINAL - RETURN TO LARDRATORY WITH SAMPLES			CA TONS		Tall and formal

TAL-1001 (06/08)				ULTANT	E - CONS	DUPLICATE - CONSULTANT				ORIGINAL - RETURN TO LABORATORY WITH SAMPLES
ENSF COC No.	Custody Seal No	Lab: Custody Intact?					ab Remarks:	1.20	Date/Time:	Received by Laboratory:
		Date/Time:					Received By:	Rec	Date/Time:	Relinquished By:
a de la composición formación formac		Date/Time:						Reč	Date/Time:	Relinguistact-By V
	Comments and Special Analytical Requirements:	114 1650				1	Received By:	41315	Partimes //	Company of the control of the contro
745			メ	4	4	A 17	70 SE 01	9/11/14 11	<b>!</b>	15-N-180-091614
- 94			7			7	1033 BK	9/16/14 1	4	" 5-W-15-09161A
-43			<b>×</b>			0	00 Sol1	9/16/14 1	2	"5-W-14-091614
2/12			X	*haurmina		15	1425 PK	1 41/1/18	2	2 S4-CU-091714
- y			メ			\rac{1}{2}	7403 DK	9/17/14	2	" 54-CD-091714
-40			×	-	-	<i> </i>	1440 1/	9/17/14	2	" 54-BU-09171A
-39			Х				1415 VK	9/17/14	2	4
-38			X		-		1425 RO	9/17/14	12	\$ \$4-AU-09171A
-37			×				1408 10	9/17/14	2	, S4-AD-091714
-36			×	Thereware	-		1530 JK	9/17/14	12	63-CU-091714
-35			<b>×</b>				1570 JK	9/17/14	2 (	\$3-CD-09171A
234			>		-	7	1533 茶	a lirila	12	. 53-BU-091714
-33			>		-	- No	1573 森	9/17/14	12	\$3-BD-09/114
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COMMENTS LAB USE			NWT	Matrix	Type (Comp/ Grab)	Filtered Y/N	Time Sampler	Sample Collection  Date Time	Containers	Sample identification
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2-day Rush Standard 10-Day	Level III	EDD Req, Format?	× .		
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SAMI	SAMPLE INFORMATION		PH	17.00	
Sample identification	Containers Sample Collection  Date Time	Filtered (Comp/ Matrix Y/N Grab)	NWT	COMMENTS	TS LAB USE
5-W-16-091614	2 9/16/14 1045	JK N G W	メ		
419160-LI-M-S	2 9/16/14 1052	8	X		-47
5-W-18-091614	2 9/16/14 1145	DK.	×		-48
5-W-19-09161A	2 9/16/14 1155	ド	×		- 4g
5-W-43-091614	2 9/16/14 1310	ド	×		-50
8-W-50-091614	2 9/16/14 1740	۶×			25
75-W-54-091614	2 9/16/14 1755	ド	×		-52
8-W-55-091614	2 9/16/14 1020	714	×		253
· 5-13-56-091614	2 9/16/14 1607	7 X X			154
10 1A-W-4-691714	2 9/17/14 1232	8			783
18-W-2-091714	2 9/17/14 1120	×	×		93-
18-W-3-091714	2 9117/14 1049	R	<b>メ</b>		45-
"1C-w-3-091814	2 9/18/14 1252	6			28
" IC-W-4-091814	2 9/18/14 1300	JK X			-24
5 AW -16 /1091814	2 9/18/14 1128	X 4 4 X			760
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Relinquished By:	Date/Time: Received By:	34.	Date/Time:		
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ORIGINAL - RETURN TO LABORATORY WITH SAMPLES		DUPLICATE - CONSULTANT			TAL-1001 (06/08)

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RAILWAY	Address: Address:	•			Phone:	253	10		Shipment Method:	#		
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	BNSF Work Order No.:		City/State/2	City/State/ZIP:	Z Z	£2088	£.	<b>.</b> -	Phone: 245-0800	0800	415	425 295 0850
TURNAROUND TIME	DELIVERABLES		Other Deliverables?			3	METHODS FOR ANALYSIS	l			-	
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2-day Rush 📉 Standard 10-Day	Level III		EDD Req, Format?			<u>×</u>		·			- day	
3-day Rush Other	Level IV				- V						-	
SAM	SAMPLE INFORMATION				<u></u> РН							
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Received by Laboratory:	Date/Time:	Lab Remarks:				Lak: C	Lab: Custody Intact?	Custody Seal No	I Na		BNSF COC No.	
ORIGINAL - RETURN TO LABORATORY WITH SAMPLES			DUPLICATE	DUPLICATE - CONSULTANT	7							TAL-1001 (06/08)

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Cooler/TB Dig/IR cor 1. 4 unc 1.7 Cooler Dsc 15 nessub; a Lab 1650
Wel/Packs Packing Bnbbls
wlo A (

Cooler/IB Big/IR cor O.4 unc 1, 2 Cooler Dsc 16, Blue/hth/k@Lab 1650 Wet/Packs Packing Bhbb/a

Cooler TB bigIR cor 25 unc 2.8
Cooler Dsculb+/Blu La Lab 16.550
WelPacks Packing Bubble
Al W/OCS.

Cooler TB Dig IR cor 0.7 unc 1.2
Cooler Dsc1.0 Blu Wht @ Lab 16:50
Wet Packs Packing + A Bulkhle
W/O C. 6.

Cooler TB Dig/IR cor 2.5 unc 2.8
Cooler Dscig Blu Wht @Lab 16:50
Wet/Packs Packing Bubble
All w/oc.s.

Cooler TB Dig/IR cor 3.7 unc 4.0
Cooler Dsc 2 Blad the a Lab 16:50
Wet Packs Packing Bubble
Wo/C.S.

Cooler TB big IR cor 1.2 unc 1.5
Cooler Dsc A Blukh+@Lab 11.50
Wet Packs Packing Bubble
Wet O C &

Cooler/IB Dig/IR cor 2.1 unc 2.4 Cooler Dsc 10 Blu keht-@Lab 16:50 Wet/Packs Packing Bubble Wo C.S. A.

Cooler Dig/IR cor . 7 unc 1.0 Cooler Dsc . Blu Wh+ @Lab 16:50 Wet/Packs Packing Busball W10 C.5

Cooler/TB/Dig/IR cor 2.7 unc 3.2 Cooler Dsc A Bluddht @ Lab 16:50 Wet/Packs Packing Bubble W/oc.5

Cooler TB big IR cor 0.4 unc 0.7
Cooler Dscia Bluctin @ Lab 16:50
Wet/Packs Packing Bubble

## **Login Sample Receipt Checklist**

Client: Farallon Consulting LLC

Job Number: 580-45475-1

Login Number: 45475 List Source: TestAmerica Seattle

List Number: 1

Creator: Abello, Andrea N

Cleator. Abello, Alfurea N	
Question	Answer Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td>	N/A
The cooler's custody seal, if present, is intact.	True
Sample custody seals, if present, are intact.	True
The cooler or samples do not appear to have been compromised or tampered with.	True
Samples were received on ice.	True
Cooler Temperature is acceptable.	True
Cooler Temperature is recorded.	True
COC is present.	True
COC is filled out in ink and legible.	True
COC is filled out with all pertinent information.	True
Is the Field Sampler's name present on COC?	True
There are no discrepancies between the containers received and the COC.	True
Samples are received within Holding Time.	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

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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: 580-46788-1

Client Project/Site: BNSF Skykomish Groundwater Quarterly

## For:

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

Attn: Gerald Portele

Kristiene D. allen

Authorized for release by: 1/5/2015 1:06:24 PM

Kristine Allen, Manager of Project Management (253)248-4970

kristine.allen@testamericainc.com

·····LINKS ·······

Review your project results through

Total Access

**Have a Question?** 



Visit us at: www.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.

# 4

# **Table of Contents**

Cover Page	1
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### **Case Narrative**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Job ID: 580-46788-1

**Laboratory: TestAmerica Seattle** 

#### Narrative

#### Receipt

The samples were received on 12/18/2014 1:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 9 coolers at receipt time were -0.3° C, 0.2° C, 0.4° C, 0.5° C, 0.7° C, 1.6° C, 2.1° C, 2.5° C and 4.4° C.

#### GC Semi VOA

Method(s) NWTPH-Dx: In analysis batch 179054, for the following sample(s) from preparation batch 178889: The following sample(s) contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: 2A-W-10-121614 (580-46788-6), 5-W-15-121614 (580-46788-12), 5-W-18-121614 (580-46788-2), EW-2A-121614 (580-46788-11), GW-4-121614 (580-46788-13), MW-3-121614 (580-46788-1), MW-4-121614 (580-46788-4).

Method(s) NWTPH-Dx: In analysis batch 179054, for the following sample from preparation batch 178889: The following sample contained a hydrocarbon pattern in the diesel range; however, the elution pattern was earlier than the typical diesel fuel pattern used by the laboratory for quantitative purposes: 2A-W-9-121614 (580-46788-9).

Method(s) NWTPH-Dx: In analysis batch 179025, for the following sample(s) from preparation batch 178992: The following sample(s) 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: 1B-W-3-121714 (580-46788-20), 2A-W-42-121714 (580-46788-23), 5-W-43-121614 (580-46788-14), EW-1-121614 (580-46788-15), GW-1-121614 (580-46788-16), GW-2-121614 (580-46788-17).

Method(s) NWTPH-Dx: In analysis batch 179124, for the following sample(s) from preparation batch 179154: The following sample(s) 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: 1C-W-7-121714 (580-46788-27), 2A-W-41-121714 (580-46788-25), CV1-121714 (580-46788-29), CV2-121714 (580-46788-30), CV3-121714 (580-46788-32), GW-3-121714 (580-46788-33), WV1-121714 (580-46788-26), WV2-121714 (580-46788-28).

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.

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## **Definitions/Glossary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

Not Calculated

**Quality Control** 

Relative error ratio

Practical Quantitation Limit

Toxicity Equivalent Factor (Dioxin)
Toxicity Equivalent Quotient (Dioxin)

Not detected at the reporting limit (or MDL or EDL if shown)

Relative Percent Difference, a measure of the relative difference between two points

Reporting Limit or Requested Limit (Radiochemistry)

TestAmerica Job ID: 580-46788-1

## **Qualifiers**

## GC Semi VOA

Qualifier	Qualifier Description
Y	The chromatographic response resembles a typical fuel pattern.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

NC

ND

PQL QC

RER

RPD

TEF

TEQ

RL

Olossary	
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)

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Client Sample ID: MW-3-121614 Lab Sample ID: 580-46788-1

Date Collected: 12/16/14 09:31 Matrix: Water

Date Received: 12/18/14 13:20

Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	Products (GC	<del>;</del> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.045	Y	0.024	0.014	mg/L		12/23/14 15:50	12/29/14 16:22	1
Motor Oil (>C24-C36)	0.10	Y	0.047	0.0093	mg/L		12/23/14 15:50	12/29/14 16:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl			50 - 150				12/23/14 15:50	12/29/14 16:22	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-2

Client Sample ID: 5-W-18-121614 Date Collected: 12/16/14 09:51 Matrix: Water

Date Received: 12/18/14 13:20

Method: NWTPH-Dx - North									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.095	Υ	0.024	0.014	mg/L		12/23/14 15:50	12/29/14 16:38	1
Motor Oil (>C24-C36)	0.14	Y	0.047	0.0093	mg/L		12/23/14 15:50	12/29/14 16:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	65		50 - 150				12/23/14 15:50	12/29/14 16:38	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Client Sample ID: 5-W-19-121614

Lab Sample ID: 580-46788-3 Date Collected: 12/16/14 10:05 Matrix: Water

Date Received: 12/18/14 13:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		12/23/14 15:50	12/29/14 16:54	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		12/23/14 15:50	12/29/14 16:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	56		50 <sub>-</sub> 150				12/23/14 15:50	12/29/14 16:54	1

Client: Farallon Consulting LLC

Client Sample ID: MW-4-121614

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-4

Matrix: Water

Motrice Wote

Date Collected: 12/16/14 10:22 Date Received: 12/18/14 13:20

Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.13	Y	0.024	0.014	mg/L		12/23/14 15:50	12/29/14 17:10	1
Motor Oil (>C24-C36)	0.25	Y	0.048	0.0093	mg/L		12/23/14 15:50	12/29/14 17:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	73		50 <sub>-</sub> 150				12/23/14 15:50	12/29/14 17:10	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Client Sample ID: 5-W-16-121614

Lab Sample ID: 580-46788-5 Date Collected: 12/16/14 11:12 Matrix: Water

Date Received: 12/18/14 13:20

Method: NWTPH-Dx - North									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.021	J	0.024	0.014	mg/L		12/23/14 15:50	12/29/14 17:26	1
Motor Oil (>C24-C36)	0.021	J	0.047	0.0093	mg/L		12/23/14 15:50	12/29/14 17:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	57		50 - 150				12/23/14 15:50	12/29/14 17:26	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

Client Sample ID: 2A-W-10-121614

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-6

Matrix: Water

Date Collected: 12/16/14 11:24 Date Received: 12/18/14 13:20

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	<b>Products (GC</b>	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.18	Υ	0.024	0.014	mg/L		12/23/14 15:50	12/29/14 17:42	1
Motor Oil (>C24-C36)	0.48	Y	0.047	0.0093	mg/L		12/23/14 15:50	12/29/14 17:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	71		50 - 150				12/23/14 15:50	12/29/14 17:42	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Client Sample ID: 5-W-14-121614

Lab Sample ID: 580-46788-7 Date Collected: 12/16/14 12:08

Matrix: Water

Date Received: 12/18/14 13:20

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	<b>Products (GC</b>	)					
Analyte	Result (	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND ND		0.024	0.014	mg/L		12/23/14 15:50	12/29/14 17:58	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		12/23/14 15:50	12/29/14 17:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	55		50 - 150				12/23/14 15:50	12/29/14 17:58	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Client Sample ID: 5-W-17-121614

Date Collected: 12/16/14 12:20 Date Received: 12/18/14 13:20

Lab Sample ID: 580-46788-8 Matrix: Water

Method: NWTPH-Dx - Northwe	st - Semi-Volatile	<b>Petroleum</b>	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		12/23/14 15:50	12/29/14 18:30	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		12/23/14 15:50	12/29/14 18:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	64		50 - 150				12/23/14 15:50	12/29/14 18:30	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-9

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Matrix: Water

Date Collected: 12/16/14 12:53 Date Received: 12/18/14 13:20

**Client Sample ID: 2A-W-9-121614** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.94	Y	0.024	0.014	mg/L		12/23/14 15:50	12/29/14 18:46	1
Motor Oil (>C24-C36)	0.37	Y	0.047	0.0093	mg/L		12/23/14 15:50	12/29/14 18:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	69		50 - 150				12/23/14 15:50	12/29/14 18:46	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

Client Sample ID: 5-W-170-121614

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-10

Matrix: Water

Date Collected: 12/16/14 13:10 Date Received: 12/18/14 13:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		12/23/14 15:50	12/29/14 19:02	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		12/23/14 15:50	12/29/14 19:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	61		50 - 150				12/23/14 15:50	12/29/14 19:02	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-11

Matrix: Water

Date Collected: 12/16/14 14:27 Date Received: 12/18/14 13:20

Client Sample ID: EW-2A-121614

Method: NWTPH-Dx - North									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.027	Y	0.024	0.014	mg/L		12/23/14 15:50	12/29/14 19:18	1
Motor Oil (>C24-C36)	0.044	J	0.047	0.0093	mg/L		12/23/14 15:50	12/29/14 19:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78		50 - 150				12/23/14 15:50	12/29/14 19:18	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-12

**Matrix: Water** 

Date Collected: 12/16/14 14:30 Date Received: 12/18/14 13:20

Client Sample ID: 5-W-15-121614

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.17	Y	0.024	0.014	mg/L		12/23/14 15:50	12/29/14 19:34	1
Motor Oil (>C24-C36)	0.20	Y	0.048	0.0093	mg/L		12/23/14 15:50	12/29/14 19:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	80		50 - 150				12/23/14 15:50	12/29/14 19:34	

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Client Sample ID: GW-4-121614

Date Collected: 12/16/14 15:16 Date Received: 12/18/14 13:20

Lab Sample ID:	580-46788-13
	Matrix: Water

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.032	Y	0.024	0.014	mg/L		12/23/14 15:50	12/29/14 19:50	1
Motor Oil (>C24-C36)	0.044	J	0.047	0.0093	mg/L		12/23/14 15:50	12/29/14 19:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	80		50 - 150				12/23/14 15:50	12/29/14 19:50	1

Client: Farallon Consulting LLC

Client Sample ID: 5-W-43-121614

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-14

Matrix: Water

Date Collected: 12/16/14 15:25 Date Received: 12/18/14 13:20

Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.030	Υ	0.024	0.014	mg/L		12/24/14 14:38	12/29/14 14:49	1
Motor Oil (>C24-C36)	0.056	Y	0.048	0.0094	mg/L		12/24/14 14:38	12/29/14 14:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	77	-	50 - 150				12/24/14 14:38	12/29/14 14:49	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-15

Matrix: Water

Date Collected: 12/16/14 16:15 Date Received: 12/18/14 13:20

Client Sample ID: EW-1-121614

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.039	Y	0.024	0.014	mg/L		12/24/14 14:38	12/29/14 15:07	1
Motor Oil (>C24-C36)	0.066	Y	0.048	0.0093	mg/L		12/24/14 14:38	12/29/14 15:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	68	-	50 - 150				12/24/14 14:38	12/29/14 15:07	

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-16

Matrix: Water

Date Collected: 12/16/14 16:18 Date Received: 12/18/14 13:20

Client Sample ID: GW-1-121614

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.082	Υ	0.024	0.014	mg/L		12/24/14 14:38	12/29/14 15:25	1
Motor Oil (>C24-C36)	0.10	Y	0.048	0.0093	mg/L		12/24/14 14:38	12/29/14 15:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78	-	50 - 150				12/24/14 14:38	12/29/14 15:25	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-17

12/24/14 14:38 12/29/14 15:43

Matrix: Water

Client Sample ID: GW-2-121614

Date Collected: 12/16/14 16:52

Date Received: 12/18/14 13:20

o-Terphenyl

Method: NWTPH-Dx - Northwes	st - Semi-Volatile	Petroleum	Products (G	C)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.078	Υ	0.024	0.014	mg/L		12/24/14 14:38	12/29/14 15:43	1
Motor Oil (>C24-C36)	0.048	Y	0.048	0.0093	mg/L		12/24/14 14:38	12/29/14 15:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-18

Matrix: Water

Date Collected: 12/17/14 09:17 Date Received: 12/18/14 13:20

**Client Sample ID: 2B-W-4-121714** 

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		12/24/14 14:38	12/29/14 16:01	1
Motor Oil (>C24-C36)	0.0093	J	0.048	0.0093	mg/L		12/24/14 14:38	12/29/14 16:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	57	-	50 - 150				12/24/14 14:38	12/29/14 16:01	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Client Sample ID: 2B-W-40-121714

Lab Sample ID: 580-46788-19 Date Collected: 12/17/14 09:20

Matrix: Water

Date Received: 12/18/14 13:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		12/24/14 14:38	12/29/14 16:19	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		12/24/14 14:38	12/29/14 16:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	63		50 - 150				12/24/14 14:38	12/29/14 16:19	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

**Client Sample ID: 1B-W-3-121714** 

Lab Sample ID: 580-46788-20

Date Collected: 12/17/14 09:30 Date Received: 12/18/14 13:20

Matrix: Water

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.074	Y	0.024	0.014	mg/L		12/24/14 14:38	12/29/14 16:37	1
Motor Oil (>C24-C36)	0.058	Y	0.047	0.0093	mg/L		12/24/14 14:38	12/29/14 16:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	74		50 - 150				12/24/14 14:38	12/29/14 16:37	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-21

Matrix: Water

Client Sample ID: 2A-W-40-121714 Date Collected: 12/17/14 11:02

Date Received: 12/18/14 13:20

Method: NWTPH-Dx - North Analyte		Petroleum Qualifier	Products (GC RL	) MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.020		0.024	0.014			12/24/14 14:38	12/29/14 16:55	1
Motor Oil (>C24-C36)	ND		0.048	0.0093	mg/L		12/24/14 14:38	12/29/14 16:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	68		50 - 150				12/24/14 14:38	12/29/14 16:55	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

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TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-22

**Matrix: Water** 

Date Collected: 12/17/14 11:05

Client Sample ID: 2A-W-400-121714

Date Received: 12/18/14 13:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.024	0.014	mg/L		12/24/14 14:38	12/29/14 17:13	1
Motor Oil (>C24-C36)	ND		0.047	0.0093	mg/L		12/24/14 14:38	12/29/14 17:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	64		<del>50 - 150</del>				12/24/14 14:38	12/29/14 17:13	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Client Sample ID: 2A-W-42-121714 Lab Sample ID: 580-46788-23

Date Collected: 12/17/14 11:15 Matrix: Water

Date Received: 12/18/14 13:20

Method: NWTPH-Dx - Northy	vest - Semi-Volatile	e Petroleum	Products (GC	5)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.12	Y	0.024	0.014	mg/L		12/24/14 14:38	12/29/14 17:31	1
Motor Oil (>C24-C36)	0.097	Y	0.048	0.0093	mg/L		12/24/14 14:38	12/29/14 17:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	70		50 - 150				12/24/14 14:38	12/29/14 17:31	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

**Client Sample ID: 1C-W-8-121714** 

Lab Sample ID: 580-46788-24

Date Collected: 12/17/14 12:25 Matrix: Water

Date Received: 12/18/14 13:20

Method: NWTPH-Dx - North	west - Semi-Volatile	<b>Petroleum</b>	Products (GC	<b>;</b> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.071	Υ	0.024	0.014	mg/L		12/30/14 10:47	12/30/14 15:44	1
Motor Oil (>C24-C36)	0.076	Y	0.048	0.0093	mg/L		12/30/14 10:47	12/30/14 15:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	65		50 - 150				12/30/14 10:47	12/30/14 15:44	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-25

Matrix: Water

Date Collected: 12/17/14 12:29

Client Sample ID: 2A-W-41-121714

Date Received: 12/18/14 13:20

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	Products (GC	<b>;</b> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.16	Y	0.024	0.014	mg/L		12/30/14 10:47	12/30/14 16:00	1
Motor Oil (>C24-C36)	0.13	Υ	0.047	0.0093	mg/L		12/30/14 10:47	12/30/14 16:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	67		50 - 150				12/30/14 10:47	12/30/14 16:00	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-26

Matrix: Water

Date Collected: 12/17/14 14:30 Date Received: 12/18/14 13:20

Client Sample ID: WV1-121714

Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	Products (GC	<b>;</b> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.073	Υ	0.024	0.014	mg/L		12/30/14 10:47	12/30/14 16:16	1
Motor Oil (>C24-C36)	0.14	Y	0.048	0.0093	mg/L		12/30/14 10:47	12/30/14 16:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	75		50 - 150				12/30/14 10:47	12/30/14 16:16	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Client Sample ID: 1C-W-7-121714

Lab Sample ID: 580-46788-27

Date Collected: 12/17/14 14:35

Date Received: 12/18/14 13:20

Matrix: Water

Method: NWTPH-Dx - North Analyte		Qualifier	RL	) MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.074	Y	0.024	0.014	mg/L		12/30/14 10:47	12/30/14 16:32	1
Motor Oil (>C24-C36)	0.067	Υ	0.048	0.0093	mg/L		12/30/14 10:47	12/30/14 16:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	73		50 - 150				12/30/14 10:47	12/30/14 16:32	1

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Client: Farallon Consulting LLC

Client Sample ID: WV2-121714

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Lab Sample ID: 580-46788-28

Lab Campic ID. 000-40700-20

Matrix: Water

Date Collected: 12/17/14 14:45 Date Received: 12/18/14 13:20

Method: NWTPH-Dx - North	west - Semi-Volatile	est - Semi-Volatile Petroleum Products (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.49	Y	0.024	0.014	mg/L		12/30/14 10:47	12/30/14 16:48	1
Motor Oil (>C24-C36)	0.45	Y	0.047	0.0093	mg/L		12/30/14 10:47	12/30/14 16:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	81		50 - 150				12/30/14 10:47	12/30/14 16:48	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Client Sample ID: CV1-121714

Lab Sample ID: 580-46788-29

Matrix: Water

Date Collected: 12/17/14 15:00 Date Received: 12/18/14 13:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.57	Y	0.024	0.014	mg/L		12/30/14 10:47	12/30/14 17:04	1
Motor Oil (>C24-C36)	0.28	Y	0.048	0.0094	mg/L		12/30/14 10:47	12/30/14 17:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	67		50 - 150				12/30/14 10:47	12/30/14 17:04	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Client Sample ID: CV2-121714 Lab Sample ID: 580-46788-30

Date Collected: 12/17/14 15:10 Matrix: Water

Date Received: 12/18/14 13:20

Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	Products (GC	<del>;</del> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.45	Υ	0.024	0.014	mg/L		12/30/14 10:47	12/30/14 17:20	1
Motor Oil (>C24-C36)	0.25	Y	0.048	0.0094	mg/L		12/30/14 10:47	12/30/14 17:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	64		50 - 150				12/30/14 10:47	12/30/14 17:20	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Client Sample ID: 1B-W-23-121714

Lab Sample ID: 580-46788-31

. Matrix: Water

Date Collected: 12/17/14 15:25 Date Received: 12/18/14 13:20

Method: NWTPH-Dx - North	west - Semi-Volatile	e Petroleum	Products (GC	<b>(</b> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.021	J	0.024	0.014	mg/L		12/30/14 10:47	12/30/14 17:52	1
Motor Oil (>C24-C36)	0.049	Y	0.048	0.0093	mg/L		12/30/14 10:47	12/30/14 17:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	56		50 - 150				12/30/14 10:47	12/30/14 17:52	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

Client Sample ID: CV3-121714

Lab Sample ID: 580-46788-32

Date Collected: 12/17/14 15:30 Date Received: 12/18/14 13:20 Matrix: Water

TestAmerica Job ID: 580-46788-1

Method: NWTPH-Dx - Northy	west - Semi-Volatile	<b>Petroleum</b>	<b>Products (GC</b>	)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.39	Υ	0.024	0.014	mg/L		12/30/14 10:47	12/30/14 18:08	1
Motor Oil (>C24-C36)	0.27	Y	0.047	0.0093	mg/L		12/30/14 10:47	12/30/14 18:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	59		50 - 150				12/30/14 10:47	12/30/14 18:08	1

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Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Client Sample ID: GW-3-121714

Lab Sample ID: 580-46788-33 Date Collected: 12/17/14 16:30 Matrix: Water

Date Received: 12/18/14 13:20

Method: NWTPH-Dx - North	west - Semi-Volatile	Petroleum	<b>Products (GC</b>	<b>&gt;</b> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.11		0.024	0.014	mg/L		12/30/14 10:47	12/30/14 18:24	1
Motor Oil (>C24-C36)	0.077		0.047	0.0093	mg/L		12/30/14 10:47	12/30/14 18:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	62		50 - 150				12/30/14 10:47	12/30/14 18:24	1

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

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

Lab Sample ID: MB 580-178889/1-A

Lab Sample ID: LCS 580-178889/2-A

**Matrix: Water** 

**Matrix: Water** 

Analysis Batch: 179054

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

**Prep Batch: 178889** 

	IVID IVID							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND	0.025	0.015	mg/L		12/23/14 15:50	12/29/14 13:42	1
Motor Oil (>C24-C36)	ND	0.050	0.0098	mg/L		12/23/14 15:50	12/29/14 13:42	1

MB MB

Surrogate %Recovery Qualifier I imits Prepared Analyzed Dil Fac o-Terphenyl 83 50 - 150 12/23/14 15:50 12/29/14 13:42

Client Sample ID: Lab Control Sample

Prep Type: Total/NA **Prep Batch: 178889** 

Analysis Batch: 179054

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
#2 Diesel (C10-C24)	0.500	0.420		mg/L	_	84	59 - 120	
Motor Oil (>C24-C36)	0.502	0.448		mg/L		89	71 - 140	

LCS LCS

Surrogate %Recovery Qualifier Limits o-Terphenyl 91 50 - 150

Lab Sample ID: LCSD 580-178889/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Water** 

Analysis Batch: 179054

Prep Type: Total/NA

**Prep Batch: 178889** 

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
#2 Diesel (C10-C24)	0.500	0.380		mg/L		76	59 - 120	10	27
Motor Oil (>C24-C36)	0.502	0.409		mg/L		82	71 - 140	9	27

LCSD LCSD

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

Lab Sample ID: MB 580-178992/1-A

**Matrix: Water** 

Analysis Batch: 179025

Client Sample ID: Method Blank

Prep Type: Total/NA

**Prep Batch: 178992** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.025	0.015	mg/L		12/24/14 14:38	12/29/14 12:43	1
Motor Oil (>C24-C36)	ND		0.050	0.0098	mg/L		12/24/14 14:38	12/29/14 12:43	1

MB MB

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 50 - 150 12/24/14 14:38 12/29/14 12:43 o-Terphenyl 76

Lab Sample ID: LCS 580-178992/2-A

**Matrix: Water** 

**Analysis Batch: 179025** 

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

**Prep Batch: 178992** 

-	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
#2 Diesel (C10-C24)	0.500	0.312		mg/L		62	59 - 120	
Motor Oil (>C24-C36)	0.502	0.354		mg/L		71	71 - 140	

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

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

Lab Sample ID: LCS 580-178992/2-A

Lab Sample ID: LCSD 580-178992/3-A

**Matrix: Water** 

**Matrix: Water** 

**Analysis Batch: 179025** 

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

**Prep Batch: 178992** 

LCS LCS

Limits Surrogate %Recovery Qualifier o-Terphenyl 79 50 - 150

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Prep Batch: 178992** 

Analysis Batch: 179025 Spike LCSD LCSD RPD %Rec. RPD Limit Analyte Added Result Qualifier Unit D %Rec Limits #2 Diesel (C10-C24) 0.500 0.382 mg/L 59 - 120 20 27 76 0.502 Motor Oil (>C24-C36) 0 424 mg/L 84 71 \_ 140 27 18

LCSD LCSD

Surrogate %Recovery Qualifier Limits o-Terphenyl 83 50 - 150

Lab Sample ID: MB 580-179154/1-A Client Sample ID: Method Blank

**Matrix: Water** 

Analysis Batch: 179124

Prep Type: Total/NA **Prep Batch: 179154** 

мв мв

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac #2 Diesel (C10-C24) 0.025 ND 0.015 mg/L 12/30/14 10:47 12/30/14 14:56 Motor Oil (>C24-C36) ND 0.050 0.0098 mg/L 12/30/14 10:47 12/30/14 14:56

MB MB

Qualifier Limits Dil Fac Surrogate %Recovery Prepared Analyzed 78 50 - 150 12/30/14 10:47 12/30/14 14:56 o-Terphenyl

Lab Sample ID: LCS 580-179154/2-A

Lab Sample ID: LCSD 580-179154/3-A

**Matrix: Water** 

**Matrix: Water** 

Analysis Batch: 179124

Analysis Batch: 179124

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

**Prep Batch: 179154** 

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit D %Rec Limits #2 Diesel (C10-C24) 0.500 0.403 80 59 - 120 mg/L Motor Oil (>C24-C36) 0.502 0.421 84 71 - 140 mg/L

Spike

LCS LCS

Surrogate %Recovery Qualifier Limits 50 - 150 o-Terphenyl 87

Client Sample ID: Lab Control Sample Dup

%Rec.

Prep Type: Total/NA

**Prep Batch: 179154** 

RPD

Limit Limits RPD %Rec

Added Result Qualifier Analyte Unit D #2 Diesel (C10-C24) 0.500 0.413 mg/L 83 59 - 1203 27 Motor Oil (>C24-C36) 0.502 0.437 mg/L 87 71 - 140 27

LCSD LCSD

LCSD LCSD

%Recovery Qualifier Limits Surrogate o-Terphenyl 87 50 - 150

TestAmerica Job ID: 580-46788-1

Client Sample ID: MW-3-121614

Date Collected: 12/16/14 09:31 Date Received: 12/18/14 13:20 Lab Sample ID: 580-46788-1

Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178889	12/23/14 15:50	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179054	12/29/14 16:22	JJP	TAL SEA

Client Sample ID: 5-W-18-121614 La

Date Collected: 12/16/14 09:51

Date Received: 12/18/14 13:20

ab Sample ID: 580-467	788-2
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Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178889	12/23/14 15:50	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179054	12/29/14 16:38	JJP	TAL SEA

Client Sample ID: 5-W-19-121614 Lab Sample ID: 580-46788-3 Matrix: Water

Date Collected: 12/16/14 10:05

Date Received: 12/18/14 13:20

<del>_</del>	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178889	12/23/14 15:50	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179054	12/29/14 16:54	JJP	TAL SEA

Client Sample ID: MW-4-121614 Lab Sample ID: 580-46788-4

Date Collected: 12/16/14 10:22

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178889	12/23/14 15:50	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179054	12/29/14 17:10	JJP	TAL SEA

Client Sample ID: 5-W-16-121614 Lab Sample ID: 580-46788-5

Date Received: 12/18/14 13:20

Olicint Gample 15. 0-11-10-12 1014	Lab Cample 15: 000-40700-0
Date Collected: 12/16/14 11:12	Matrix: Water
Data Passivad: 12/19/14 12:20	

Batch Dilution Batch Prepared Batch Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab Total/NA Prep 3510C 178889 12/23/14 15:50 WJR TAL SEA Total/NA NWTPH-Dx 179054 12/29/14 17:26 TAL SEA Analysis 1 JJP

Client Sample ID: 2A-W-10-121614 Lab Sample ID: 580-46788-6

Date Collected: 12/16/14 11:24 Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178889	12/23/14 15:50	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179054	12/29/14 17:42	JJP	TAL SEA

TestAmerica Seattle

Matrix: Water

Matrix: Water

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

Client Sample ID: 5-W-14-121614

Lab Sample ID: 580-46788-7 Date Collected: 12/16/14 12:08

**Matrix: Water** 

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178889	12/23/14 15:50	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179054	12/29/14 17:58	JJP	TAL SEA

Client Sample ID: 5-W-17-121614 Lab Sample ID: 580-46788-8

**Matrix: Water** 

Date Collected: 12/16/14 12:20 Date Received: 12/18/14 13:20

Dilution Batch Batch Batch Prepared Prep Type Туре Method Factor Number or Analyzed Analyst Run Total/NA Prep 3510C 178889 12/23/14 15:50 WJR TAL SEA Total/NA NWTPH-Dx 179054 TAL SEA Analysis 1 12/29/14 18:30 JJP

Client Sample ID: 2A-W-9-121614 Lab Sample ID: 580-46788-9

Date Collected: 12/16/14 12:53 **Matrix: Water** 

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178889	12/23/14 15:50	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179054	12/29/14 18:46	JJP	TAL SEA

Client Sample ID: 5-W-170-121614 Lab Sample ID: 580-46788-10

Date Collected: 12/16/14 13:10 Matrix: Water

Date Received: 12/18/14 13:20

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178889	12/23/14 15:50	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179054	12/29/14 19:02	JJP	TAL SEA

Client Sample ID: EW-2A-121614 Lab Sample ID: 580-46788-11

Date Collected: 12/16/14 14:27 Matrix: Water

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178889	12/23/14 15:50	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179054	12/29/14 19:18	JJP	TAL SEA

Client Sample ID: 5-W-15-121614 Lab Sample ID: 580-46788-12

Date Collected: 12/16/14 14:30 Matrix: Water

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178889	12/23/14 15:50	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179054	12/29/14 19:34	JJP	TAL SEA

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

Client Sample ID: GW-4-121614

Lab Sample ID: 580-46788-13

Date Collected: 12/16/14 15:16 Date Received: 12/18/14 13:20 Matrix: Water

Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Total/NA Prep 3510C 178889 12/23/14 15:50 WJR TAL SEA Total/NA Analysis NWTPH-Dx 179054 12/29/14 19:50 JJP TAL SEA 1

Client Sample ID: 5-W-43-121614 Lab Sample ID: 580-46788-14

Date Collected: 12/16/14 15:25 Matrix: Water

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178992	12/24/14 14:38	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179025	12/29/14 14:49	JJP	TAL SEA

Client Sample ID: EW-1-121614 Lab Sample ID: 580-46788-15

Date Collected: 12/16/14 16:15 Matrix: Water

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178992	12/24/14 14:38	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179025	12/29/14 15:07	JJP	TAL SEA

Client Sample ID: GW-1-121614 Lab Sample ID: 580-46788-16

Date Collected: 12/16/14 16:18 Matrix: Water

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178992	12/24/14 14:38	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179025	12/29/14 15:25	JJP	TAL SEA

Client Sample ID: GW-2-121614 Lab Sample ID: 580-46788-17

Date Collected: 12/16/14 16:52 Matrix: Water

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178992	12/24/14 14:38	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179025	12/29/14 15:43	JJP	TAL SEA

Client Sample ID: 2B-W-4-121714 Lab Sample ID: 580-46788-18

Date Collected: 12/17/14 09:17

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178992	12/24/14 14:38	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179025	12/29/14 16:01	JJP	TAL SEA

TestAmerica Seattle

Matrix: Water

Lab Sample ID: 580-46788-19

Matrix: Water

Client Sample ID: 2B-W-40-121714

Date Collected: 12/17/14 09:20 Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178992	12/24/14 14:38	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179025	12/29/14 16:19	JJP	TAL SEA

Client Sample ID: 1B-W-3-121714

Lab Sample ID: 580-46788-20

Matrix: Water

Date Collected: 12/17/14 09:30 Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	3510C			178992	12/24/14 14:38	WJR	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	179025	12/29/14 16:37	JJP	TAL SEA	

**Client Sample ID: 2A-W-40-121714** 

Lab Sample ID: 580-46788-21 Date Collected: 12/17/14 11:02

**Matrix: Water** 

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178992	12/24/14 14:38	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179025	12/29/14 16:55	JJP	TAL SEA

Client Sample ID: 2A-W-400-121714

Lab Sample ID: 580-46788-22 Date Collected: 12/17/14 11:05

**Matrix: Water** 

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178992	12/24/14 14:38	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179025	12/29/14 17:13	JJP	TAL SEA

Client Sample ID: 2A-W-42-121714

Lab Sample ID: 580-46788-23 Date Collected: 12/17/14 11:15

Matrix: Water

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			178992	12/24/14 14:38	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179025	12/29/14 17:31	JJP	TAL SEA

Client Sample ID: 1C-W-8-121714 Lab Sample ID: 580-46788-24

Date Collected: 12/17/14 12:25 **Matrix: Water** 

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			179154	12/30/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179124	12/30/14 15:44	JJP	TAL SEA

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

Client Sample ID: 2A-W-41-121714

Lab Sample ID: 580-46788-25

Matrix: Water

Date Collected: 12/17/14 12:29 Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			179154	12/30/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179124	12/30/14 16:00	JJP	TAL SEA

Client Sample ID: WV1-121714 Lab Sample ID: 580-46788-26

Matrix: Water

Date Collected: 12/17/14 14:30 Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			179154	12/30/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179124	12/30/14 16:16	JJP	TAL SEA

Client Sample ID: 1C-W-7-121714 Lab Sample ID: 580-46788-27

Date Collected: 12/17/14 14:35 Matrix: Water

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			179154	12/30/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179124	12/30/14 16:32	JJP	TAL SEA

Client Sample ID: WV2-121714 Lab Sample ID: 580-46788-28

Date Collected: 12/17/14 14:45 Matrix: Water

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			179154	12/30/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179124	12/30/14 16:48	JJP	TAL SEA

Client Sample ID: CV1-121714 Lab Sample ID: 580-46788-29

Date Collected: 12/17/14 15:00 Matrix: Water

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			179154	12/30/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179124	12/30/14 17:04	JJP	TAL SEA

Client Sample ID: CV2-121714 Lab Sample ID: 580-46788-30

Date Collected: 12/17/14 15:10 Matrix: Water

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			179154	12/30/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179124	12/30/14 17:20	JJP	TAL SEA

#### **Lab Chronicle**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Client Sample ID: 1B-W-23-121714 Lab Sample ID: 580-46788-31

Date Collected: 12/17/14 15:25 Matrix: Water

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			179154	12/30/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179124	12/30/14 17:52	JJP	TAL SEA

Client Sample ID: CV3-121714 Lab Sample ID: 580-46788-32

Lab Sample 1D. 300-40700-32

Date Collected: 12/17/14 15:30 Matrix: Water
Date Received: 12/18/14 13:20

Dilution Prepared Batch Batch Batch Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab 12/30/14 10:47 Total/NA Prep 3510C 179154 WJR TAL SEA Total/NA NWTPH-Dx 179124 12/30/14 18:08 TAL SEA Analysis 1 JJP

Client Sample ID: GW-3-121714 Lab Sample ID: 580-46788-33

Date Collected: 12/17/14 16:30 Matrix: Water

Date Received: 12/18/14 13:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			179154	12/30/14 10:47	WJR	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	179124	12/30/14 18:24	JJP	TAL SEA

Laboratory References:

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

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# **Certification Summary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

#### **Laboratory: TestAmerica Seattle**

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

Authority	Program	EPA Region	Certification ID	<b>Expiration Date</b>
Alaska (UST)	State Program	10	UST-022	03-04-15
California	State Program	9	2901	01-31-15
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-15
US Fish & Wildlife	Federal		LE192332-0	02-28-16
USDA	Federal		P330-11-00222	04-08-17
Washington	State Program	10	C553	02-17-15

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# **Sample Summary**

Client: Farallon Consulting LLC

Project/Site: BNSF Skykomish Groundwater Quarterly

TestAmerica Job ID: 580-46788-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-46788-1	MW-3-121614	Water	12/16/14 09:31	12/18/14 13:20
580-46788-2	5-W-18-121614	Water	12/16/14 09:51	12/18/14 13:20
580-46788-3	5-W-19-121614	Water	12/16/14 10:05	12/18/14 13:20
580-46788-4	MW-4-121614	Water	12/16/14 10:22	12/18/14 13:20
580-46788-5	5-W-16-121614	Water	12/16/14 11:12	12/18/14 13:20
580-46788-6	2A-W-10-121614	Water	12/16/14 11:24	12/18/14 13:20
580-46788-7	5-W-14-121614	Water	12/16/14 12:08	12/18/14 13:20
580-46788-8	5-W-17-121614	Water	12/16/14 12:20	12/18/14 13:20
580-46788-9	2A-W-9-121614	Water	12/16/14 12:53	12/18/14 13:20
580-46788-10	5-W-170-121614	Water	12/16/14 13:10	12/18/14 13:20
580-46788-11	EW-2A-121614	Water	12/16/14 14:27	12/18/14 13:20
580-46788-12	5-W-15-121614	Water	12/16/14 14:30	12/18/14 13:20
580-46788-13	GW-4-121614	Water	12/16/14 15:16	12/18/14 13:20
580-46788-14	5-W-43-121614	Water	12/16/14 15:25	12/18/14 13:20
580-46788-15	EW-1-121614	Water	12/16/14 16:15	12/18/14 13:20
580-46788-16	GW-1-121614	Water	12/16/14 16:18	12/18/14 13:20
580-46788-17	GW-2-121614	Water	12/16/14 16:52	12/18/14 13:20
580-46788-18	2B-W-4-121714	Water	12/17/14 09:17	12/18/14 13:20
580-46788-19	2B-W-40-121714	Water	12/17/14 09:20	12/18/14 13:20
580-46788-20	1B-W-3-121714	Water	12/17/14 09:30	12/18/14 13:20
580-46788-21	2A-W-40-121714	Water	12/17/14 11:02	12/18/14 13:20
580-46788-22	2A-W-400-121714	Water	12/17/14 11:05	12/18/14 13:20
580-46788-23	2A-W-42-121714	Water	12/17/14 11:15	12/18/14 13:20
580-46788-24	1C-W-8-121714	Water	12/17/14 12:25	12/18/14 13:20
580-46788-25	2A-W-41-121714	Water	12/17/14 12:29	12/18/14 13:20
580-46788-26	WV1-121714	Water	12/17/14 14:30	12/18/14 13:20
580-46788-27	1C-W-7-121714	Water	12/17/14 14:35	12/18/14 13:20
580-46788-28	WV2-121714	Water	12/17/14 14:45	12/18/14 13:20
580-46788-29	CV1-121714	Water	12/17/14 15:00	12/18/14 13:20
580-46788-30	CV2-121714	Water	12/17/14 15:10	12/18/14 13:20
580-46788-31	1B-W-23-121714	Water	12/17/14 15:25	12/18/14 13:20
580-46788-32	CV3-121714	Water	12/17/14 15:30	12/18/14 13:20
580-46788-33	GW-3-121714	Water	12/17/14 16:30	12/18/14 13:20

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			1	ABORATORY I	LABORATORY INFORMATION		LAB WORK ORDER:	ORDER:	
CHAIN OF CUSTON   CHAIN OF C			ser, ca		Project Man	- 1		SHIPMENT INFORMATION	
CHAIN OF CUSTODY   Contained	RAILWAY		th St	( t	Phone: (		Shipment Method:	ethod:	
Design Fronger   Propertion	CHAIN OF CUSTODY	City/State/ZIP: Tacoma	WA,	42486	Fax:		Tracking Number:	mber.	
State State   State State State   State State   State State State   State State State   State State State   State State State   State State   State State State   State State State   State State State   State State State   State State State   State State State State   State State State State   State Stat	BNSF PROJECT INFORMATION	Project State of Origin: W.P.			CONSULTA	NT INFORMATION	Project Number:	E 683-043	
Secretary   Secr	BNSF Project Number:		w.sk	Company: A	rallon		Project Manag	Project Manager. Jens Portele	
Cay Plant   Ches Power   Ches			ملعار	Address: 97	15 5th A		Email:	or tele @ Farallones	Sultingen
-2 cy 7 cycle   -2 cycle   -				City/State/ZiP:	SSagrah		Phone: (12)	Phone (425) 295-0800 Fax (425) 295-0852	295-0850
1-day flash   5-day flash	TURNAROUND TIME	DELIVERABLES	Other D	eliverables?	2	METHODS FOR ANAL			
Sample Residual (-Day   Cores   Core	1-day Rush	BNSF Standard (Level II)	ľ		<u> </u>				
Sample letterfrention   Contestion   Sample letterfrention   Sample letterfr		Level III	EDD Re	q, Format?	X d			, ,	1 2 2 2
Sample Identification   Sample Collection		Level IV		i	- }:				
Sumple therethodon  1B-LV-23 - 121714 - 31 2 12/17/14 1635 N LV-14-  CV3 - 121714 - 35 2 12/17/14 1635 N Water  CV3 - 121714 - 35 2 12/17/14 1635 N Water  CSV3 - 121714 - 35 2 12/17/14 17/14 17/14 17/14 17/14 17/14 17/14 17/14 17/14 17/14 17/	SAI	AMPLE INFORMATION			9-				
18-10-23 - 121714			e Collection		Ţ				
B - W - 23 - 12   7   4   - 3   2   12 / 17 / 14   15 36   N   Water X	Sample Identification	Date		N/X	Matrix			COMMENTS	LAB USE
CV3 - 1217	18-W-23-121714		1525	>	×				
(会し-3-121714 - 33 2 12/17/14 1630 W Water X	CV3			2	X				
	GW-3-121714	12/17/14		>	Water				
Continuence By   Cont	<b>∕</b> , ¥	•							
Part	51								
Parameter   Para	9								
1									
1   1   1   1   1   1   1   1   1   1	8								
1   2   2   2   2   2   2   2   2   2	0								
2   2   2   2   2   2   2   2   2   2	10								
13   15   15   15   15   15   15   15	2								
13   15   15   15   15   15   15   15	12								
Selfinquished By:	13								
Telinquished By: Here By: Pater Time: Pate	72								
Received By:     Date/Time:     Received By:     Date/Time:       Received by:     Acceived by:     Date/Time:       Received by Laboratory:     Date/Time:     Lab Remarks:       Received by Laboratory:     Lab Remarks:     Lab: Custody Infact?       ORIGINAL - RETURN TO LABORATORY WITH SAMPLES     DUPLICATE - CONSULTANT	Green B	1200	Received By:			Date/1916 1326	Comments and Sp	Comments and Special Analytical Requirements:	
Received By:         Pate/Time:         Date/Time:         Date/Time:         Date/Time:         Date/Time:         Lab: Custody Intact?	Rejinquished By:		Received By:			Date/Time:			
Received by Laboratory:     Lab Remarks:     Lab Remarks: <td>C Relinquished By:</td> <td></td> <td>Received By:</td> <td></td> <td></td> <td>Date/Time:</td> <td></td> <td></td> <td></td>	C Relinquished By:		Received By:			Date/Time:			
ORIGINAL - RETURN TO LABORATORY WITH SAMPLES	Received by Laboratory:	Date/Time:				Lab: Custody Intact?  Yes  No	Custody Seal No.	BNSF COC No	
	ORIGINAL - RETURN TO LABORATORY WITH SAMPLES			UPLICATE - CON	ISULTANT				TAL-1001 (0912)

#### **Login Sample Receipt Checklist**

Client: Farallon Consulting LLC Job Number: 580-46788-1

Login Number: 46788 List Source: TestAmerica Seattle

List Number: 1

Creator: Pilch, Andrew C

Cleator. Filch, Andrew C		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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# APPENDIX B DATA VALIDATION REPORTS

2014 SITE-WIDE GROUNDWATER MONITORING REPORT BNSF Former Maintenance and Fueling Facility Skykomish, Washington Consent Decree No. 07-2-33672-9 SEA

Farallon PN: 683-043

# Sayler Data Solutions, Inc.

## DATA VALIDATION REPORT

J

Skykomish Groundwater Monitoring January - March 2014 Data

Prepared for: Farallon Consulting, LLC 975 5<sup>th</sup> Avenue NW Issaquah, Washington 98027

July 22, 2014

#### 1.0 Introduction

The following water samples were validated:

Sample ID	Sample Date/ Time	Lab ID	Analysis
1B-W-3-011714	01/17/2014 11:29	580-42035-1	NWTPH-Dx
1C-W-7-011714	01/17/2014 12:45	580-42035-2	NWTPH-Dx
1C-W-70-011714	01/17/2014 12:50	580-42035-3	NWTPH-Dx
1C-W-8-011714	01/17/2014 13:36	580-42035-4	NWTPH-Dx
1B-W-3-021814	02/18/2014 13:14	580-42413-1	NWTPH-Dx
1C-W-7-021814	02/18/2014 14:14	580-42413-2	NWTPH-Dx
1C-W-70-021814	02/18/2014 14:19	580-42413-3	NWTPH-Dx
1C-W-8-021814	02/18/2014 15:18	580-42413-4	NWTPH-Dx
MW-38R-032014	03/20/2014 09:38	580-42898-01	NWTPH-Dx
5-W-19-032014	03/20/2014 10:39	580-42898-02	NWTPH-Dx
5-W-16-032014	03/20/2014 11:38	580-42898-03	NWTPH-Dx
5-W-15-032014	03/20/2014 13:29	580-42898-04	NWTPH-Dx
5-W-17-032014	03/20/2014 14:07	580-42898-05	NWTPH-Dx
5-W-14-032014	03/20/2014 14:58	580-42898-06	NWTPH-Dx
5-W-190-032014	03/20/2014 16:00	580-42898-07	NWTPH-Dx
5-W-43-031914	03/19/2014 12:15	580-42898-08	NWTPH-Dx
5-W-430-031914	03/19/2014 12:34	580-42898-09	NWTPH-Dx
GW-30-031914	03/19/2014 13:57	580-42898-10	NWTPH-Dx
GW-1-031914	03/19/2014 14:19	580-42898-11	NWTPH-Dx
GW-2-031914	03/19/2014 14:21	580-42898-12	NWTPH-Dx
2A-W-40-031914	03/19/2014 14:57	580-42898-13	NWTPH-Dx
GW-3-031914	03/19/2014 15:26	580-42898-14	NWTPH-Dx
2A-W-9-031914	03/19/2014 16:20	580-42898-15	NWTPH-Dx
2A-W-41-031914	03/19/2014 17:06	580-42898-16	NWTPH-Dx
2A-W-420-031914	03/19/2014 17:43	580-42898-17	NWTPH-Dx
S1-AU-031714	03/17/2014 16:23	580-42898-18	NWTPH-Dx
S1-BU-031714	03/17/2014 16:13	580-42898-19	NWTPH-Dx

S1-BD-031714         03/17/2014 16:34         580-42898-20         NWTPH-Dx           S1-AD-031714         03/17/2014 16:34         580-42898-21         NWTPH-Dx           S2-BU-031714         03/17/2014 17:10         580-42898-22         NWTPH-Dx           S2-AD-031714         03/17/2014 17:11         580-42898-23         NWTPH-Dx           S2-BD-031714         03/17/2014 17:13         580-42898-25         NWTPH-Dx           S2-BD-031714         03/17/2014 17:31         580-42898-25         NWTPH-Dx           S2-AD-031714         03/17/2014 17:31         580-42898-25         NWTPH-Dx           S4-AD-031814         03/18/2014 08:30         580-42898-26         NWTPH-Dx           S4-CU-031814         03/18/2014 08:30         580-42898-28         NWTPH-Dx           S4-BU-031814         03/18/2014 08:33         580-42898-28         NWTPH-Dx           S4-BU-031814         03/18/2014 08:46         580-42898-29         NWTPH-Dx           S4-BD-031814         03/18/2014 08:59         580-42898-30         NWTPH-Dx           S3-AD-031814         03/18/2014 09:16         580-42898-32         NWTPH-Dx           S3-BU-031814         03/18/2014 09:31         580-42898-33         NWTPH-Dx           S3-BU-031814         03/18/2014 09:31         580-42898-34<	Sample ID	Sample Date/ Time	Lab ID	Analysis
S1-AD-031714         03/17/2014 16:34         580-42898-21         NWTPH-Dx           S2-BU-031714         03/17/2014 17:10         580-42898-22         NWTPH-Dx           S2-AD-031714         03/17/2014 17:11         580-42898-23         NWTPH-Dx           S2-BD-031714         03/17/2014 17:13         580-42898-24         NWTPH-Dx           S2-BD-031714         03/17/2014 17:31         580-42898-25         NWTPH-Dx           S2-AU-031714         03/18/2014 08:28         580-42898-26         NWTPH-Dx           S4-AD-031814         03/18/2014 08:28         580-42898-26         NWTPH-Dx           S4-CU-031814         03/18/2014 08:30         580-42898-27         NWTPH-Dx           S4-BU-031814         03/18/2014 08:33         580-42898-27         NWTPH-Dx           S4-BU-031814         03/18/2014 08:36         580-42898-29         NWTPH-Dx           S4-BU-031814         03/18/2014 08:36         580-42898-29         NWTPH-Dx           S4-BU-031814         03/18/2014 09:36         580-42898-30         NWTPH-Dx           S4-BU-031814         03/18/2014 09:16         580-42898-31         NWTPH-Dx           S3-CU-031814         03/18/2014 09:31         580-42898-33         NWTPH-Dx           S3-CU-031814         03/18/2014 09:31         580-42898-34<	•			
S2-BU-031714         03/17/2014 17:10         580-42898-22         NWTPH-Dx           S2-AD-031714         03/17/2014 17:11         580-42898-23         NWTPH-Dx           S2-BD-031714         03/17/2014 17:13         580-42898-24         NWTPH-Dx           S2-AU-031714         03/17/2014 17:31         580-42898-25         NWTPH-Dx           S4-AD-031814         03/18/2014 08:28         580-42898-26         NWTPH-Dx           S4-CU-031814         03/18/2014 08:30         580-42898-27         NWTPH-Dx           S4-CU-031814         03/18/2014 08:33         580-42898-28         NWTPH-Dx           S4-CU-031814         03/18/2014 08:46         580-42898-28         NWTPH-Dx           S4-CU-031814         03/18/2014 08:46         580-42898-29         NWTPH-Dx           S4-BU-031814         03/18/2014 08:59         580-42898-31         NWTPH-Dx           S3-AD-031814         03/18/2014 09:16         580-42898-32         NWTPH-Dx           S3-BU-031814         03/18/2014 09:24         580-42898-33         NWTPH-Dx           S3-BU-031814         03/18/2014 09:31         580-42898-33         NWTPH-Dx           S3-CU-031814         03/18/2014 09:37         580-42898-36         NWTPH-Dx           S3-BU-031814         03/18/2014 09:37         580-42898-37<				
S2-AD-031714         03/17/2014 17:11         580-42898-23         NWTPH-Dx           S2-BD-031714         03/17/2014 17:13         580-42898-24         NWTPH-Dx           S2-AU-031714         03/17/2014 17:31         580-42898-25         NWTPH-Dx           S4-AD-031814         03/18/2014 08:28         580-42898-26         NWTPH-Dx           S4-DU-031814         03/18/2014 08:30         580-42898-27         NWTPH-Dx           S4-BU-031814         03/18/2014 08:33         580-42898-28         NWTPH-Dx           S4-CD-031814         03/18/2014 08:46         580-42898-29         NWTPH-Dx           S4-AU-031814         03/18/2014 08:46         580-42898-30         NWTPH-Dx           S4-AU-031814         03/18/2014 08:59         580-42898-31         NWTPH-Dx           S3-AD-031814         03/18/2014 09:16         580-42898-32         NWTPH-Dx           S3-AD-031814         03/18/2014 09:24         580-42898-33         NWTPH-Dx           S3-BU-031814         03/18/2014 09:31         580-42898-33         NWTPH-Dx           S3-BU-031814         03/18/2014 09:33         580-42898-34         NWTPH-Dx           S3-CD-031814         03/18/2014 09:37         580-42898-35         NWTPH-Dx           S3-BD-031814         03/18/2014 11:39         580-42898-37<		03/17/2014 17:10		
S2-BD-031714         03/17/2014 17:13         580-42898-24         NWTPH-Dx           S2-AU-031714         03/17/2014 17:31         580-42898-25         NWTPH-Dx           S4-AD-031814         03/18/2014 08:28         580-42898-26         NWTPH-Dx           S4-CU-031814         03/18/2014 08:30         580-42898-27         NWTPH-Dx           S4-BU-031814         03/18/2014 08:33         580-42898-28         NWTPH-Dx           S4-CD-031814         03/18/2014 08:46         580-42898-39         NWTPH-Dx           S4-BU-031814         03/18/2014 08:46         580-42898-30         NWTPH-Dx           S4-BD-031814         03/18/2014 08:59         580-42898-31         NWTPH-Dx           S3-AD-031814         03/18/2014 09:16         580-42898-31         NWTPH-Dx           S3-D-031814         03/18/2014 09:24         580-42898-33         NWTPH-Dx           S3-BU-031814         03/18/2014 09:31         580-42898-33         NWTPH-Dx           S3-BU-031814         03/18/2014 09:33         580-42898-36         NWTPH-Dx           S3-BD-031814         03/18/2014 09:37         580-42898-36         NWTPH-Dx           S3-BD-031814         03/18/2014 11:19         580-42898-37         NWTPH-Dx           2B-W-4-031814         03/18/2014 12:3         580-42898-38 </td <td></td> <td></td> <td></td> <td></td>				
S2-AU-031714         03/17/2014 17:31         580-42898-25         NWTPH-Dx           S4-AD-031814         03/18/2014 08:28         580-42898-26         NWTPH-Dx           S4-CU-031814         03/18/2014 08:30         580-42898-27         NWTPH-Dx           S4-BU-031814         03/18/2014 08:33         580-42898-28         NWTPH-Dx           S4-CD-031814         03/18/2014 08:46         580-42898-29         NWTPH-Dx           S4-AU-031814         03/18/2014 08:46         580-42898-30         NWTPH-Dx           S4-BD-031814         03/18/2014 08:59         580-42898-31         NWTPH-Dx           S3-AD-031814         03/18/2014 09:16         580-42898-32         NWTPH-Dx           S3-BU-031814         03/18/2014 09:24         580-42898-33         NWTPH-Dx           S3-BU-031814         03/18/2014 09:31         580-42898-33         NWTPH-Dx           S3-CD-031814         03/18/2014 09:33         580-42898-36         NWTPH-Dx           S3-CD-031814         03/18/2014 09:37         580-42898-36         NWTPH-Dx           S3-BD-031814         03/18/2014 11:19         580-42898-37         NWTPH-Dx           S3-BD-031814         03/18/2014 11:31         580-42898-39         NWTPH-Dx           EW-2A-031814         03/18/2014 13:13         580-42898-39<				
S4-AD-031814         03/18/2014 08:28         580-42898-26         NWTPH-Dx           S4-CU-031814         03/18/2014 08:30         580-42898-27         NWTPH-Dx           S4-BU-031814         03/18/2014 08:33         580-42898-28         NWTPH-Dx           S4-CD-031814         03/18/2014 08:46         580-42898-29         NWTPH-Dx           S4-AU-031814         03/18/2014 08:46         580-42898-30         NWTPH-Dx           S4-BD-031814         03/18/2014 08:59         580-42898-30         NWTPH-Dx           S3-AD-031814         03/18/2014 09:16         580-42898-32         NWTPH-Dx           S3-AD-031814         03/18/2014 09:24         580-42898-33         NWTPH-Dx           S3-BU-031814         03/18/2014 09:31         580-42898-34         NWTPH-Dx           S3-AU-031814         03/18/2014 09:33         580-42898-35         NWTPH-Dx           S3-BD-031814         03/18/2014 09:37         580-42898-36         NWTPH-Dx           S3-BD-031814         03/18/2014 09:58         580-42898-37         NWTPH-Dx           S3-BD-031814         03/18/2014 11:31         580-42898-38         NWTPH-Dx           EW-2A-031814         03/18/2014 12:18         580-42898-39         NWTPH-Dx           1C-W-3-031814         03/18/2014 13:31         580-42898-41				
S4-CU-031814         03/18/2014 08:30         580-42898-27         NWTPH-Dx           S4-BU-031814         03/18/2014 08:33         580-42898-28         NWTPH-Dx           S4-CD-031814         03/18/2014 08:46         580-42898-29         NWTPH-Dx           S4-AU-031814         03/18/2014 08:46         580-42898-30         NWTPH-Dx           S4-BD-031814         03/18/2014 08:59         580-42898-31         NWTPH-Dx           S3-AD-031814         03/18/2014 09:16         580-42898-32         NWTPH-Dx           S3-CU-031814         03/18/2014 09:24         580-42898-32         NWTPH-Dx           S3-BU-031814         03/18/2014 09:31         580-42898-33         NWTPH-Dx           S3-BU-031814         03/18/2014 09:31         580-42898-35         NWTPH-Dx           S3-D-031814         03/18/2014 09:37         580-42898-35         NWTPH-Dx           S3-BD-031814         03/18/2014 09:58         580-42898-37         NWTPH-Dx           S3-BD-031814         03/18/2014 11:19         580-42898-38         NWTPH-Dx           S4-BD-031814         03/18/2014 11:39         580-42898-39         NWTPH-Dx           MW-4-031814         03/18/2014 12:18         580-42898-40         NWTPH-Dx           1C-W-3-031814         03/18/2014 13:03         580-42898-41 </td <td></td> <td></td> <td></td> <td></td>				
S4-BU-031814         03/18/2014 08:33         580-42898-28         NWTPH-Dx           S4-CD-031814         03/18/2014 08:46         580-42898-29         NWTPH-Dx           S4-AU-031814         03/18/2014 08:46         580-42898-30         NWTPH-Dx           S4-BD-031814         03/18/2014 08:59         580-42898-31         NWTPH-Dx           S3-AD-031814         03/18/2014 09:16         580-42898-32         NWTPH-Dx           S3-CU-031814         03/18/2014 09:24         580-42898-33         NWTPH-Dx           S3-BU-031814         03/18/2014 09:31         580-42898-34         NWTPH-Dx           S3-BU-031814         03/18/2014 09:33         580-42898-35         NWTPH-Dx           S3-BD-031814         03/18/2014 09:37         580-42898-36         NWTPH-Dx           S3-BD-031814         03/18/2014 09:58         580-42898-37         NWTPH-Dx           S3-BD-031814         03/18/2014 11:19         580-42898-38         NWTPH-Dx           S2-W-4-031814         03/18/2014 11:39         580-42898-38         NWTPH-Dx           1C-W-3-031814         03/18/2014 11:39         580-42898-40         NWTPH-Dx           1C-W-4-031814         03/18/2014 12:18         580-42898-41         NWTPH-Dx           1C-W-4-031814         03/18/2014 13:03         580-42898	S4-CU-031814	03/18/2014 08:30	580-42898-27	
S4-CD-031814         03/18/2014 08:46         580-42898-29         NWTPH-Dx           S4-AU-031814         03/18/2014 08:46         580-42898-30         NWTPH-Dx           S4-BD-031814         03/18/2014 08:59         580-42898-31         NWTPH-Dx           S3-AD-031814         03/18/2014 09:16         580-42898-32         NWTPH-Dx           S3-CU-031814         03/18/2014 09:24         580-42898-33         NWTPH-Dx           S3-BU-031814         03/18/2014 09:31         580-42898-34         NWTPH-Dx           S3-AU-031814         03/18/2014 09:33         580-42898-35         NWTPH-Dx           S3-CD-031814         03/18/2014 09:37         580-42898-36         NWTPH-Dx           S3-BD-031814         03/18/2014 09:58         580-42898-37         NWTPH-Dx           S3-BD-031814         03/18/2014 11:19         580-42898-38         NWTPH-Dx           EW-2A-031814         03/18/2014 11:31         580-42898-38         NWTPH-Dx           EW-2A-031814         03/18/2014 11:39         580-42898-39         NWTPH-Dx           MW-4-031814         03/18/2014 12:18         580-42898-40         NWTPH-Dx           1C-W-3-031814         03/18/2014 13:03         580-42898-42         NWTPH-Dx           1C-W-4-031814         03/18/2014 13:03         580-42898-42	S4-BU-031814	03/18/2014 08:33	580-42898-28	
S4-AU-031814         03/18/2014 08:46         580-42898-30         NWTPH-Dx           S4-BD-031814         03/18/2014 08:59         580-42898-31         NWTPH-Dx           S3-AD-031814         03/18/2014 09:16         580-42898-32         NWTPH-Dx           S3-CU-031814         03/18/2014 09:24         580-42898-33         NWTPH-Dx           S3-BU-031814         03/18/2014 09:31         580-42898-34         NWTPH-Dx           S3-AU-031814         03/18/2014 09:33         580-42898-35         NWTPH-Dx           S3-CD-031814         03/18/2014 09:37         580-42898-36         NWTPH-Dx           S3-BD-031814         03/18/2014 09:58         580-42898-37         NWTPH-Dx           S3-BD-031814         03/18/2014 11:19         580-42898-38         NWTPH-Dx           EW-2A-031814         03/18/2014 11:31         580-42898-39         NWTPH-Dx           EW-2A-031814         03/18/2014 11:39         580-42898-39         NWTPH-Dx           1C-W-3-031814         03/18/2014 12:18         580-42898-40         NWTPH-Dx           1C-W-4-031814         03/18/2014 12:18         580-42898-42         NWTPH-Dx           GW-4-031814         03/18/2014 13:03         580-42898-42         NWTPH-Dx           1C-W-80-031814         03/18/2014 16:31         580-42898-	S4-CD-031814	03/18/2014 08:46	580-42898-29	
S4-BD-031814         03/18/2014 08:59         580-42898-31         NWTPH-Dx           S3-AD-031814         03/18/2014 09:16         580-42898-32         NWTPH-Dx           S3-CU-031814         03/18/2014 09:24         580-42898-33         NWTPH-Dx           S3-BU-031814         03/18/2014 09:31         580-42898-34         NWTPH-Dx           S3-AU-031814         03/18/2014 09:33         580-42898-35         NWTPH-Dx           S3-CD-031814         03/18/2014 09:57         580-42898-36         NWTPH-Dx           S3-BD-031814         03/18/2014 09:58         580-42898-37         NWTPH-Dx           S3-BD-031814         03/18/2014 11:19         580-42898-38         NWTPH-Dx           2B-W-4-031814         03/18/2014 11:31         580-42898-39         NWTPH-Dx           1C-W-3-031814         03/18/2014 11:39         580-42898-39         NWTPH-Dx           MW-4-031814         03/18/2014 12:18         580-42898-40         NWTPH-Dx           1C-W-4-031814         03/18/2014 12:23         580-42898-42         NWTPH-Dx           GW-4-031814         03/18/2014 13:03         580-42898-42         NWTPH-Dx           1C-W-80-031814         03/18/2014 14:47         580-42898-45         NWTPH-Dx           1C-W-8-031814         03/18/2014 15:03         580-42898	S4-AU-031814	03/18/2014 08:46	580-42898-30	
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S3-BU-031814         03/18/2014 09:31         580-42898-34         NWTPH-Dx           S3-AU-031814         03/18/2014 09:33         580-42898-35         NWTPH-Dx           S3-CD-031814         03/18/2014 09:37         580-42898-36         NWTPH-Dx           S3-BD-031814         03/18/2014 09:58         580-42898-37         NWTPH-Dx           2B-W-4-031814         03/18/2014 11:19         580-42898-38         NWTPH-Dx           EW-2A-031814         03/18/2014 11:31         580-42898-39         NWTPH-Dx           1C-W-3-031814         03/18/2014 11:39         580-42898-40         NWTPH-Dx           MW-4-031814         03/18/2014 12:18         580-42898-41         NWTPH-Dx           1C-W-4-031814         03/18/2014 12:23         580-42898-42         NWTPH-Dx           GW-4-031814         03/18/2014 13:03         580-42898-43         NWTPH-Dx           1C-W-80-031814         03/18/2014 14:47         580-42898-44         NWTPH-Dx           1C-W-8-031814         03/18/2014 14:47         580-42898-45         NWTPH-Dx           1C-W-8-031814         03/18/2014 16:00         580-42898-46         NWTPH-Dx           1C-W-8-031814         03/18/2014 16:00         580-42898-48         NWTPH-Dx           5-W-56-031814         03/18/2014 16:36         580-42	S3-CU-031814	03/18/2014 09:24	580-42898-33	
S3-AU-031814         03/18/2014 09:33         580-42898-35         NWTPH-Dx           S3-CD-031814         03/18/2014 09:37         580-42898-36         NWTPH-Dx           S3-BD-031814         03/18/2014 09:58         580-42898-37         NWTPH-Dx           2B-W-4-031814         03/18/2014 11:19         580-42898-38         NWTPH-Dx           EW-2A-031814         03/18/2014 11:31         580-42898-39         NWTPH-Dx           1C-W-3-031814         03/18/2014 11:39         580-42898-40         NWTPH-Dx           MW-4-031814         03/18/2014 12:18         580-42898-41         NWTPH-Dx           1C-W-4-031814         03/18/2014 12:23         580-42898-42         NWTPH-Dx           GW-4-031814         03/18/2014 13:03         580-42898-43         NWTPH-Dx           2A-W-10-031814         03/18/2014 14:31         580-42898-44         NWTPH-Dx           1C-W-80-031814         03/18/2014 14:47         580-42898-45         NWTPH-Dx           1C-W-1-031814         03/18/2014 15:03         580-42898-46         NWTPH-Dx           1C-W-8-031814         03/18/2014 16:00         580-42898-47         NWTPH-Dx           5-W-18-031814         03/18/2014 16:19         580-42898-49         NWTPH-Dx           5-W-56-031814         03/18/2014 16:53         580-	S3-BU-031814	03/18/2014 09:31	580-42898-34	
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2B-W-4-031814         03/18/2014 11:19         580-42898-38         NWTPH-Dx           EW-2A-031814         03/18/2014 11:31         580-42898-39         NWTPH-Dx           1C-W-3-031814         03/18/2014 11:39         580-42898-40         NWTPH-Dx           MW-4-031814         03/18/2014 12:18         580-42898-41         NWTPH-Dx           1C-W-4-031814         03/18/2014 12:23         580-42898-42         NWTPH-Dx           GW-4-031814         03/18/2014 13:03         580-42898-43         NWTPH-Dx           2A-W-10-031814         03/18/2014 14:31         580-42898-44         NWTPH-Dx           1C-W-80-031814         03/18/2014 14:47         580-42898-45         NWTPH-Dx           1C-W-1-031814         03/18/2014 15:03         580-42898-46         NWTPH-Dx           1C-W-8-031814         03/18/2014 16:00         580-42898-47         NWTPH-Dx           2B-W-40-031814         03/18/2014 16:19         580-42898-48         NWTPH-Dx           5-W-56-031814         03/18/2014 16:36         580-42898-50         NWTPH-Dx           5-W-54-031814         03/18/2014 16:53         580-42898-51         NWTPH-Dx           5-W-50-031914         03/18/2014 17:46         580-42898-52         NWTPH-Dx           5-W-55-031914         03/18/2014 17:51	S3-CD-031814	03/18/2014 09:37	580-42898-36	
2B-W-4-031814         03/18/2014 11:19         580-42898-38         NWTPH-Dx           EW-2A-031814         03/18/2014 11:31         580-42898-39         NWTPH-Dx           1C-W-3-031814         03/18/2014 11:39         580-42898-40         NWTPH-Dx           MW-4-031814         03/18/2014 12:18         580-42898-41         NWTPH-Dx           1C-W-4-031814         03/18/2014 12:23         580-42898-42         NWTPH-Dx           GW-4-031814         03/18/2014 13:03         580-42898-43         NWTPH-Dx           2A-W-10-031814         03/18/2014 14:31         580-42898-44         NWTPH-Dx           1C-W-80-031814         03/18/2014 14:47         580-42898-45         NWTPH-Dx           1C-W-1-031814         03/18/2014 15:03         580-42898-46         NWTPH-Dx           1C-W-8-031814         03/18/2014 16:00         580-42898-47         NWTPH-Dx           2B-W-40-031814         03/18/2014 16:19         580-42898-48         NWTPH-Dx           5-W-56-031814         03/18/2014 16:36         580-42898-50         NWTPH-Dx           5-W-54-031814         03/18/2014 16:53         580-42898-51         NWTPH-Dx           5-W-50-031914         03/18/2014 17:46         580-42898-52         NWTPH-Dx           5-W-55-031914         03/18/2014 17:51	S3-BD-031814	03/18/2014 09:58	580-42898-37	
1C-W-3-031814         03/18/2014 11:39         580-42898-40         NWTPH-Dx           MW-4-031814         03/18/2014 12:18         580-42898-41         NWTPH-Dx           1C-W-4-031814         03/18/2014 12:23         580-42898-42         NWTPH-Dx           GW-4-031814         03/18/2014 13:03         580-42898-43         NWTPH-Dx           2A-W-10-031814         03/18/2014 14:31         580-42898-44         NWTPH-Dx           1C-W-80-031814         03/18/2014 14:47         580-42898-45         NWTPH-Dx           1C-W-1-031814         03/18/2014 14:48         580-42898-46         NWTPH-Dx           1C-W-8-031814         03/18/2014 15:03         580-42898-47         NWTPH-Dx           2B-W-40-031814         03/18/2014 16:00         580-42898-48         NWTPH-Dx           5-W-18-031814         03/18/2014 16:19         580-42898-49         NWTPH-Dx           5-W-56-031814         03/18/2014 16:36         580-42898-50         NWTPH-Dx           5-W-50-031914         03/18/2014 17:46         580-42898-52         NWTPH-Dx           5-W-55-031914         03/18/2014 17:51         580-42898-53         NWTPH-Dx           1B-W-2-031914         03/19/2014 09:43         580-42898-54         NWTPH-Dx	2B-W-4-031814	03/18/2014 11:19	580-42898-38	
MW-4-031814         03/18/2014 12:18         580-42898-41         NWTPH-Dx           1C-W-4-031814         03/18/2014 12:23         580-42898-42         NWTPH-Dx           GW-4-031814         03/18/2014 13:03         580-42898-43         NWTPH-Dx           2A-W-10-031814         03/18/2014 14:31         580-42898-44         NWTPH-Dx           1C-W-80-031814         03/18/2014 14:47         580-42898-45         NWTPH-Dx           1C-W-1-031814         03/18/2014 14:48         580-42898-46         NWTPH-Dx           1C-W-8-031814         03/18/2014 15:03         580-42898-47         NWTPH-Dx           2B-W-40-031814         03/18/2014 16:00         580-42898-48         NWTPH-Dx           5-W-18-031814         03/18/2014 16:19         580-42898-49         NWTPH-Dx           5-W-56-031814         03/18/2014 16:36         580-42898-50         NWTPH-Dx           5-W-50-031914         03/18/2014 17:46         580-42898-51         NWTPH-Dx           5-W-55-031914         03/18/2014 17:51         580-42898-53         NWTPH-Dx           1B-W-2-031914         03/19/2014 09:43         580-42898-54         NWTPH-Dx	EW-2A-031814	03/18/2014 11:31	580-42898-39	
1C-W-4-031814         03/18/2014 12:23         580-42898-42         NWTPH-Dx           GW-4-031814         03/18/2014 13:03         580-42898-43         NWTPH-Dx           2A-W-10-031814         03/18/2014 14:31         580-42898-44         NWTPH-Dx           1C-W-80-031814         03/18/2014 14:47         580-42898-45         NWTPH-Dx           1C-W-1-031814         03/18/2014 14:48         580-42898-46         NWTPH-Dx           1C-W-8-031814         03/18/2014 15:03         580-42898-47         NWTPH-Dx           2B-W-40-031814         03/18/2014 16:00         580-42898-48         NWTPH-Dx           5-W-18-031814         03/18/2014 16:19         580-42898-49         NWTPH-Dx           5-W-56-031814         03/18/2014 16:36         580-42898-50         NWTPH-Dx           5-W-54-031814         03/18/2014 16:53         580-42898-51         NWTPH-Dx           5-W-50-031914         03/18/2014 17:46         580-42898-52         NWTPH-Dx           5-W-55-031914         03/18/2014 17:51         580-42898-53         NWTPH-Dx           1B-W-2-031914         03/19/2014 09:43         580-42898-54         NWTPH-Dx	1C-W-3-031814	03/18/2014 11:39	580-42898-40	NWTPH-Dx
GW-4-031814         03/18/2014 13:03         580-42898-43         NWTPH-Dx           2A-W-10-031814         03/18/2014 14:31         580-42898-44         NWTPH-Dx           1C-W-80-031814         03/18/2014 14:47         580-42898-45         NWTPH-Dx           1C-W-1-031814         03/18/2014 14:48         580-42898-46         NWTPH-Dx           1C-W-8-031814         03/18/2014 15:03         580-42898-47         NWTPH-Dx           2B-W-40-031814         03/18/2014 16:00         580-42898-48         NWTPH-Dx           5-W-18-031814         03/18/2014 16:19         580-42898-49         NWTPH-Dx           5-W-56-031814         03/18/2014 16:36         580-42898-50         NWTPH-Dx           5-W-54-031814         03/18/2014 16:53         580-42898-51         NWTPH-Dx           5-W-50-031914         03/18/2014 17:46         580-42898-52         NWTPH-Dx           5-W-55-031914         03/18/2014 17:51         580-42898-53         NWTPH-Dx           1B-W-2-031914         03/19/2014 09:43         580-42898-54         NWTPH-Dx	MW-4-031814	03/18/2014 12:18	580-42898-41	NWTPH-Dx
2A-W-10-031814         03/18/2014 14:31         580-42898-44         NWTPH-Dx           1C-W-80-031814         03/18/2014 14:47         580-42898-45         NWTPH-Dx           1C-W-1-031814         03/18/2014 14:48         580-42898-46         NWTPH-Dx           1C-W-8-031814         03/18/2014 15:03         580-42898-47         NWTPH-Dx           2B-W-40-031814         03/18/2014 16:00         580-42898-48         NWTPH-Dx           5-W-18-031814         03/18/2014 16:19         580-42898-49         NWTPH-Dx           5-W-56-031814         03/18/2014 16:36         580-42898-50         NWTPH-Dx           5-W-54-031814         03/18/2014 16:53         580-42898-51         NWTPH-Dx           5-W-50-031914         03/18/2014 17:46         580-42898-52         NWTPH-Dx           5-W-55-031914         03/18/2014 17:51         580-42898-53         NWTPH-Dx           1B-W-2-031914         03/19/2014 09:43         580-42898-54         NWTPH-Dx	1C-W-4-031814	03/18/2014 12:23	580-42898-42	NWTPH-Dx
1C-W-80-031814         03/18/2014 14:47         580-42898-45         NWTPH-Dx           1C-W-1-031814         03/18/2014 14:48         580-42898-46         NWTPH-Dx           1C-W-8-031814         03/18/2014 15:03         580-42898-47         NWTPH-Dx           2B-W-40-031814         03/18/2014 16:00         580-42898-48         NWTPH-Dx           5-W-18-031814         03/18/2014 16:19         580-42898-49         NWTPH-Dx           5-W-56-031814         03/18/2014 16:36         580-42898-50         NWTPH-Dx           5-W-54-031814         03/18/2014 16:53         580-42898-51         NWTPH-Dx           5-W-50-031914         03/18/2014 17:46         580-42898-52         NWTPH-Dx           5-W-55-031914         03/18/2014 17:51         580-42898-53         NWTPH-Dx           1B-W-2-031914         03/19/2014 09:43         580-42898-54         NWTPH-Dx	GW-4-031814	03/18/2014 13:03	580-42898-43	NWTPH-Dx
1C-W-1-031814         03/18/2014 14:48         580-42898-46         NWTPH-Dx           1C-W-8-031814         03/18/2014 15:03         580-42898-47         NWTPH-Dx           2B-W-40-031814         03/18/2014 16:00         580-42898-48         NWTPH-Dx           5-W-18-031814         03/18/2014 16:19         580-42898-49         NWTPH-Dx           5-W-56-031814         03/18/2014 16:36         580-42898-50         NWTPH-Dx           5-W-54-031814         03/18/2014 16:53         580-42898-51         NWTPH-Dx           5-W-50-031914         03/18/2014 17:46         580-42898-52         NWTPH-Dx           5-W-55-031914         03/18/2014 17:51         580-42898-53         NWTPH-Dx           1B-W-2-031914         03/19/2014 09:43         580-42898-54         NWTPH-Dx	2A-W-10-031814	03/18/2014 14:31	580-42898-44	NWTPH-Dx
1C-W-8-031814         03/18/2014 15:03         580-42898-47         NWTPH-Dx           2B-W-40-031814         03/18/2014 16:00         580-42898-48         NWTPH-Dx           5-W-18-031814         03/18/2014 16:19         580-42898-49         NWTPH-Dx           5-W-56-031814         03/18/2014 16:36         580-42898-50         NWTPH-Dx           5-W-54-031814         03/18/2014 16:53         580-42898-51         NWTPH-Dx           5-W-50-031914         03/18/2014 17:46         580-42898-52         NWTPH-Dx           5-W-55-031914         03/18/2014 17:51         580-42898-53         NWTPH-Dx           1B-W-2-031914         03/19/2014 09:43         580-42898-54         NWTPH-Dx	1C-W-80-031814	03/18/2014 14:47	580-42898-45	NWTPH-Dx
2B-W-40-031814         03/18/2014 16:00         580-42898-48         NWTPH-Dx           5-W-18-031814         03/18/2014 16:19         580-42898-49         NWTPH-Dx           5-W-56-031814         03/18/2014 16:36         580-42898-50         NWTPH-Dx           5-W-54-031814         03/18/2014 16:53         580-42898-51         NWTPH-Dx           5-W-50-031914         03/18/2014 17:46         580-42898-52         NWTPH-Dx           5-W-55-031914         03/18/2014 17:51         580-42898-53         NWTPH-Dx           1B-W-2-031914         03/19/2014 09:43         580-42898-54         NWTPH-Dx	1C-W-1-031814	03/18/2014 14:48	580-42898-46	NWTPH-Dx
5-W-18-031814         03/18/2014 16:19         580-42898-49         NWTPH-Dx           5-W-56-031814         03/18/2014 16:36         580-42898-50         NWTPH-Dx           5-W-54-031814         03/18/2014 16:53         580-42898-51         NWTPH-Dx           5-W-50-031914         03/18/2014 17:46         580-42898-52         NWTPH-Dx           5-W-55-031914         03/18/2014 17:51         580-42898-53         NWTPH-Dx           1B-W-2-031914         03/19/2014 09:43         580-42898-54         NWTPH-Dx	1C-W-8-031814	03/18/2014 15:03	580-42898-47	NWTPH-Dx
5-W-56-031814         03/18/2014 16:36         580-42898-50         NWTPH-Dx           5-W-54-031814         03/18/2014 16:53         580-42898-51         NWTPH-Dx           5-W-50-031914         03/18/2014 17:46         580-42898-52         NWTPH-Dx           5-W-55-031914         03/18/2014 17:51         580-42898-53         NWTPH-Dx           1B-W-2-031914         03/19/2014 09:43         580-42898-54         NWTPH-Dx	2B-W-40-031814	03/18/2014 16:00	580-42898-48	NWTPH-Dx
5-W-54-031814         03/18/2014 16:53         580-42898-51         NWTPH-Dx           5-W-50-031914         03/18/2014 17:46         580-42898-52         NWTPH-Dx           5-W-55-031914         03/18/2014 17:51         580-42898-53         NWTPH-Dx           1B-W-2-031914         03/19/2014 09:43         580-42898-54         NWTPH-Dx	5-W-18-031814	03/18/2014 16:19	580-42898-49	NWTPH-Dx
5-W-50-031914       03/18/2014 17:46       580-42898-52       NWTPH-Dx         5-W-55-031914       03/18/2014 17:51       580-42898-53       NWTPH-Dx         1B-W-2-031914       03/19/2014 09:43       580-42898-54       NWTPH-Dx	5-W-56-031814	03/18/2014 16:36	580-42898-50	NWTPH-Dx
5-W-55-031914         03/18/2014 17:51         580-42898-53         NWTPH-Dx           1B-W-2-031914         03/19/2014 09:43         580-42898-54         NWTPH-Dx	5-W-54-031814	03/18/2014 16:53	580-42898-51	NWTPH-Dx
1B-W-2-031914 03/19/2014 09:43 580-42898-54 NWTPH-Dx	5-W-50-031914	03/18/2014 17:46	580-42898-52	NWTPH-Dx
	5-W-55-031914	03/18/2014 17:51	580-42898-53	NWTPH-Dx
1B-W-3-031914 03/19/2014 08:57 580-42898-55 NWTPH-Dx	1B-W-2-031914	03/19/2014 09:43	580-42898-54	NWTPH-Dx
	1B-W-3-031914	03/19/2014 08:57	580-42898-55	NWTPH-Dx
MW-3-031914 03/19/2014 09:29 580-42898-56 NWTPH-Dx	MW-3-031914	03/19/2014 09:29	580-42898-56	NWTPH-Dx
1C-W-7-031914 03/19/2014 09:38 580-42898-57 NWTPH-Dx	1C-W-7-031914	03/19/2014 09:38	580-42898-57	NWTPH-Dx
MW-16-031914 03/19/2014 10:20 580-42898-58 NWTPH-Dx	MW-16-031914	03/19/2014 10:20	580-42898-58	NWTPH-Dx
2A-W-42-031914 03/19/2014 10:27 580-42898-59 NWTPH-Dx	2A-W-42-031914	03/19/2014 10:27	580-42898-59	NWTPH-Dx
1B-W-23-031914 03/19/2014 10:33 580-42898-60 NWTPH-Dx	1B-W-23-031914	03/19/2014 10:33	580-42898-60	NWTPH-Dx
1A-W-4-031914 03/19/2014 11:31 580-42898-61 NWTPH-Dx	1A-W-4-031914	03/19/2014 11:31	580-42898-61	NWTPH-Dx
EW-1-031914 03/19/2014 11:59 580-42898-62 NWTPH-Dx	EW-1-031914	03/19/2014 11:59	580-42898-62	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 listed in section 4.0 below.

#### 2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

<u>Sample analysis frequencies:</u> Monthly sampling currently includes samples from three water sample locations. Quarterly sampling includes 22 additional water sample locations, and semi-annual sampling includes 32 additional water samples. This round of sampling includes monthly, quarterly, and semi-annual locations.

No sample was collected from location 5-W-51. This location is not required to be sampled because free product was present. All intended samples were collected and the required analysis was completed by the laboratory for each collected sample.

<u>Analysis methods</u>: Samples were analyzed by method NWTPH-Dx and prepared by method SW3510C. These methods are approved EPA methods and therefore meet comparability requirements.

<u>Precision, accuracy and completeness:</u> Precision and accuracy measurements were within laboratory control limits. Some results were estimated due to blank contamination. Blank contamination also caused elevated reporting limits in some samples. No data were rejected.

A data completeness of 100% was calculated based on 62 of 62 intended sample analyses completed. This meets the project goal of 90%.

#### 3.0 Diesel Range Petroleum Hydrocarbon Analysis

<u>Quality control analysis frequencies:</u> The method specifies that a method blank must be analyzed one per analytical batch or one per twenty samples, whichever is more frequent, and a laboratory duplicate must be analyzed one per ten samples. In addition, surrogate compounds must be measured in each field and quality control sample.

Each batch included a method blank, laboratory control sample (LCS), and LCS duplicate (LCSD), as well as appropriate surrogates. Laboratory duplicates may have been analyzed but not reported because non-project samples were utilized. Data qualifiers are not required due to a lack of reported laboratory duplicate results.

<u>Holding times:</u> Unpreserved water samples must be extracted within 7 days of collection. Preserved water samples must be extracted within 14 days of collection. Extracts must be analyzed within 40 days of extraction. Samples were extracted and analyzed within holding time.

<u>Laboratory blank results</u>: Criteria for blanks are that analyte concentrations must be below the PQL, or below 5% of the lowest associated sample concentration.

Motor oil ( $>C_{24}$ - $C_{36}$ ) was detected in the method blanks as listed below:

		Concentration	RL
Blank ID	Analyte	(mg/L)	(mg/L)
MB 580-156008/1-A	Motor Oil (>C24-C36)	0.0116J	0.050
MB 580-154113/1-A	Motor Oil (>C24-C36)	0.0157J	0.050

Sample results less than five times the method blank level should be considered not detected at the reported concentration and are qualified "U". Samples results which are below both the PQL and the five times action level are qualified as both estimated and not detected "UJ". Sample results between five and ten times the method blank level are qualified as estimated "J".

<u>Surrogate recoveries:</u> Laboratory control limits were 50-150%. Surrogate recoveries were within limits.

<u>LCS recoveries:</u> Laboratory control limits ranged from 65-125% to 70-140%. LCS recoveries were within limits.

<u>LCS/LCSD RPDs:</u> The laboratory control limit was <27%. LCS/LCSD RPD values were within limits.

<u>Field duplicate RPDs:</u> 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%.

Reporting limits: The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met.

<u>Laboratory narrative and flags:</u> No 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 Validation Qualifiers

Client ID	Analyte	Qualifier	Reason
1B-W-3-021814	Motor Oil (>C24-C36)	U	Blank Contamination
1C-W-70-021814	Motor Oil (>C24-C36)	J	Blank Contamination
1C-W-7-021814	Motor Oil (>C24-C36)	J	Blank Contamination
S1-AD-031714	Motor Oil (>C24-C36)	U	Blank Contamination
S1-AU-031714	Motor Oil (>C24-C36)	U	Blank Contamination
S1-BD-031714	Motor Oil (>C24-C36)	U	Blank Contamination
S1-BU-031714	Motor Oil (>C24-C36)	U	Blank Contamination
S2-AD-031714	Motor Oil (>C24-C36)	U	Blank Contamination
S2-AU-031714	Motor Oil (>C24-C36)	U	Blank Contamination
S2-BD-031714	Motor Oil (>C24-C36)	U	Blank Contamination
S2-BU-031714	Motor Oil (>C24-C36)	U	Blank Contamination
S3-AD-031814	Motor Oil (>C24-C36)	U	Blank Contamination
S3-AU-031814	Motor Oil (>C24-C36)	U	Blank Contamination
S3-BU-031814	Motor Oil (>C24-C36)	U	Blank Contamination
S3-CD-031814	Motor Oil (>C24-C36)	U	Blank Contamination
S3-CU-031814	Motor Oil (>C24-C36)	U	Blank Contamination
S4-AD-031814	Motor Oil (>C24-C36)	U	Blank Contamination
S4-AU-031814	Motor Oil (>C24-C36)	U	Blank Contamination
S4-BD-031814	Motor Oil (>C24-C36)	U	Blank Contamination

Client ID	Analyte	Qualifier	Reason
S4-BU-031814	Motor Oil (>C24-C36)	U	Blank Contamination
S4-CD-031814	Motor Oil (>C24-C36)	U	Blank Contamination
S4-CU-031814	Motor Oil (>C24-C36)	U	Blank Contamination

#### 5.0 Abbreviations and Definitions

<u>DV Qualifier</u> U	<u>Definition</u> The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample reporting limit or the amount of contaminant detected in the sample.
J	The analyte was positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.
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 DV	<u>Definition</u> Data Validation

<u>Abbreviation</u>	<u>Definition</u>
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.

## DATA VALIDATION REPORT

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Skykomish Groundwater Monitoring April – June 2014 Data

Prepared for: Farallon Consulting, LLC 975 5<sup>th</sup> Avenue NW Issaquah, Washington 98027

February 9, 2015

#### 1.0 Introduction

The following water samples were validated:

Sample ID	Sample Date/ Time	Lab ID	Analysis
1B-W-3-042114	04/21/2014 12:03	580-43330-1	NWTPH-Dx
1C-W-7-042114	04/21/2014 12:54	580-43330-2	NWTPH-Dx
1C-W-8-042114	04/21/2014 13:52	580-43330-3	NWTPH-Dx
1C-W-80-042114	04/21/2014 16:00	580-43330-4	NWTPH-Dx
1B-W-3-052014	05/20/2014 11:36	580-43715-1	NWTPH-Dx
1C-W-7-052014	05/20/2014 12:25	580-43715-2	NWTPH-Dx
1C-W-8-052014	05/20/2014 13:24	580-43715-3	NWTPH-Dx
1C-W-80-052014	05/20/2014 16:00	580-43715-4	NWTPH-Dx
1C-W-1-061814	06/18/2014 13:05	580-44190-1	NWTPH-Dx
1C-W-7-061814	06/18/2014 11:00	580-44190-2	NWTPH-Dx
1C-W-8-061814	06/18/2014 13:50	580-44190-3	NWTPH-Dx
1C-W-80-061814	06/18/2014 16:00	580-44190-4	NWTPH-Dx
2A-W-10-061814	06/18/2014 12:35	580-44190-5	NWTPH-Dx
2A-W-9-061814	06/18/2014 13:10	580-44190-6	NWTPH-Dx
2B-W-4-061814	06/18/2014 09:45	580-44190-7	NWTPH-Dx
MW-3-061814	06/18/2014 11:30	580-44190-8	NWTPH-Dx
MW-4-061814	06/18/2014 12:05	580-44190-9	NWTPH-Dx
EW-1-061714	06/17/2014 10:42	580-44190-10	NWTPH-Dx
EW-2A-061814	06/18/2014 10:25	580-44190-11	NWTPH-Dx
GW-1-061714	06/17/2014 12:03	580-44190-12	NWTPH-Dx
GW-2-061714	06/17/2014 12:15	580-44190-13	NWTPH-Dx
GW-20-061714	06/17/2014 16:00	580-44190-14	NWTPH-Dx
GW-3-061714	06/17/2014 15:45	580-44190-15	NWTPH-Dx
GW-30-061714	06/17/2014 16:01	580-44190-16	NWTPH-Dx
GW-4-061814	06/18/2014 12:00	580-44190-17	NWTPH-Dx

Sample Date/ Time	Lab ID	Analysis
06/17/2014 15:05	580-44190-18	NWTPH-Dx
06/17/2014 13:10	580-44190-19	NWTPH-Dx
06/17/2014 11:50	580-44190-20	NWTPH-Dx
06/17/2014 14:05	580-44190-21	NWTPH-Dx
06/17/2014 10:53	580-44190-22	NWTPH-Dx
06/17/2014 10:00	580-44190-23	NWTPH-Dx
06/17/2014 16:40	580-44190-24	NWTPH-Dx
06/17/2014 14:25	580-44190-25	NWTPH-Dx
06/17/2014 14:08	580-44190-26	NWTPH-Dx
06/17/2014 15:55	580-44190-27	NWTPH-Dx
06/18/2014 10:07	580-44190-28	NWTPH-Dx
06/17/2014 09:58	580-44190-29	NWTPH-Dx
	06/17/2014 15:05 06/17/2014 13:10 06/17/2014 11:50 06/17/2014 14:05 06/17/2014 10:53 06/17/2014 10:00 06/17/2014 16:40 06/17/2014 14:25 06/17/2014 14:08 06/17/2014 15:55 06/18/2014 10:07	06/17/2014 15:05         580-44190-18           06/17/2014 13:10         580-44190-19           06/17/2014 11:50         580-44190-20           06/17/2014 14:05         580-44190-21           06/17/2014 10:53         580-44190-22           06/17/2014 10:00         580-44190-23           06/17/2014 16:40         580-44190-24           06/17/2014 14:25         580-44190-25           06/17/2014 15:55         580-44190-27           06/18/2014 10:07         580-44190-28

Samples were analyzed by Test America, Tacoma, Washington.

A stage 2A summary validation was performed on the analytical results including from the hardcopy (portable document format) for Laboratory batched 580-43330 and 580-43715, earning EPA OSWER validation label code S2AVM, and on the analytical results from both the hardcopy (portable document format) and electronic data deliverable for laboratory batch 580-44190, 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 listed in section 4.0 below.

#### 2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

<u>Sample analysis frequencies:</u> Monthly sampling currently includes samples from three water sample locations. Quarterly sampling includes 23 additional water sample locations, and semi-annual sampling includes 32 additional water samples. This round of sampling includes monthly and quarterly locations.

All intended samples were collected and the required analysis was completed by the laboratory for each collected sample.

<u>Analysis methods</u>: Samples were analyzed by method NWTPH-Dx and prepared by method SW3510C. These methods are approved EPA methods and therefore meet comparability requirements.

<u>Precision, accuracy and completeness:</u> Precision and accuracy measurements were within laboratory control limits. Results in one sample were estimated due to blank contamination and holding time exceedances. Blank contamination also caused one elevated reporting limit in this sample. No data were rejected.

A data completeness of 100% was calculated based on 32 of 32 intended sample analyses completed. This meets the project goal of 90%.

#### 3.0 Diesel Range Petroleum Hydrocarbon Analysis

<u>Quality control analysis frequencies:</u> The method specifies that a method blank must be analyzed one per analytical batch or one per twenty samples, whichever is more frequent, and a laboratory duplicate must be analyzed one per ten samples. In addition, surrogate compounds must be measured in each field and quality control sample.

Each batch included a method blank, laboratory control sample (LCS), and LCS duplicate (LCSD), as well as appropriate surrogates. Laboratory duplicates may have been analyzed but not reported because non-project samples were utilized. Data qualifiers are not required due to a lack of reported laboratory duplicate results.

<u>Holding times:</u> Unpreserved water samples must be extracted within 7 days of collection. Preserved water samples must be extracted within 14 days of collection. Extracts must be analyzed within 40 days of extraction. Samples were extracted and analyzed within holding time, with one exception:

Sample ID	Sample Date	Extraction Date	Elapsed Days
2A-W-40-061714	6/17/2014	7/3/2014	16

According to the narrative, this sample was a re-extraction. The initial analysis contained low surrogate recoveries and was not reported. Results in this sample are qualified as estimated.

<u>Laboratory blank results</u>: Criteria for blanks are that analyte concentrations must be below the PQL, or below 5% of the lowest associated sample concentration.

Motor oil ( $>C_{24}-C_{36}$ ) was detected in the method blanks as listed below:

		Concentration	RL
Blank ID	Analyte	(mg/L)	(mg/L)
MB 580-163023/1-A	Motor Oil (>C24-C36)	0.0189J	0.050

Sample results less than five times the method blank level should be considered not detected at the reported concentration and are qualified "U". Samples results which are below both the PQL and the five times action level are qualified as both estimated and not detected "UJ". Sample results between five and ten times the method blank level are qualified as estimated "J".

<u>Surrogate recoveries:</u> Laboratory control limits were 50-150%. Surrogate recoveries were within limits.

<u>LCS recoveries:</u> Laboratory control limits ranged from 59-120% to 70-140%. LCS recoveries were within limits.

<u>LCS/LCSD RPDs:</u> The laboratory control limit was <27%. LCS/LCSD RPD values were within limits.

<u>Field duplicate RPDs:</u> 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%.

Reporting limits: The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met.

<u>Laboratory narrative and flags:</u> No 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 Validation Qualifiers

Client ID	Analyte	Qualifier	Reason
2A-W-40-061714	#2 Diesel (C10-C24)	UJ	Hold time exceeded
2A-W-40-061714	Motor Oil (>C24-C36)	UJ	Blank Contamination, hold time exceeded

#### 5.0 Abbreviations and Definitions

<u>DV Qualifier</u> U	<u>Definition</u> The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample reporting limit or the amount of contaminant detected in the sample.
J	The analyte was positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.
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.
<u>Abbreviation</u>	Definition
DV	Data Validation
LCS	Laboratory control sample
LCSD	Laboratory control sample duplicate
MS	Matrix spike
MSD RL	Matrix spike duplicate
RPD	Reporting limit Relative percent difference
	Treative 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.

## DATA VALIDATION REPORT

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Skykomish Groundwater Monitoring - September 2014 Data

Prepared for: Farallon Consulting, LLC 975 5<sup>th</sup> Avenue NW Issaquah, Washington 98027

February 9, 2015

#### 1.0 Introduction

The following water samples were validated:

Sample ID	Sample Date/ Time	Lab ID	Analysis
1A-W-4-091714	09/17/2014 12:32	580-45475-55	NWTPH-Dx
1B-W-2-091714	09/17/2014 11:20	580-45475-56	NWTPH-Dx
1B-W-3-091714	09/17/2014 10:49	580-45475-57	NWTPH-Dx
1C-W-3-091814	09/18/2014 12:52	580-45475-58	NWTPH-Dx
1C-W-4-091814	09/18/2014 13:00	580-45475-59	NWTPH-Dx
2A-W-100-091814	09/18/2014 14:54	580-45475-25	NWTPH-Dx
2A-W-10-091714	09/17/2014 14:44	580-45475-24	NWTPH-Dx
2A-W-40-091714	09/17/2014 09:33	580-45475-21	NWTPH-Dx
2A-W-41-091714	09/17/2014 11:09	580-45475-22	NWTPH-Dx
2A-W-42-091714	09/17/2014 11:57	580-45475-23	NWTPH-Dx
2B-W-4-091814	09/18/2014 13:33	580-45475-26	NWTPH-Dx
5-W-14-091614	09/16/2014 12:08	580-45475-43	NWTPH-Dx
5-W-150-091614	09/16/2014 10:35	580-45475-45	NWTPH-Dx
5-W-15-091614	09/16/2014 10:33	580-45475-44	NWTPH-Dx
5-W-16-091614	09/16/2014 10:45	580-45475-46	NWTPH-Dx
5-W-17-091614	09/16/2014 10:52	580-45475-47	NWTPH-Dx
5-W-18-091614	09/16/2014 11:45	580-45475-48	NWTPH-Dx
5-W-19-091614	09/16/2014 11:55	580-45475-49	NWTPH-Dx
5-W-43-091614	09/16/2014 13:10	580-45475-50	NWTPH-Dx
5-W-50-091614	09/16/2014 17:40	580-45475-51	NWTPH-Dx
5-W-54-091614	09/16/2014 17:55	580-45475-52	NWTPH-Dx
5-W-55-091614	09/16/2014 16:20	580-45475-53	NWTPH-Dx
5-W-56-091614	09/16/2014 16:07	580-45475-54	NWTPH-Dx
EW-1-091614	09/16/2014 13:08	580-45475-29	NWTPH-Dx
EW-2A-091814	09/18/2014 10:00	580-45475-30	NWTPH-Dx
GW-1-091614	09/16/2014 17:58	580-45475-1	NWTPH-Dx
GW-20-091614	09/16/2014 16:12	580-45475-3	NWTPH-Dx

Sample ID	Sample Date/ Time	Lab ID	Analysis
GW-2-091614	09/16/2014 16:09	580-45475-2	NWTPH-Dx
GW-30-091714	09/17/2014 13:00	580-45475-5	NWTPH-Dx
GW-3-091714	09/17/2014 09:20	580-45475-4	NWTPH-Dx
GW-4-091814	09/18/2014 10:05	580-45475-6	NWTPH-Dx
IB-W-23-091714	09/17/2014 09:13	580-45475-20	NWTPH-Dx
IC-W-1-091814	09/18/2014 11:28	580-45475-16	NWTPH-Dx
IC-W-7-091814	09/18/2014 10:10	580-45475-17	NWTPH-Dx
IC-W-80-091814	09/18/2014 12:00	580-45475-19	NWTPH-Dx
IC-W-8-091814	09/18/2014 11:25	580-45475-18	NWTPH-Dx
MW-16-091814	09/18/2014 11:28	580-45475-60	NWTPH-Dx
MW-3-091814	09/18/2014 12:33	580-45475-27	NWTPH-Dx
MW-38R-091614	09/16/2014 13:46	580-45475-61	NWTPH-Dx
MW-4-091814	09/18/2014 14:25	580-45475-28	NWTPH-Dx
S1-AD-091714	09/17/2014 16:12	580-45475-7	NWTPH-Dx
S1-AU-091714	09/17/2014 16:35	580-45475-8	NWTPH-Dx
S1-BD-091714	09/17/2014 16:10	580-45475-9	NWTPH-Dx
S1-BU-091714	09/17/2014 16:35	580-45475-10	NWTPH-Dx
S2-AD-091714	09/17/2014 17:05	580-45475-11	NWTPH-Dx
S2-AU-091714	09/17/2014 17:03	580-45475-12	NWTPH-Dx
S2-BD-091714	09/17/2014 16:10	580-45475-13	NWTPH-Dx
S2-BDO-091714	09/17/2014 16:20	580-45475-14	NWTPH-Dx
S2-BU-091714	09/17/2014 16:38	580-45475-15	NWTPH-Dx
S3-AD-091714	09/17/2014 15:09	580-45475-31	NWTPH-Dx
S3-AU-091714	09/17/2014 15:33	580-45475-32	NWTPH-Dx
S3-BD-091714	09/17/2014 15:13	580-45475-33	NWTPH-Dx
S3-BU-091714	09/17/2014 15:33	580-45475-34	NWTPH-Dx
S3-CD-091714	09/17/2014 15:10	580-45475-35	NWTPH-Dx
S3-CU-091714	09/17/2014 15:30	580-45475-36	NWTPH-Dx
S4-AD-091714	09/17/2014 14:08	580-45475-37	NWTPH-Dx
S4-AU-091714	09/17/2014 14:25	580-45475-38	NWTPH-Dx
S4-BD-091714	09/17/2014 14:15	580-45475-39	NWTPH-Dx
S4-BU-091714	09/17/2014 14:40	580-45475-40	NWTPH-Dx
S4-CD-091714	09/17/2014 14:03	580-45475-41	NWTPH-Dx
S4-CU-091714	09/17/2014 14:25	580-45475-42	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 listed in section 4.0 below.

#### 2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

<u>Sample analysis frequencies:</u> Quarterly sampling includes 23 water sample locations, and semi-annual sampling includes an additional 34 water sample locations. This round of sampling includes both quarterly and semi-annual locations.

No sample was collected from location 5-W-51 or 2A-W-9. These locations were not required to be sampled because LNAPL was present. All required samples were collected and the required analysis was completed by the laboratory for each collected sample.

<u>Analysis methods</u>: Samples were analyzed by method NWTPH-Dx and prepared by method SW3510C. These methods are approved EPA methods and therefore meet comparability requirements.

<u>Precision, accuracy and completeness:</u> Precision and accuracy measurements were within laboratory control limits. Some results were estimated due to blank contamination. No data were rejected.

A data completeness of 100% was calculated based on 55 of 55 intended sample analyses completed. This meets the project goal of 90%.

#### 3.0 Diesel Range Petroleum Hydrocarbon Analysis

<u>Quality control analysis frequencies:</u> The method specifies that a method blank must be analyzed one per analytical batch or one per twenty samples, whichever is more frequent, and a laboratory duplicate must be analyzed one per ten samples. In addition, surrogate compounds must be measured in each field and quality control sample.

Each batch included a method blank, laboratory control sample (LCS), and LCS duplicate (LCSD), as well as appropriate surrogates. Laboratory duplicates may have been analyzed but not reported because non-project samples were utilized. Data qualifiers are not required due to a lack of reported laboratory duplicate results.

<u>Holding times:</u> Unpreserved water samples must be extracted within 7 days of collection. Preserved water samples must be extracted within 14 days of collection. Extracts must be analyzed within 40 days of extraction. Samples were extracted and analyzed within holding time.

<u>Laboratory blank results</u>: Criteria for blanks are that analyte concentrations must be below the PQL, or below 5% of the lowest associated sample concentration.

Target compounds were detected in the method blanks as listed below:

		Concentration	RL
Blank ID	Analyte	(mg/L)	(mg/L)
MB 580-170522/1-A	Motor Oil (>C24-C36)	0.011J	0.05
MB 580-170586/1-A	Motor Oil (>C24-C36)	0.0132J	0.05
MB 580-171105/1-A	Motor Oil (>C24-C36)	0.0174J	0.05
MB 580-171105/1-A	#2 Diesel (C10-C24)	0.0162J	0.025

Sample results less than five times the method blank level should be considered not detected at the reported concentration and are qualified "U". Samples results which are below both the PQL and the five times action level are qualified as both estimated and not detected "UJ". Sample results between five and ten times the method blank level are qualified as estimated "J".

<u>Surrogate recoveries:</u> Laboratory control limits were 50-150%. Surrogate recoveries were within limits.

<u>LCS recoveries:</u> Laboratory control limits ranged from 59-120% to 71-140%. LCS recoveries were within limits.

<u>LCS/LCSD RPDs:</u> The laboratory control limit was <27%. LCS/LCSD RPD values were within limits.

<u>Field duplicate RPDs:</u> 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%.

Reporting limits: The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met.

<u>Laboratory narrative and flags:</u> No 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 Validation Qualifiers

Client ID	Analyte(s)	Qualifier	Reason
1A-W-4-091714	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	Blank Contamination
1B-W-2-091714	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	U	Blank Contamination
1B-W-3-091714	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	Blank Contamination
1C-W-3-091814	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	Blank Contamination
1C-W-4-091814	#2 Diesel (C10-C24)	U	Blank Contamination
1C-W-4-091814	Motor Oil (>C24-C36)	UJ	Blank Contamination
2A-W-40-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
2A-W-41-091714	Motor Oil (>C24-C36)	J	Blank Contamination
2A-W-42-091714	Motor Oil (>C24-C36)	J	Blank Contamination
2B-W-4-091814	Motor Oil (>C24-C36)	UJ	Blank Contamination
5-W-14-091614	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	Blank Contamination
5-W-16-091614	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	Blank Contamination
5-W-17-091614	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	Blank Contamination
5-W-18-091614	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	U	Blank Contamination
5-W-19-091614	Motor Oil (>C24-C36)	UJ	Blank Contamination
5-W-43-091614	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	Blank Contamination
5-W-54-091614	#2 Diesel (C10-C24)	U	Blank Contamination
5-W-54-091614	Motor Oil (>C24-C36)	UJ	Blank Contamination
5-W-55-091614	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	J	Blank Contamination
EW-1-091614	Motor Oil (>C24-C36)	UJ	Blank Contamination
EW-2A-091814	Motor Oil (>C24-C36)	UJ	Blank Contamination
GW-1-091614	Motor Oil (>C24-C36)	UJ	Blank Contamination
GW-20-091614	Motor Oil (>C24-C36)	UJ	Blank Contamination
GW-2-091614	Motor Oil (>C24-C36)	UJ	Blank Contamination
GW-4-091814	Motor Oil (>C24-C36)	UJ	Blank Contamination
IB-W-23-091714	Motor Oil (>C24-C36)	J	Blank Contamination
IC-W-1-091814	Motor Oil (>C24-C36)	UJ	Blank Contamination
IC-W-7-091814	Motor Oil (>C24-C36)	UJ	Blank Contamination
IC-W-80-091814	Motor Oil (>C24-C36)	UJ	Blank Contamination
IC-W-8-091814	Motor Oil (>C24-C36)	UJ	Blank Contamination
MW-3-091814	Motor Oil (>C24-C36)	U	Blank Contamination
S1-AD-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination

Client ID	Analyte(s)	Qualifier	Reason
S1-AU-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S1-BD-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S1-BU-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S2-AD-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S2-AU-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S2-BD-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S2-BDO-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S2-BU-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S3-AD-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S3-AU-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S3-BD-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S3-BU-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S3-CD-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S3-CU-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S4-AD-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S4-AU-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S4-BD-091714	Motor Oil (>C24-C36)	UJ	Blank Contamination
S4-BU-091714	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	Blank Contamination
S4-CD-091714	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	Blank Contamination
S4-CU-091714	#2 Diesel (C10-C24), Motor Oil (>C24-C36)	UJ	Blank Contamination

#### 5.0 Abbreviations and Definitions

<u>DV Qualifier</u> U	<u>Definition</u> The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample reporting limit or the amount of contaminant detected in the sample.
J	The analyte was positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.
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.

<u>Abbreviation</u>	<u>Definition</u>
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.

## DATA VALIDATION REPORT



Skykomish Groundwater Monitoring - December 2014 Data

Prepared for: Farallon Consulting, LLC 975 5<sup>th</sup> Avenue NW Issaguah, Washington 98027

February 11, 2015

#### 1.0 Introduction

The following water samples were validated:

Sample ID	Sample Date/Time	Lab ID	Analysis
MW-3-121614	12/16/2014 09:31	580-46788-1	NWTPH-Dx
5-W-18-121614	12/16/2014 09:51	580-46788-2	NWTPH-Dx
5-W-19-121614	12/16/2014 10:05	580-46788-3	NWTPH-Dx
MW-4-121614	12/16/2014 10:22	580-46788-4	NWTPH-Dx
5-W-16-121614	12/16/2014 11:12	580-46788-5	NWTPH-Dx
2A-W-10-121614	12/16/2014 11:24	580-46788-6	NWTPH-Dx
5-W-14-121614	12/16/2014 12:08	580-46788-7	NWTPH-Dx
5-W-17-121614	12/16/2014 12:20	580-46788-8	NWTPH-Dx
2A-W-9-121614	12/16/2014 12:53	580-46788-9	NWTPH-Dx
5-W-170-121614	12/16/2014 13:10	580-46788-10	NWTPH-Dx
EW-2A-121614	12/16/2014 14:27	580-46788-11	NWTPH-Dx
5-W-15-121614	12/16/2014 14:30	580-46788-12	NWTPH-Dx
GW-4-121614	12/16/2014 15:16	580-46788-13	NWTPH-Dx
5-W-43-121614	12/16/2014 15:25	580-46788-14	NWTPH-Dx
EW-1-121614	12/16/2014 16:15	580-46788-15	NWTPH-Dx
GW-1-121614	12/16/2014 16:18	580-46788-16	NWTPH-Dx
GW-2-121614	12/16/2014 16:52	580-46788-17	NWTPH-Dx
2B-W-4-121714	12/17/2014 09:17	580-46788-18	NWTPH-Dx
2B-W-40-121714	12/17/2014 09:20	580-46788-19	NWTPH-Dx
1B-W-3-121714	12/17/2014 09:30	580-46788-20	NWTPH-Dx
2A-W-40-121714	12/17/2014 11:02	580-46788-21	NWTPH-Dx
2A-W-400-121714	12/17/2014 11:05	580-46788-22	NWTPH-Dx
2A-W-42-121714	12/17/2014 11:15	580-46788-23	NWTPH-Dx
1C-W-8-121714	12/17/2014 12:25	580-46788-24	NWTPH-Dx
2A-W-41-121714	12/17/2014 12:29	580-46788-25	NWTPH-Dx

Sample ID	Sample Date/Time	Lab ID	Analysis
1C-W-7-121714	12/17/2014 14:35	580-46788-27	NWTPH-Dx
1B-W-23-121714	12/17/2014 15:25	580-46788-31	NWTPH-Dx
GW-3-121714	12/17/2014 16:30	580-46788-33	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. No qualifiers were assigned during this review.

#### 2.0 Precision, Accuracy, Representativeness, Comparability, and Completeness

<u>Sample analysis frequencies:</u> Quarterly sampling includes 25 water sample locations, and semi-annual sampling includes an additional 32 water sample locations. This round of sampling includes quarterly locations.

All required samples were collected and the required analysis was completed by the laboratory for each collected sample.

<u>Analysis methods</u>: Samples were analyzed by method NWTPH-Dx and prepared by method SW3510C. These methods are approved EPA methods and therefore meet comparability requirements.

<u>Precision, accuracy and completeness:</u> Precision and accuracy measurements were within laboratory control limits. No data were rejected.

A data completeness of 100 % was calculated based on 25 of 25 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. Laboratory duplicates may have been analyzed but not reported because non-project samples were utilized. Data qualifiers are not required due to a lack of reported laboratory duplicate results.

<u>Holding times:</u> Unpreserved water samples must be extracted within 7 days of collection. Preserved water samples must be extracted within 14 days of collection. Extracts must be analyzed within 40 days of extraction. Samples were extracted and analyzed within holding time.

<u>Laboratory blank results</u>: Criteria for blanks are that analyte concentrations must be below the PQL, or below 5% of the lowest associated sample concentration. No target compounds were detected in the method.

<u>Surrogate recoveries:</u> Laboratory control limits were 50-150%. Surrogate recoveries were within limits.

<u>LCS recoveries:</u> Laboratory control limits ranged from 59-120% to 71-140%. LCS recoveries were within limits.

<u>LCS/LCSD RPDs:</u> The laboratory control limit was <27%. LCS/LCSD RPD values were within limits.

<u>Field duplicate RPDs:</u> 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%.

Reporting limits: The reporting limit goals are 0.1 mg/L for both diesel range hydrocarbons and oil range hydrocarbons. These goals were met.

<u>Laboratory narrative and flags:</u> No other qualifiers were added based on a review of the laboratory narratives.

Diesel and oil range petroleum hydrocarbon data are acceptable for use as reported.

#### 4.0 Abbreviations and Definitions

<u>DV Qualifier</u> U	<u>Definition</u> The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample reporting limit or the amount of contaminant detected in the sample.
J	The analyte was positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.
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 DV LCS LCSD MS MSD	<u>Definition</u> Data Validation Laboratory control sample Laboratory control sample duplicate Matrix spike Matrix spike duplicate

Abbreviation Definition RL Reporting limit

RPD Relative percent difference RSD Relative standard deviation

#### 5.0 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 MONITORING WELL TREND PLOTS

2014 SITE-WIDE GROUNDWATER MONITORING REPORT BNSF Former Maintenance and Fueling Facility Skykomish, Washington Consent Decree No. 07-2-33672-9 SEA

Farallon PN: 683-043

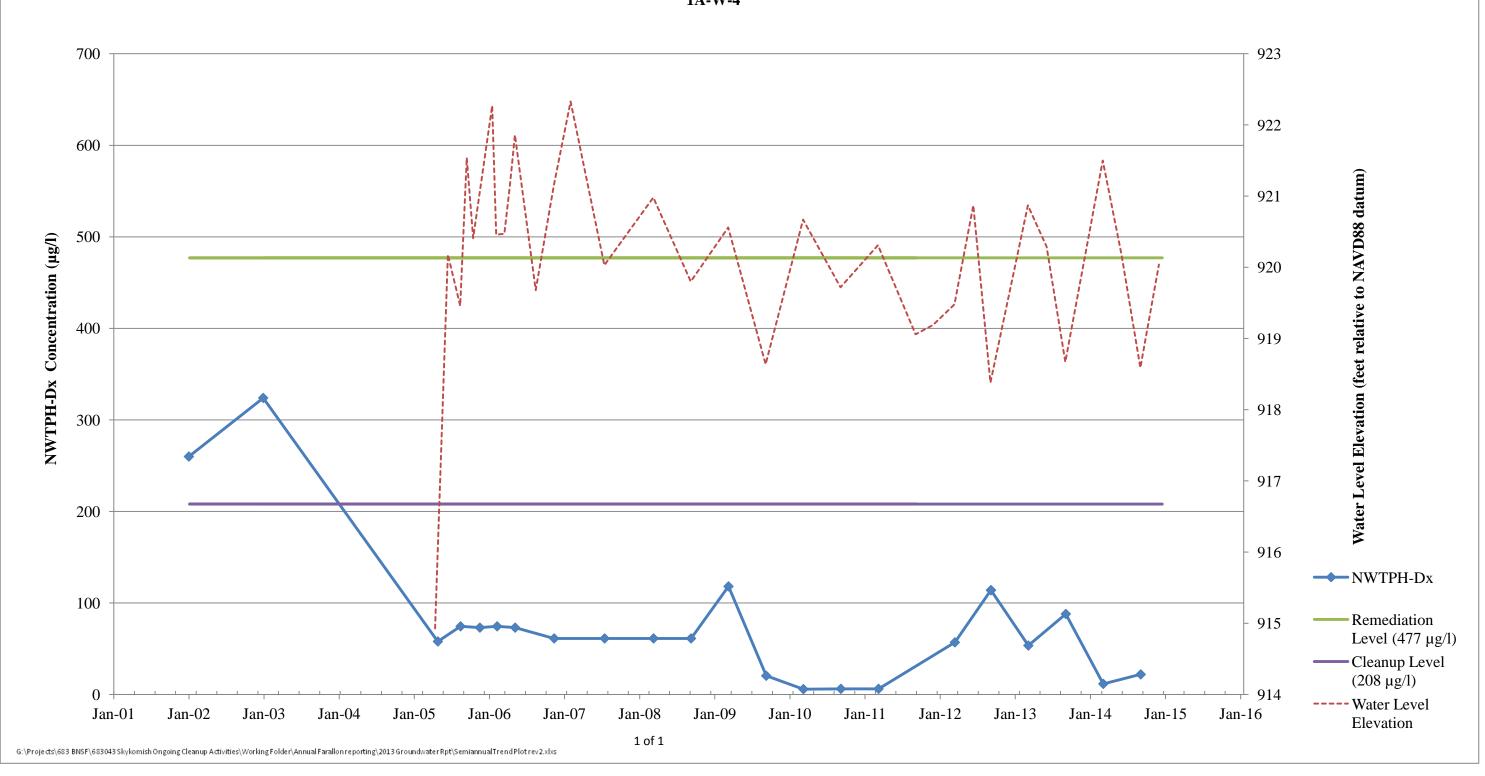
#### **APPENDIX C**

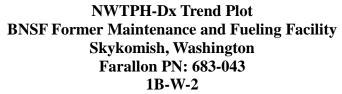
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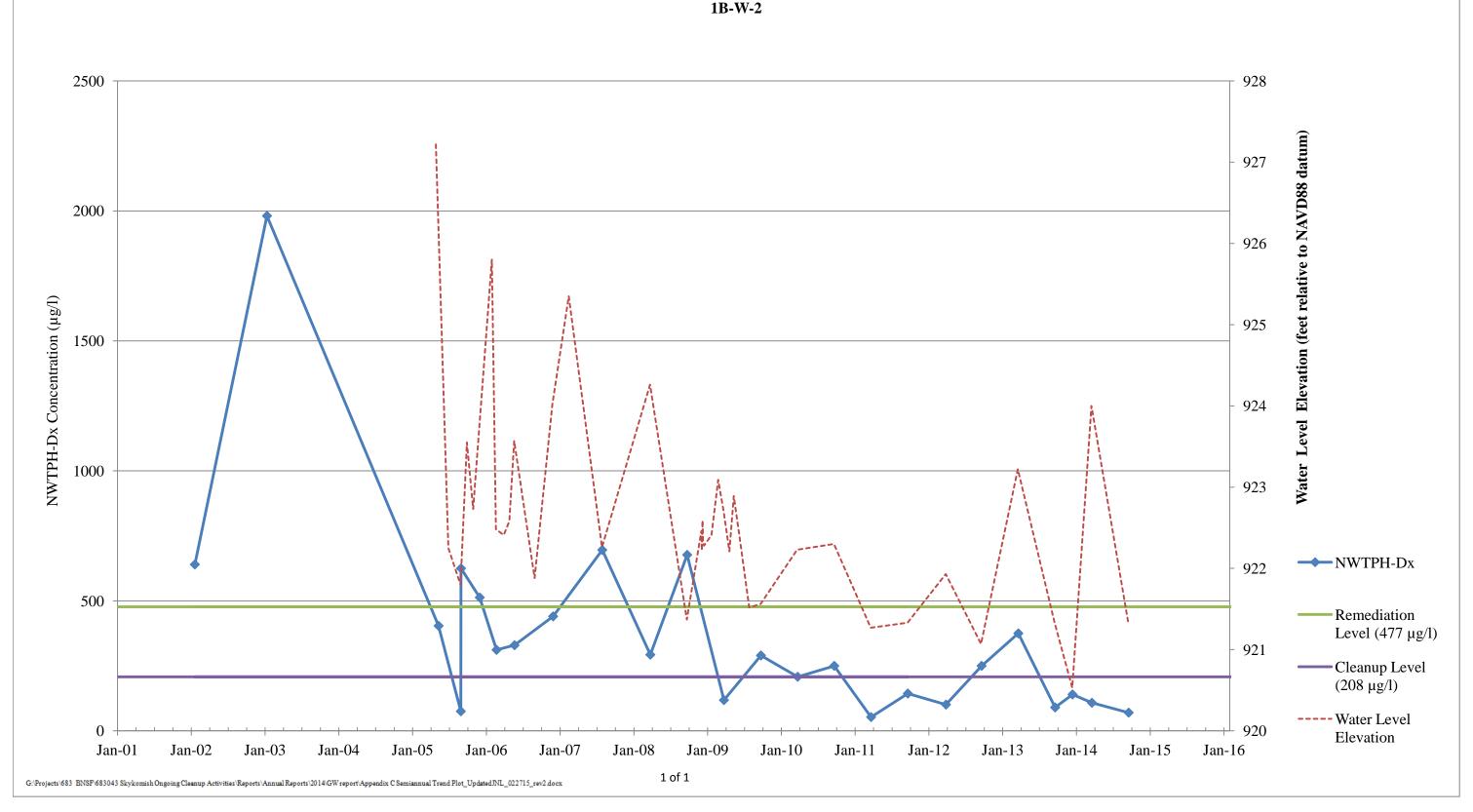
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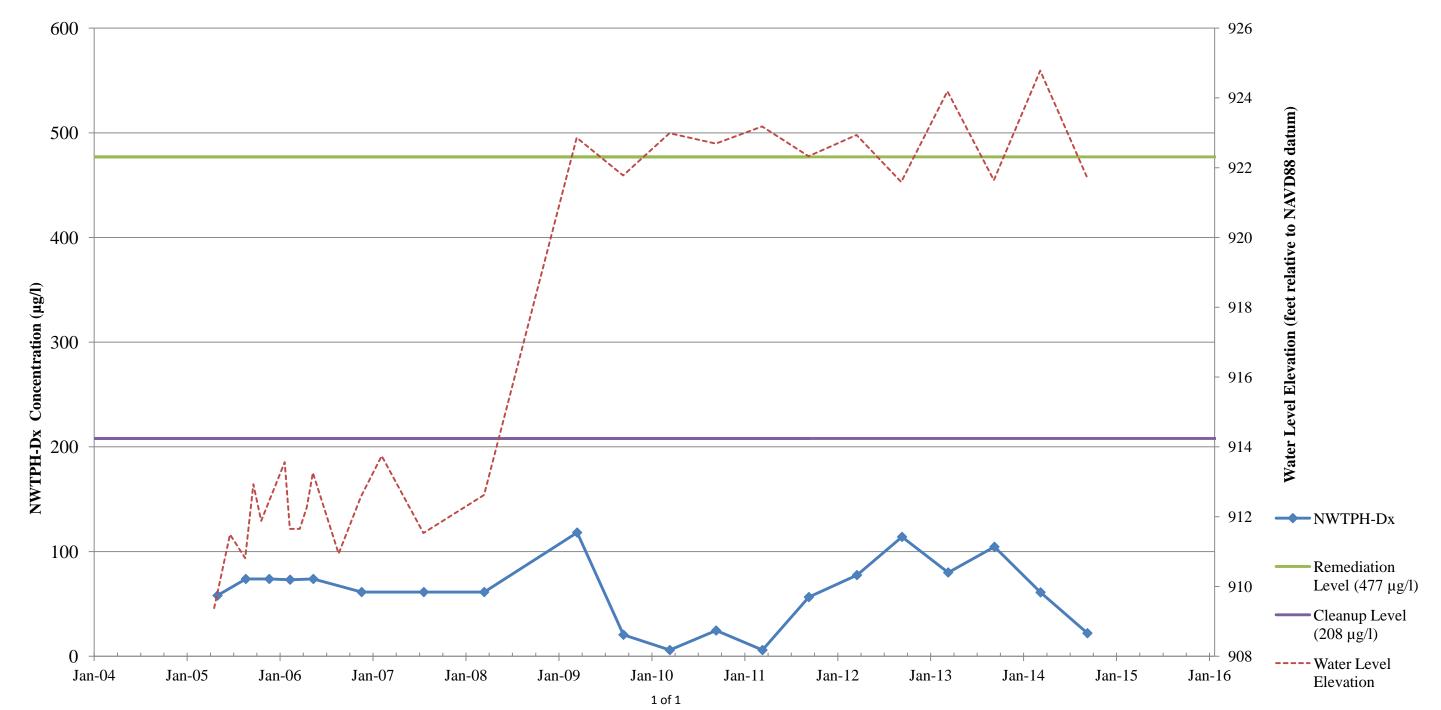
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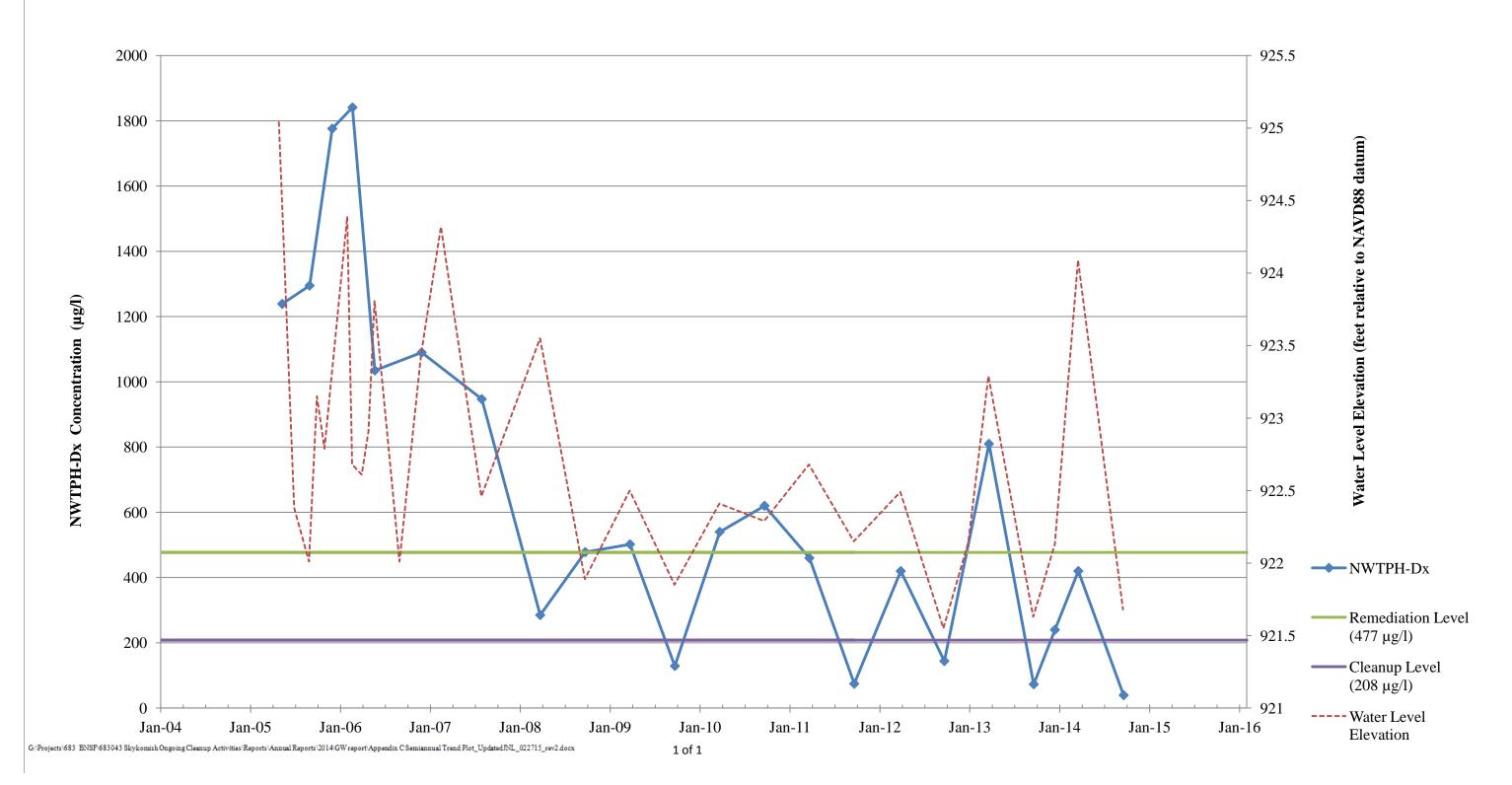


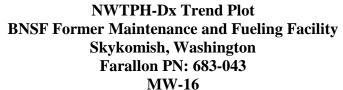
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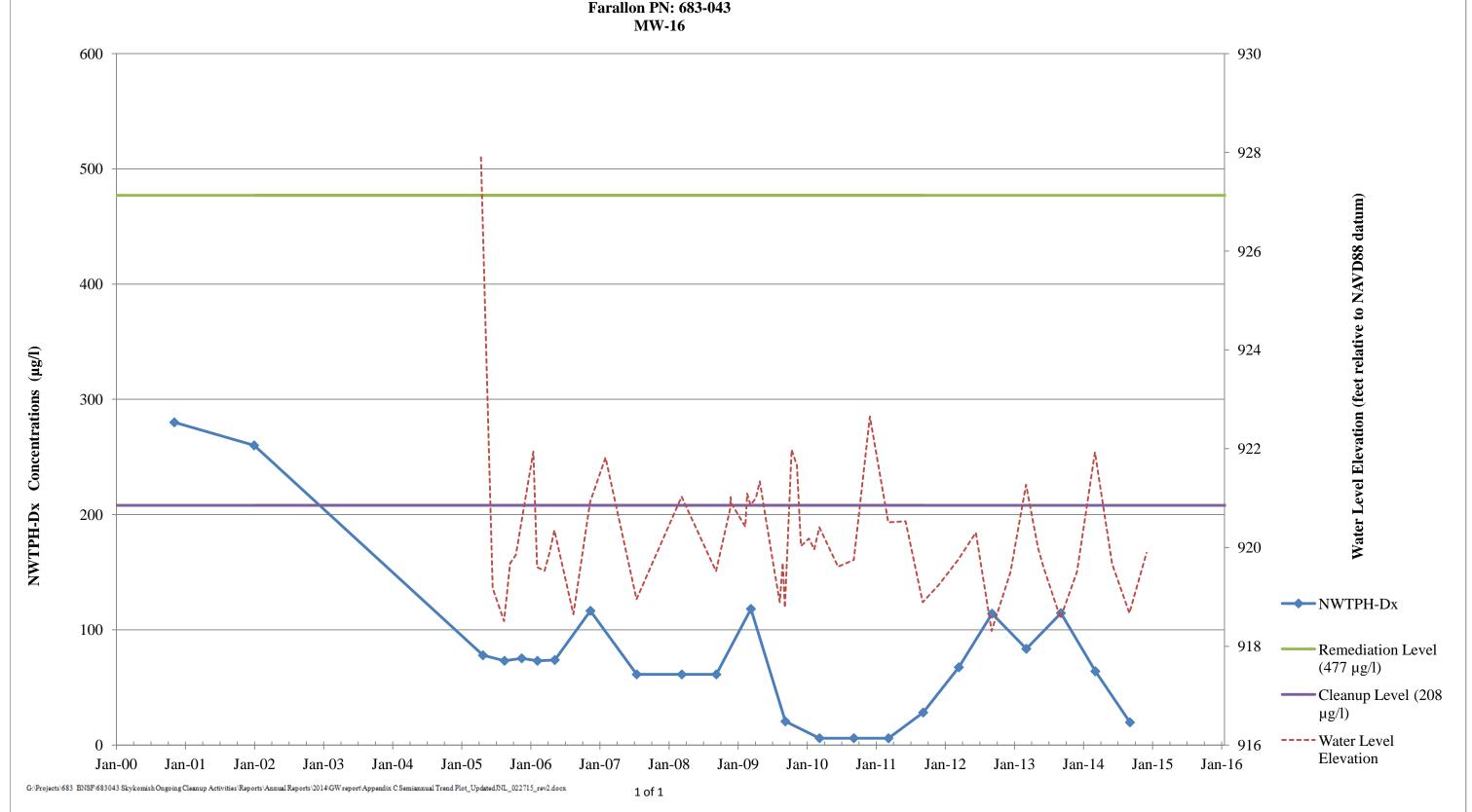


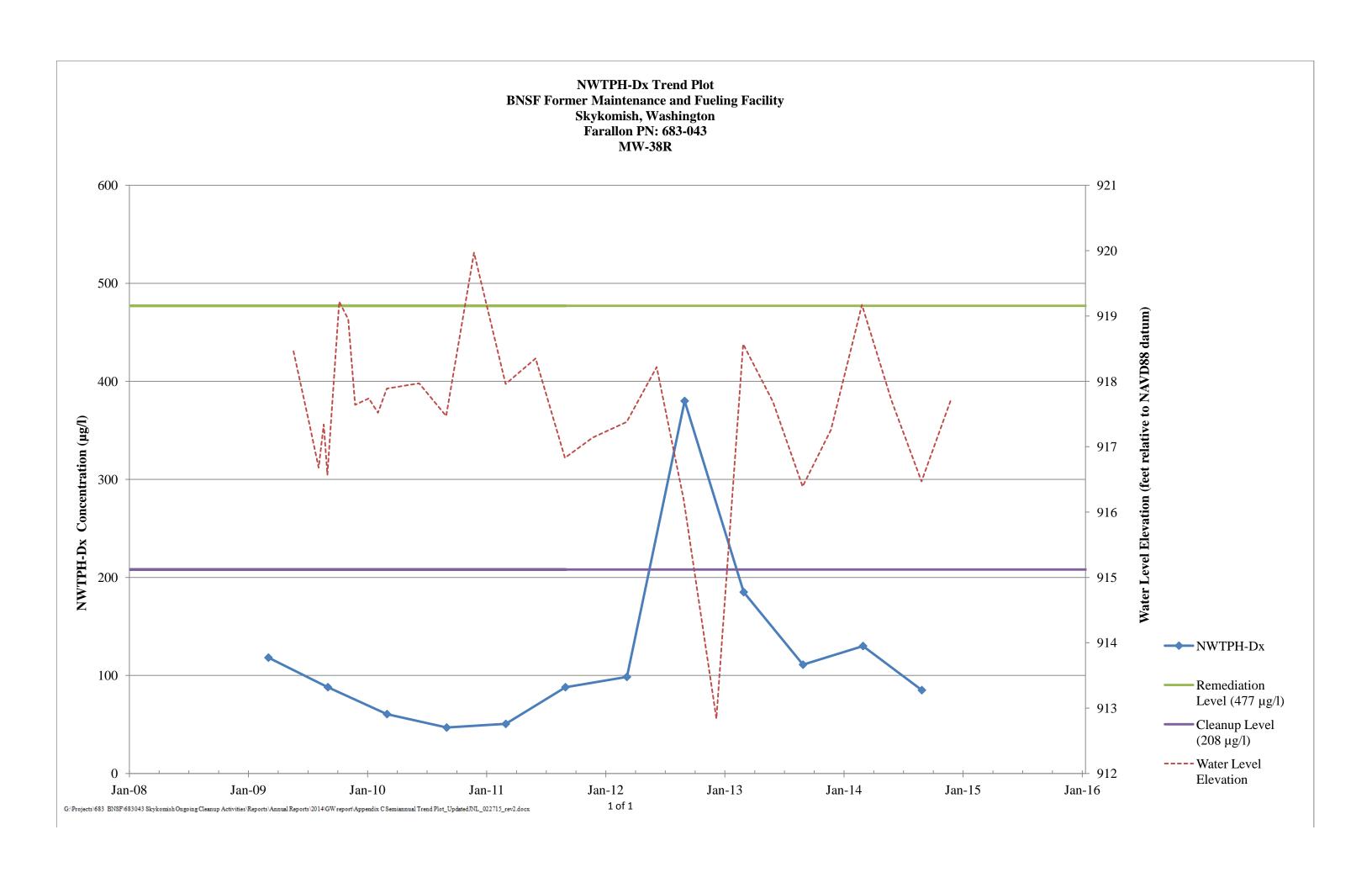
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#### NWTPH-Dx Trend Plot BNSF Former Maintenance and Fueling Facility Skykomish, Washington Farallon PN: 683-043 1C-W-4









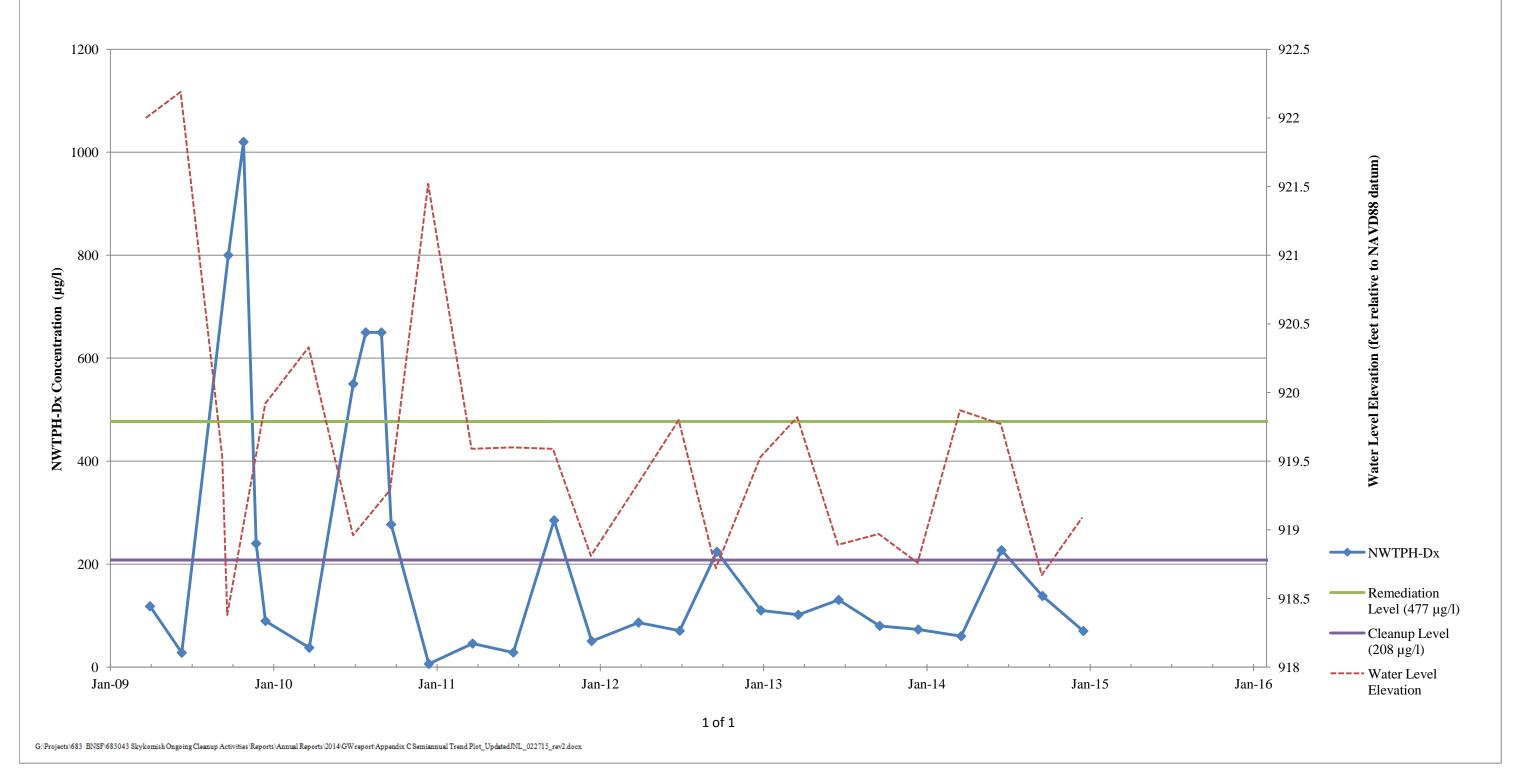
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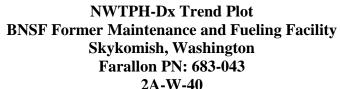
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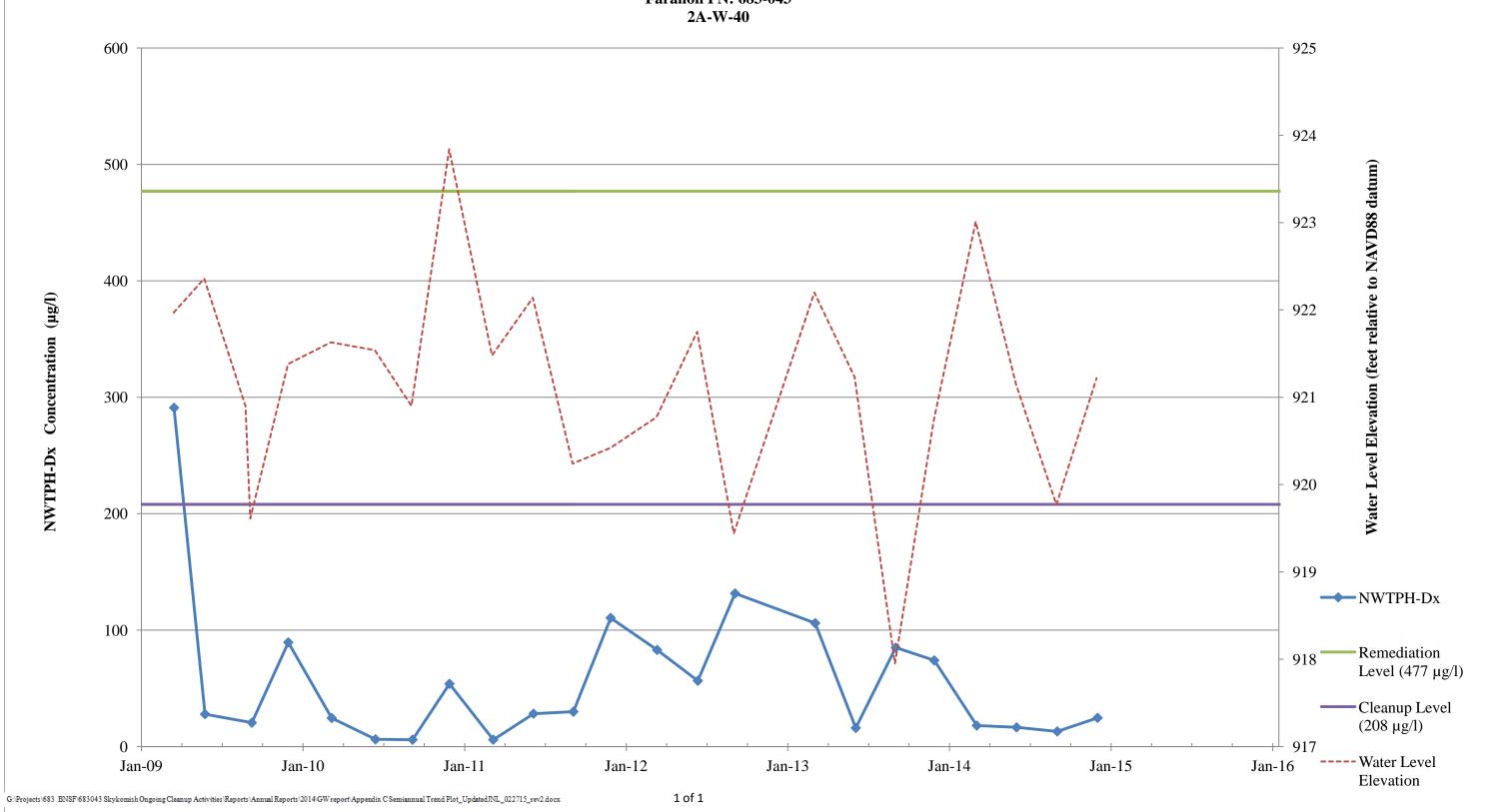
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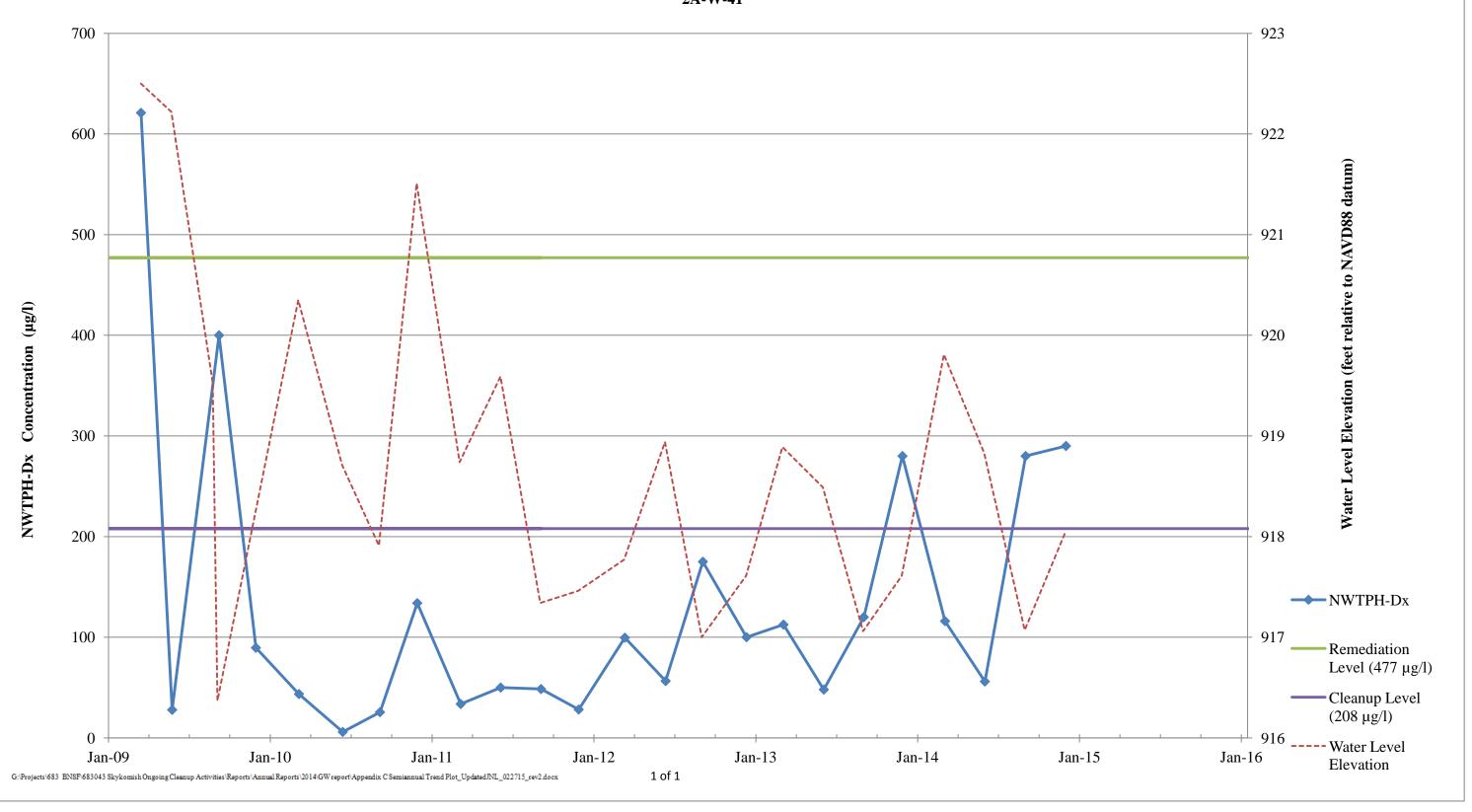
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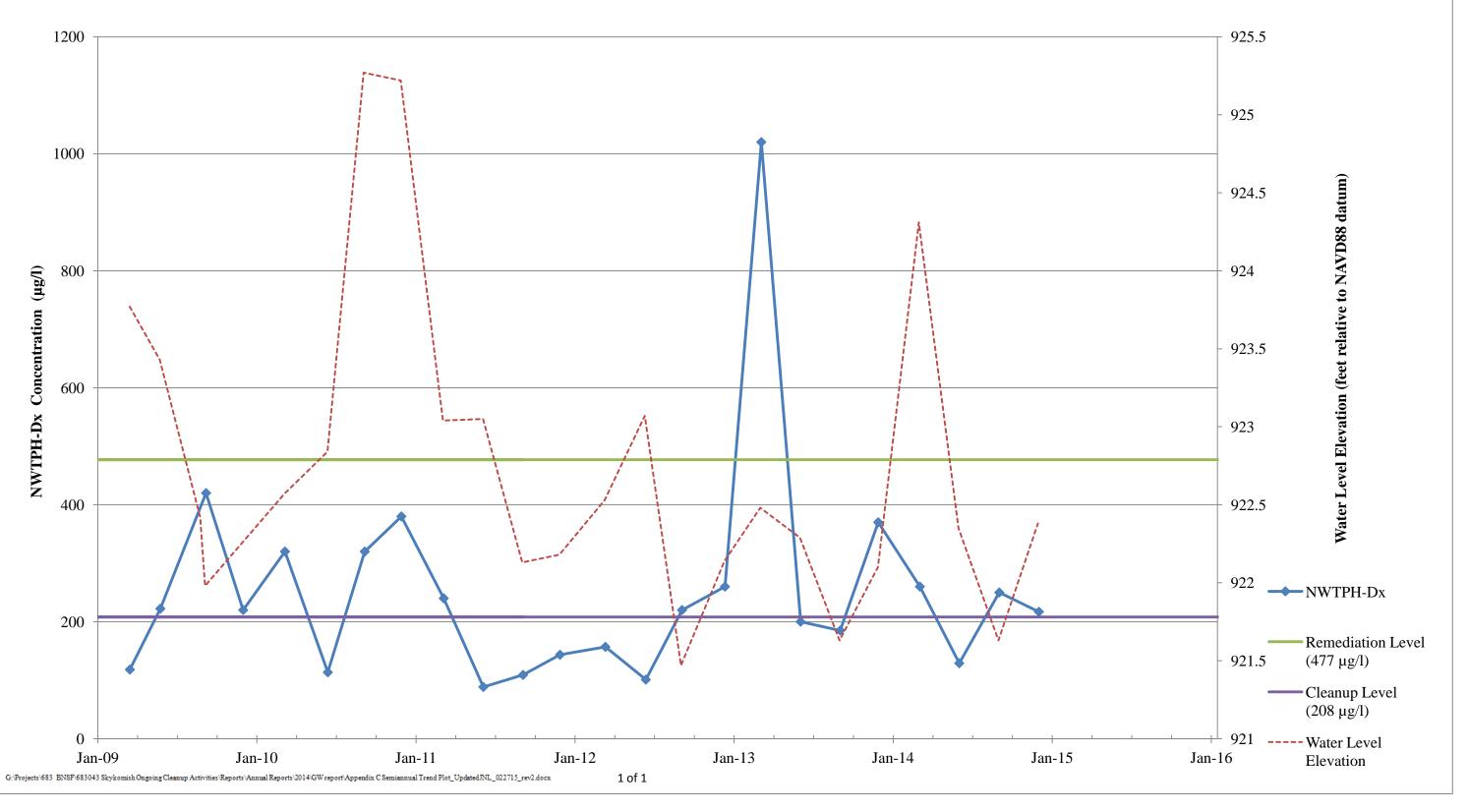


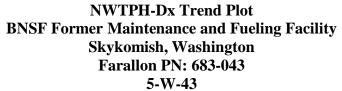
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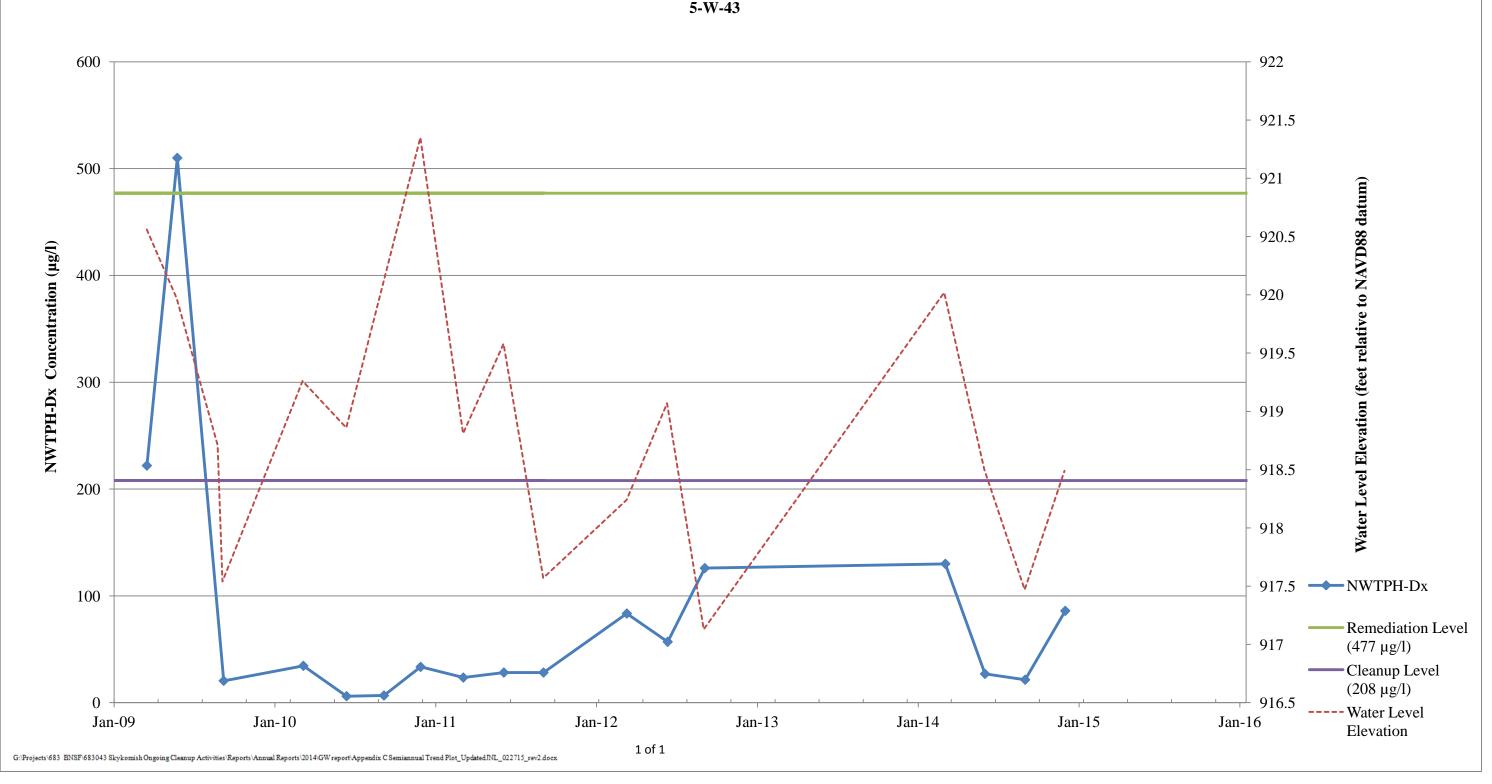


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2A-W-42





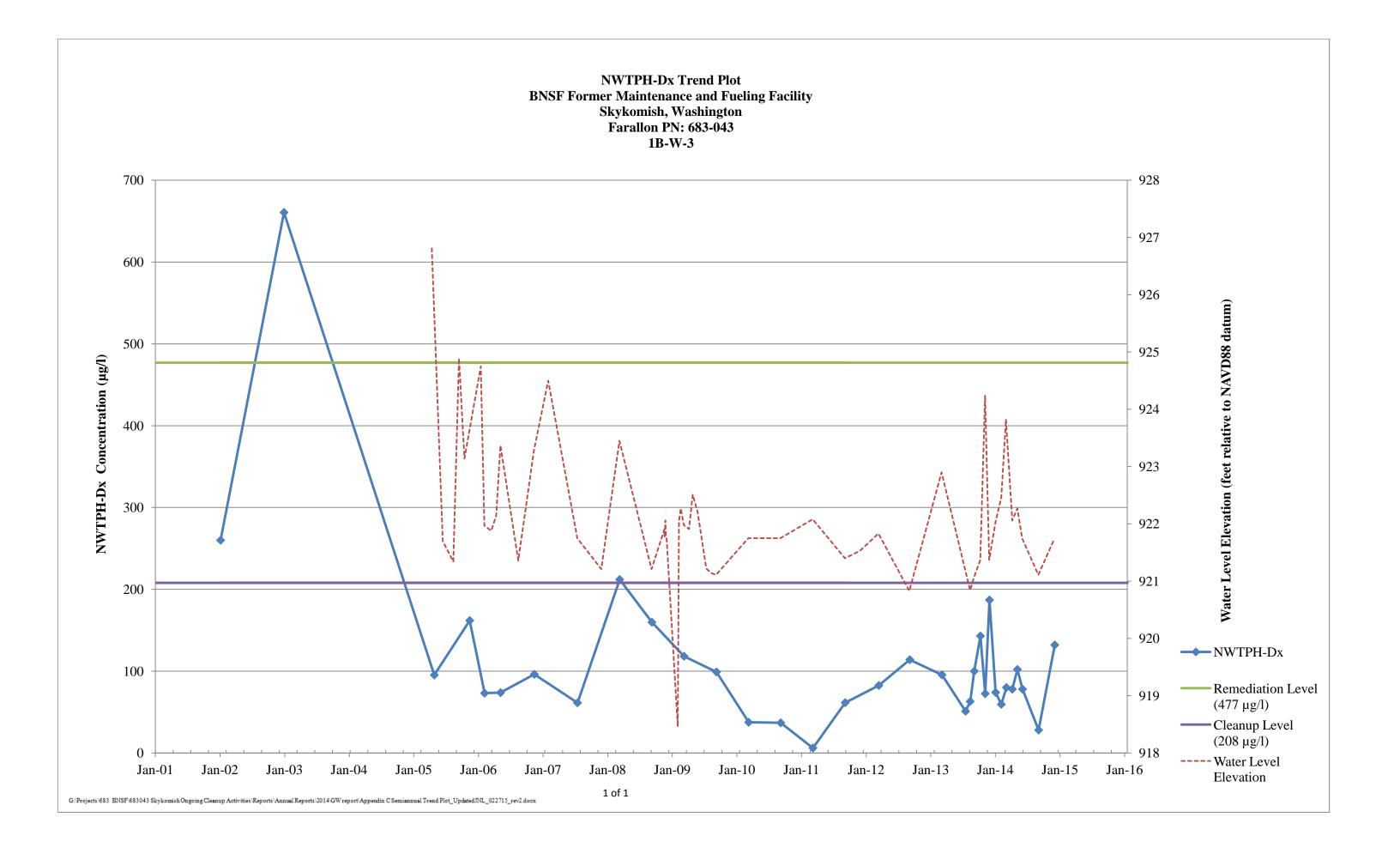


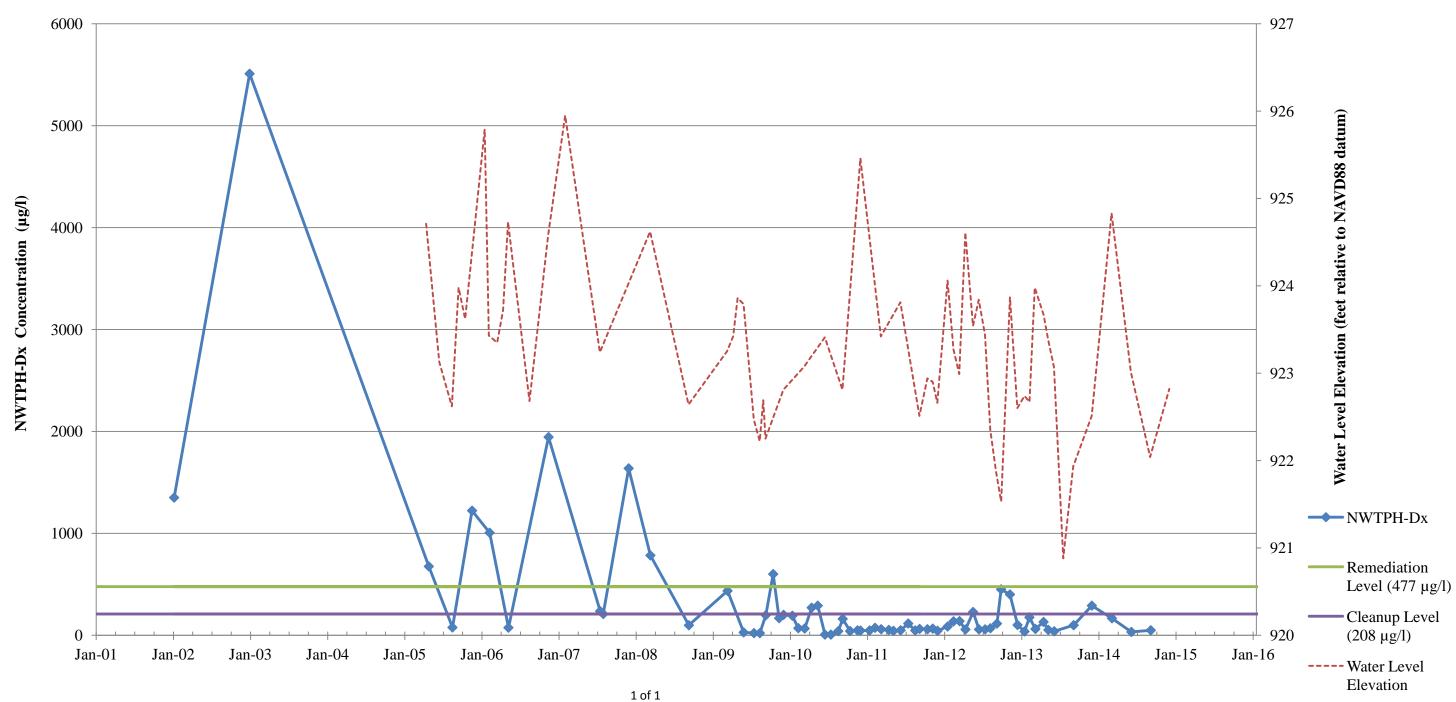
### APPENDIX C

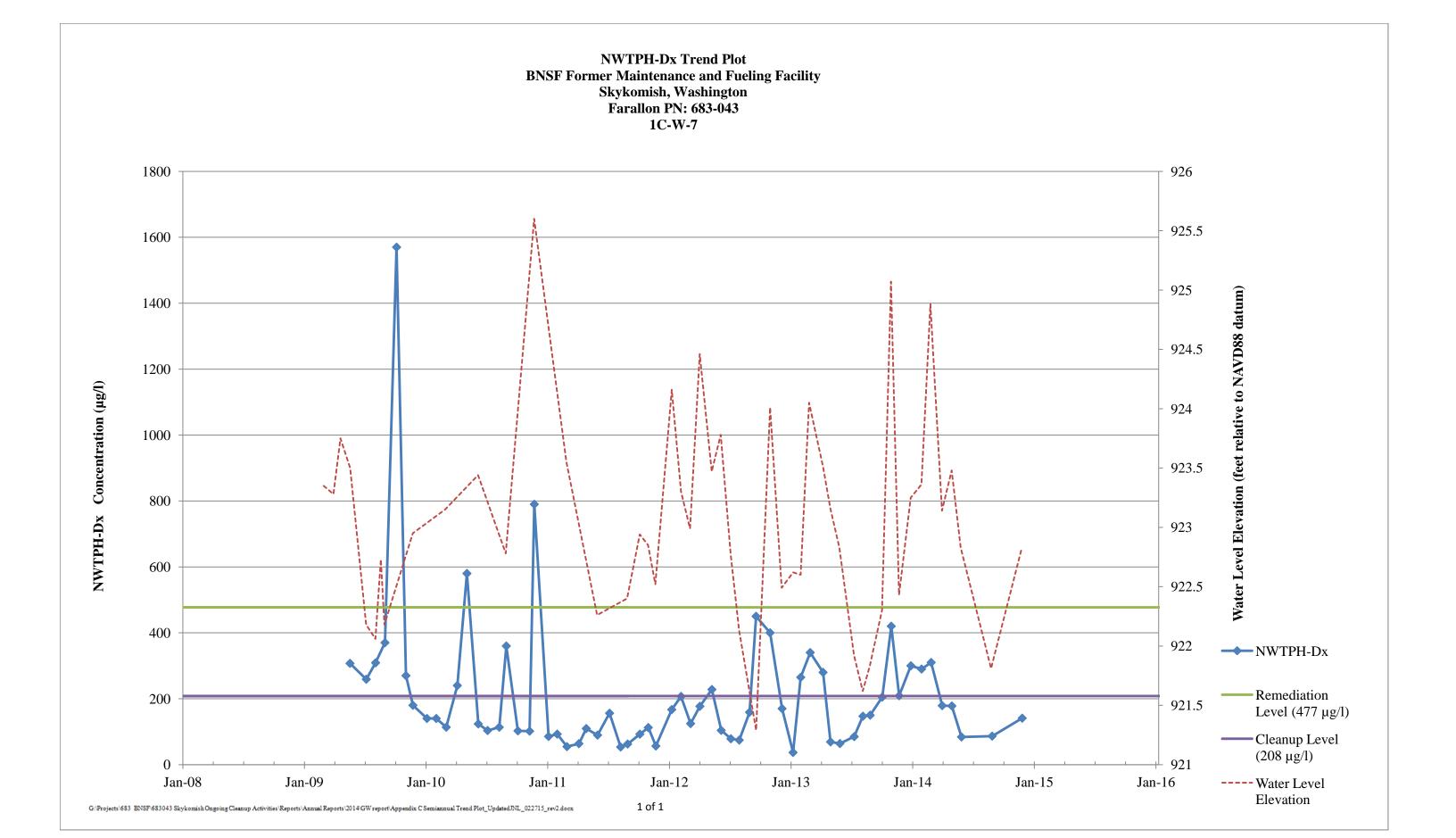
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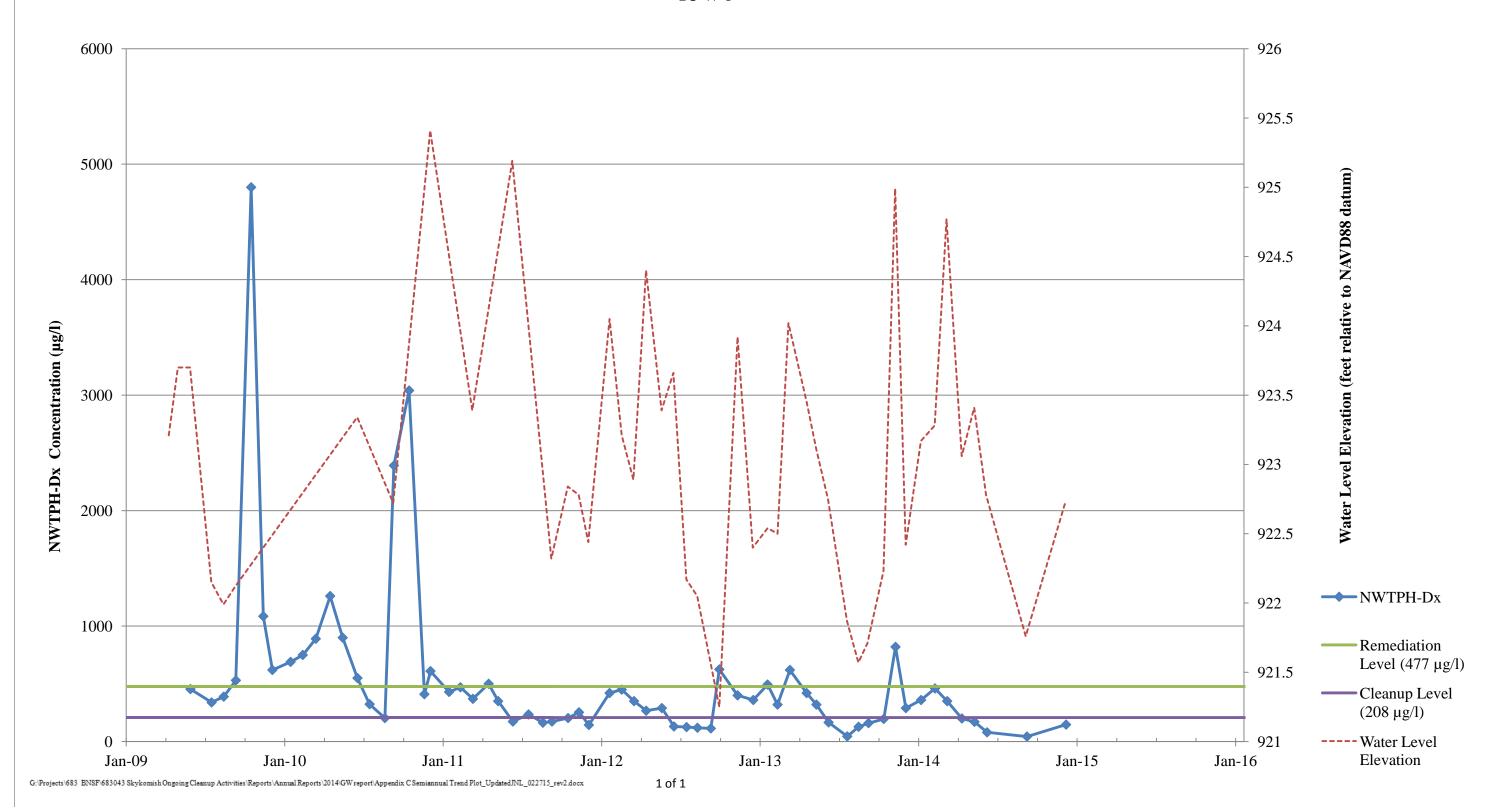
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Farallon PN: 683-043



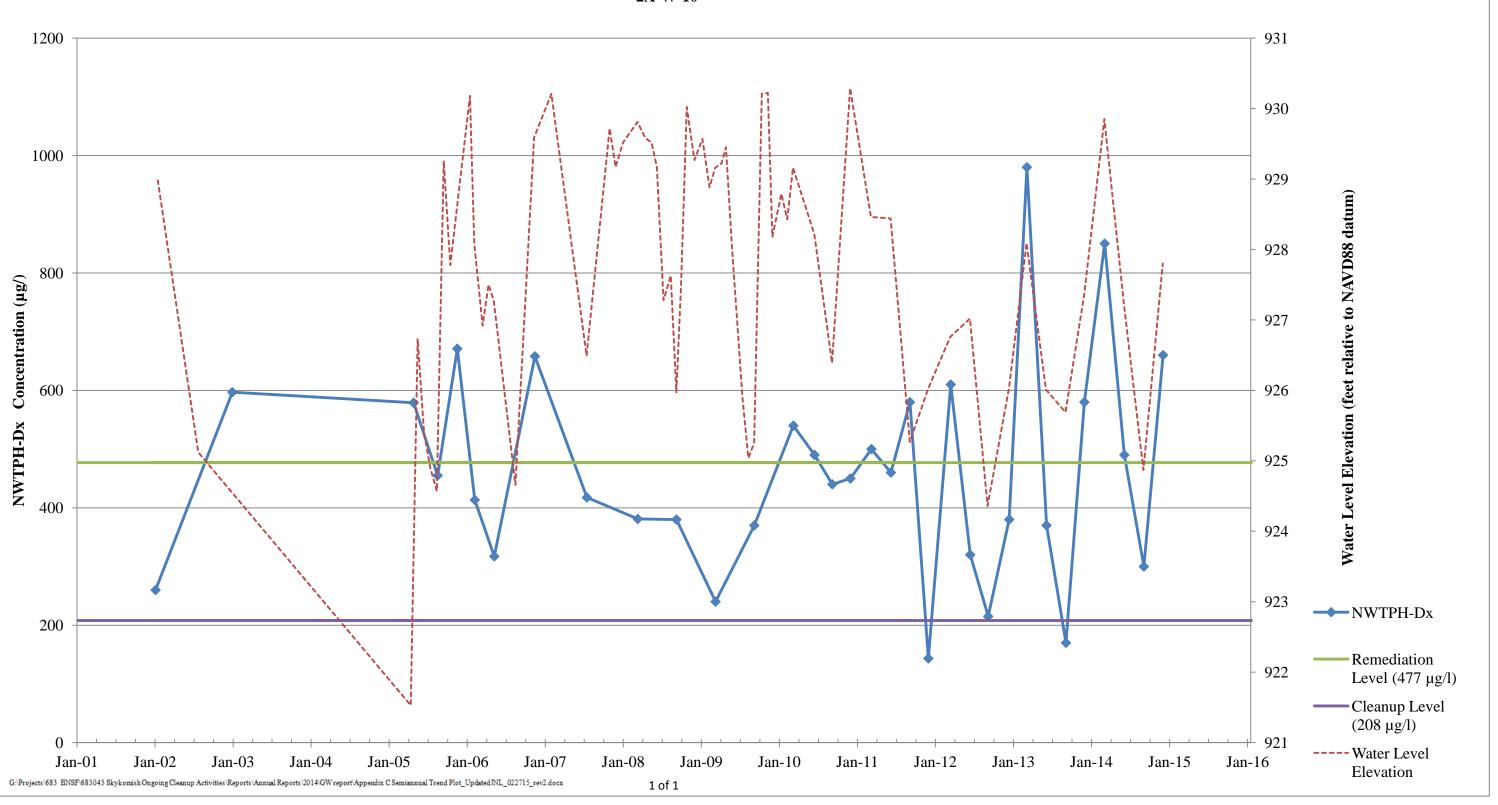


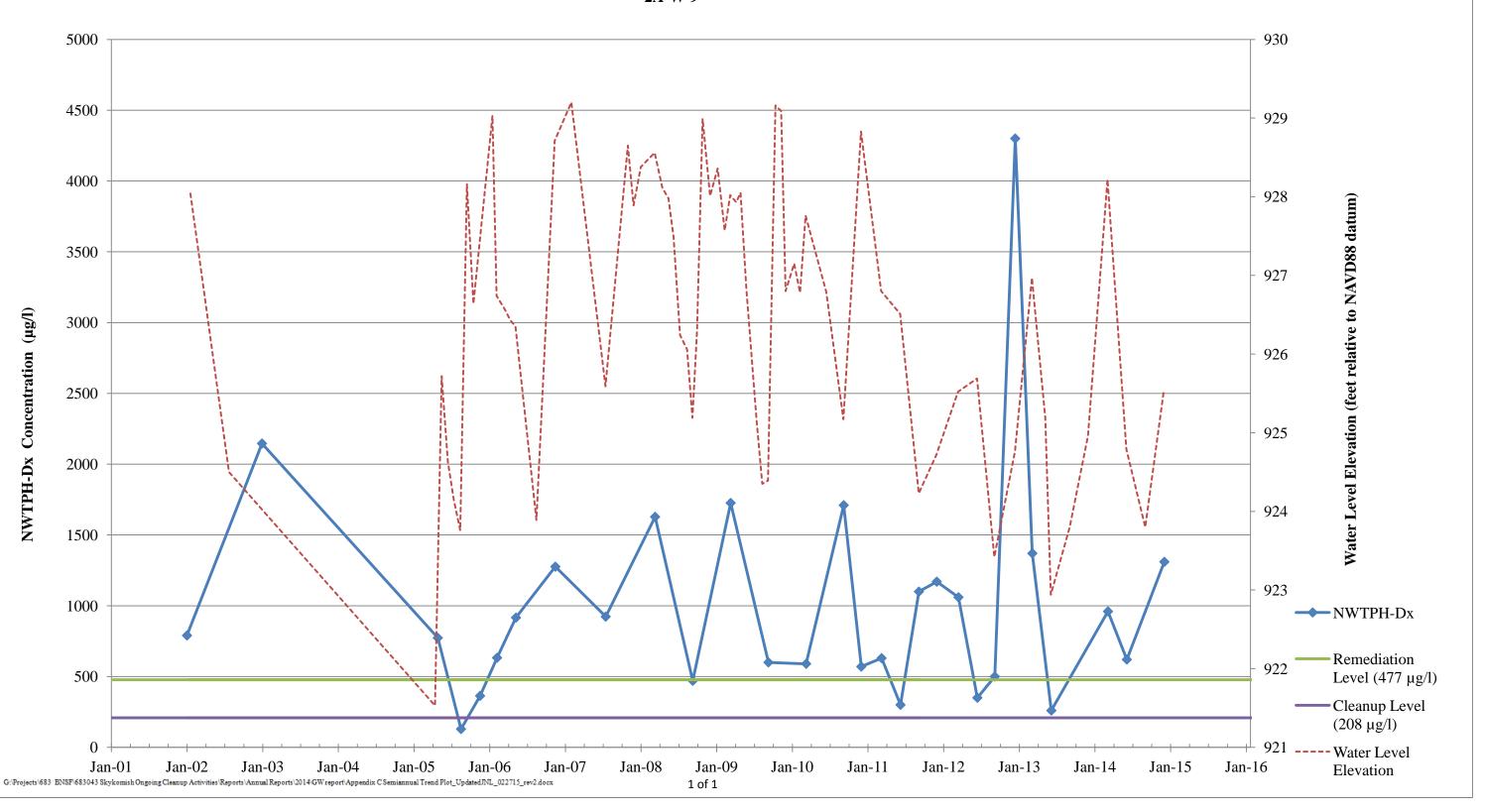


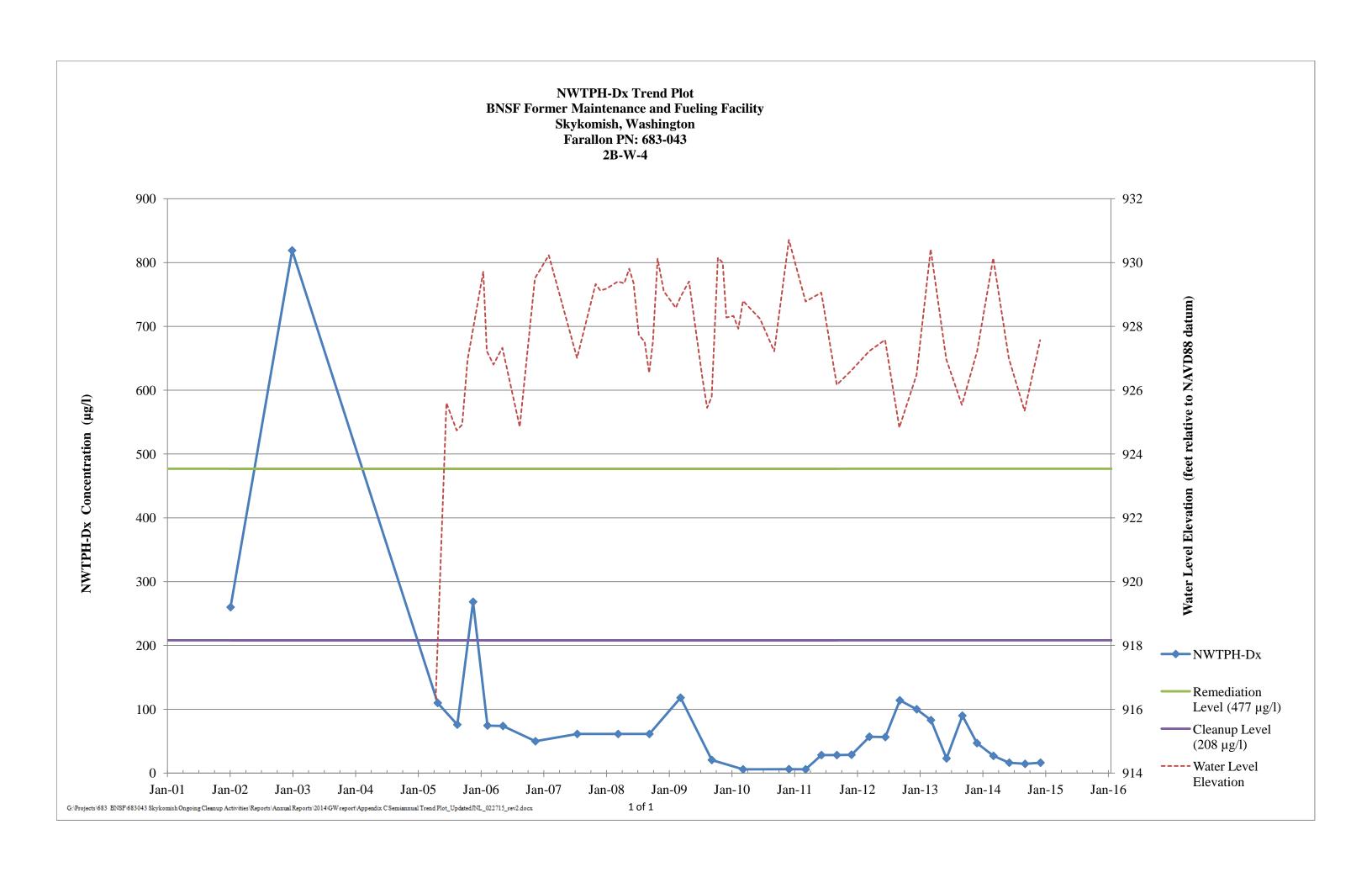


### FMCZ-EW AND SURROUNDING AREAS

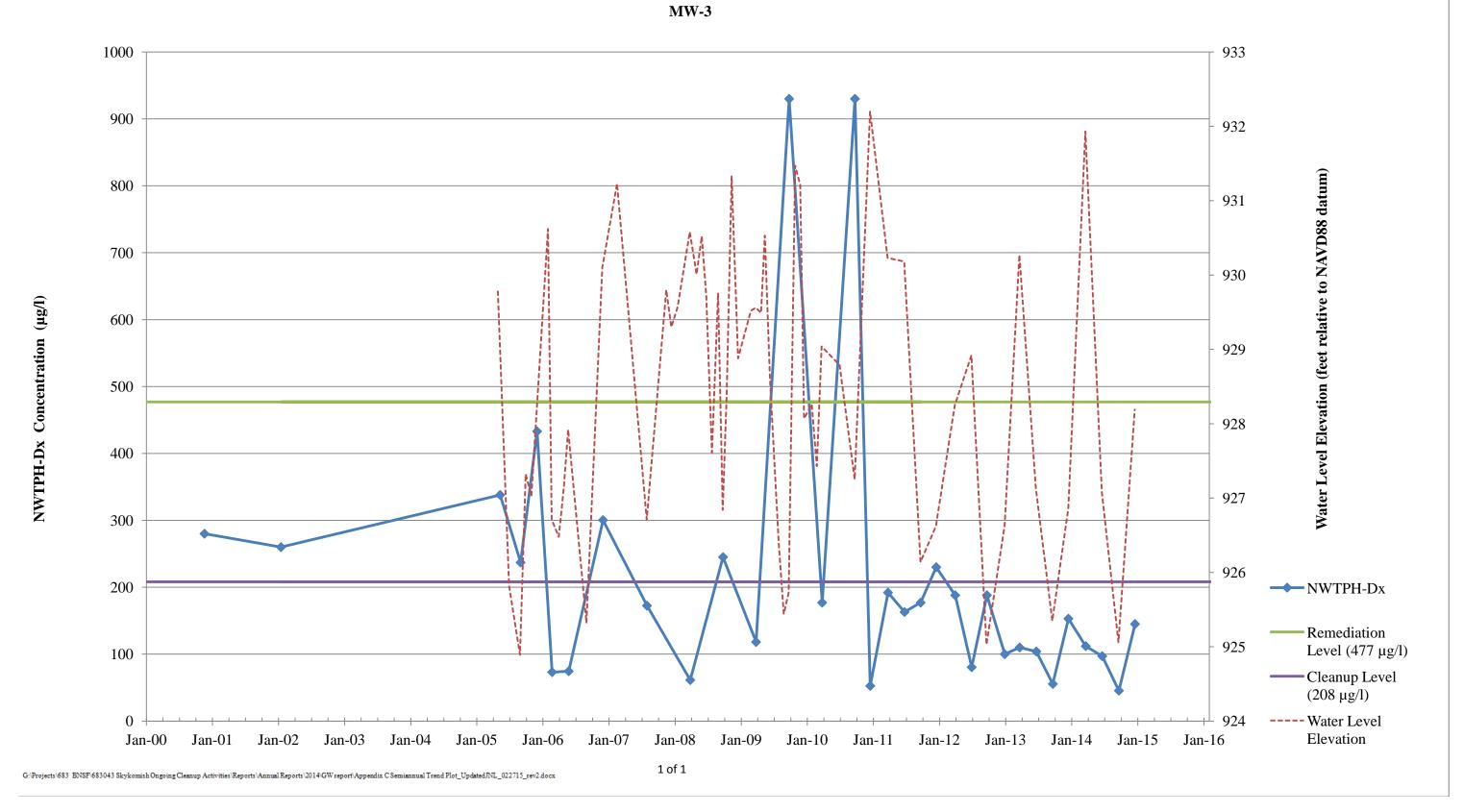
2014 SITE-WIDE GROUNDWATER MONITORING REPORT BNSF Former Maintenance and Fueling Facility Skykomish, Washington Consent Decree No. 07-2-33672-9 SEA







NWTPH-Dx Trend Plot
BNSF Former Maintenance and Fueling Facility
Skykomish, Washington
Farallon PN: 683-043

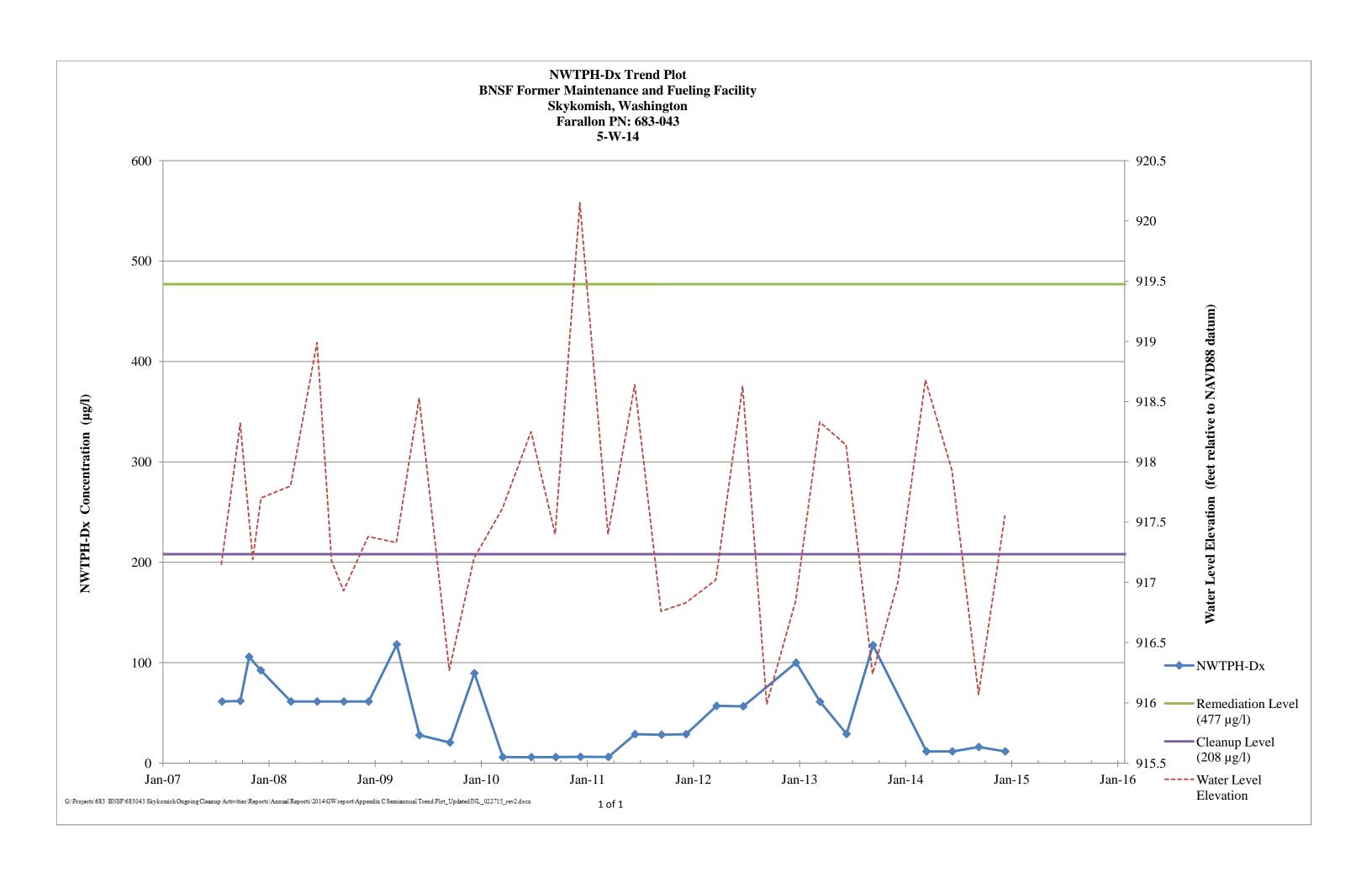


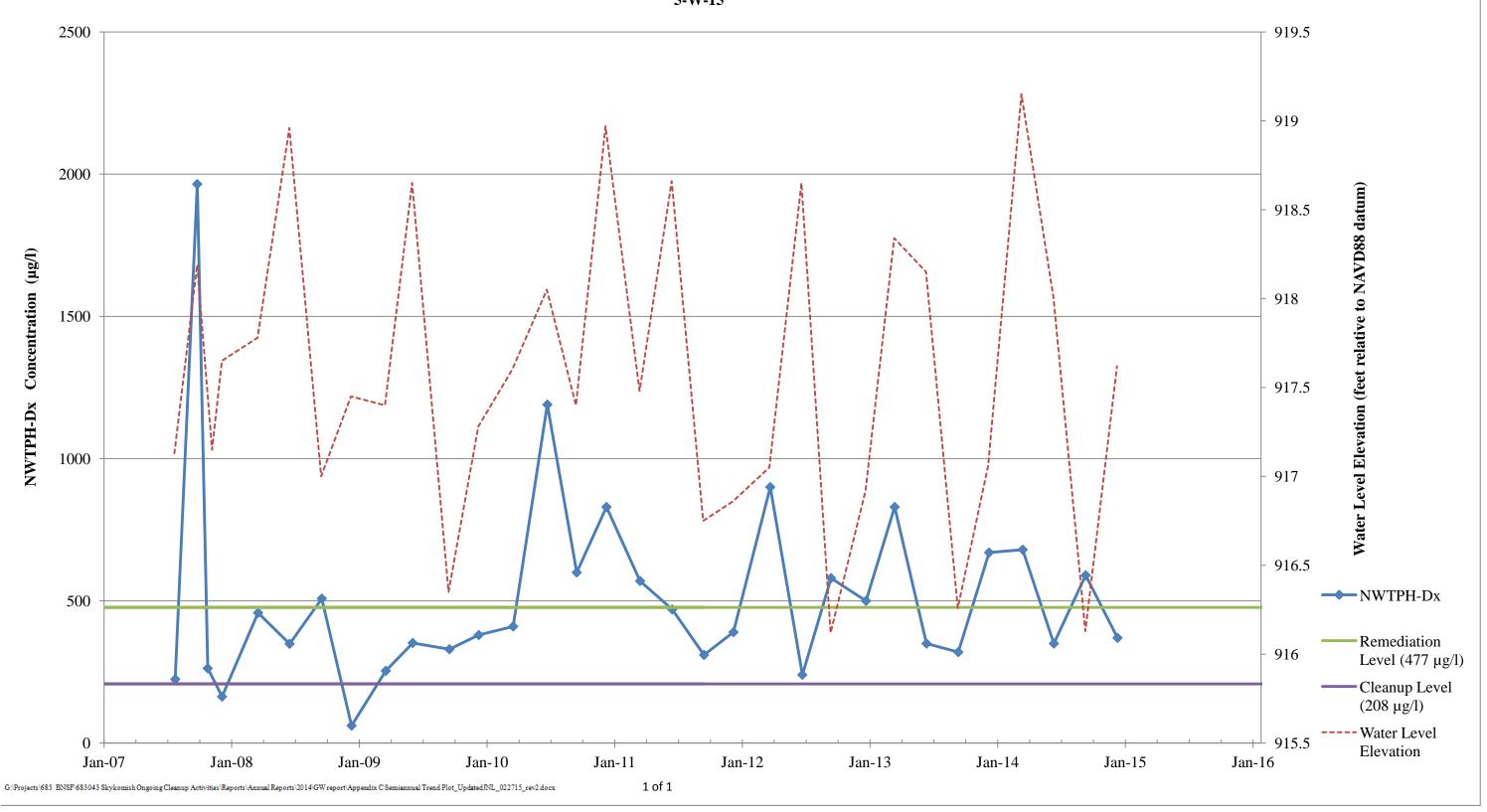
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Farallon PN: 683-043
MW-4

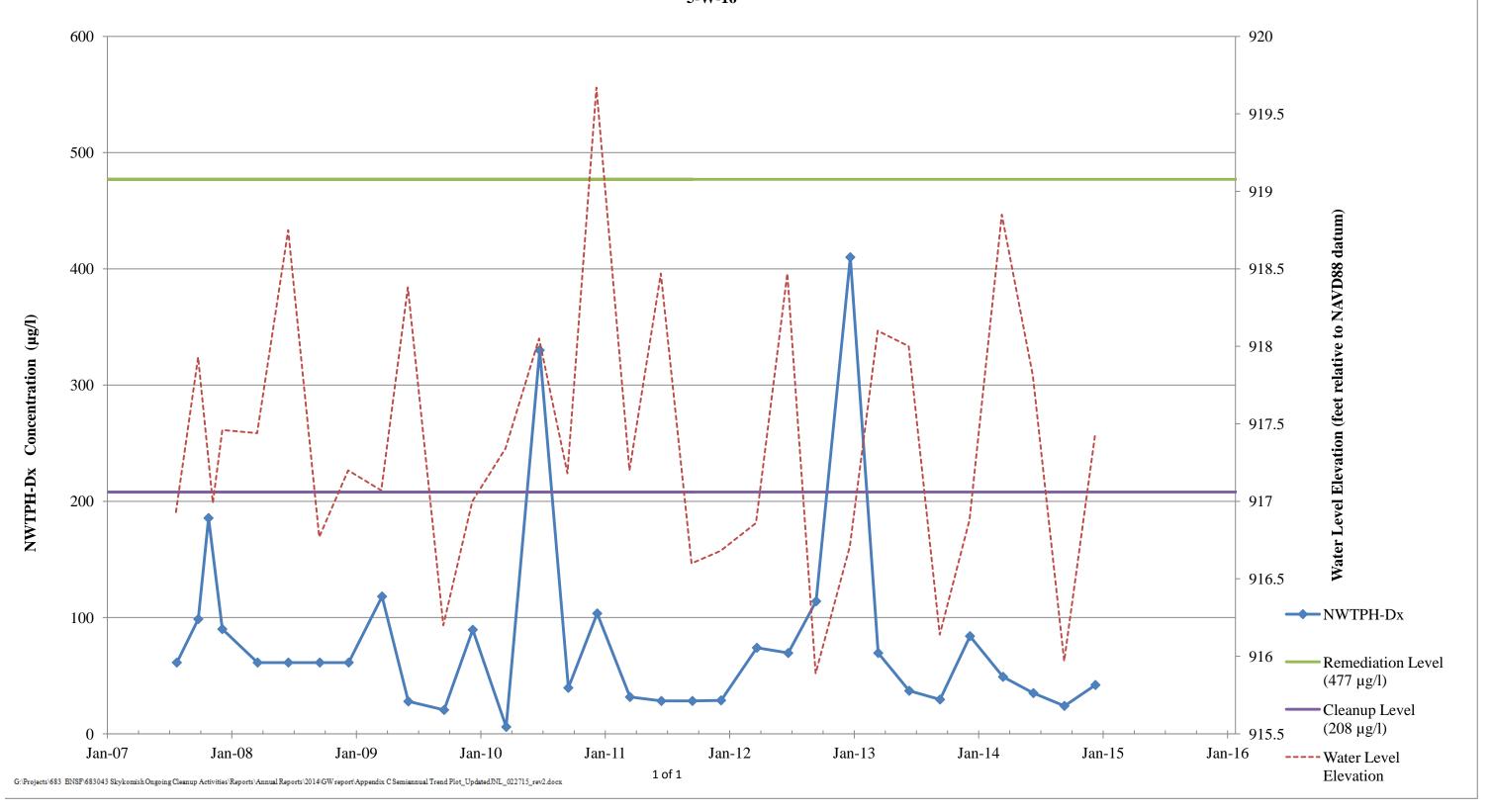


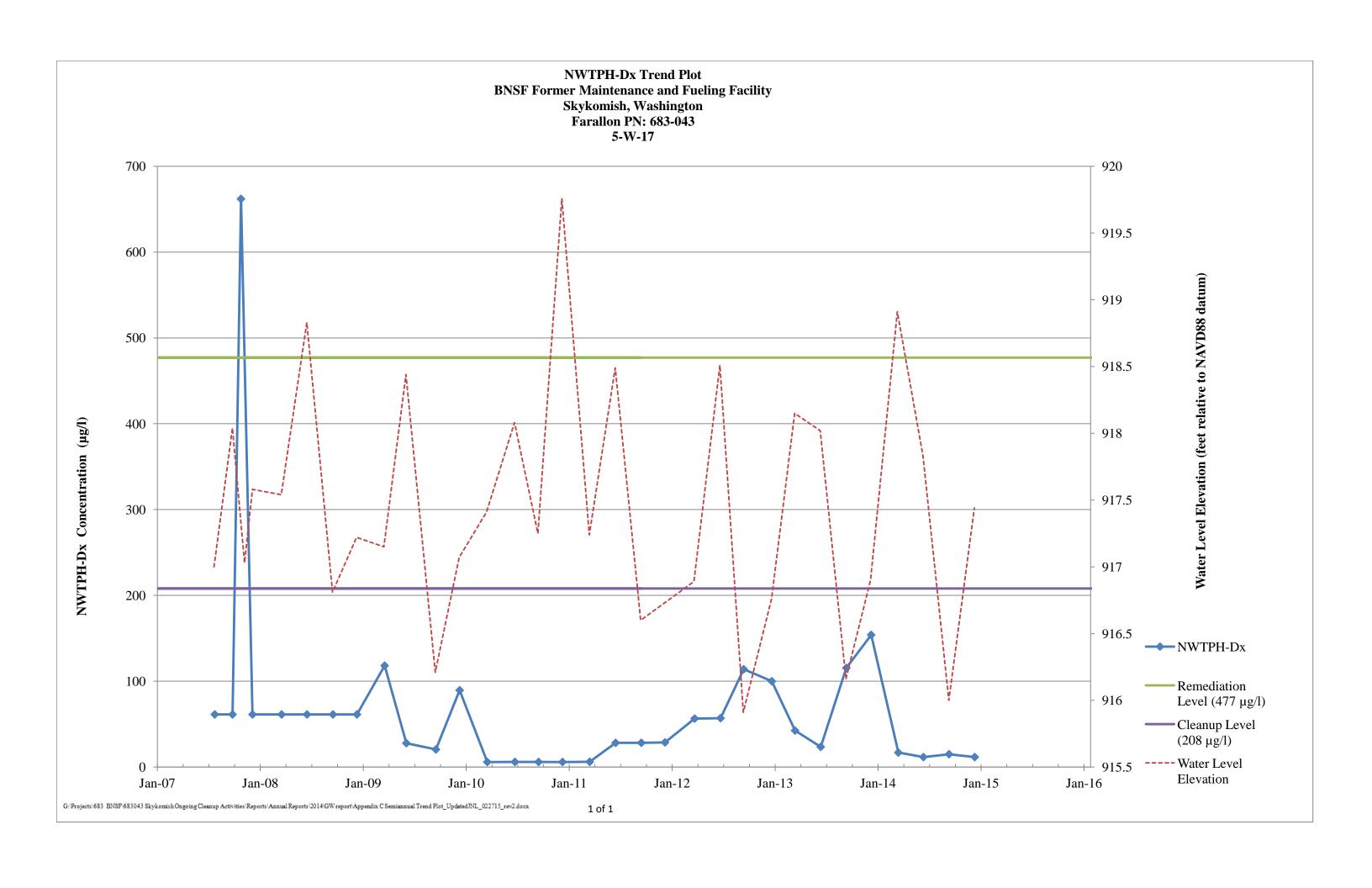
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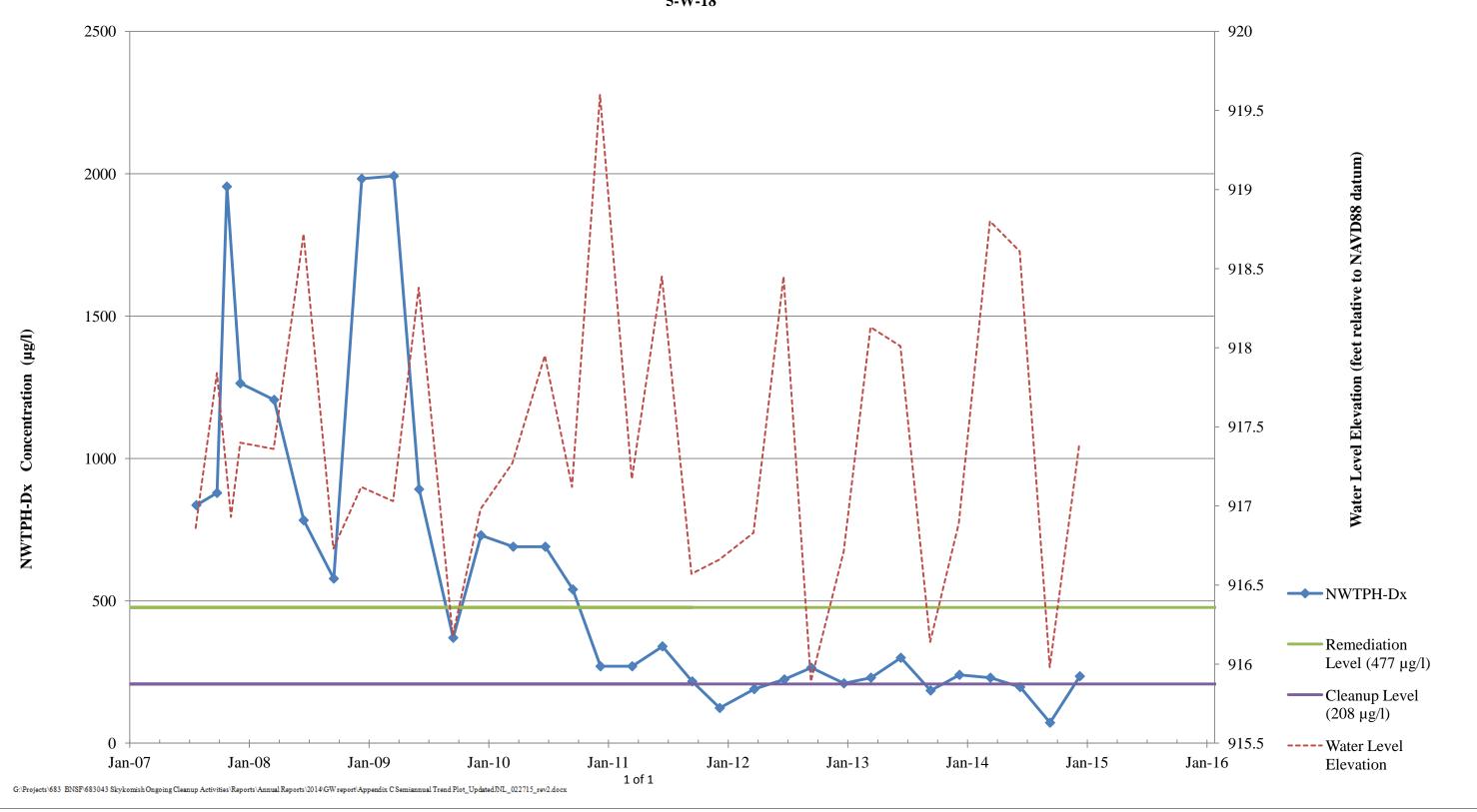
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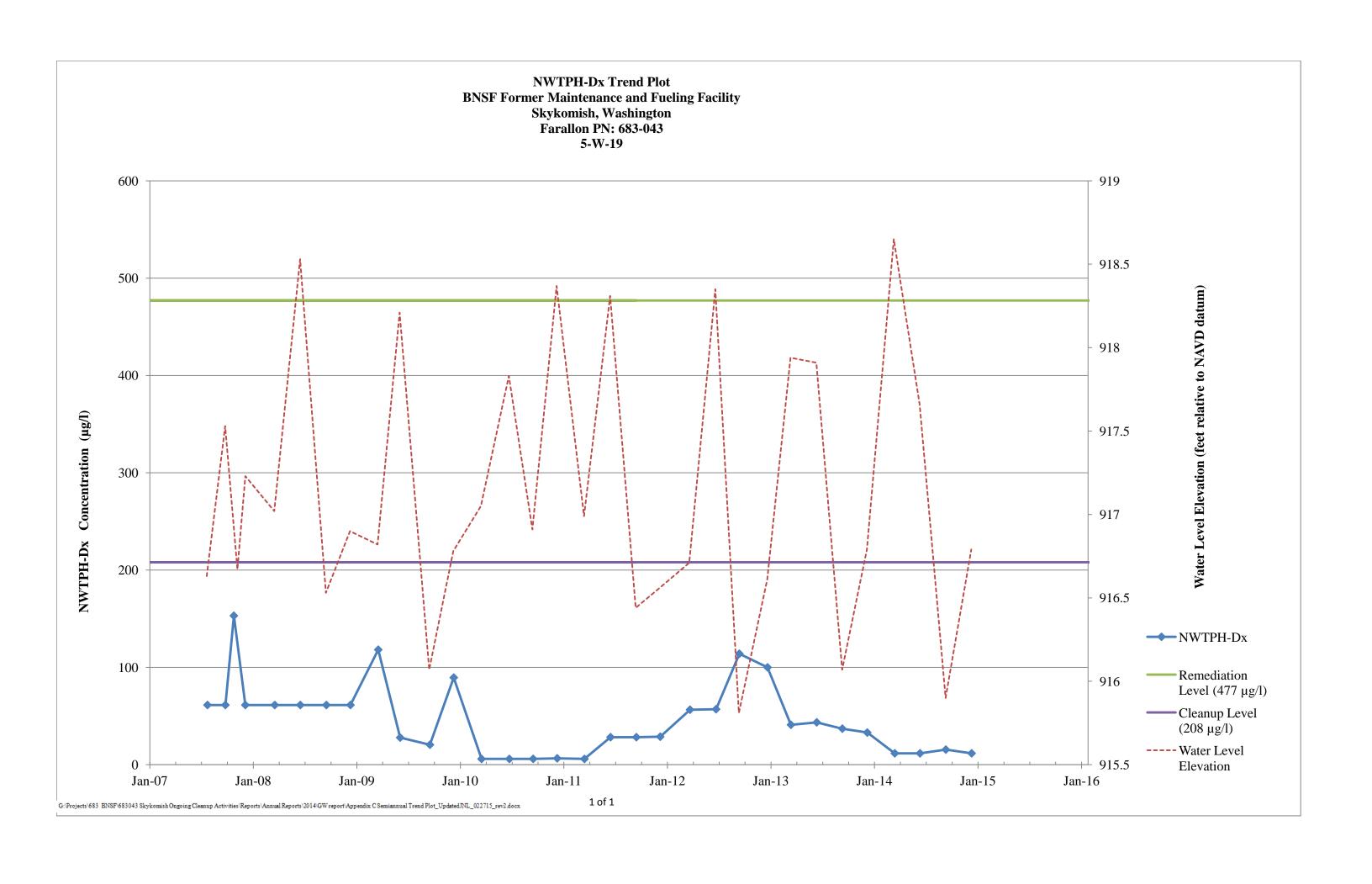






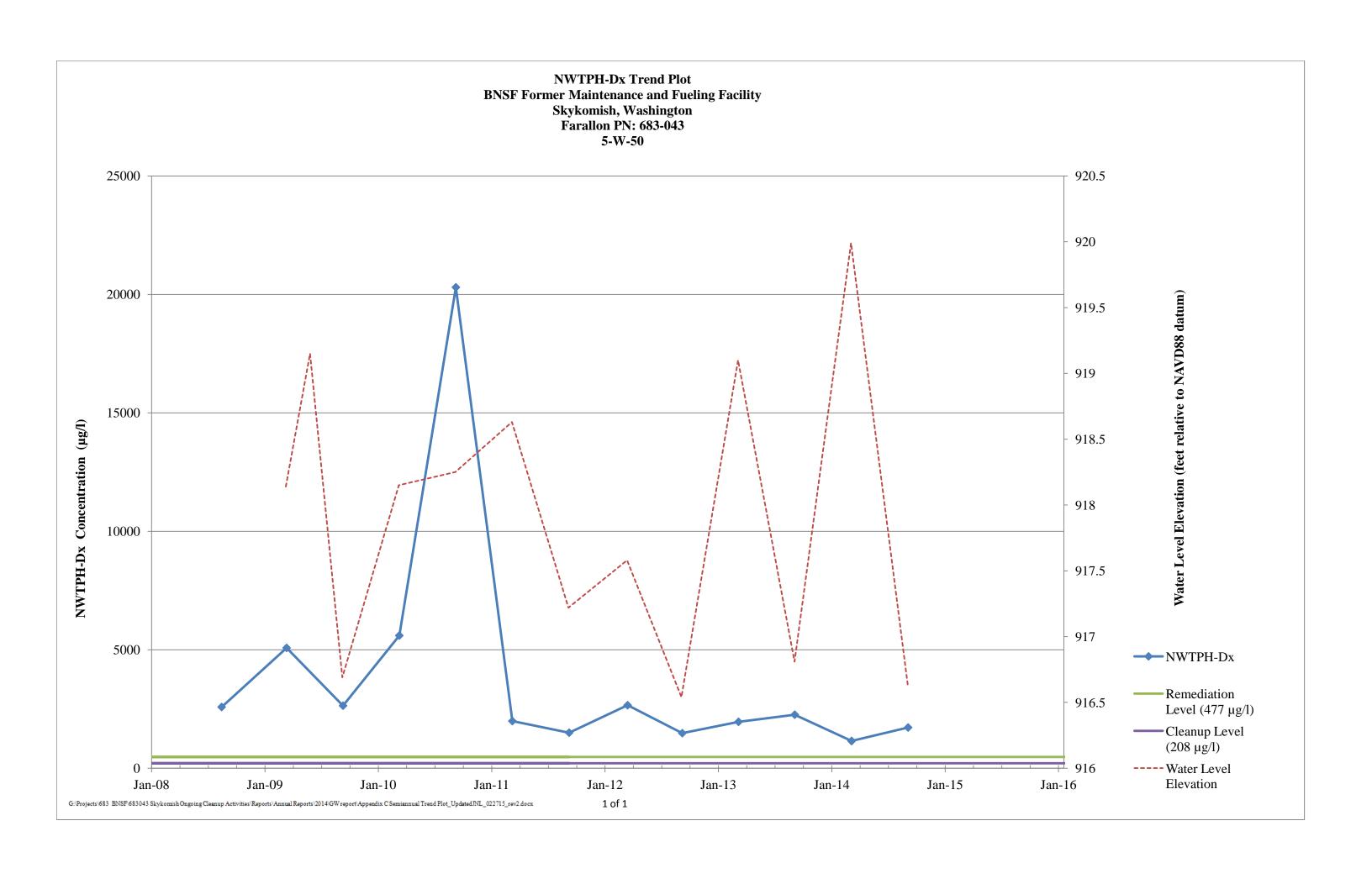


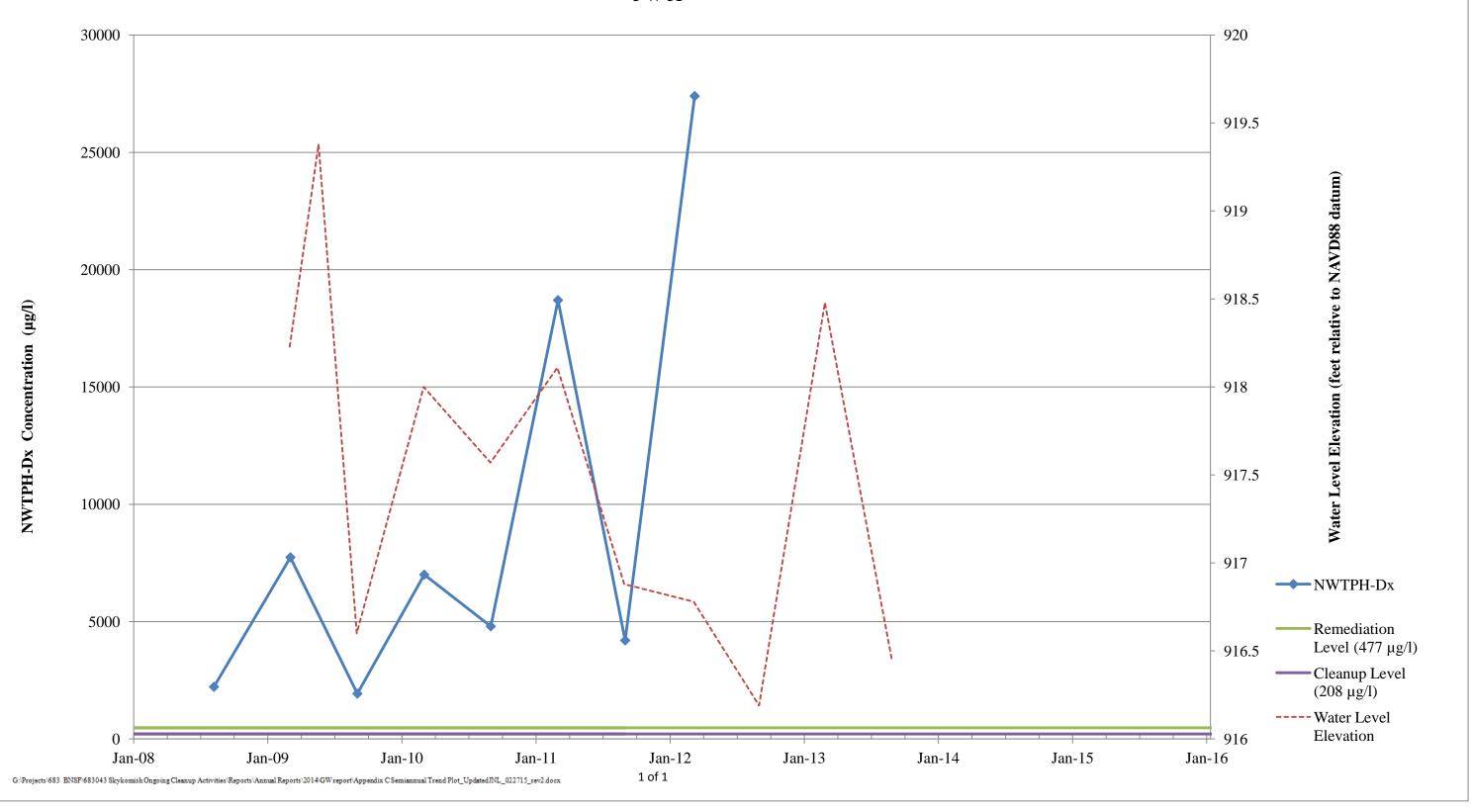


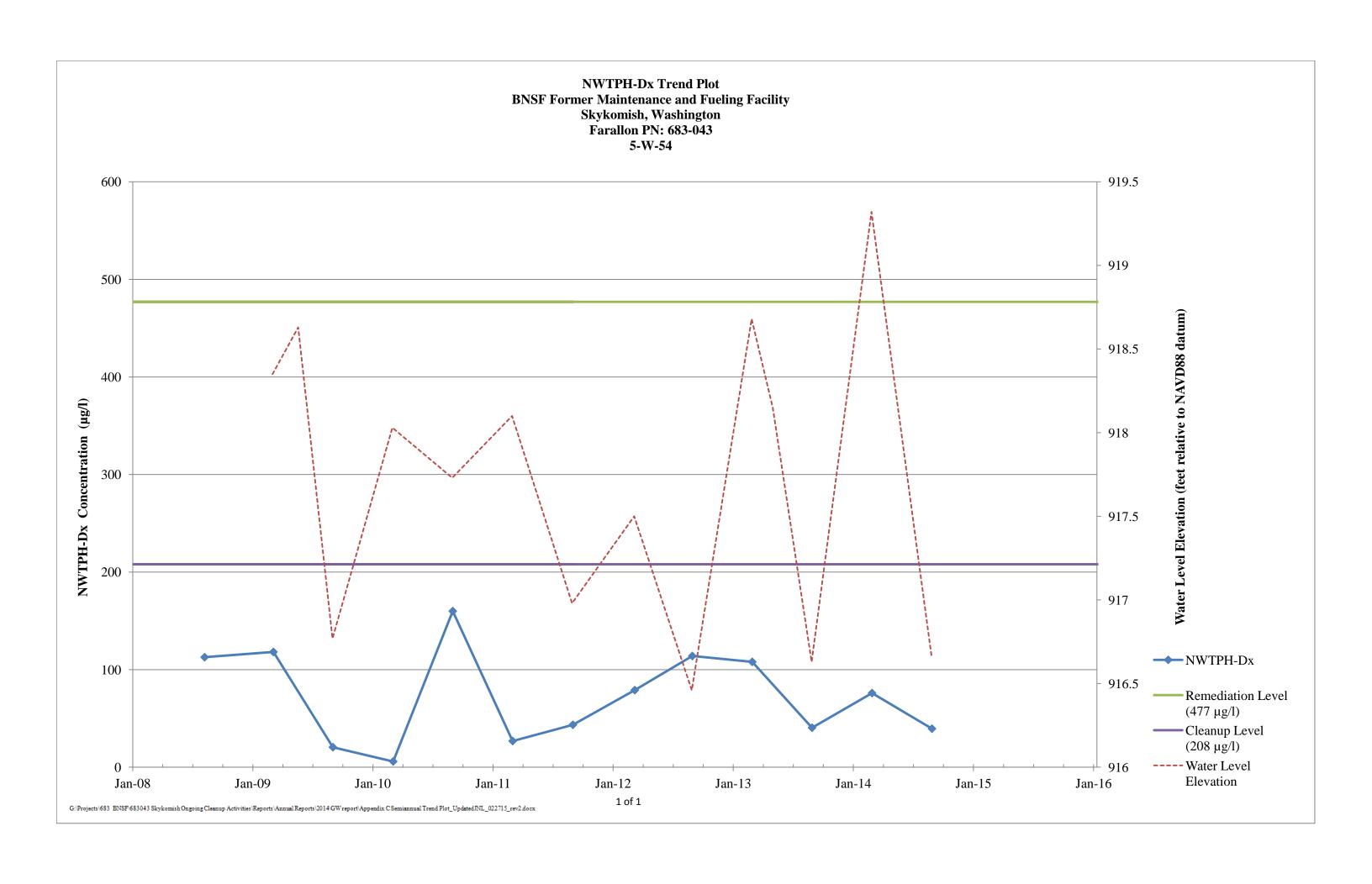


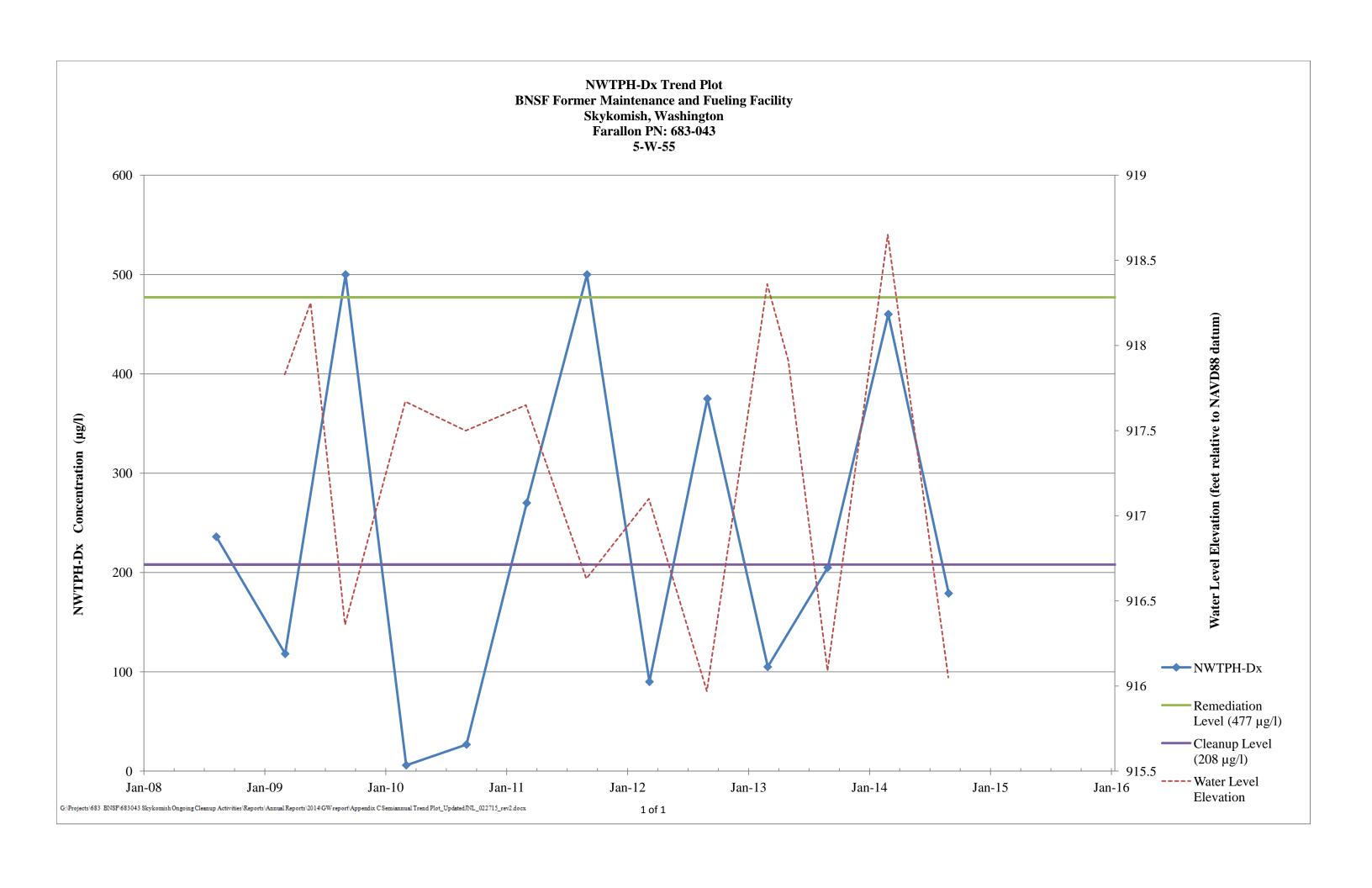
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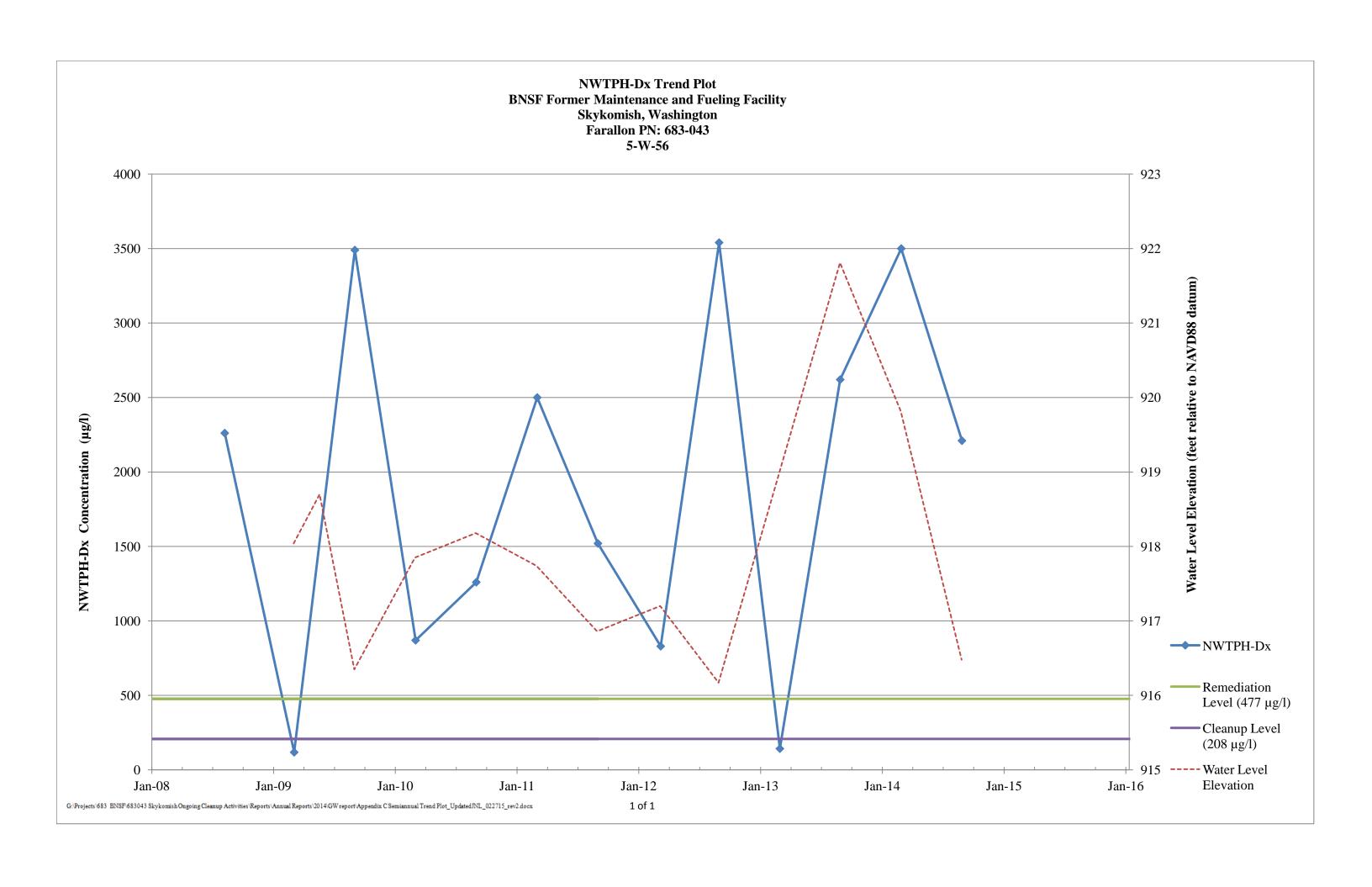
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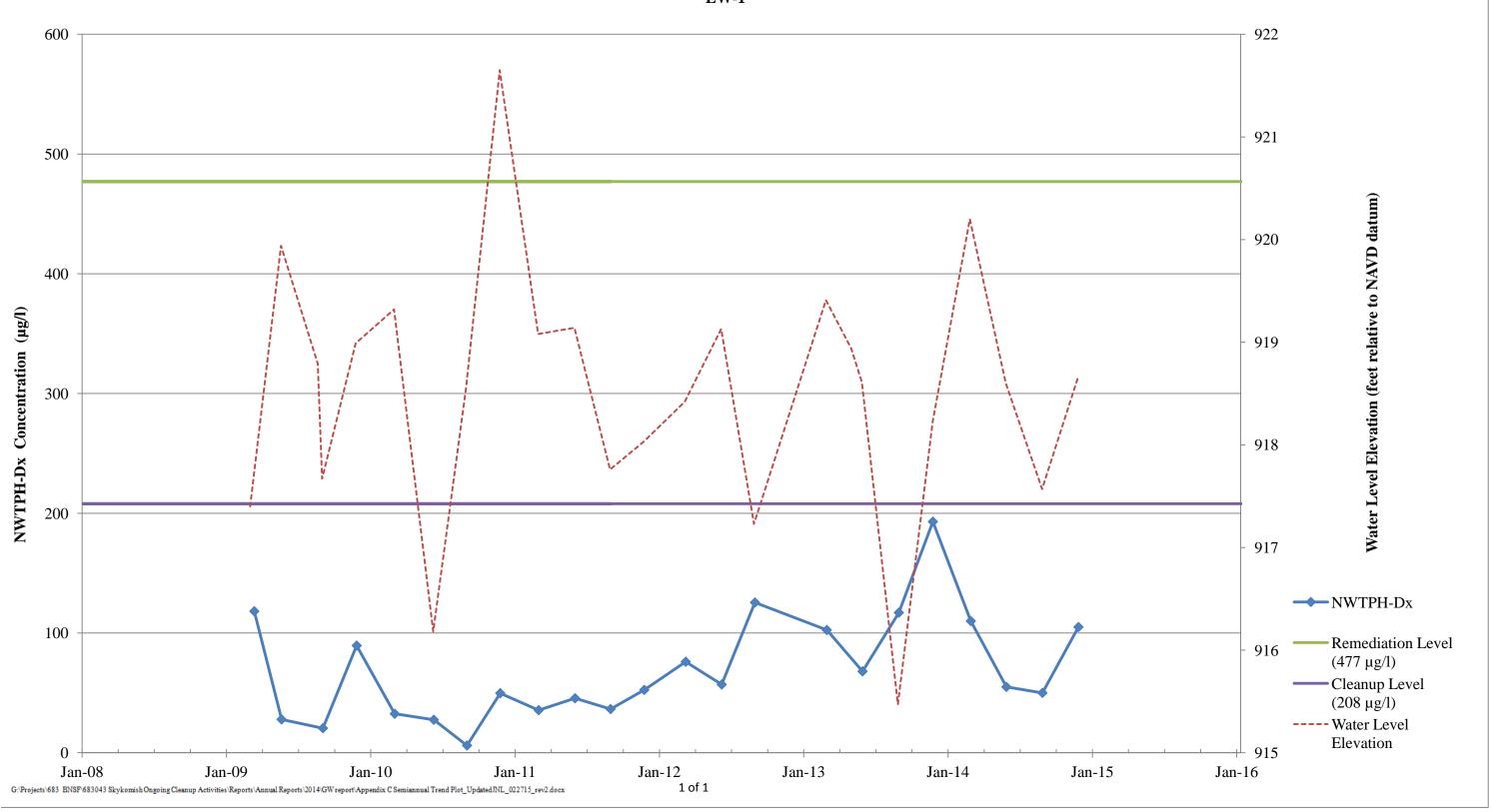


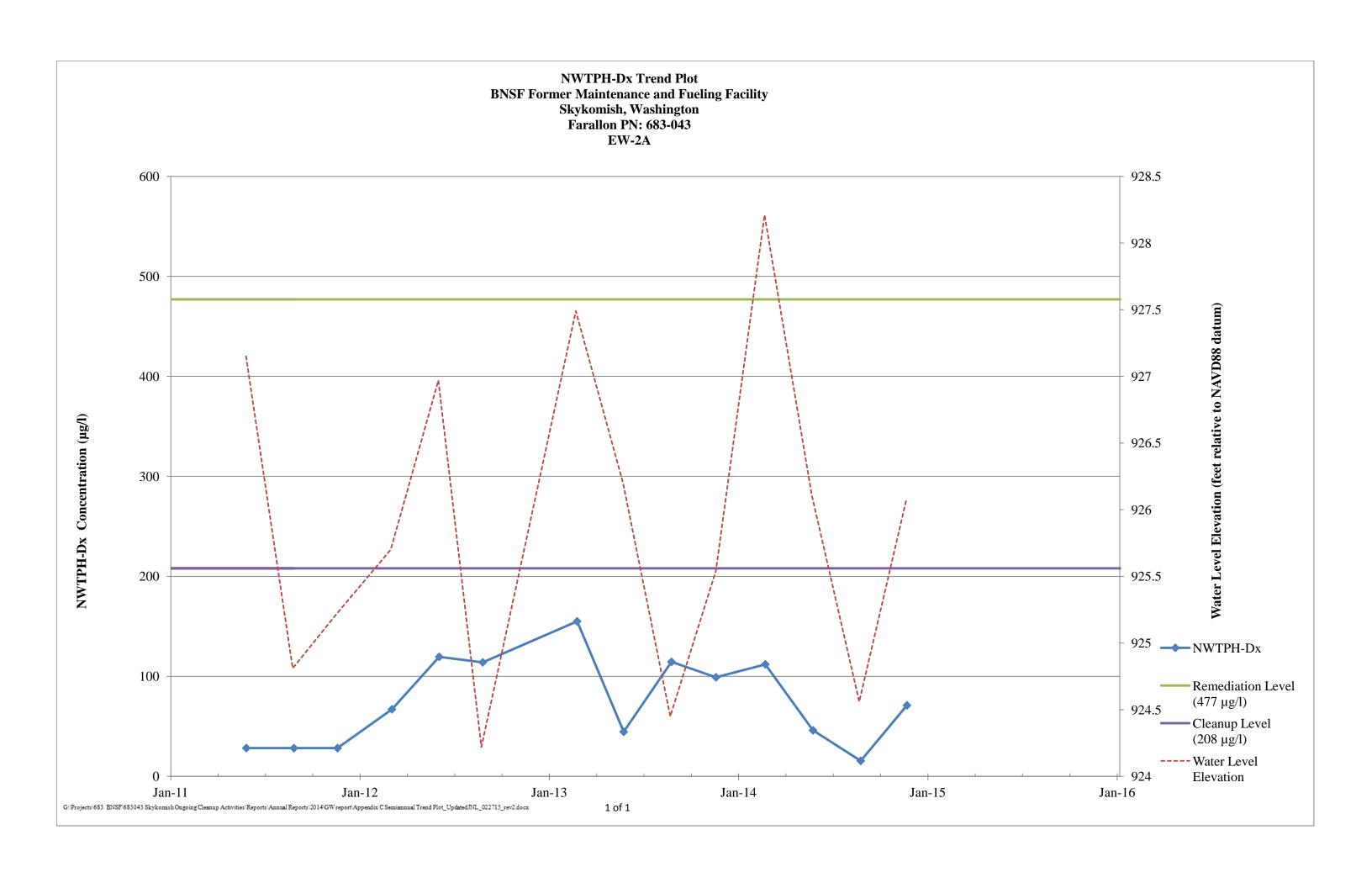


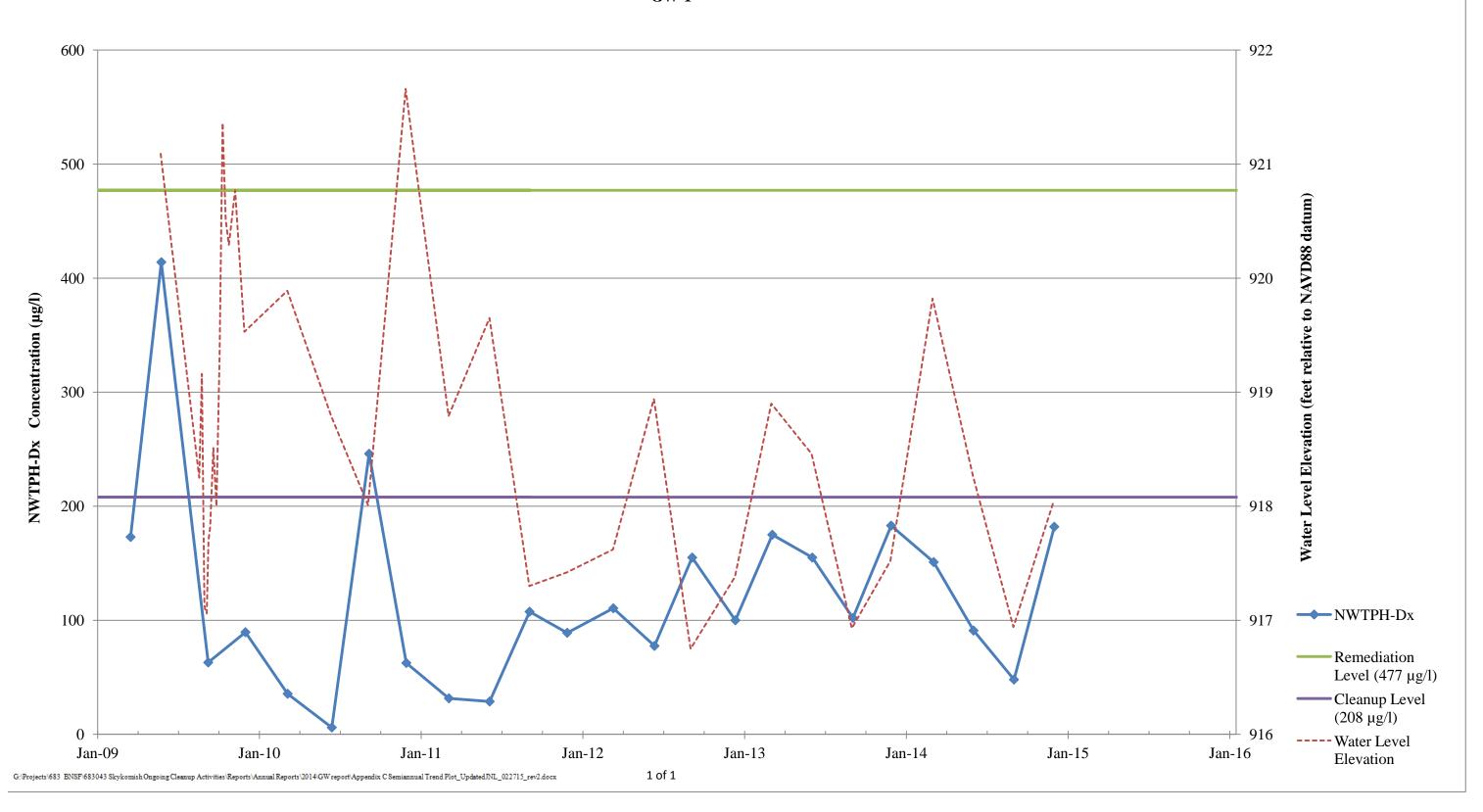


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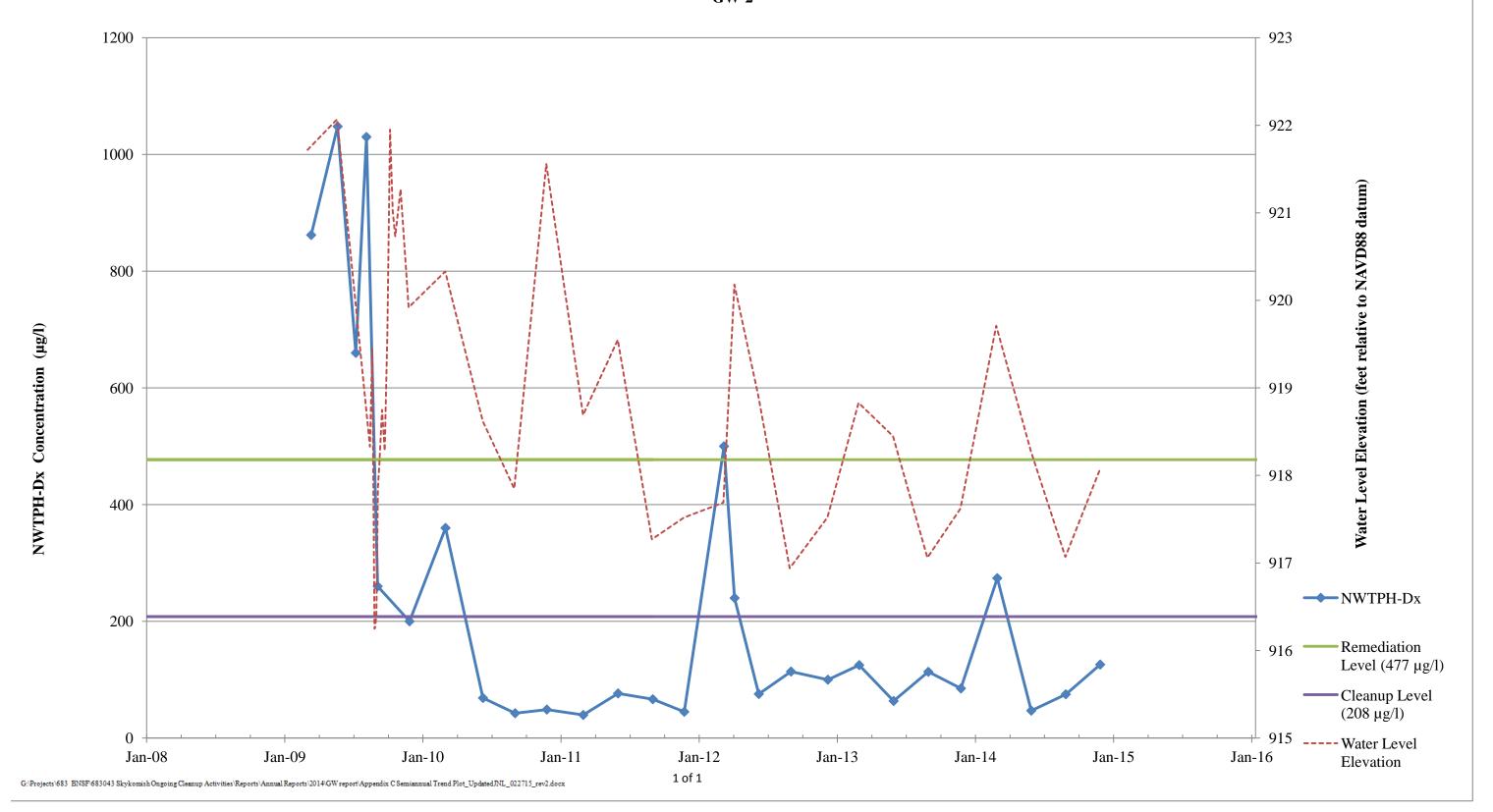
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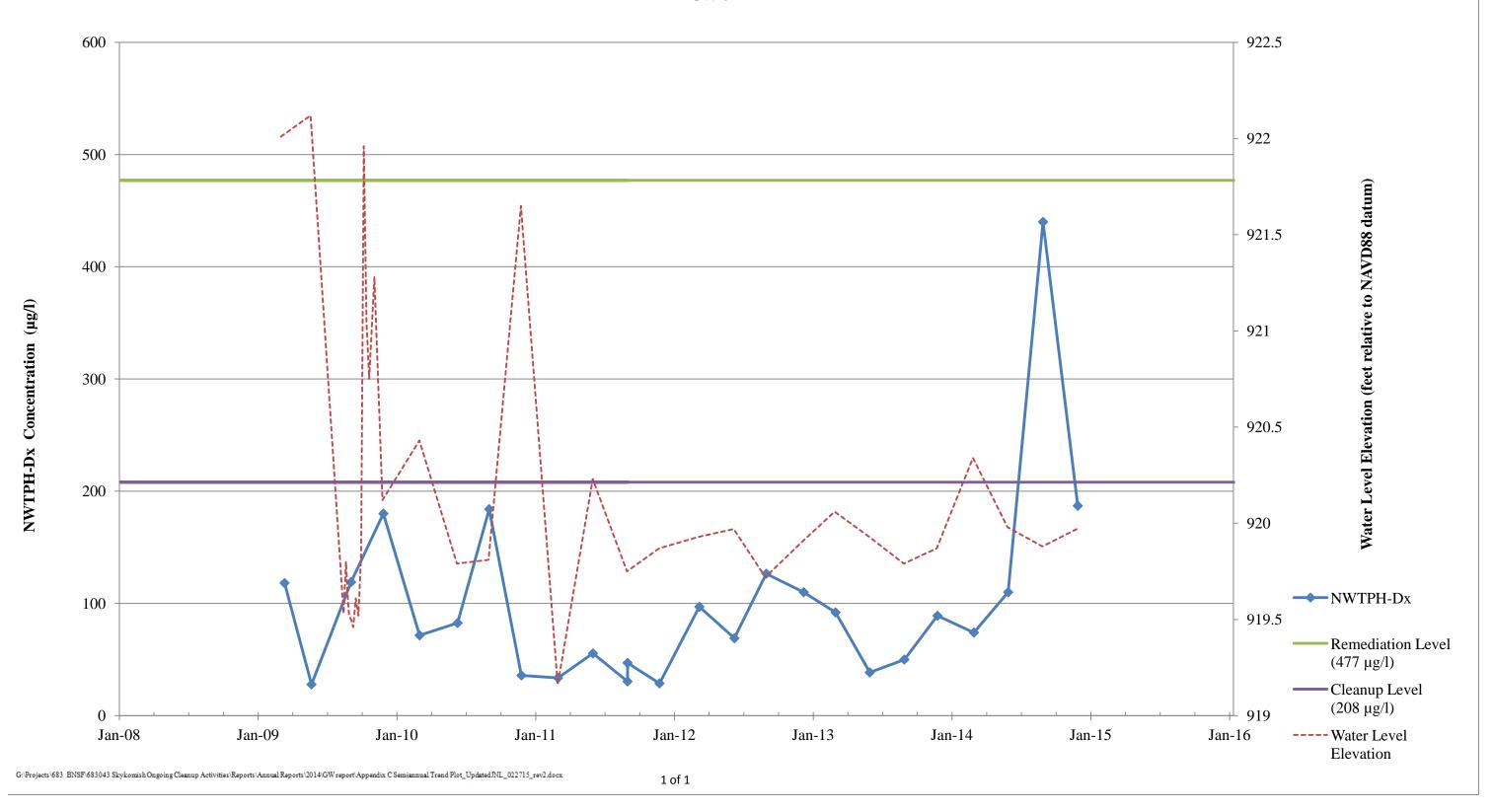


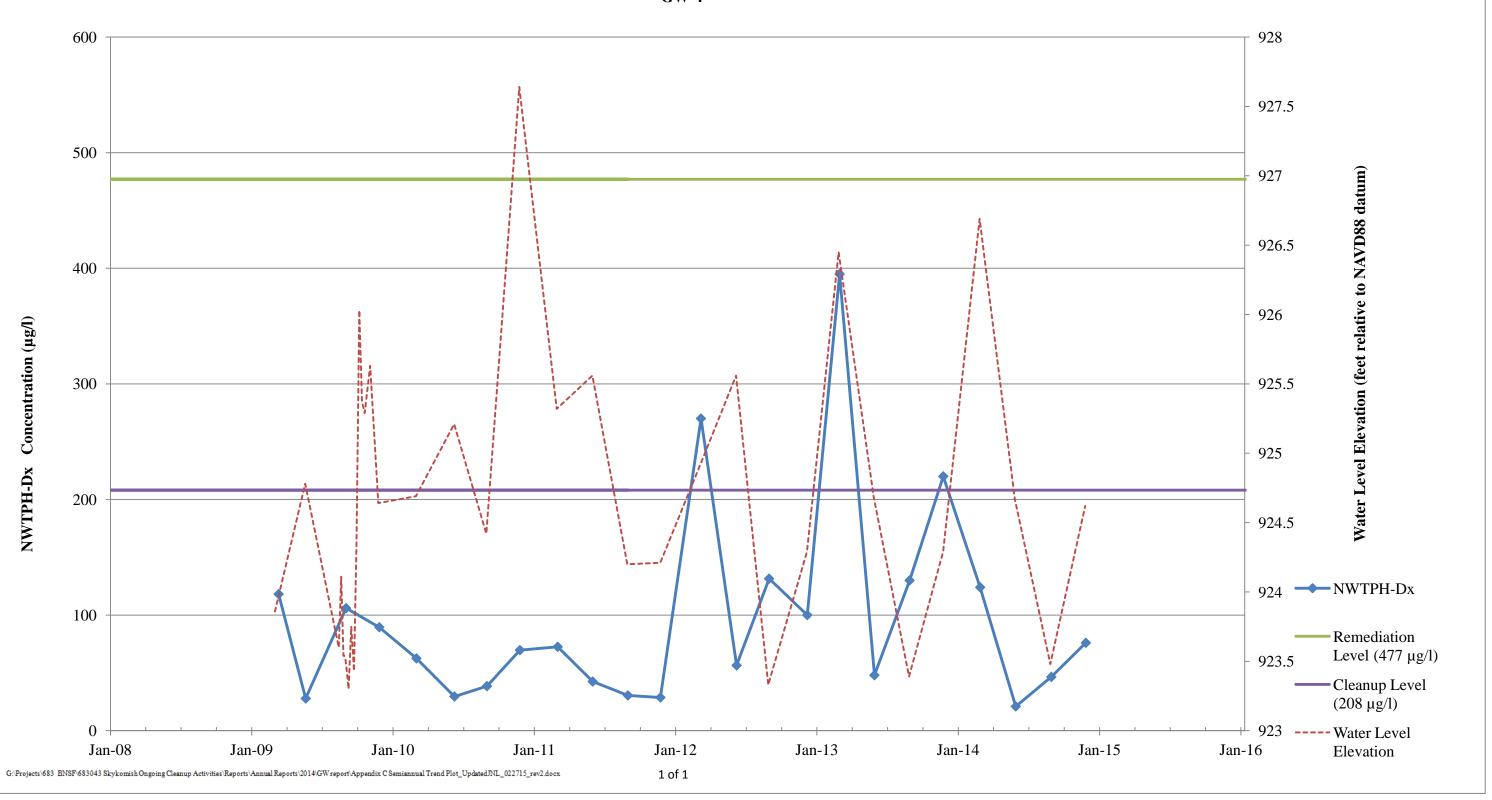


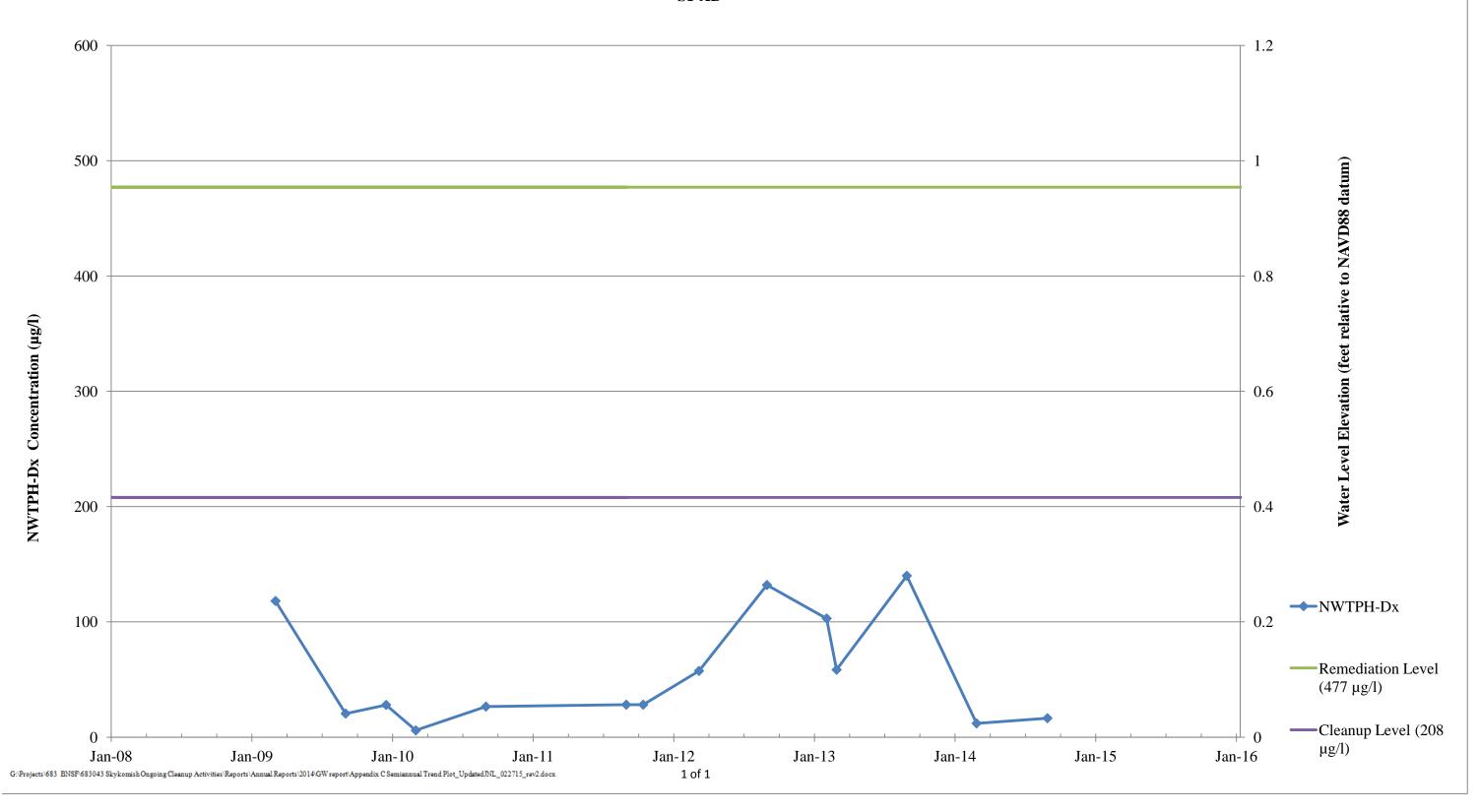
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Skykomish, Washington
Farallon PN: 683-043
GW-2

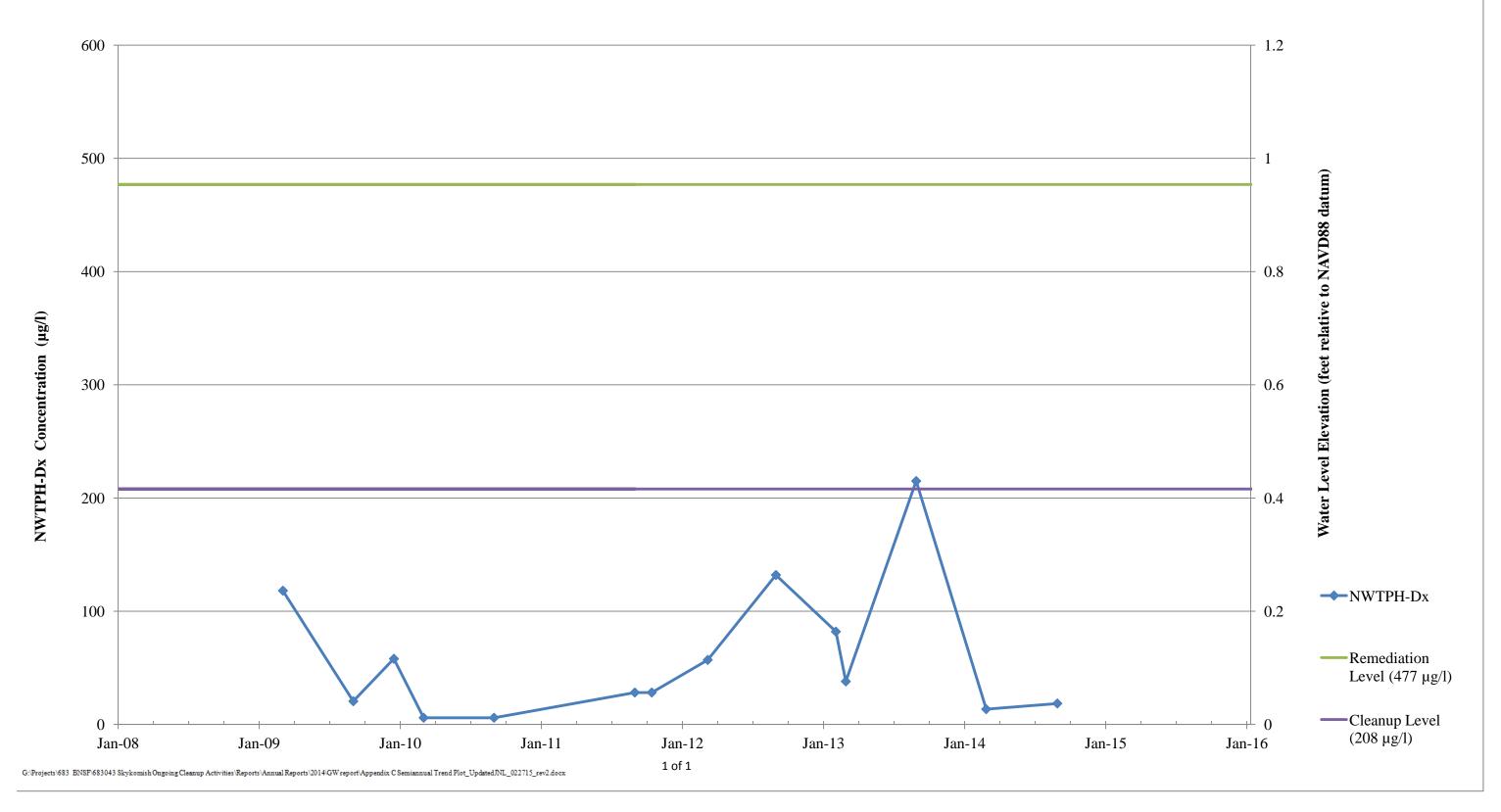


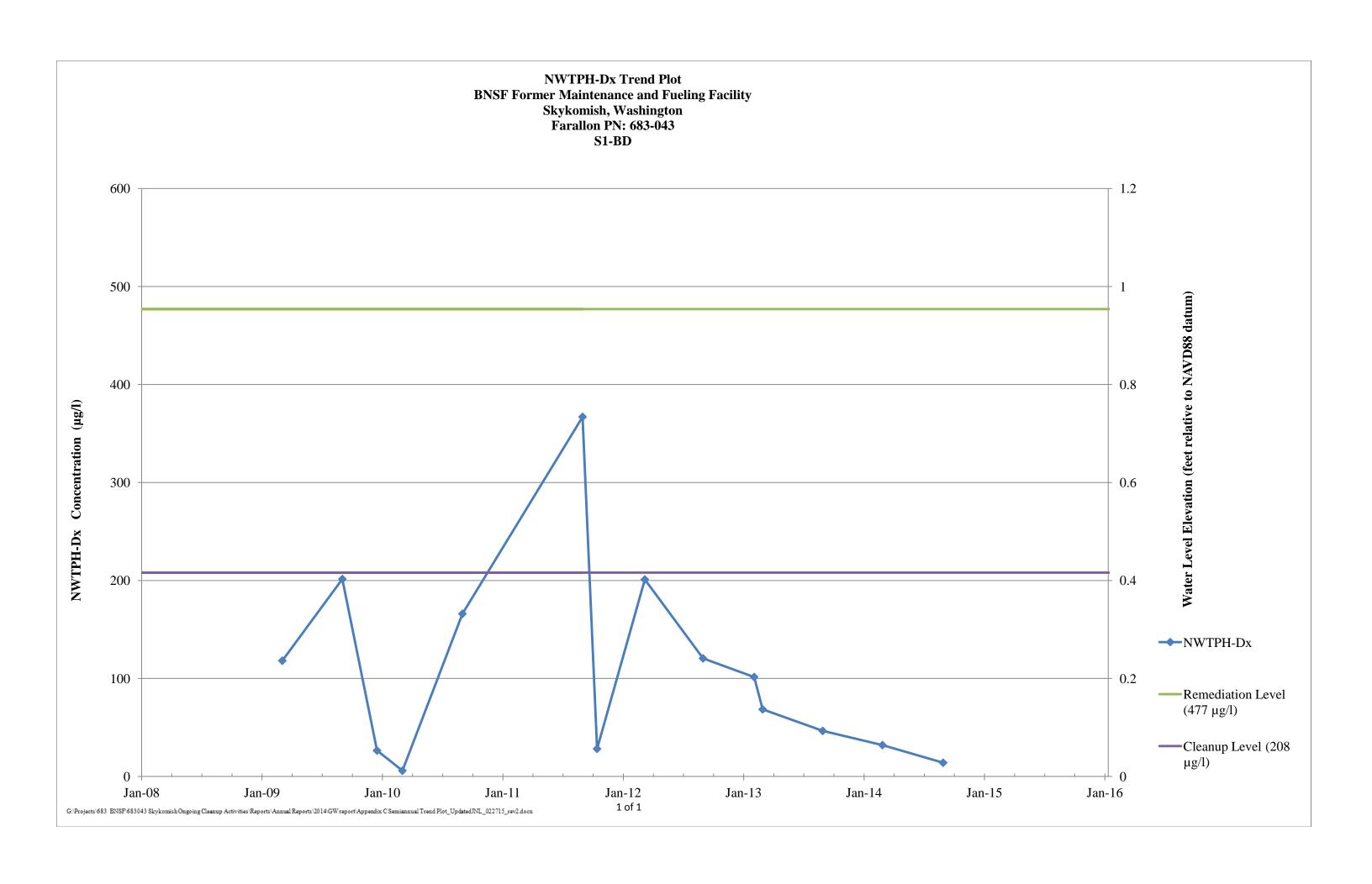
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Skykomish, Washington
Farallon PN: 683-043
GW-3

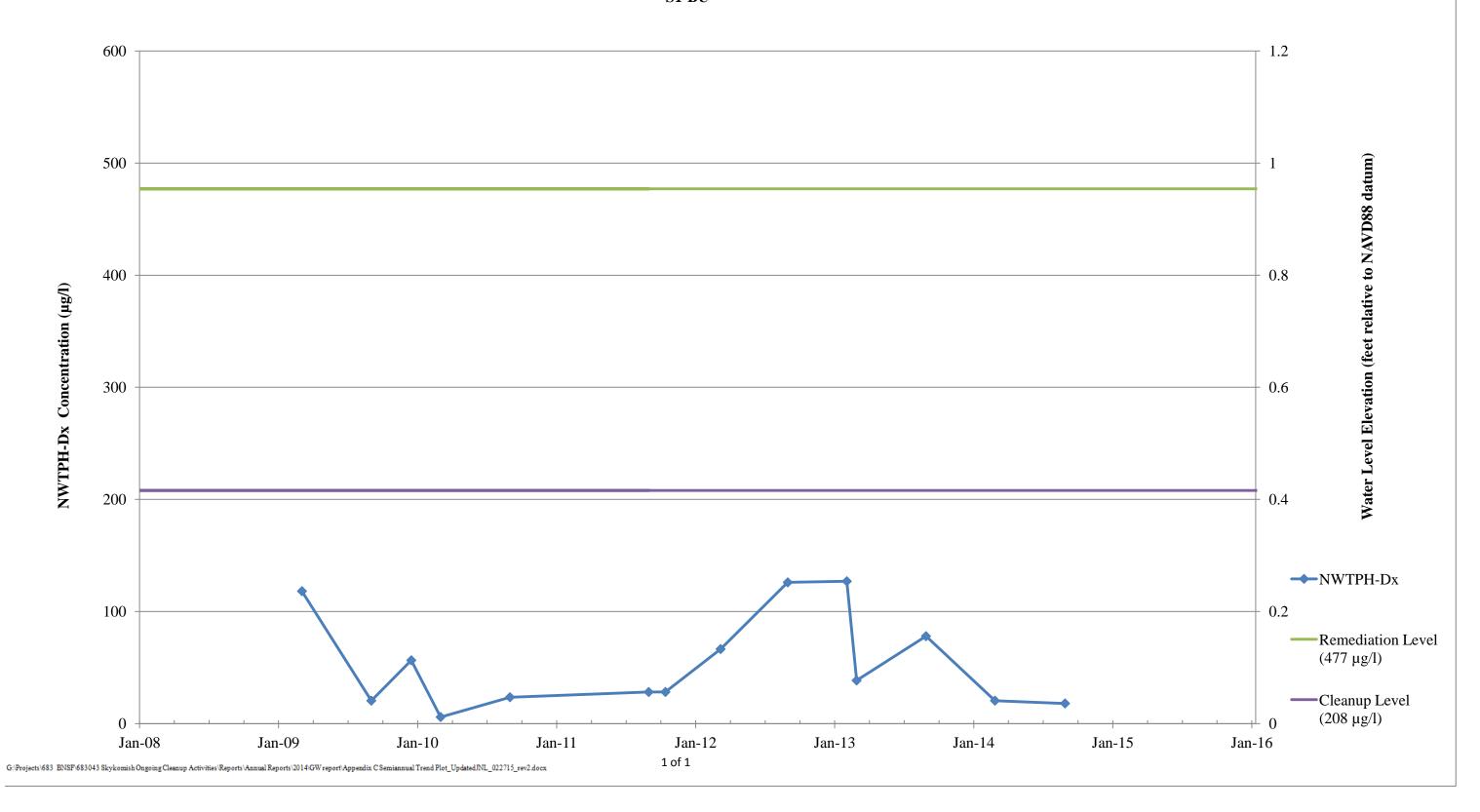


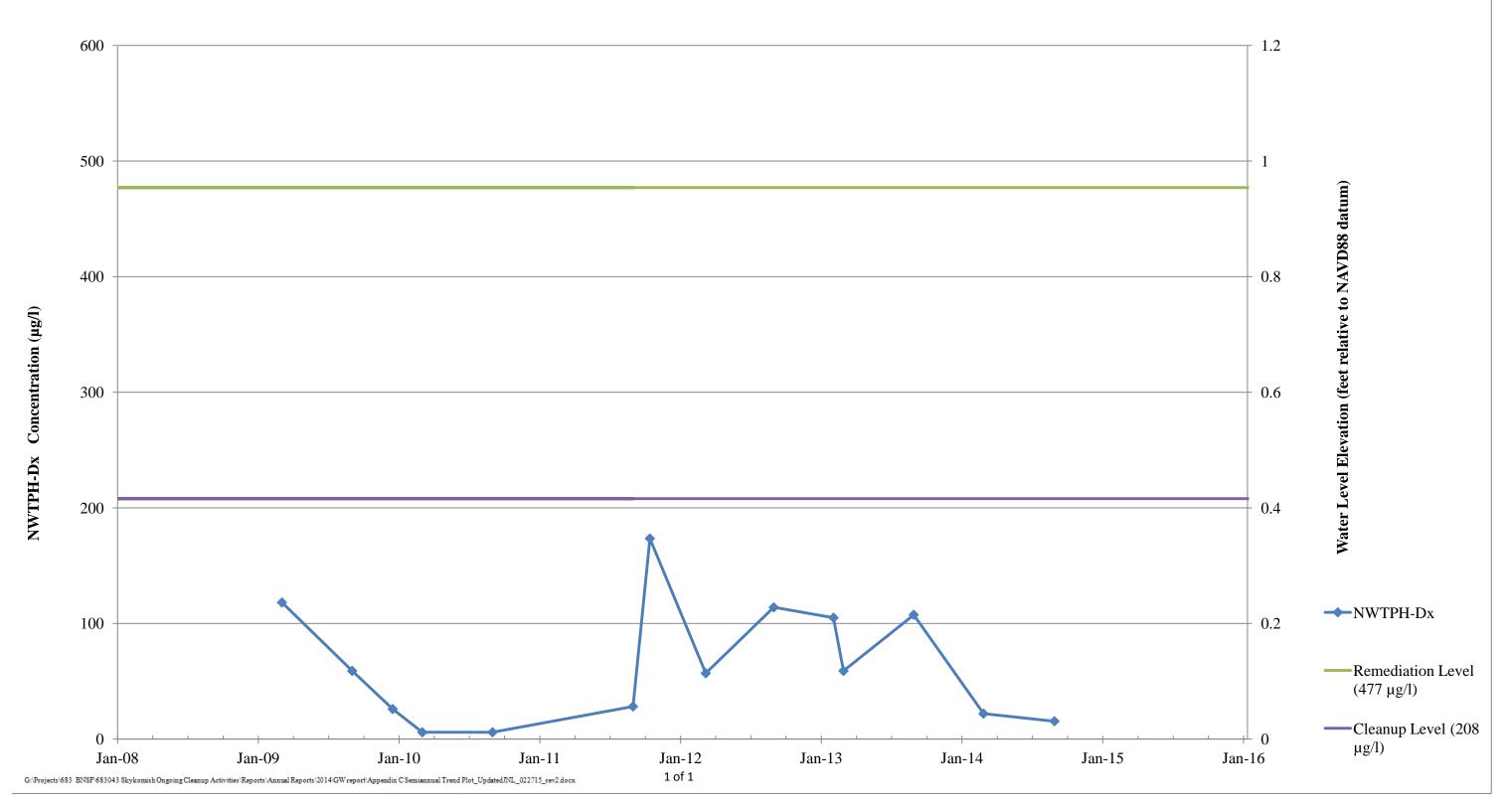


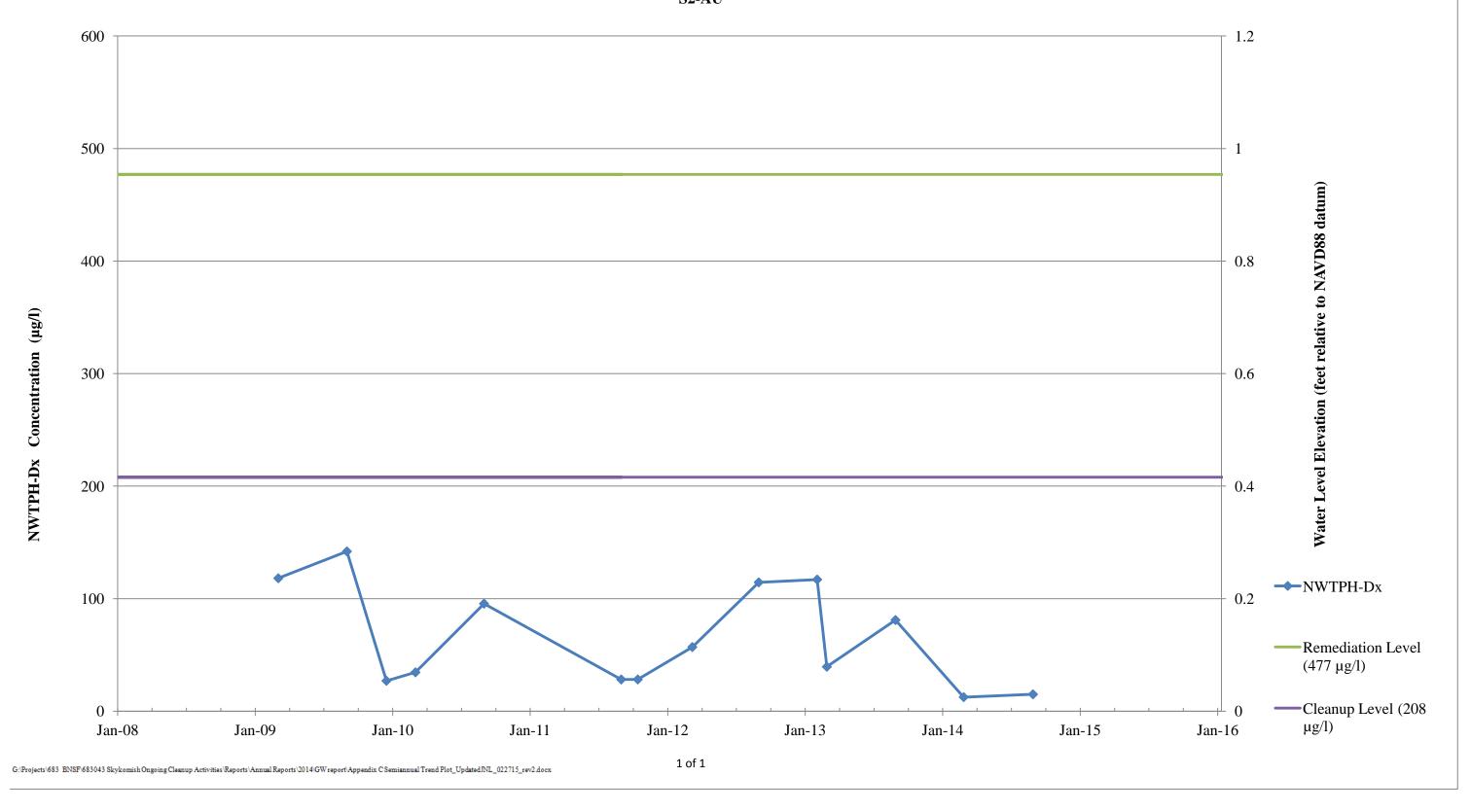




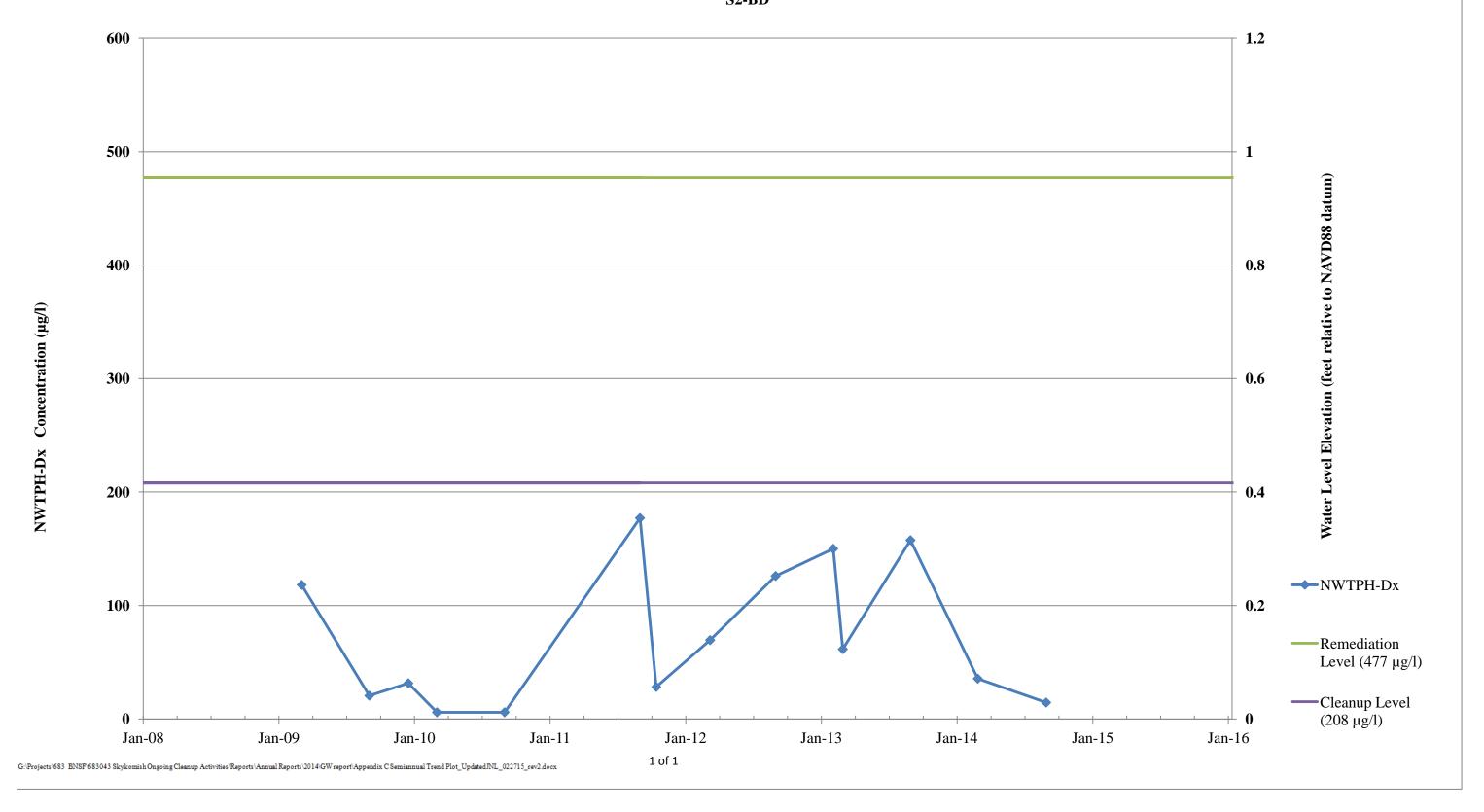




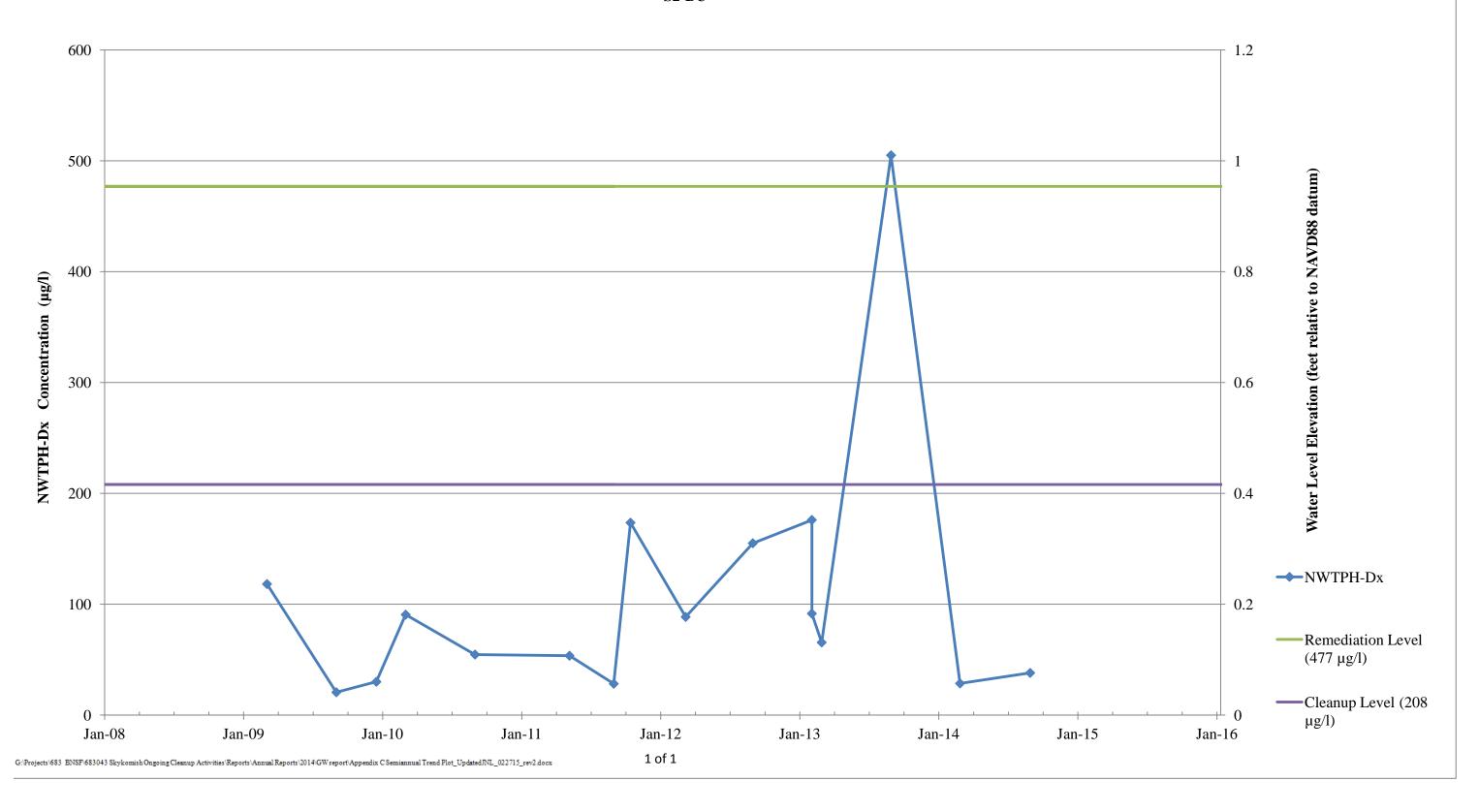




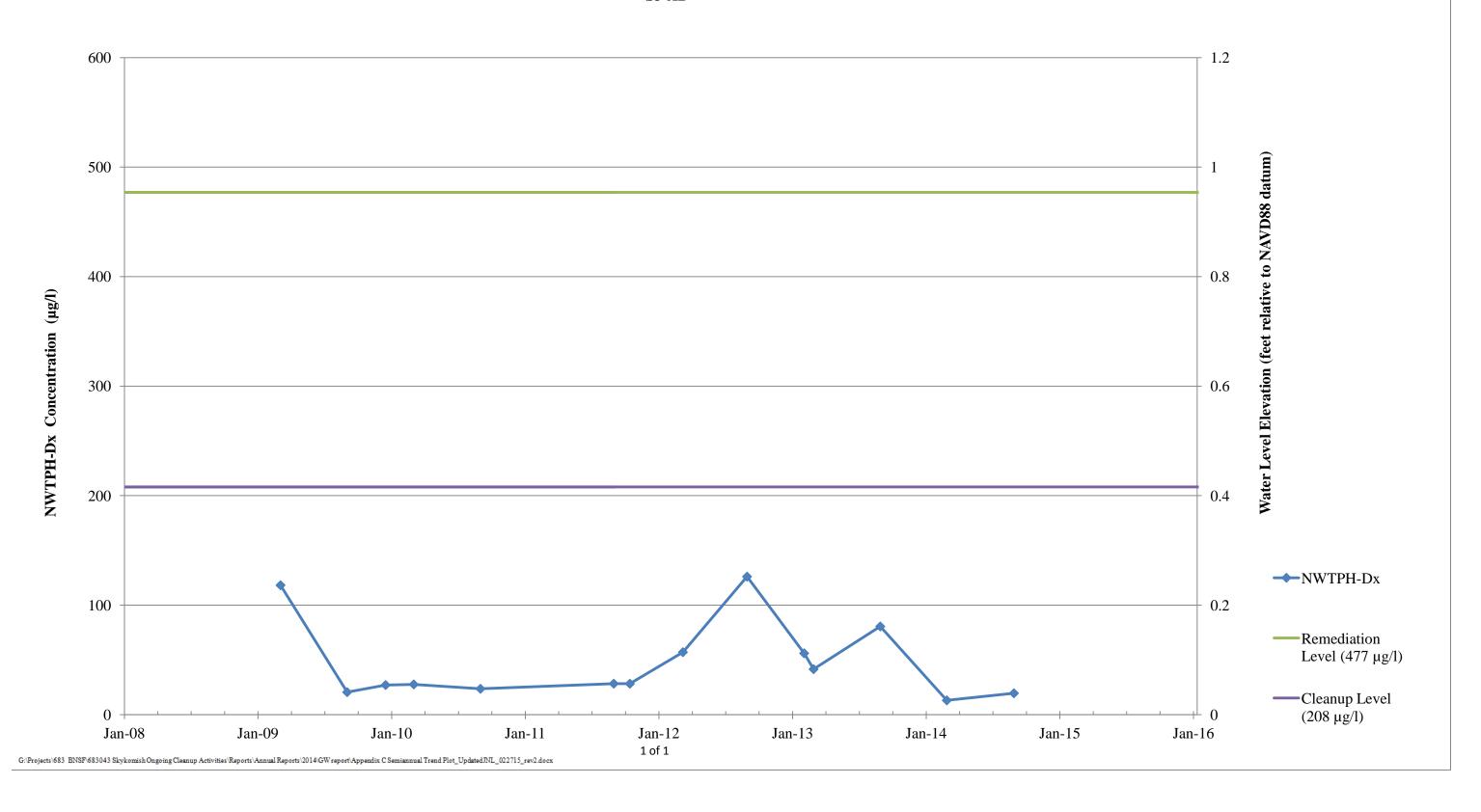
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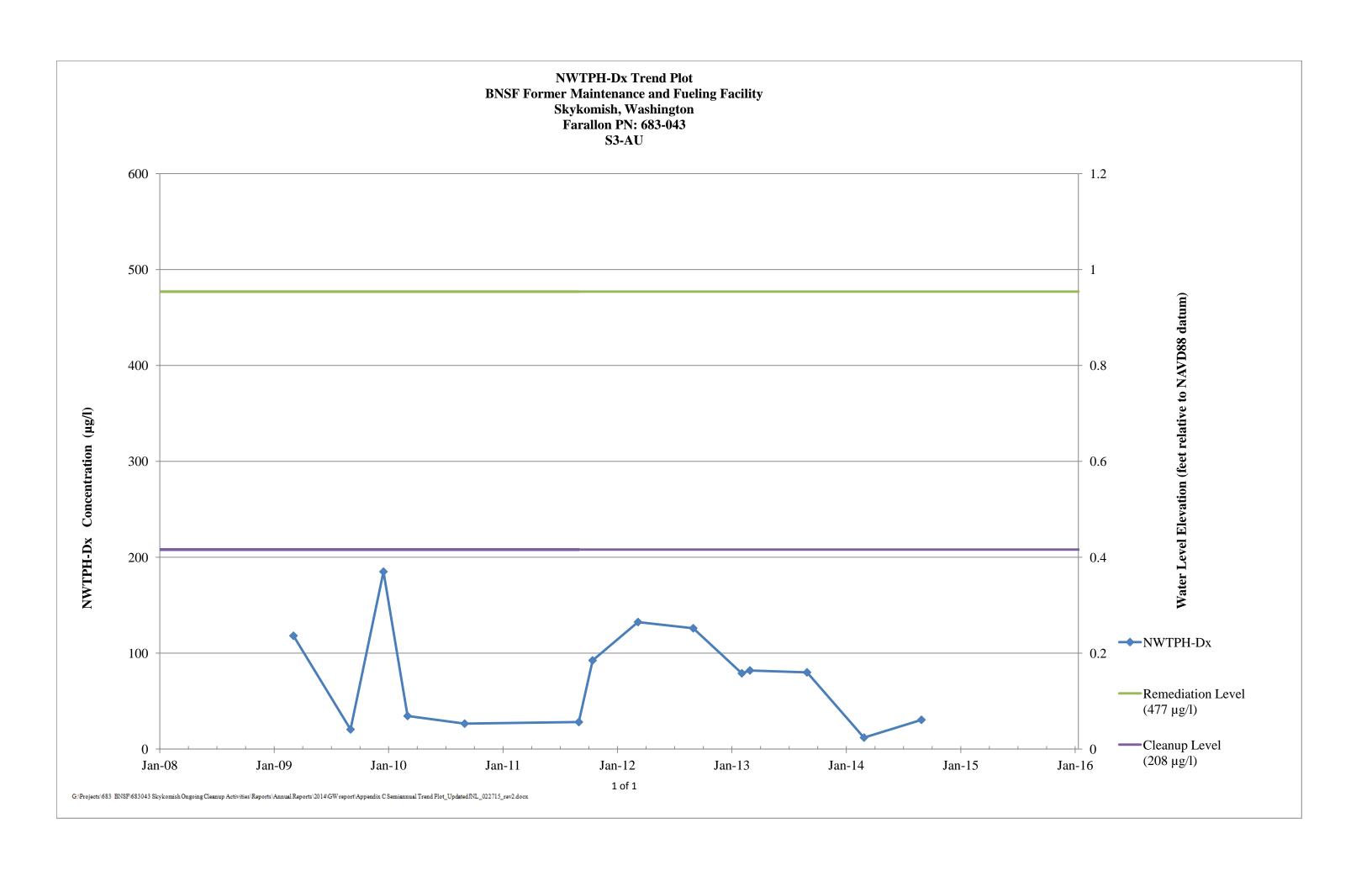


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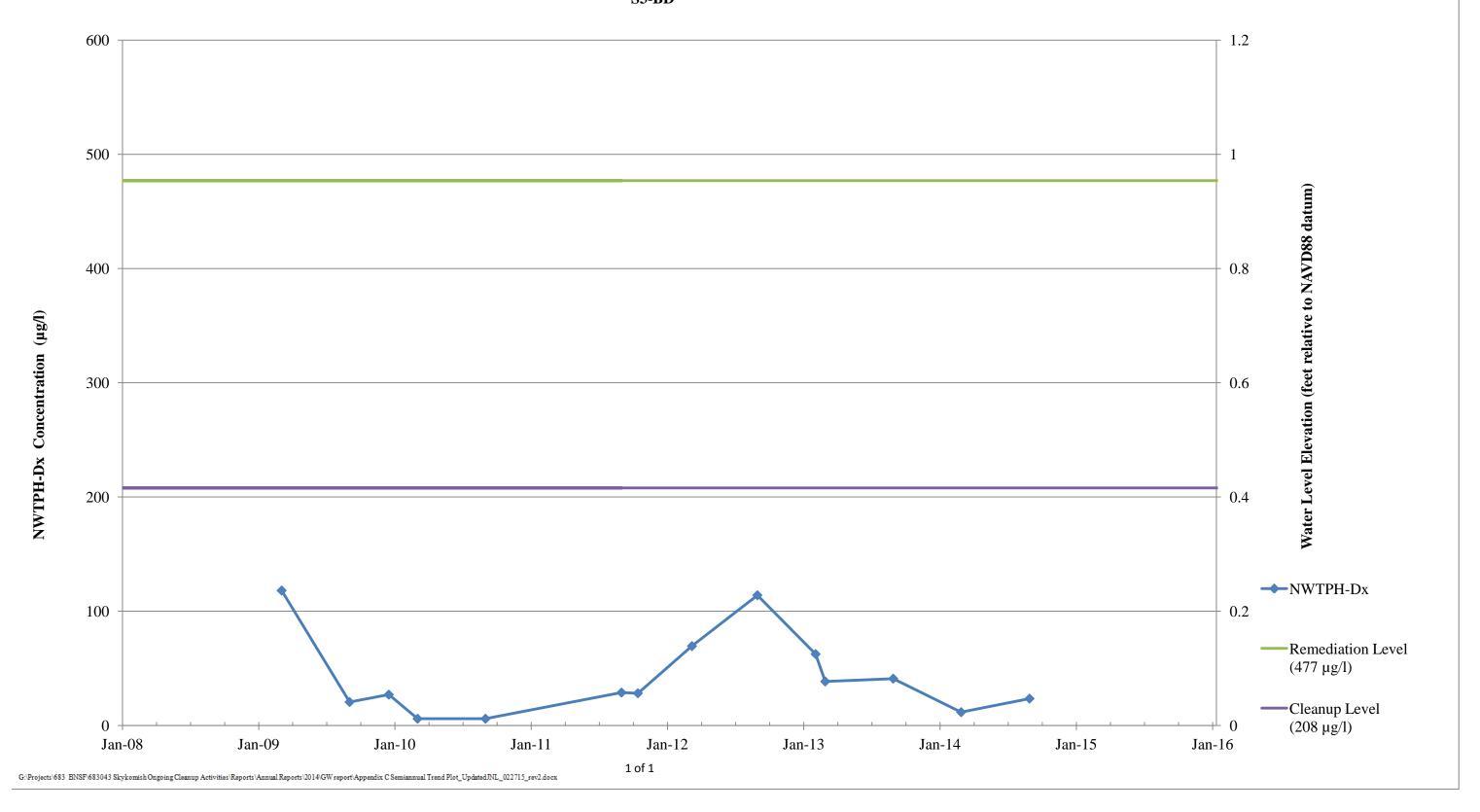


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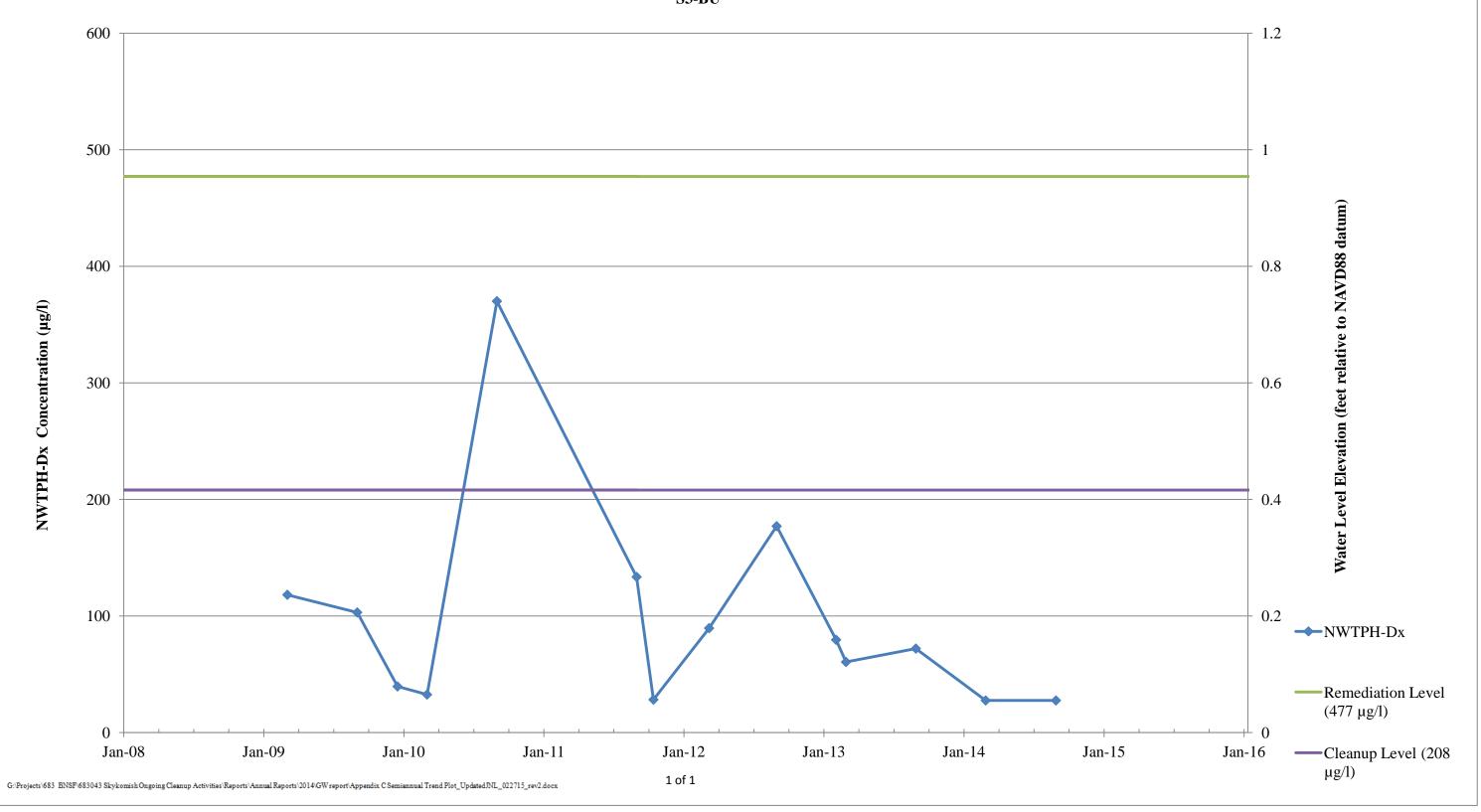


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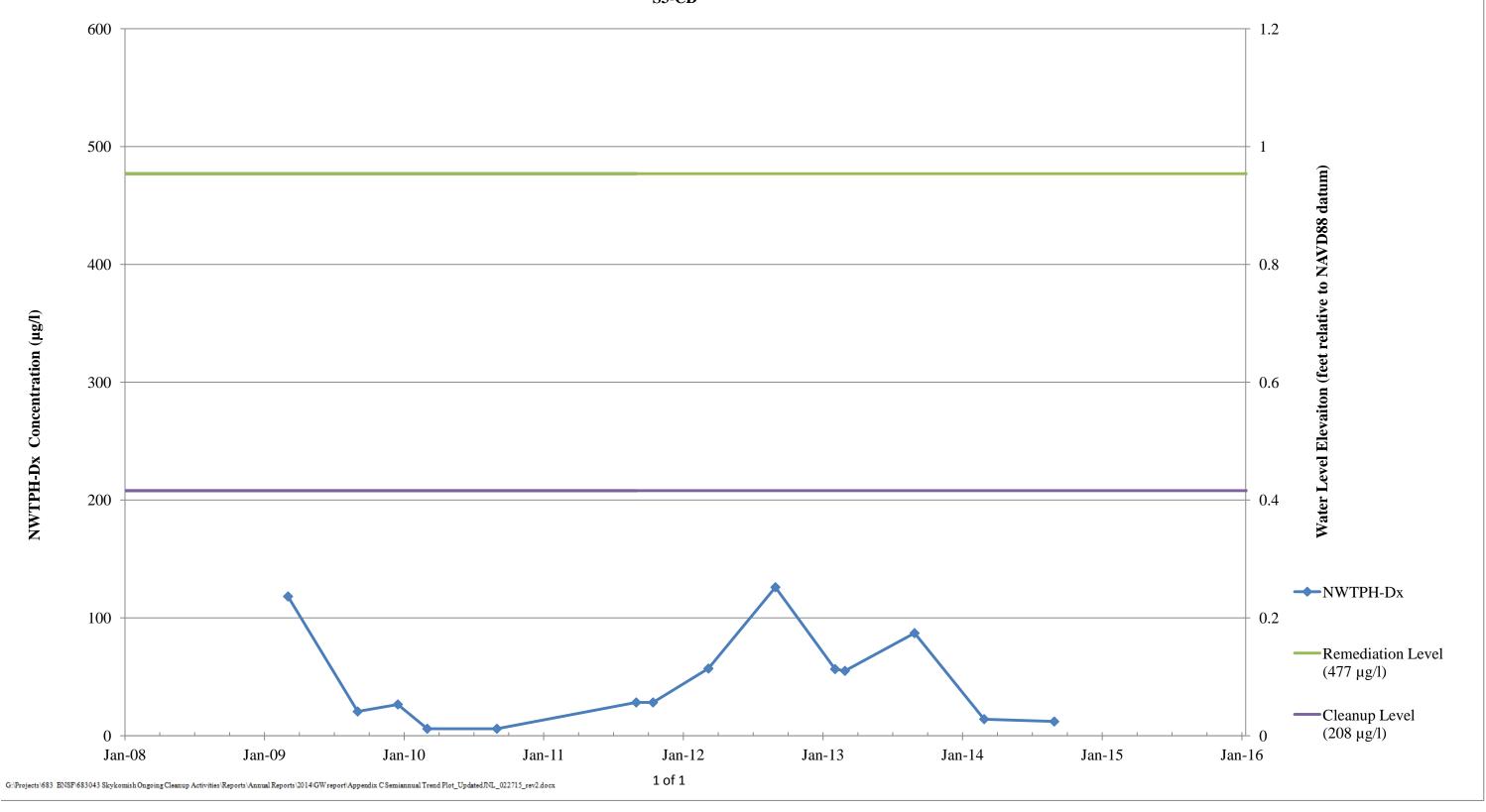


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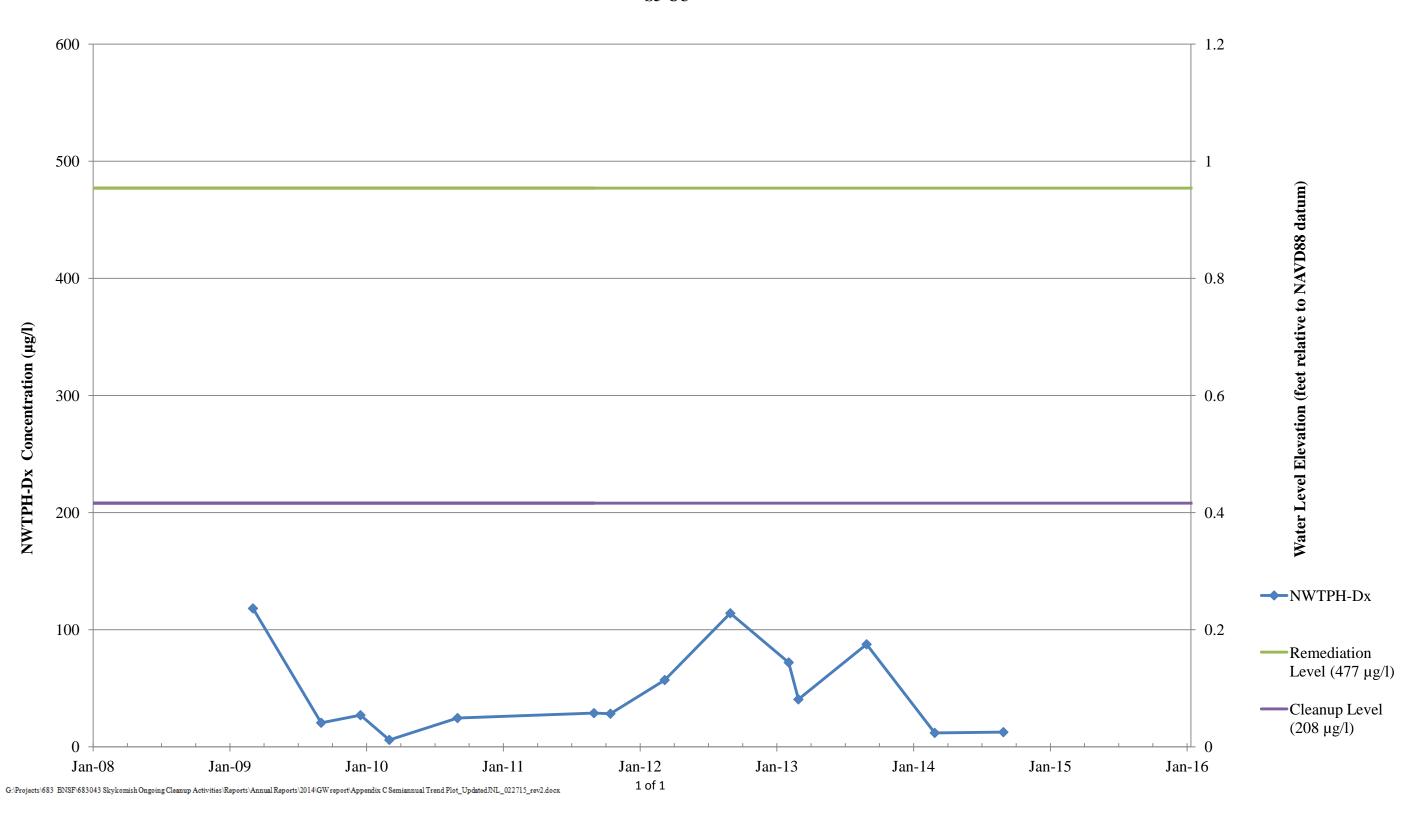
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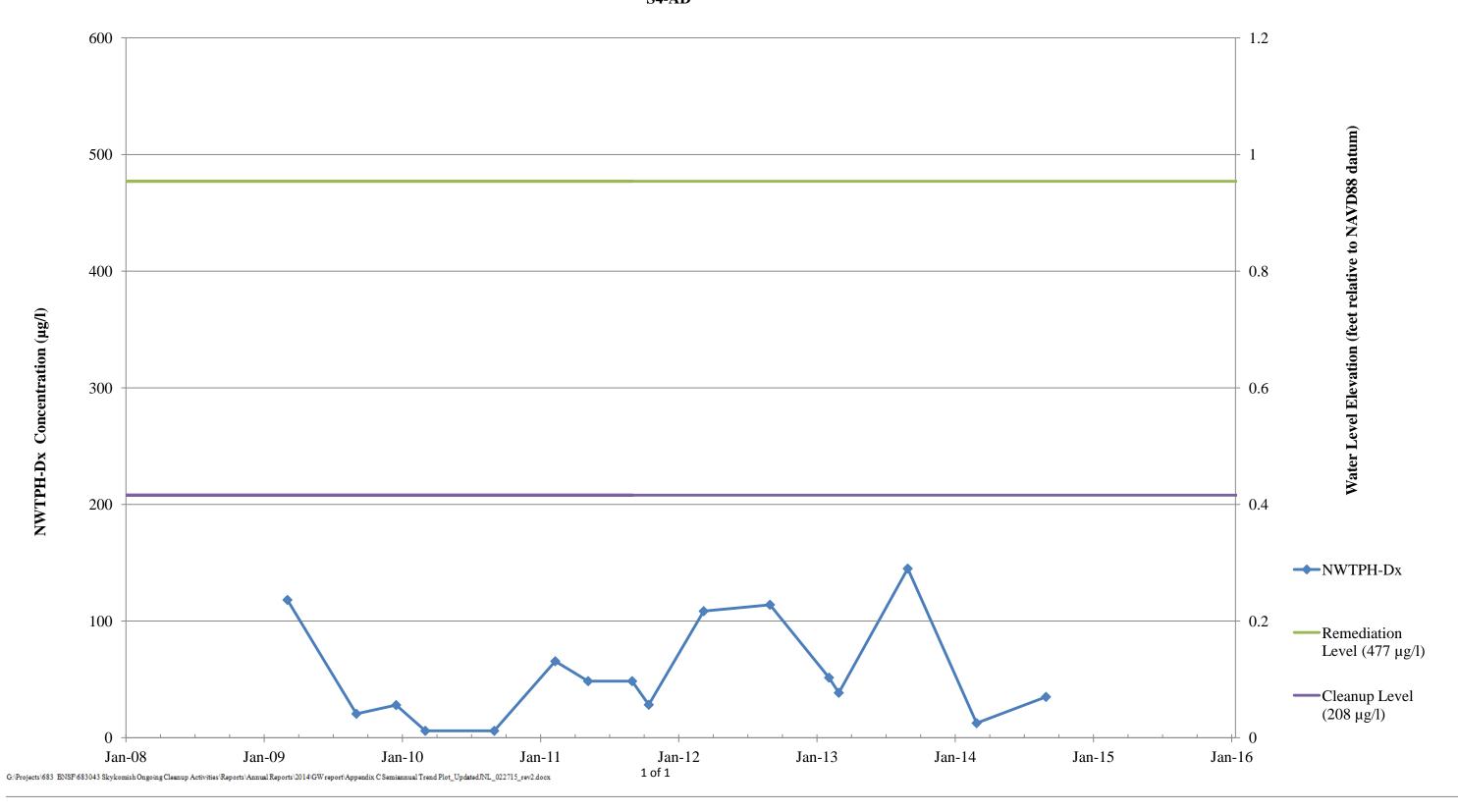
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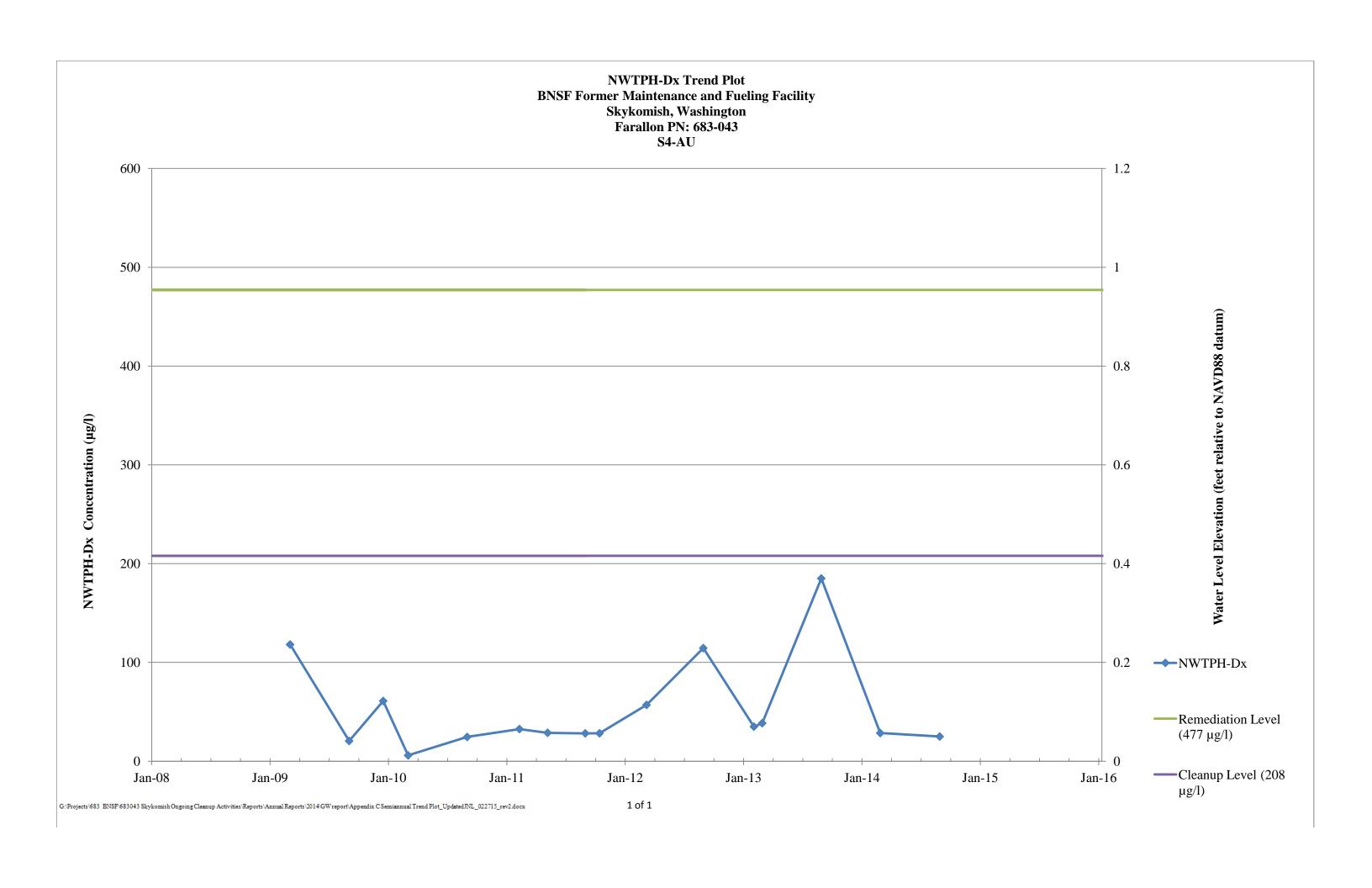


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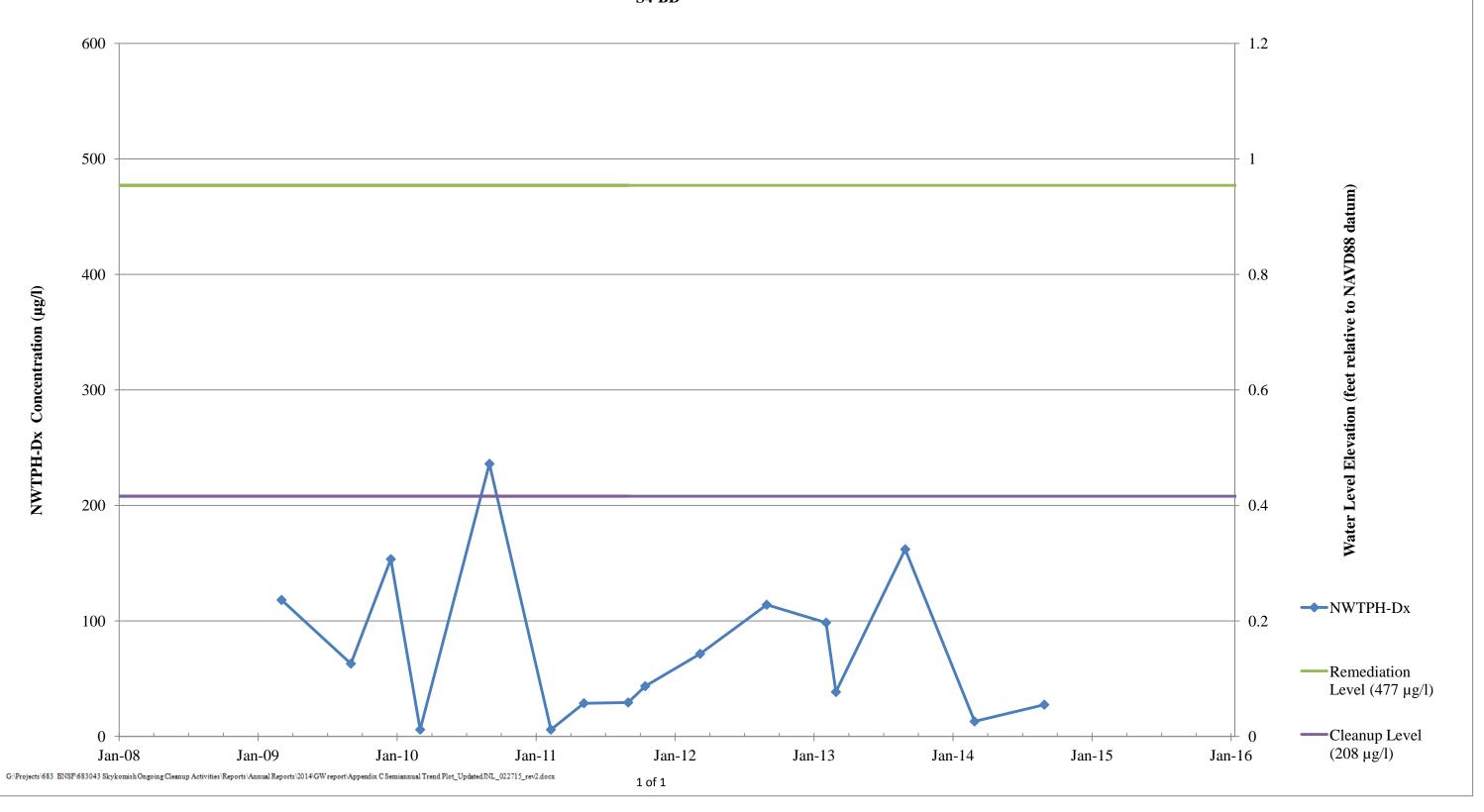


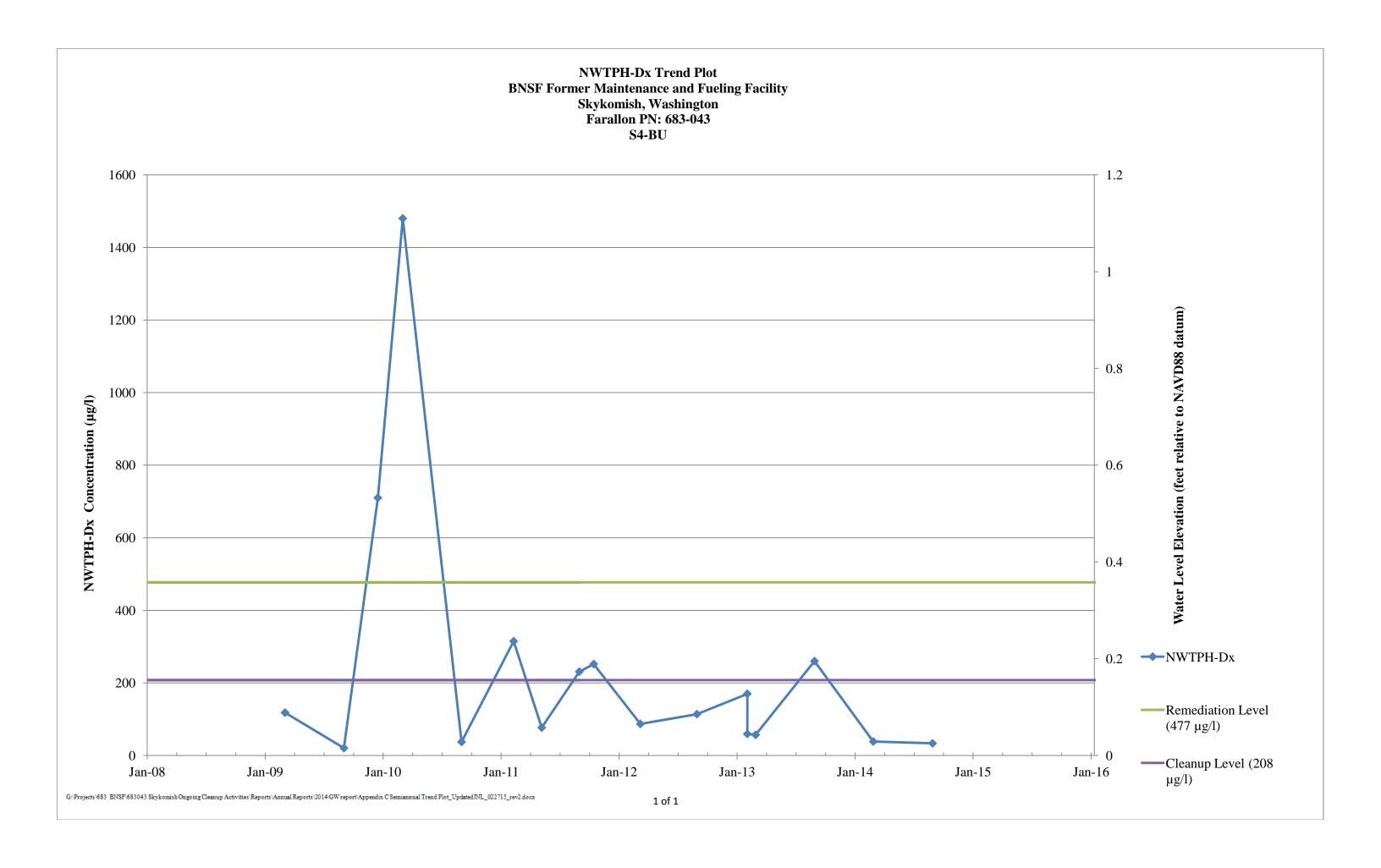
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## NWTPH-Dx Trend Plot BNSF Former Maintenance and Fueling Facility Skykomish, Washington Farallon PN: 683-043 S4-BD





# NWTPH-Dx Trend Plot BNSF Former Maintenance and Fueling Facility Skykomish, Washington Farallon PN: 683-043 S4-CD

