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Issaquah, WA 98027
T 425.395.0010
TRCcompanies.com

December 7, 2023 TRC Project Number: 505850

Tim Mullin, LHG
Toxics Cleanup Program
Southwest Regional Office
Washington Department of Ecology
P.O. Box 47775
Olympia, WA 98504
TMUL461@ECY.WA.GOV

Subject: **Confirmation Soil Sampling Report**
Former Cummings Oil Lease Site
Winlock, Washington
VCP Project No: SW0775
Facility/Site ID: 3151688
Cleanup Site ID: 2247

Dear Mr. Mullin,

TRC Environmental Corporation (TRC) prepared this Confirmation Soil Sampling Report (Report) on behalf of BNSF Railway Company (BNSF) to document the field activities completed in accordance with the Confirmation Soil Sampling Work Plan (Work Plan) submitted to Ecology on July 29, 2022. The Work Plan and this Report have been prepared in support of a no further action (NFA) determination for the Former Cummings Oil Lease Site (Site) located at 908 Northwest Kerron Avenue in Winlock, Washington (Figure 1). This Report and the Work Plan were prepared in response to Washington State Department of Ecology's (Ecology) opinion letter (Ecology Opinion Letter) dated March 17, 2021, and further discussions with Ecology during the Work Plan preparation.

1.0 Background

The Site is an industrial property zoned as commercial retail that was formerly used as a bulk fuel storage facility from approximately 1925 through 1976. In 2008, four aboveground and one underground fuel storage tanks (ASTs and USTs, respectively) were removed along with approximately 330 cubic yards of petroleum-impacted soil, overhead fuel racks, the pumphouse, and aboveground piping (Figure 1). No staining was observed under the aboveground piping runs during excavations. All buildings, USTs, ASTs, and associated piping have been removed. The property is an unoccupied gravel lot used for temporary equipment staging. There are no foreseeable land use changes for this property.

Following discussions with you, BNSF implemented Ecology's recommendations to obtain a NFA determination (email communication Sept. 25, 2019). Recommended activities included quarterly groundwater monitoring for all wells during the third quarter of 2019 and analyzing samples from MW-3 for diesel-range organics (DRO) and oil-range organics (ORO) using the Northwest Total Petroleum Hydrocarbons-Diesel (NWTPH-Dx) method with and without silica gel cleanup (SGC). TRC's 2019-2020 Groundwater Monitoring Summary Report was submitted to Ecology in June 2020 as well as a formal request for an NFA determination (BNSF 2020).

The Ecology Opinion Letter determining no further remedial action was necessary for groundwater and the Site would be categorized as "no further action likely." Ecology stated that "Groundwater data suggests that concentrations in soil have also likely degraded, but

confirmatory soil sampling is necessary to verify current concentrations of Site hazardous substances at locations of historical residual soil impacts" to achieve NFA (Ecology 2021). The Work plan approved by Ecology following discussion on July 28, 2022 was submitted to Ecology on July 29, 2022. The Work plan included soil sampling to address the locations of presumed historical residual soil impacts identified in the 2021 Ecology Opinion Letter.

2.0 Investigation Activities

The investigation was completed on September 1, 2022 and included the collection of additional soil samples to verify that the direct contact and vapor intrusion pathways are incomplete in support of a NFA determination. The soil boring locations are shown on Figure 1 and outlined below:

- SB-01: One sample collected between the estimated north sidewall locations (EX1-NSD1 and EX1-NSD3) and the stormwater conveyance system.
- SB-02: One sample in the area between the estimated location of EX1-WSD2 and the stormwater conveyance system.
- SB-03: Two samples near the area of the estimated location of boring B9.
- SB-04: Two samples from under the piping run that connected the pumphouse to the USTs and overhead fuel racks.
- SB-05: One sample from under the former pumphouse.
- SB-06: One sample in the area between former ASTs #3 and #4.

Prior to initiating the onsite activities, a site-specific health and safety plan (HASP) was developed as required by the Code of Federal Regulations (CFR) Title 29 1910.120 and by the Washington State Department of Labor and Industries. The HASP was reviewed by onsite personnel prior to beginning field work. In addition, on August 25, 2022, Washington One Call Service was notified of the anticipated subsurface work to identify publicly owned subsurface utilities. Prior to beginning the subsurface work on September 1, 2022, Applied Professional Services, Inc. (APS) conducted utility locating services at each of the boring locations.

2.1 Soil Sampling

On September 1, 2022, borings were advanced using a hand auger to a maximum depth of 5 feet (ft) below ground surface (bgs) at the locations shown on Figure 1. Borings SB-02 and SB-05 hit refusal at 4.5 ft bgs and 3.0 ft bgs, respectively. Soil samples were collected from SB-01, SB-03, SB-04, and SB-06 at 2.5 and 5.0 ft bgs for laboratory analysis. At SB-02 samples were collected at 2.5 ft bgs and 4.5 ft bgs and at SB-05 a sample was collected at 3.0 ft bgs for laboratory analysis. Soil samples were field-screened for potential impacts using visual and olfactory indicators, and a photoionization detector (PID). A portion of soil from each sample interval was placed in a new resealable plastic bag, disaggregated, and allowed to equilibrate. Headspace within the bag was measured for the presence and relative concentration of volatile organic compounds (VOCs) using a PID.

Soil samples for laboratory analysis were collected in laboratory-supplied containers and placed in a cooler with ice for preservation. Samples were submitted to Pace Analytical Laboratory (Pace) in Mount Juliet, Tennessee using standard chain-of-custody procedures. In accordance with the Work Plan, samples collected from the deepest intervals were analyzed for Total

Petroleum Hydrocarbons (TPH) by method NWTPH-Gx (gasoline range organics), method NWTPH-Dx (diesel-range organics without silica gel cleanup), and method NWTPH-Dx (oil-range organics without silica gel cleanup). In addition, soil samples were analyzed for benzene, toluene, ethylbenzene, and xylenes by method 8260D. In addition, due to the observation of odors and the PID readings, the shallow samples collected from SB-03 and SB-04 were analyzed for the same analytes. All other shallow soil samples submitted to the laboratory were placed on hold.

Investigative-derived waste (IDW) generated by the boring process was placed in a plastic bucket, labeled, and transferred to the wastewater treatment plant building located at BNSF's Balmer Yard in Seattle, Washington. IDW was picked up and transported to a BNSF approved disposal facility permitted to accept the material on April 7, 2023, by Pro-Vac.

2.2 Soil Analytical Results

A total of eleven (11) soil samples were collected from the six (6) borings advanced at the Site. Of these eleven samples, eight (8) were analyzed while the other three (3) were placed on hold with the laboratory. The analytical results of soil samples submitted for analysis are discussed below. The concentrations of detected compounds were compared to Ecology's (Ecology) Model Toxics Control Act (MTCA) Method A soil cleanup levels for industrial properties (Table 745-1, Washington Administrative Code 173-340). The analytical data for the soil samples are summarized in Table 1. The laboratory report and chain-of-custody documentation is included in Appendix A.

Laboratory results indicate that concentrations in all soil samples analyzed were below applicable MTCA cleanup levels for all compounds analyzed except the following:

- Benzene was detected in two (2) of the analyzed samples above the MTCA Method A cleanup level of 0.03 milligram per kilogram (mg/kg) at 0.405 mg/kg and 0.0808 mg/kg in boring SB-03 at 2.5 ft bgs and 5.0 ft bgs, respectively.
- TPH as gasoline-range organics (TPH-GRO) was detected in two (2) of the analyzed samples above the MTCA Method A cleanup level of 30 milligram per kilogram (mg/kg), where benzene is present, at 286 mg/kg and 116 mg/kg in boring SB-03 at 2.5 ft bgs and 5.0 ft bgs, respectively.

3.0 Summary of Findings and Recommendations

Confirmatory soil sampling was completed in accordance with the approved Work plan provided to Ecology on July 29, 2022. The confirmatory soil sampling results indicate that soil impacts at the Site have been fully characterized and are below the MTCA cleanup levels for all chemicals of concern except for soils in the vicinity of former boring B9 (boring SB-03) on the west side of the Site. Based on the results of the soil investigation the following recommendations are proposed:

- Decommissioning of groundwater monitoring wells MW-1 through MW-7.
- Resample soils in the vicinity of borings B9 and SB-03 in approximately one year to confirm continued degradation of residual hydrocarbons in the soils.

4.0 References

BNSF Railway Company (BNSF), 2020. *Request for No Further Action Determination,* 908 Northwest Kerron Avenue, Winlock, Washington (VCP ID SW0775). 29 June.

TRC Environmental Corporation (TRC), 2020. *2019-2020 Groundwater Monitoring Summary Report,* Former Cummings Oil Lease Site, Winlock, Washington. 15 June.

TRC, 2022. *Confirmation Soil Sampling Work Plan,* BNSF – Former Cummings Oil Lease Site, 908 Northwest Kerron Avenue, Winlock, Washington, VCP Project No: SW0775, Facility/Site ID: 3151688, Cleanup Site ID: 2247. 29 July.

Washington Department of Ecology (Ecology). 2019. "SW0775 – BNSF Winlock", Email correspondence. 25 September.

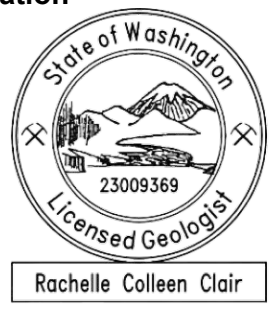
Washington Department of Ecology (Ecology). 2021. *Re: Opinion on a Cleanup at the following Site*, Site Name: BNSF Winlock, Site Address: 908 NW Kerron Street, Winlock, Lewis County, WA 98596-9405, Facility/Site ID: 3151688, Cleanup Site ID: 2247, VCP Project ID: SW0775. 17 March.

5.0 Salutation

Thank you for this opportunity to support BNSF. If you have any questions, please contact Rachelle Clair at (925) 688-2464 or rclair@trccompanies.com.

Sincerely,
TRC Environmental Corporation

Rachelle Clair, LG
Project Manager



Brian Mo
Staff Geologist

Attachments

Figure 1 – Confirmation Soil Sampling Results
Table 1 – Summary of Confirmation Soil Sampling Analytical Results

Appendix A – Certified Analytical Laboratory Reports
Appendix B – VCP Change of Contact Form

FIGURE

SAMPLE ID:	SB-02
SAMPLE DATE:	SEPT. 1, 2022
SAMPLE DEPTH:	4.5 FT.
ANALYTE	**ANALYTICAL CONCENTRATION**
GRO	<4.77
DRO	<5.81
ORO	<14.5
BENZENE	<0.00192
TOLUENE	<0.00960
ETHYLBENZENE	<0.00481
TOTAL XYLENES	<0.0125

SAMPLE ID:	SB-01
SAMPLE DATE:	SEPT. 1, 2022
SAMPLE DEPTH:	5.0 FT.
ANALYTE	**ANALYTICAL CONCENTRATION**
GRO	<4.27
DRO	21.8
ORO	43.3
BENZENE	<0.00171
TOLUENE	<0.00854
ETHYLBENZENE	<0.00427
TOTAL XYLENES	<0.0111

SAMPLE ID:	SB-03
SAMPLE DATE:	SEPT. 1, 2022
SAMPLE DEPTH:	2.5 FT.
ANALYTE	**ANALYTICAL CONCENTRATION**
GRO	**286**
DRO	35.8
ORO	19.4
BENZENE	**0.405**
TOLUENE	0.0373
ETHYLBENZENE	0.240
TOTAL XYLENES	0.133
SAMPLE DEPTH:	5.0 FT.
GRO	**116**
DRO	7.06
ORO	<14.1
BENZENE	**0.0808**
TOLUENE	0.0164
ETHYLBENZENE	0.102
TOTAL XYLENES	0.105

SAMPLE ID:	SB-05
SAMPLE DATE:	SEPT. 1, 2022
SAMPLE DEPTH:	3.0 FT.
ANALYTE	**ANALYTICAL CONCENTRATION**
GRO	<6.89
DRO	5.97
ORO	20.8
BENZENE	<0.00208
TOLUENE	<0.0104
ETHYLBENZENE	<0.00522
TOTAL XYLENES	<0.0135

SAMPLE ID:	SB-04
SAMPLE DATE:	SEPT. 1, 2022
SAMPLE DEPTH:	2.5 FT.
ANALYTE	**ANALYTICAL CONCENTRATION**
GRO	12.3
DRO	48.2
ORO	147
BENZENE	0.00584
TOLUENE	0.0392
ETHYLBENZENE	0.0189
TOTAL XYLENES	0.182
SAMPLE DEPTH:	5.0 FT.
GRO	<4.78
DRO	5.60
ORO	28.2
BENZENE	<0.00193
TOLUENE	<0.00963
ETHYLBENZENE	<0.00482
TOTAL XYLENES	<0.0125

SAMPLE ID:	SB-06
SAMPLE DATE:	SEPT. 1, 2022
SAMPLE DEPTH:	5.0 FT.
ANALYTE	**ANALYTICAL CONCENTRATION**
GRO	<4.14
DRO	<5.18
ORO	<12.9
BENZENE	<0.00165
TOLUENE	<0.00826
ETHYLBENZENE	<0.00414
TOTAL XYLENES	<0.0107

CULVERT
B12
MW-1
B11
B10
SB-01
EX1-NSD2
EX1-NSD4
EX1-NSD3
EX1-NSD1
FORMER UST EXCAVATION
SB-02
UST #1 1K GALLON
EX1-WSD2
EX1-WSD1
EX1-BTM1
EX1-ESD1
GRAVEL
UST #2 5K GALLON
B8
PUMP HOUSE
EX1-SSD1
EX1-BTM2
B7
EX1-WSD3
TP-2
SB-04
SB-05
VENT PIPES
B9
SB-03
OVERHEAD FUEL RACKS
DOCK
EX1-ESD2
B6
EX1-BTM3
EX1-WSD4
EX1-SSD2
WAREHOUSE
MW-5
MW-6
MW-2
MW-4
EX2-NSD1
EX2-WSD1
EX2-ESD1
AST #1 25K GAL.
B5
UST FILL PORTS
BTM1
TP-1
EX2-SSD1
MW2A
FORMER UST EXCAVATION
AST #2 13K GAL
B13
AST #3 13K GAL.
OFFICE
GRAVEL
GARAGE
BATH-ROOM
SB-06
B4
AST #4 13K GAL.
FORMER SITE FEATURES
B3
B2
MW-3
B1
MW-7
NORTHWEST KERRON STREET
SPUR
GRAVEL PARKING
GRAVEL PARKING
BNSF R.R. MAIN LINE

N
W
E
S

0 10' 20' 40'

SCALE IN FEET
1" = 20'-0"

NOTES:

All results in milligrams per kilogram (mg/kg).
Results in **bold** denote concentrations above applicable cleanup levels.
< denotes analyte not detected at or above the reporting limit listed.

Depth in feet below ground level.

GRO = Total Petroleum Hydrocarbons (TPH) as gasoline-range organics.

DRO = TPH as diesel-range organics.

ORO = TPH as oil-range organics.

MTCA MOTHOD A CLEANUP LEVELS	
GRO	**30/100**
DRO	**2,000**
ORO	**2,000**
BENZENE	**0.03**
TOLUENE	**7**
ETHYLBENZENE	**6**
TOTAL XYLENES	**9**

Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Industrial Properties Cleanup Levels for Soil, Table 745-1, Washington Administrative Code 173-340. GRO Cleanup Levels are 30 mg/kg when benzene is present and 100 mg/kg when there is no detectable benzene.

LEGEND

- APPROXIMATE SITE BOUNDARY
- RAILROAD TRACKS
- STORM LINE
- SANITARY SEWER
- FORMER WATER LINE
- FORMER TELEPHONE LINE
- FORMER ABOVE GROUND PIPING AT SITE (APPROXIMATE FORMER LOCATION)
- DITCH AND DIRECTION OF FLOW
- TEST PIT
- CATCH BASIN
- UST #1 — FORMER UNDERGROUND STORAGE TANK
- AST #1 — FORMER ABOVEGROUND STORAGE TANK
- AREA OF EXCAVATION
- MONITORING WELL (FARALLON 2006)
- BORING LOCATION
- CONFIRMATION SOIL BORING LOCATION
- CONFIRMATION SOIL SAMPLE LOCATION (FARALLON 2008)
- SOIL SAMPLE LOCATION WITH HISTORICAL EXCEEDANCE OF CLEANUP LEVELS

CLIENT / PROJECT

FORMER CUMMINGS OIL LEASE SITE
908 Northwest Kerron Street
Winlock, Washington 98596

TITLE

CONFIRMATION SOIL SAMPLING RESULTS

DRAWN BY: O. Fonseka	REQUEST BY: N. Dorfner	PROJECT NO. 505850
DWG. DATE: May 2023	PROJECT-MGR: C. Miller	

TRC
14701 ST. MARY'S LANE, STE. 500
HOUSTON, TEXAS 77079
PHONE: 281-616-0100
TRCcompanies.com

FIGURE 1

TABLE

Table 1
Summary of Confirmation Soil Sampling Analytical Results
Former Cummings Oil Lease Site
Winlock, Washington

Sample ID	Sample Depth (ft bgs)	Sample Date	GRO[a]	DRO[b]	ORO[b]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
SB-01-S:5.0	5.0	9/1/2022	<4.27	**21.8**	**43.3**	<0.00171	<0.00854	<0.00427	<0.0111
SB-02-S:4.5	4.5	9/1/2022	<4.77	<5.81	<14.5	<0.00192	<0.00960	<0.00481	<0.0125
SB-03-S:2.5	2.5	9/1/2022	**286**	**35.8**	**19.4**	**0.405**	**0.0373**	**0.240**	**0.133**
SB-03-S:5.0	5.0	9/1/2022	**116**	**7.06**	<14.1	**0.0808**	**0.0164**	**0.102**	**0.105**
SB-04-S:2.5	2.5	9/1/2022	**12.3**	**48.2**	**147**	**0.00584**	**0.0392**	**0.0189**	**0.182**
SB-04-S:5.0	5.0	9/1/2022	<4.78	**5.60**	**28.2**	<0.00193	<0.00963	<0.00482	<0.0125
SB-05-S:3.0	3.0	9/1/2022	<6.89	**5.97**	**20.8**	<0.00208	<0.0104	<0.00522	<0.0135
SB-06-S:5.0	5.0	9/1/2022	<4.14	<5.18	<12.9	<0.00165	<0.00826	<0.00414	<0.0107
MTCA Method A Cleanup Levels[d]			**30/100[e]**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**

NOTES:

All results in milligrams per kilogram (mg/kg).

Results in **bold** denote concentrations above laboratory reporting detection limits.

Shaded results denote concentrations greater than applicable cleanup levels.

< denotes analyte not detected at or greater than reporting limit.

[a] Analyzed by Northwest Method NWTPH-Gx.

[b] Analyzed by Northwest Method NWTPH-Dx.

[c] Analyzed by U.S. Environmental Protection Agency (EPA) Method 8260D.

[d] Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Industrial Properties Cleanup Levels for Soil, Table 745-1, Washington Administrative Code 173-340.

[e] GRO Cleanup Levels are 30 mg/kg when benzene is present and 100 mg/kg when there is no detectable benzene.

GRO = Total Petroleum Hydrocarbons (TPH) as gasoline-range organics.

DRO = TPH as diesel-range organics.

ORO = TPH as oil-range organics.

ft bgs = feet below ground surface.

APPENDIX A
CERTIFIED ANALYTICAL LABORATORY REPORTS

ANALYTICAL REPORT

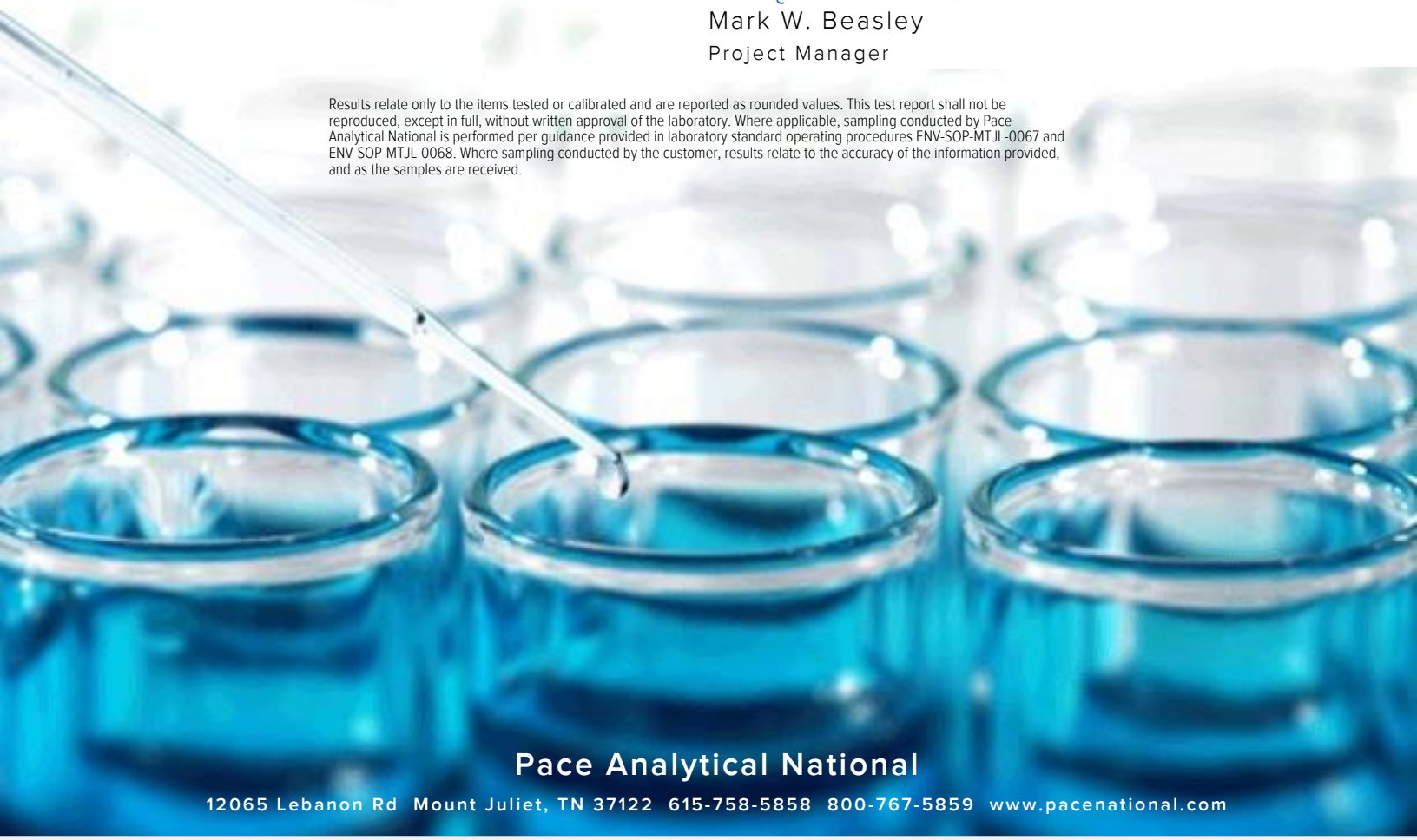
September 15, 2022

TRC - BNSF Region 1

Sample Delivery Group:	L1532477
Samples Received:	09/03/2022
Project Number:	508 590
Description:	BNSF - Winlock, WA
Site:	WINLOCK BNSF
Report To:	Alexander Lesher 1180 NW Maple St, Ste 310 Issaquah, WA 98027

Entire Report Reviewed By:

Mark W. Beasley
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SB-02-S=4.5 L1532477-02 Solid

Collected by: Alexander Lesher | Collected date/time: 09/01/22 11:15 | Received date/time: 09/03/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1922676	1	09/09/22 10:06	09/09/22 10:18	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1923539	25	09/01/22 11:15	09/09/22 21:34	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1923901	1.01	09/01/22 11:15	09/09/22 21:55	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1924335	1	09/12/22 08:59	09/13/22 13:34	JAS	Mt. Juliet, TN

SB-03-S=2.5 L1532477-03 Solid

Collected by: Alexander Lesher | Collected date/time: 09/01/22 12:05 | Received date/time: 09/03/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1922676	1	09/09/22 10:06	09/09/22 10:18	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1923539	29.5	09/01/22 12:05	09/09/22 21:55	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1923901	1.07	09/01/22 12:05	09/09/22 22:14	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1924335	1	09/12/22 08:59	09/13/22 14:11	JAS	Mt. Juliet, TN

SB-03-S=5.0 L1532477-04 Solid

Collected by: Alexander Lesher | Collected date/time: 09/01/22 12:15 | Received date/time: 09/03/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1922676	1	09/09/22 10:06	09/09/22 10:18	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1923539	25.8	09/01/22 12:15	09/09/22 22:15	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1923901	1.29	09/01/22 12:15	09/09/22 22:34	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1924335	1	09/12/22 08:59	09/13/22 13:46	JAS	Mt. Juliet, TN

SB-04-S=2.5 L1532477-05 Solid

Collected by: Alexander Lesher | Collected date/time: 09/01/22 13:15 | Received date/time: 09/03/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1922677	1	09/09/22 09:39	09/09/22 10:03	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1923539	26.3	09/01/22 13:15	09/09/22 22:36	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1923901	1.09	09/01/22 13:15	09/09/22 22:53	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1924335	1	09/12/22 08:59	09/13/22 15:01	JAS	Mt. Juliet, TN

SB-04-S=5.0 L1532477-06 Solid

Collected by: Alexander Lesher | Collected date/time: 09/01/22 13:25 | Received date/time: 09/03/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1922677	1	09/09/22 09:39	09/09/22 10:03	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1923540	27	09/01/22 13:25	09/09/22 22:47	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1923901	1	09/01/22 13:25	09/09/22 23:12	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1924335	1	09/12/22 08:59	09/13/22 14:24	JAS	Mt. Juliet, TN

SB-05=3.0 L1532477-07 Solid

Collected by: Alexander Lesher | Collected date/time: 09/01/22 14:15 | Received date/time: 09/03/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1922677	1	09/09/22 09:39	09/09/22 10:03	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1923540	61.8	09/01/22 14:15	09/09/22 23:11	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1923901	1.85	09/01/22 14:15	09/09/22 23:31	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1924335	1	09/12/22 08:59	09/13/22 14:49	JAS	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

SAMPLE SUMMARY

SB-06-S=5.0 L1532477-09 Solid

Collected by: Alexander Lesher
Collected date/time: 09/01/22 15:50
Received date/time: 09/03/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1922677	1	09/09/22 09:39	09/09/22 10:03	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1923540	26.3	09/01/22 15:50	09/09/22 23:34	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1924179	1.05	09/01/22 15:50	09/10/22 13:06	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1924335	1	09/12/22 08:59	09/13/22 13:59	JAS	Mt. Juliet, TN

SB-01-S=5.0 L1532477-11 Solid

Collected by: Alexander Lesher
Collected date/time: 09/01/22 16:50
Received date/time: 09/03/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1922677	1	09/09/22 09:39	09/09/22 10:03	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1923540	25	09/01/22 16:50	09/10/22 00:28	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1924179	1	09/01/22 16:50	09/10/22 13:26	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1924335	1	09/12/22 08:59	09/13/22 14:36	JAS	Mt. Juliet, TN

TB-1 L1532477-12 GW

Collected by: Alexander Lesher
Collected date/time: 09/01/22 00:00
Received date/time: 09/03/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1924815	1	09/12/22 12:26	09/12/22 12:26	JAH	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	68.8		1	09/09/2022 10:18	WG1922676

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		4.77	25	09/09/2022 21:34	WG1923539
(S) a,a,a-Trifluorotoluene(FID)	*92.4*		*77.0-120*		*09/09/2022 21:34*	WG1923539

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00192	1.01	09/09/2022 21:55	WG1923901
Toluene	ND		0.00960	1.01	09/09/2022 21:55	WG1923901
Ethylbenzene	ND		0.00481	1.01	09/09/2022 21:55	WG1923901
Total Xylenes	ND		0.0125	1.01	09/09/2022 21:55	WG1923901
(S) Toluene-d8	*97.1*		*75.0-131*		*09/09/2022 21:55*	WG1923901
(S) 4-Bromofluorobenzene	*102*		*67.0-138*		*09/09/2022 21:55*	WG1923901
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*09/09/2022 21:55*	WG1923901

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Diesel Range Organics (DRO)	ND		5.81	1	09/13/2022 13:34	WG1924335
Residual Range Organics (RRO)	ND		14.5	1	09/13/2022 13:34	WG1924335
(S) o-Terphenyl	*47.7*		*18.0-148*		*09/13/2022 13:34*	WG1924335

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	62.9		1	09/09/2022 10:18	WG1922676

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	286		6.17	29.5	09/09/2022 21:55	WG1923539
(S) a,a,a-Trifluorotoluene(FID)	*94.3*		*77.0-120*		*09/09/2022 21:55*	WG1923539

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.405		0.00229	1.07	09/09/2022 22:14	WG1923901
Toluene	0.0373		0.0115	1.07	09/09/2022 22:14	WG1923901
Ethylbenzene	0.240		0.00574	1.07	09/09/2022 22:14	WG1923901
Total Xylenes	0.133		0.0149	1.07	09/09/2022 22:14	WG1923901
(S) Toluene-d8	*93.8*		*75.0-131*		*09/09/2022 22:14*	WG1923901
(S) 4-Bromofluorobenzene	*104*		*67.0-138*		*09/09/2022 22:14*	WG1923901
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*09/09/2022 22:14*	WG1923901

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Diesel Range Organics (DRO)	35.8		6.36	1	09/13/2022 14:11	WG1924335
Residual Range Organics (RRO)	19.4		15.9	1	09/13/2022 14:11	WG1924335
(S) o-Terphenyl	*36.7*		*18.0-148*		*09/13/2022 14:11*	WG1924335

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	71.0		1	09/09/2022 10:18	WG1922676

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	116		4.65	25.8	09/09/2022 22:15	WG1923539
(S) a,a,a-Trifluorotoluene(FID)	*89.9*		*77.0-120*		*09/09/2022 22:15*	WG1923539

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.0808		0.00223	1.29	09/09/2022 22:34	WG1923901
Toluene	0.0164		0.0111	1.29	09/09/2022 22:34	WG1923901
Ethylbenzene	0.102		0.00557	1.29	09/09/2022 22:34	WG1923901
Total Xylenes	0.105		0.0145	1.29	09/09/2022 22:34	WG1923901
(S) Toluene-d8	*103*		*75.0-131*		*09/09/2022 22:34*	WG1923901
(S) 4-Bromofluorobenzene	*110*		*67.0-138*		*09/09/2022 22:34*	WG1923901
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*09/09/2022 22:34*	WG1923901

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Diesel Range Organics (DRO)	7.06		5.63	1	09/13/2022 13:46	WG1924335
Residual Range Organics (RRO)	ND		14.1	1	09/13/2022 13:46	WG1924335
(S) o-Terphenyl	*39.6*		*18.0-148*		*09/13/2022 13:46*	WG1924335

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	65.7		1	09/09/2022 10:03	WG1922677

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	12.3		5.31	26.3	09/09/2022 22:36	WG1923539
(S) a,a,a-Trifluorotoluene(FID)	*88.1*		*77.0-120*		*09/09/2022 22:36*	WG1923539

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.00584		0.00218	1.09	09/09/2022 22:53	WG1923901
Toluene	0.0392		0.0109	1.09	09/09/2022 22:53	WG1923901
Ethylbenzene	0.0189		0.00546	1.09	09/09/2022 22:53	WG1923901
Total Xylenes	0.182		0.0142	1.09	09/09/2022 22:53	WG1923901
(S) Toluene-d8	*91.3*		*75.0-131*		*09/09/2022 22:53*	WG1923901
(S) 4-Bromofluorobenzene	*107*		*67.0-138*		*09/09/2022 22:53*	WG1923901
(S) 1,2-Dichloroethane-d4	*119*		*70.0-130*		*09/09/2022 22:53*	WG1923901

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Diesel Range Organics (DRO)	48.2		6.09	1	09/13/2022 15:01	WG1924335
Residual Range Organics (RRO)	147		15.2	1	09/13/2022 15:01	WG1924335
(S) o-Terphenyl	*41.0*		*18.0-148*		*09/13/2022 15:01*	WG1924335

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	71.4		1	09/09/2022 10:03	WG1922677

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		4.78	27	09/09/2022 22:47	WG1923540
(S) a,a,a-Trifluorotoluene(FID)	*104*		*77.0-120*		*09/09/2022 22:47*	WG1923540

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00193	1	09/09/2022 23:12	WG1923901
Toluene	ND		0.00963	1	09/09/2022 23:12	WG1923901
Ethylbenzene	ND		0.00482	1	09/09/2022 23:12	WG1923901
Total Xylenes	ND		0.0125	1	09/09/2022 23:12	WG1923901
(S) Toluene-d8	*97.5*		*75.0-131*		*09/09/2022 23:12*	WG1923901
(S) 4-Bromofluorobenzene	*101*		*67.0-138*		*09/09/2022 23:12*	WG1923901
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*09/09/2022 23:12*	WG1923901

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Diesel Range Organics (DRO)	5.60		5.60	1	09/13/2022 14:24	WG1924335
Residual Range Organics (RRO)	28.2		14.0	1	09/13/2022 14:24	WG1924335
(S) o-Terphenyl	*32.4*		*18.0-148*		*09/13/2022 14:24*	WG1924335

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.4		1	09/09/2022 10:03	WG1922677

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		6.89	61.8	09/09/2022 23:11	WG1923540
(S) a,a,a-Trifluorotoluene(FID)	*104*		*77.0-120*		*09/09/2022 23:11*	WG1923540

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00208	1.85	09/09/2022 23:31	WG1923901
Toluene	ND		0.0104	1.85	09/09/2022 23:31	WG1923901
Ethylbenzene	ND		0.00522	1.85	09/09/2022 23:31	WG1923901
Total Xylenes	ND		0.0135	1.85	09/09/2022 23:31	WG1923901
(S) Toluene-d8	*97.3*		*75.0-131*		*09/09/2022 23:31*	WG1923901
(S) 4-Bromofluorobenzene	*103*		*67.0-138*		*09/09/2022 23:31*	WG1923901
(S) 1,2-Dichloroethane-d4	*108*		*70.0-130*		*09/09/2022 23:31*	WG1923901

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Diesel Range Organics (DRO)	5.97		4.33	1	09/13/2022 14:49	WG1924335
Residual Range Organics (RRO)	20.8		10.8	1	09/13/2022 14:49	WG1924335
(S) o-Terphenyl	*50.0*		*18.0-148*		*09/13/2022 14:49*	WG1924335

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	77.3		1	09/09/2022 10:03	WG1922677

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		4.14	26.3	09/09/2022 23:34	WG1923540
(S) a,a,a-Trifluorotoluene(FID)	*104*		*77.0-120*		*09/09/2022 23:34*	WG1923540

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00165	1.05	09/10/2022 13:06	WG1924179
Toluene	ND		0.00826	1.05	09/10/2022 13:06	WG1924179
Ethylbenzene	ND		0.00414	1.05	09/10/2022 13:06	WG1924179
Total Xylenes	ND		0.0107	1.05	09/10/2022 13:06	WG1924179
(S) Toluene-d8	*93.7*		*75.0-131*		*09/10/2022 13:06*	WG1924179
(S) 4-Bromofluorobenzene	*95.6*		*67.0-138*		*09/10/2022 13:06*	WG1924179
(S) 1,2-Dichloroethane-d4	*113*		*70.0-130*		*09/10/2022 13:06*	WG1924179

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Diesel Range Organics (DRO)	ND		5.18	1	09/13/2022 13:59	WG1924335
Residual Range Organics (RRO)	ND		12.9	1	09/13/2022 13:59	WG1924335
(S) o-Terphenyl	*36.8*		*18.0-148*		*09/13/2022 13:59*	WG1924335

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	75.3		1	09/09/2022 10:03	WG1922677

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		4.27	25	09/10/2022 00:28	WG1923540
(S) a,a,a-Trifluorotoluene(FID)	*104*		*77.0-120*		*09/10/2022 00:28*	WG1923540

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00171	1	09/10/2022 13:26	WG1924179
Toluene	ND		0.00854	1	09/10/2022 13:26	WG1924179
Ethylbenzene	ND		0.00427	1	09/10/2022 13:26	WG1924179
Total Xylenes	ND		0.0111	1	09/10/2022 13:26	WG1924179
(S) Toluene-d8	*96.6*		*75.0-131*		*09/10/2022 13:26*	WG1924179
(S) 4-Bromofluorobenzene	*92.8*		*67.0-138*		*09/10/2022 13:26*	WG1924179
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*09/10/2022 13:26*	WG1924179

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Diesel Range Organics (DRO)	21.8		5.31	1	09/13/2022 14:36	WG1924335
Residual Range Organics (RRO)	43.3		13.3	1	09/13/2022 14:36	WG1924335
(S) o-Terphenyl	*35.7*		*18.0-148*		*09/13/2022 14:36*	WG1924335

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	09/12/2022 12:26	WG1924815
Toluene	ND		1.00	1	09/12/2022 12:26	WG1924815
Ethylbenzene	ND		1.00	1	09/12/2022 12:26	WG1924815
Total Xylenes	ND		3.00	1	09/12/2022 12:26	WG1924815
(S) Toluene-d8	*122*	J1	*80.0-120*		*09/12/2022 12:26*	WG1924815
(S) 4-Bromofluorobenzene	*110*		*77.0-126*		*09/12/2022 12:26*	WG1924815
(S) 1,2-Dichloroethane-d4	*115*		*70.0-130*		*09/12/2022 12:26*	WG1924815

Method Blank (MB)

(MB) R3835744-1 09/09/22 10:18

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00300			

L1532468-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1532468-04 09/09/22 10:18 • (DUP) R3835744-3 09/09/22 10:18

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	78.0	78.1	1	0.110		10

Laboratory Control Sample (LCS)

(LCS) R3835744-2 09/09/22 10:18

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3835743-1 09/09/22 10:03

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00300			

L1532480-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1532480-02 09/09/22 10:03 • (DUP) R3835743-3 09/09/22 10:03

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	96.4	96.6	1	0.219		10

Laboratory Control Sample (LCS)

(LCS) R3835743-2 09/09/22 10:03

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3836240-2 09/09/22 20:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C6 - C12	U		0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*91.1*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3836240-1 09/09/22 19:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPHG C6 - C12	5.50	5.79	105	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*108*	*77.0-120*	

L1532136-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1532136-01 09/10/22 00:18 • (MS) R3836240-3 09/10/22 04:24 • (MSD) R3836240-4 09/10/22 04:44

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	176	119	278	265	90.4	83.2	25	50.0-150			4.62	27
(S) a,a,a-Trifluorotoluene(FID)					*115*	*113*		*77.0-120*				

Method Blank (MB)

(MB) R3836616-2 09/09/22 22:24

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C6 - C12	1.50	J	0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*104*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3836616-1 09/09/22 21:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPHG C6 - C12	5.50	5.09	92.5	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*107*	*77.0-120*	

Method Blank (MB)

(MB) R3836965-2 09/09/22 19:42

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*93.1*			*75.0-131*
(S) 4-Bromofluorobenzene	*107*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*119*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3836965-1 09/09/22 18:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.130	104	70.0-123	
Toluene	0.125	0.119	95.2	75.0-121	
Ethylbenzene	0.125	0.119	95.2	74.0-126	
Xylenes, Total	0.375	0.359	95.7	72.0-127	
(S) Toluene-d8			*96.7*	*75.0-131*	
(S) 4-Bromofluorobenzene			*101*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*117*	*70.0-130*	

Method Blank (MB)

(MB) R3837526-2 09/10/22 10:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*94.1*			*75.0-131*
(S) 4-Bromofluorobenzene	*94.4*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3837526-1 09/10/22 09:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.142	114	70.0-123	
Toluene	0.125	0.116	92.8	75.0-121	
Ethylbenzene	0.125	0.103	82.4	74.0-126	
Xylenes, Total	0.375	0.322	85.9	72.0-127	
(S) Toluene-d8			*88.9*	*75.0-131*	
(S) 4-Bromofluorobenzene			*92.7*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*126*	*70.0-130*	

L1533532-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1533532-11 09/10/22 17:01 • (MS) R3837526-3 09/10/22 19:36 • (MSD) R3837526-4 09/10/22 19:56

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.153	ND	0.202	0.0935	132	61.2	1	10.0-149		J3	73.3	37
Toluene	0.153	ND	0.175	0.0833	114	54.4	1	10.0-156		J3	70.9	38
Ethylbenzene	0.153	ND	0.158	0.0746	104	48.8	1	10.0-160		J3	71.9	38
Xylenes, Total	0.456	ND	0.429	0.230	94.1	50.4	1	10.0-160		J3	60.4	38
(S) Toluene-d8					*90.9*	*92.2*		*75.0-131*				
(S) 4-Bromofluorobenzene					*91.6*	*92.1*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*103*	*107*		*70.0-130*				

Method Blank (MB)

(MB) R3836609-3 09/12/22 10:49

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	*117*			*80.0-120*
(S) 4-Bromofluorobenzene	*113*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*117*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3836609-1 09/12/22 09:51 • (LCSD) R3836609-2 09/12/22 10:11

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	5.95	5.75	119	115	70.0-123			3.42	20
Toluene	5.00	5.64	5.62	113	112	79.0-120			0.355	20
Ethylbenzene	5.00	5.37	5.55	107	111	79.0-123			3.30	20
Xylenes, Total	15.0	16.1	16.5	107	110	79.0-123			2.45	20
(S) Toluene-d8				*119*	*120*	*80.0-120*				
(S) 4-Bromofluorobenzene				*106*	*115*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*115*	*116*	*70.0-130*				

Method Blank (MB)

(MB) R3836605-1 09/13/22 05:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	*51.8*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3836605-2 09/13/22 05:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	33.1	66.2	50.0-150	
(S) o-Terphenyl			*76.9*	*18.0-148*	

L1532412-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1532412-02 09/13/22 08:06 • (MS) R3836605-3 09/13/22 08:19 • (MSD) R3836605-4 09/13/22 08:31

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	48.5	586	1580	307	2050	0.000	10	50.0-150	V	J3 V	135	20
(S) o-Terphenyl					*21.5*	*56.2*		*18.0-148*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
TRC - BNSF Region 1

1180 NW Maple St, Ste 310
Issaquah, WA 98027

Billing Information:
Accounts Payable
1180 NW Maple St, Ste 310
Issaquah, WA 98027

Pres Chk

Report to: **Alexander Lesher**

Email To: alesher@trccompanies.com;cmmiller@trccomp

Project Description: **BNSF - Winlock, WA**

City/State Collected: Winlock, WA

Please Circle: (PT) MT CT ET

Phone: **425-395-0010**

Client Project # 508590

Lab Project # **BNSF1TRC-WINLOCK**

Collected by (print): Alexander Lesher

Site/Facility ID # Winlock BNSF

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

L1532477

E165

Acctnum: **BNSF1TRC**
Template: **T215221**
Prelogin: **P947319**
PM: **134 - Mark W. Beasley**
PB: 8-25-22
Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX w/o SGT 4ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	V8260BTEX 40mlAmb/MeOH10ml/Syr	Remarks	Sample # (lab only)
SB-02-S:2.5	G	SS	2.5	9/1/22	1100	3	X	X	X		-01
SB-02-S:4.5		SS	4.5		1115						-02
SB-03-S:2.5		SS	2.5		1205						-03
SB-03-S:5.0		SS	5.0		1215						-04
SB-04-S:2.5		SS	2.5		1315						-05
SB-04-S:5.0		SS	5.0		1325						-06
SB-05-S:3.0		SS	3.0		1415						-07
SB-06-S:2.5		SS	2.5		1540						-08
SB-06-S:5.0		SS	5.0		1550						-09
SB-01-S:2.5		SS	2.5		1640						-10

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 5433 8382 1994

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: X Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: (Yes) / No HCl (MeOH) TBR	
	9-2-22	1000		2 - 1	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: RRATC 3.9 To: 3.9	Bottles Received: 36
					If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9-3-22	Time: 0900
					Hold:

Condition: NCF / (OK)

Company Name/Address:
TRC - BNSF Region 1

1180 NW Maple St, Ste 310
Issaquah, WA 98027

Billing Information:
Accounts Payable
1180 NW Maple St, Ste 310
Issaquah, WA 98027

Report to: **Alexander Lesher**

Email To: alesher@trccompanies.com;cmmiller@trccomp

Project Description: **BNSF - Winlock, WA**

City/State Collected: Winlock, WA

Please Circle: PT MT CT ET

Phone: **425-395-0010**

Client Project # 508950

Lab Project # **BNSF1TRC-WINLOCK**

Collected by (print): Alexander Lesher

Site/Facility ID # Winlock BNSF

P.O. #

Collected by (signature):

Immediately Packed on Ice N___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

Pace
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MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1532471

Table #

Acctnum: **BNSF1TRC**
Template: **T215221**
Prelogin: **P947319**
PM: **134 - Mark W. Beasley**
PB: 8-25-22 6m

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX w/o SGT 4ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	V8260BTEX 40mlAmb/MeOH10ml/Syr	Remarks	Sample # (lab only)
SB-01-5:5.0	G	SS	5.0	9-1-22	1650	3	X	X	X		-11
TB-1		SS				2			X		-12
D-1	G	SS	—	9-1-22	—	3	X	X	X		-13
		SS									
		SS									
		SS									

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 5133 8382 1994

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: X Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
	9/1/22	1000		2-(HCl) -1	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.7 °C Bottles Received: 3.9 10=3.9 36	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9-3-22 Time: 0900	Hold: Condition: NCF / OK

APPENDIX B
VCP CHANGE OF CONTACT FORM

Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

CHANGE OF CONTACT FORM

Use this form to notify the Department of Ecology (Ecology) of any changes to the designated points of contact for a project under the Voluntary Cleanup Program (VCP). Include any changes to the contact information for those persons (for example: phone number or address). Please submit only one form for each point of contact.

Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are providing new contact information. This information may be found on the VCP Agreement.

Facility/Site Name: BNSF Winlock	
Facility/Site Address: 908 NW Kerron St, Winlock, WA 98596	
Facility/Site No: 3151688	VCP Project No.: SW0775

Step 2: IDENTIFY CONTACT PERSON

Please identify the role of the person for whom you are providing new contact information. Check all that apply.

- ☐ Project Manager
- ☐ Project Attorney
- ☐ Project Billing Contact
- ☐ Property Owner
- ☑ Project Consultant
- ☐ Other – please specify:

Please provide below the new contact information for this person:

Name: Rachelle Clair		Title: Project Manager	
Organization: TRC			
Mailing address: 460 W. Kinnerly Ct			
City: Rathdrum	State: ID	Zip code: 83858	
Phone: 925-688-2464	Fax:	E-mail: rclair@trccompanies.com	
Effective date: 02/01/2023			

Step 3: IDENTIFY PRIOR CONTACT PERSON (IF APPLICABLE)

Is the new contact person replacing an existing point of contact?

☑ Yes

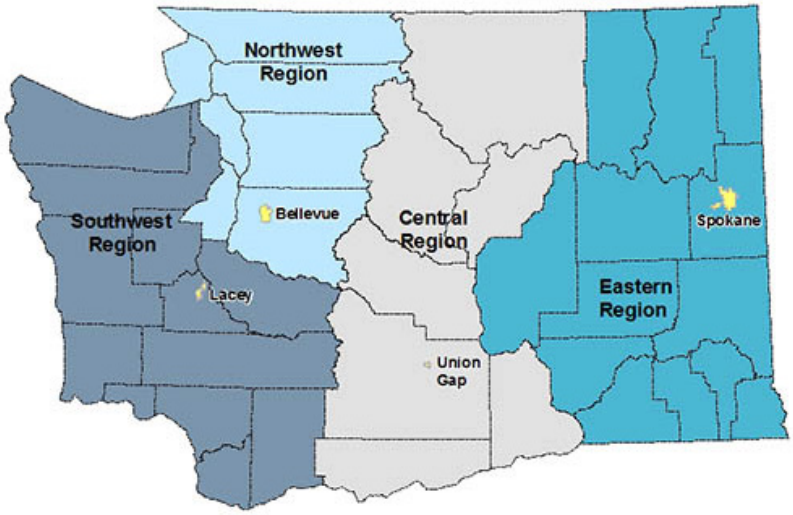
☐ No

If you answered "YES" above, please identify below the person who is being replaced:

Name: Alexander Lesher		Title:
Organization: TRC		
Mailing address: 1180 NW Maple St, Suite 310		
City: Issaquah	State: WA	Zip code: 98027
Phone:	Fax:	E-mail: ALesher@trccompanies.com

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



Northwest Region: Attn: VCP Coordinator 3190 160th Ave. SE Bellevue, WA 98008-5452	**Central Region:** Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009
Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	**Eastern Region:** Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call 877-833-6341.