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January 26, 2021
Project No. 0747.01.12

Michael R. Warfel, LG, LHG, RG
Washington State Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008

Re: Second Quarterly Compliance Groundwater Monitoring Event
North Cascade Ford Property, Sedro-Woolley, Washington
VCP Number: NW3031, CSID: 12075, FSID: 58313566

Dear Mr. Warfel:

On behalf of VSF Properties, LLC, Maul Foster & Alongi, Inc. (MFA) has prepared this report describing monitoring well sampling activities conducted at the North Cascade Ford property, located at 116 W Ferry Street in Sedro-Woolley, Washington (the Property) (see Figure 1). The North Cascade Ford Site (the Site) includes the Property and a portion of the adjacent property to the north, owned by the Burlington Northern Santa Fe Railway Company (see Figures 1 and 2).

Activities were conducted in accordance with the groundwater compliance monitoring plan (CMP) (MFA, 2020a), the addendum to the groundwater CMP (MFA, 2020c), and the requirements for performance monitoring, per the Washington State Model Toxics Control Act (MTCA) (Washington Administrative Code 173-340-410(b)).

BACKGROUND

Previous investigations identified environmental impacts in three remaining areas of the Site, referred to as areas of concern (AOCs) 1 through 3 (see Figure 2) (MFA, 2015, 2017a,b, 2020b,c).

Chemicals of concern (COCs) in AOCs 1 through 3 include diesel-range organics (DRO), lube oil-range organics (ORO), gasoline-range organics (GRO), benzene, toluene, ethylbenzene, total xylenes (BTEX), and/or total naphthalenes.

Historical groundwater analytical results associated with monitoring wells in AOCs 1 and 2 and reconnaissance groundwater samples in AOC 3 are presented in Table 1.

In March 2020, a cleanup action was completed in AOCs 1 through 3 at the Site (MFA, 2020b). Following implementation of the remedial action, the groundwater CMP and addendum to the groundwater CMP were developed in coordination with the Washington State Department of Ecology to implement performance groundwater monitoring the Site (MFA, 2020a,c). Per

WAC 173-340(b), the purpose of performance monitoring is to confirm that a cleanup action has attained cleanup levels. The first quarterly compliance groundwater monitoring event was conducted in September 2020 (MFA, 2020d).

FIELD AND ANALYTICAL METHODS

Groundwater monitoring activities were conducted in December 2020. Sample locations, sample depths, and chemical analyses are summarized in Table 2. Compliance monitoring well locations are shown on Figure 2.

Potentiometric Surface

On December 16, 2020, MFA measured static water levels in the compliance monitoring (see Table 3). A potentiometric surface map is provided as Figure 3. The estimated potentiometric surface contours continue to show no groundwater migration at the Site.

Monitoring Well Sampling

MFA collected ten groundwater samples from nine compliance monitoring wells on the Property (MW01R, MW02R, MW04, MW06, MW07, and MW09 through MW12) on December 15, 2020, including a field duplicate sample from monitoring well MW09. Chemical analyses and analytical methods are detailed in Table 2. A minimum of one well volume was purged, and selected water quality field parameters (e.g., temperature, specific conductance, pH, turbidity) were allowed to stabilize prior to sample collection. During purging, the flow rates, water levels, and water quality parameters were recorded on field sampling data sheets (see Attachment A). Groundwater samples were submitted to FBI for analysis under standard chain-of-custody procedures.

RESULTS

The laboratory analytical report is provided as Attachment B, and analytical data is presented in Table 4. MTCA Method A cleanup level (CUL) exceedances of DRO are shown on Figure 4, and site trends for DRO and ORO concentrations are presented in Figures 5 and 6. Analytical data and the laboratory's internal quality assurance and quality control data were reviewed to assess whether they met project-specific data quality objectives. A data validation memorandum summarizing data evaluation procedures, data usability, and deviations from specific field and/or laboratory methods is included as Attachment C. The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

AOC 1: Former Auto Repair Shop

Four groundwater samples, including one field duplicate, were collected from monitoring wells MW01R, MW07, and MW09 and analyzed for BTEX, GRO, DRO, and ORO.

All detections of DRO and ORO in AOC 1 were below their respective MTCA Method A CULs.

No BTEX constituents or GRO were detected in the groundwater samples from AOC 1.

AOC 2: Former USTs

Five groundwater samples were collected from monitoring wells MW02R, MW04, MW06, MW10, and MW12 and analyzed for GRO, DRO, ORO, and BTEX.

DRO were detected in groundwater samples at MW02R, MW04, and MW10 Only one monitoring well, MW02R, had a detection above the MTCA Method A CUL. ORO were detected in MW02R and MW04 at 390 and 280 ug/L, respectively, below the MTCA Method A CUL.

No BTEX constituents or GRO were detected in the groundwater samples from AOC 2.

AOC 3: Former Coal Storage Sheds/Possible Buried Object

One groundwater sample was collected from MW11 and analyzed for GRO, DRO, ORO, BTEX, and total naphthalenes.

There were no detections of COCs in the groundwater sample from AOC 3.

SUMMARY

Results from the groundwater monitoring indicate the following:

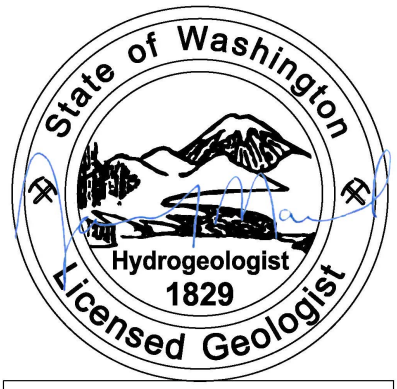
- **AOC 1**
  - No detections of COCs exceeded their respective MTCA Method A CULs.
- **AOC 2**
  - DRO concentrations remain slightly above the MTCA Method A CUL in groundwater at monitoring well MW02R.
- **AOC 3**
  - No COCs were detected.

The next quarterly groundwater monitoring event is scheduled for March 2021.

If you have any questions, please feel free to contact either of us.

Sincerely,

Maul Foster & Alongi, Inc.



JAMES J. MAUL

01-26-2021

James J. Maul, LHG
Principal Hydrogeologist

Carolyn R. Wise, LG
Project Geologist

Attachments: Limitations
References
Tables
Figures
Attachment A – Water Field Sampling Data Sheets
Attachment B – Analytical Laboratory Report
Attachment C – Data Validation Memorandum

cc: Larry Setchell, Setchell NW Legal Services, P.S.
Holly Stafford, Chmelik, Sitkin & David, P.S.

LIMITATIONS

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

REFERENCES

MFA. 2015. Preliminary remedial investigation and feasibility study, North Cascade Ford property, Sedro-Woolley, Washington. Prepared for VSF Properties, LLC. Prepared by Maul Foster & Alongi, Inc., Bellingham, Washington. December 9.

MFA. 2017a. Letter (re: 2016 data gap investigation results, North Cascade Ford property, Sedro-Woolley, Washington) to L. Setchell, Helsell Fetterman LLP, from H. Good and J. Clary, Maul Foster & Alongi, Inc., Bellingham, Washington. January 24.

MFA. 2017b. Supplemental data gap investigation report, North Cascade Ford property, Sedro-Woolley, Washington. Prepared for VSF Properties, LLC. Prepared by Maul Foster & Alongi, Inc., Bellingham, Washington. August 18.

MFA. 2020a. Groundwater compliance monitoring plan, North Cascade Ford property, Sedro-Woolley, Washington. Prepared for VSF Properties, LLC. Prepared by Maul Foster & Alongi, Inc., Bellingham, Washington. July 8.

MFA. 2020b. Remedial action completion report, North Cascade Ford property, Sedro-Woolley, Washington. Prepared for VSF Properties, LLC. Prepared by Maul Foster & Alongi, Inc., Bellingham, Washington. July 13.

MFA. 2020c. Memorandum (re: Addendum to Groundwater Compliance Monitoring Plan, North Cascade Ford Property, 116 W. Ferry Street, Sedro-Woolley, Washington, Facility Site ID: 58313566; Cleanup Site ID: 12075) to M. Warfel, Washington State Department of Ecology, from J. Maul, Maul Foster & Alongi, Inc., Bellingham, Washington. August 10.

MFA. 2020d. Letter (re: Monitoring Well Installation and First Quarterly Compliance Groundwater Monitoring Event, North Cascade Ford Property, Sedro-Woolley, Washington, VCP Number: NW3031, CSID: 12075, FSID: 58313566) to M. Warfel, Washington State Department of Ecology, from J. Maul and C. Wise, Maul Foster & Alongi, Inc., Bellingham, Washington. November 24.

TABLES

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Table 1
Historical Groundwater Analytical Results
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington

AOC	Location	Sample Name	Collection Date:	Collection Depth (ft bgs)[a]	Benzene	Ethylbenzene	Toluene	Xylenes[b]	Gasoline-Range Organics	Diesel-Range Organics	Lube-Oil-Range Organics	Total Naphthalenes
MTCA Method A Cleanup Level:					5	700	1,000	1,000	800	500	500	160
1	MW01	MW1-W-8.5	05/15/2012	5.61-13.44	**0.3**	0.2 U	0.2 U	0.4 U	**400**	**1,300**	**240**	**10.53**
		FIELD DUPLICATE			**0.3**	0.2 U	0.2 U	0.4 U	**380**	**1,200**	**220**	**11.36**
		MW01-GW-20121019	10/09/2012	9.87-13.44	--	--	--	--	--	**1,800**	**490**	**11.18**
		MW01	04/10/2014	NM	0.2 U	0.2 U	0.2 U	0.4 U	250 U	**1,700**	**870**	--
		MWDUP			0.2 U	0.2 U	0.2 U	0.4 U	250 U	**1,600**	**930**	--
		MW01-GW-140618	06/18/2014	6.09-13.45	--	--	--	--	--	**1,400**	**310**	--
		FD-GW-140618			--	--	--	--	--	**1,700**	**350**	--
		MW01-GW-091014	09/10/2014	7.74-13.44	--	--	--	--	--	**1,300**	**300**	--
		FD-091014			--	--	--	--	--	**1,400**	**390**	--
		MW01-GW-121014	12/10/2014	6.08-13.46	--	--	--	--	--	**2,400**	**1,400**	--
		FD-121014			--	--	--	--	--	**1,900**	**1,200**	--
		MW01-GW-112816	11/28/2016	6.12-13.43	--	--	--	--	--	**1,300**	610 U	--
		MWDUP-GW-112816			--	--	--	--	--	**1,300**	590 U	--
		MW01-GW-042617	04/26/2017	5.35-13.40	--	--	--	--	100 U	**620**	**510 J**	--
		MWDUP-GW-042617			--	--	--	--	100 U	**560**	410 U	--
		MW01-GW-101718	10/17/2018	9.70-13.40	--	--	--	--	500 U	**900**	**1,500**	--
		MW01-GW-032819	03/28/2019	6.82-13.41	--	--	--	--	**370 J**	**2,400**	**2,200**	--
	MW05	MW05-GW-042617	04/26/2017	5.76-10.60	--	--	--	--	**490**	**1,300**	**1,100**	--
		MW05-GW-032819	03/28/2019	6.93-10.63	--	--	--	--	**600 J**	**1,500**	**460**	--
	MW07	MW07-GW-042617	04/26/2017	7.85-19.74	--	--	--	--	100 U	260 U	410 U	--
		MW07-GW-101718	10/17/2018	9.25-19.74	--	--	--	--	100 U	250 U	400 U	--
		MW07-GW-032819	03/28/2019	7.95-19.74	--	--	--	--	100 U	250 U	410 U	--
	MW08	MW08-GW-042617	04/26/2017	7.38-15.80	--	--	--	--	400 U	**1,000**	**690**	--
		MW08-GW-101718	10/17/2018	10.05-15.80	--	--	--	--	100 U	**700**	**580**	--
		MWDUP-GW-101718			--	--	--	--	500 U	**780**	**970**	--
		MW08-GW-032819	03/28/2019	6.85-15.82	--	--	--	--	100 U	**950**	**460**	--
		MWDUP-GW-032819			--	--	--	--	100 U	**1,000**	**510**	--

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Table 1
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VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington

AOC	Location	Sample Name	Collection Date:	Collection Depth (ft bgs)[a]	Benzene	Ethylbenzene	Toluene	Xylenes[b]	Gasoline-Range Organics	Diesel-Range Organics	Lube-Oil-Range Organics	Total Naphthalenes
MTCA Method A Cleanup Level:					5	700	1,000	1,000	800	500	500	160
2	MW02 (decommissioned in September 2016)	MW2-W-9	05/16/2012	6.65-13.85	0.2 U	0.2 U	0.2 U	0.4 U	250 U	**1,900**	**240**	ND
		MW02-GW-20121019	10/09/2012	9.29-13.84	--	--	--	--	--	**690**	200 U	--
		MW02	04/10/2014	6.12-13.81	--	--	--	--	--	**11,000**	**1,300**	--
		MW02-GW-140618	06/18/2014	6.98-13.80	--	--	--	--	--	**3,800**	**410**	--
		MW02-GW-091014	09/10/2014	8.37-13.84	--	--	--	--	--	**770**	200 U	--
		MW02-GW-121014	12/10/2014	7.11-13.85	--	--	--	--	--	**1,300**	**410**	--
	MW02R (replacement well for MW02)	MW02R-GW-042617	04/26/2017	6.60-14.80	--	--	--	--	--	**750**	410 U	--
		MW02R-GW-101718	10/17/2018	9.90-14.80	--	--	--	--	--	**480**	**450**	--
		MW02R-GW-032819	03/28/2019	7.60-14.79	--	--	--	--	--	**680**	**470**	--
2	MW04	MW04-GW-042617	04/26/2017	6.39-13.60	--	--	--	--	--	**260**	**450**	--
		MW04-GW-101718	10/17/2018	10.23-13.60	--	--	--	--	--	250 U	420 U	--
		MW04-GW-032819	03/28/2019	7.40-13.58	--	--	--	--	--	260 U	410 U	--
	MW06	MW06-GW-042617	04/26/2017	7.66-19.74	--	--	--	--	--	260 U	410 U	--
		MW06-GW-101718	10/17/2018	10.6-19.74	--	--	--	--	100 U	250 U	400 U	--
		MW06-GW-032819	03/28/2019	5.73-13.88	--	--	--	--	100 U	260 U	410 U	--
3	GP51	GP51-W-11.0	11/16/2016	8.85-12.0	**15 J**	**480 J**	**6.1 J**	**1000 J**	**7400 J**	--	--	--
	GP76	GP76-W-10.0	04/25/2017	6.0-15.0	**5.8**	**230**	10 U	**8.4**	**6900**	**2800 J**	420 U	**428**

NOTES:

Analytical results are shown in ug/L.

Bolding indicates a detection.

Shading indicates a MTCA Method A CUL exceedance; non-detect results ("U") were not compared with screening criteria.

-- = not analyzed.

AOC = area of concern.

CUL = cleanup level.

ft bgs = feet below ground surface.

J = Result is an estimated value.

MTCA = Model Toxics Control Act.

MW = monitoring well.

ND = not detected.

NM = water level not measured because of unanticipated presence of free product.

NV = no value.

U = Analyte not detected at or above method reporting limit.

ug/L = micrograms per liter (parts per billion).

[a]Sample collection depths are from top of water table or top of screened interval, whichever is deeper, to bottom of screened interval.

[b]Total xylenes are sum of m,p-xylene and o-xylene. When both results are non-detect, the higher reporting limit is used.

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Table 2
Sampling and Analysis Summary
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington

AOC	Well ID	Sample Matrix	Screened Interval	Sample Date	Analytical Schedule					
					DRO	ORO	GRO	EPH/VPH	BTEX	Naphth.
1	MW01R	GW	5 - 15	9/22/2020	X	X	X	--	X	--
		GW		10/14/2020	X	--	X	X	--	X
		GW		12/16/2020	X	X	X	--	X	--
	MW07	GW	5 - 20	9/22/2020	X	X	X	--	X	--
		GW		12/16/2020	X	X	X	--	X	--
	MW09	GW	5 - 20	9/22/2020	X	X	X	--	X	--
		GW		12/16/2020	X	X	X	--	X	--
2	MW02R	GW	5 - 15	9/22/2020	X	X	X	--	X	--
		GW		12/16/2020	X	X	X	--	X	--
	MW04	GW	4 - 14	9/22/2020	X	X	X	--	X	--
		GW		12/16/2020	X	X	X	--	X	--
	MW06	GW	5 - 20	9/22/2020	X	X	X	--	X	--
		GW		12/16/2020	X	X	X	--	X	--
	MW10	GW	5 - 20	9/22/2020	X	X	X	--	X	--
		GW		10/14/2020	X	--	X	X	--	X
		GW		12/16/2020	X	X	X	--	X	--
	MW12	GW	5 - 15	9/22/2020	X	X	X	--	X	--
		GW		12/16/2020	X	X	X	--	X	--
3	MW11	GW	5 - 20	9/22/2020	X	X	X	--	X	X
		GW		12/16/2020	X	X	X	--	X	X

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Table 2
Sampling and Analysis Summary
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington

NOTES:
-- = not analyzed.
AOC = area of concern.
BTEX = benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8021.
DRO = diesel-range organics; analysis by NWTPH-Dx method.
EPA = U.S. Environmental Protection Agency.
EPH/VPH = extractable petroleum hydrocarbons/volatile petroleum hydrocarbons; analysis by NWTPH-EPH/VPH.
GRO = gasoline-range organics; analysis by NWTPH-Gx method.
ID = identification.
Naphth. = naphthalenes; analysis by EPA Method 8270 SIM.
NWTPH = Northwest Total Petroleum Hydrocarbons.
ORO = oil-range organics; analysis by NWTPH-Dx method.
SIM = selected ion monitoring.
X = yes.

Table 3
Water Levels
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington

Location	MP Elevation (feet, NAVD 88)	Measurement Date	NAPL Thickness (feet)	Depth to Water (feet)	NAPL-Corrected Depth to Water (feet)[a]	Groundwater Elevation (feet, NAVD 88)
MW01 (decommissioned in February 2020)	56.09	05/15/2012	--	5.61	NA	50.48
		10/09/2012	--	9.87	NA	46.22
		12/03/2012	--	6.96	NA	49.13
		04/10/2014	NM[b]	NM[b]	NA	NM[b]
		06/17/2014	NM[c]	6.01	NA	50.16
		06/18/2014	--	6.09	NA	50.00
		09/10/2014	NM[c]	7.74	NA	48.43
		12/10/2014	0.01[d]	6.09	6.08	50.09
		04/26/2017	--	5.35	NA	50.74
		05/31/2017	--	5.96	NA	50.13
		10/17/2018	0.02	9.70	9.69	46.40
		12/06/2018	NM[e]	NA[e]	NA[e]	NA[e]
		03/28/2019	NM[e]	NA[e]	NA[e]	NA[e]
MW01R	56.32	09/22/2020	--	9.94	NA	46.38
		10/14/2020	--	7.82	NA	48.50
		12/16/2020	--	5.84	NA	50.48
MW02 (decommissioned in September 2016)	56.73	05/15/2012	--	6.65	NA	50.08
		10/09/2012	--	9.29	NA	47.44
		12/03/2012	--	8.45	NA	48.28
		04/10/2014	--	6.12	NA	50.61
		06/17/2014	--	6.96	NA	49.77
		06/18/2014	--	6.98	NA	49.75
		09/10/2014	--	8.37	NA	48.36
		12/10/2014	--	7.11	NA	49.62

Table 3
Water Levels
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington

Location	MP Elevation (feet, NAVD 88)	Measurement Date	NAPL Thickness (feet)	Depth to Water (feet)	NAPL-Corrected Depth to Water (feet)[a]	Groundwater Elevation (feet, NAVD 88)
MW02R	56.59	04/26/2017	--	6.60	NA	49.99
		05/31/2017	--	7.07	NA	49.52
		10/17/2018	--	9.90	NA	46.69
		12/06/2018	--	8.80	NA	47.79
		03/28/2019	--	7.60	NA	48.99
		09/22/2020	--	9.28	NA	47.31
		10/14/2020	--	9.41	NA	47.18
		12/16/2020	--	7.79	NA	48.80
MW03	55.08	05/15/2012	--	5.40	NA	49.68
		10/09/2012	--	8.11	NA	46.97
		12/03/2012	--	5.28	NA	49.80
		04/10/2014	--	5.00	NA	50.08
		06/17/2014	--	5.66	NA	49.42
		06/18/2014	--	5.87	NA	49.21
		09/10/2014	--	6.94	NA	48.14
		12/10/2014	--	5.10	NA	49.98
		05/31/2017	--	5.75	NA	49.33
		10/17/2018	--	7.72	NA	47.36
		12/06/2018	--	5.92	NA	49.16
		03/28/2019	--	5.73	NA	49.35
MW04	56.32	04/26/2017	--	6.39	NA	49.93
		05/31/2017	--	6.88	NA	49.44
		10/17/2018	--	10.23	NA	46.09
		12/06/2018	--	8.62	NA	47.70
		03/28/2019	--	7.40	NA	48.92
		09/22/2020	--	9.06	NA	47.26
		12/16/2020	--	7.71	NA	48.61

Table 3
Water Levels
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington

Location	MP Elevation (feet, NAVD 88)	Measurement Date	NAPL Thickness (feet)	Depth to Water (feet)	NAPL-Corrected Depth to Water (feet)[a]	Groundwater Elevation (feet, NAVD 88)
MW05 (decommissioned in February 2020)	56.25	04/26/2017	--	5.76	NA	50.49
		05/31/2017	--	6.35	NA	49.90
		10/17/2018	--	NA[f]	NA[f]	NA[f]
		12/06/2018	--	8.05	NA	48.20
		03/28/2019	--	6.93	NA	49.32
MW06	56.58	04/26/2017	--	7.66	NA	48.92
		05/31/2017	--	8.06	NA	48.52
		10/17/2018	--	10.60	NA	45.98
		12/06/2018	--	9.10	NA	47.48
		03/28/2019	--	5.73	NA	50.85
		09/22/2020	--	10.84	NA	45.74
		12/16/2020	--	8.25	NA	48.33
MW07	56.46	04/26/2017	--	7.85	NA	48.61
		05/31/2017	--	8.02	NA	48.44
		10/17/2018	--	9.25	NA	47.21
		12/06/2018	--	9.15	NA	47.31
		03/28/2019	--	7.95	NA	48.51
	NA[g]	09/22/2020	--	10.42[g]	NA[g]	NA[g]
	56.30	12/16/2020	--	8.24	NA	48.06
MW08 (decommissioned in February 2020)	56.48	04/26/2017	--	7.38	NA	49.10
		05/31/2017	--	8.01	NA	48.47
		10/17/2018	--	10.05	NA	46.43
		12/06/2018	--	9.02	NA	47.46
		03/28/2019	--	6.85	NA	49.63
MW09	56.66	09/22/2020	--	9.26	NA	47.40
		10/14/2020	--	8.46	NA	48.20
		12/16/2020	--	6.17	NA	50.49

Table 3
Water Levels
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington

Location	MP Elevation (feet, NAVD 88)	Measurement Date	NAPL Thickness (feet)	Depth to Water (feet)	NAPL-Corrected Depth to Water (feet)[a]	Groundwater Elevation (feet, NAVD 88)
MW10	56.26	09/22/2020	--	9.71	NA	46.55
		10/14/2020	--	9.21	NA	47.05
		12/16/2020	--	7.13	NA	49.13
MW11	56.2	09/22/2020	--	10.48	NA	45.72
		12/16/2020	--	6.51	NA	49.69
MW12	56.39	09/22/2020	--	10.24	NA	46.15
		12/16/2020	--	7.85	NA	48.54

NOTES:

-- = NAPL not observed.

Max = maximum.

Min = minimum.

MP = measuring point.

MW = monitoring well.

NA = not applicable.

NAPL = nonaqueous-phase liquid.

NAVD 88 = North American Vertical Datum of 1988.

NM = not measured.

[a]Water level corrected for presence of NAPL, using assumed product density of 0.8 gram per cubic centimeter.

[b]NAPL was observed, but interface probe was not available to measure NAPL thickness and water level.

[c]NAPL was observed on probe and tubing, but measurable and extractable quantity was not present.

[d]NAPL thickness was measured, but extractable quantity was not present.

[e]NAPL was present, coating entire probe tip and tubing; coated probe tip prevented measurement of thickness or water level.

[f]Water level may not be representative of groundwater elevation because screened interval was above low water table.

[g]The well monument was compressed during implementation of the remedial action, and the casing had to be cut down to properly secure the monument. A water level measurement was not collected at this time. A new well monument was installed on 10/01/2020.

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Table 4
Groundwater Analytical Results—Compliance Monitoring
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington

AOC	Location	Collection Date	Benzene	Ethylbenzene	Toluene	Xylenes (total)	GRO	DRO	ORO	Total Naphthalenes[a]
		Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
		MTCA Method A CUL[1]:	5	700	1,000	1,000	1,000[b]	500	500	160
1	MW01R	9/22/2020	1 U	1 U	1 U	**3.7**	**160**	**1,900**	**610**	--
		10/14/2020	20 U	20 U	20 U	60 U	100 U	**200**	260 U	20 U
		12/16/2020	1 U	1 U	1 U	3 U	100 U	**250**	250 U	--
	MW07	9/22/2020	1 U	1 U	1 U	3 U	100 U	**130**	250 U	--
		12/16/2020	1 U	1 U	1 U	3 U	100 U	**89**	250 U	--
	MW09	9/22/2020	1 U	1 U	1 U	3 U	100 U	**640**	**620**	--
		12/16/2020	1 U	1 U	1 U	3 U	100 U	**230**	**300**	--
		12/16/2020	1 U	1 U	1 U	3 U	100 U	**210**	**390**	--
2	MW02R	9/22/2020	1 U	1 U	1 U	3 U	100 U	**780**	**450**	--
		12/16/2020	1 U	1 U	1 U	3 U	100 U	**600**	**390**	--
	MW04	9/22/2020	1 U	1 U	1 U	3 U	100 U	**260**	250 U	--
		12/16/2020	1 U	1 U	1 U	3 U	100 U	**220**	**280**	--
	MW06	9/22/2020	1 U	1 U	1 U	3 U	100 U	50 U	250 U	--
		12/16/2020	1 U	1 U	1 U	3 U	100 U	50 U	250 U	--
	MW10	9/22/2020	1 U	1 U	1 U	3 U	**370**	**1,900**	250 U	--
		10/14/2020	20 U	20 U	20 U	60 U	**550**	**2,000**	**400**	--
		12/16/2020	1 U	1 U	1 U	3 U	100 U	**160**	250 U	--
	MW12	9/22/2020	1 U	1 U	1 U	3 U	100 U	50 U	250 U	--
		12/16/2020	1 U	1 U	1 U	3 U	100 U	50 U	250 U	--
3	MW11	9/22/2020	1 U	**30**	1 U	**16**	**390**	**350**	300 U	**18.8**
		9/22/2020	1 U	**30**	1 U	**17**	**380**	**200**	250 U	**21.7**
		12/16/2020	1 U	1 U	1 U	3 U	100 U	50 U	250 U	0.4 U

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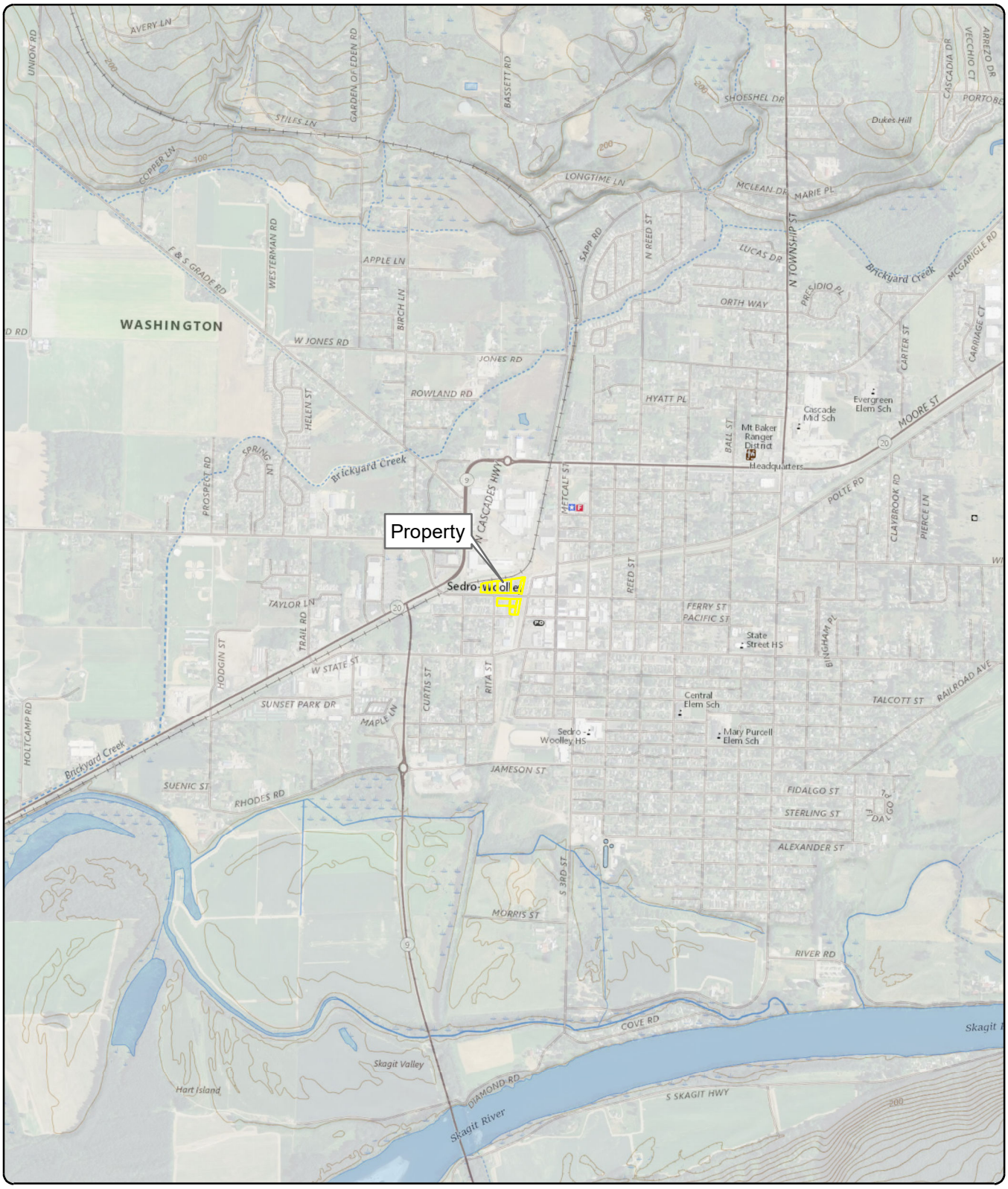
Table 4
Groundwater Analytical Results—Compliance Monitoring
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington

NOTES:
Bolding indicates a detection.
Shading indicates a MTCA Method A CUL exceedance; non-detect results ("U") were not compared with screening criteria.
-- = not analyzed.
AOC = area of concern.
CUL = cleanup level.
DRO = diesel-range organics.
GRO = gasoline-range organics.
MTCA = Model Toxics Control Act.
NV = no value.
ORO = lube oil-range organics.
U = analyte not detected at or above method reporting limit.
ug/L = micrograms per liter (parts per billion).
[a]Total naphthalenes are the sum of 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene. When all results are non-detect the highest reporting limit is shown.
[b]MTCA Method A CUL with no detectable benzene.
REFERENCES:
[1]Ecology, Cleanup Levels, and Risk Calculation table. August 2020.

FIGURES



Property Address: 116 W Ferry Street, Sedro-Woolley, Washington
Source: US Geological Survey (1990) 7.5-minute topographic quadrangle: Sedro-Woolley North
Section 24, Township 35 North, Range 4 East

Legend

Property Parcel

Figure 1
Property Location

North Cascade Ford Property
Sedro-Woolley, Washington

0 1,000 2,000
Feet

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Path: X:\0747.01\12\Projects\Fig_PropertyLocation.mxd
Print Date: 9/30/2020
Approved By: C. Wise
Produced By: abixby
Project: 0747.01.12

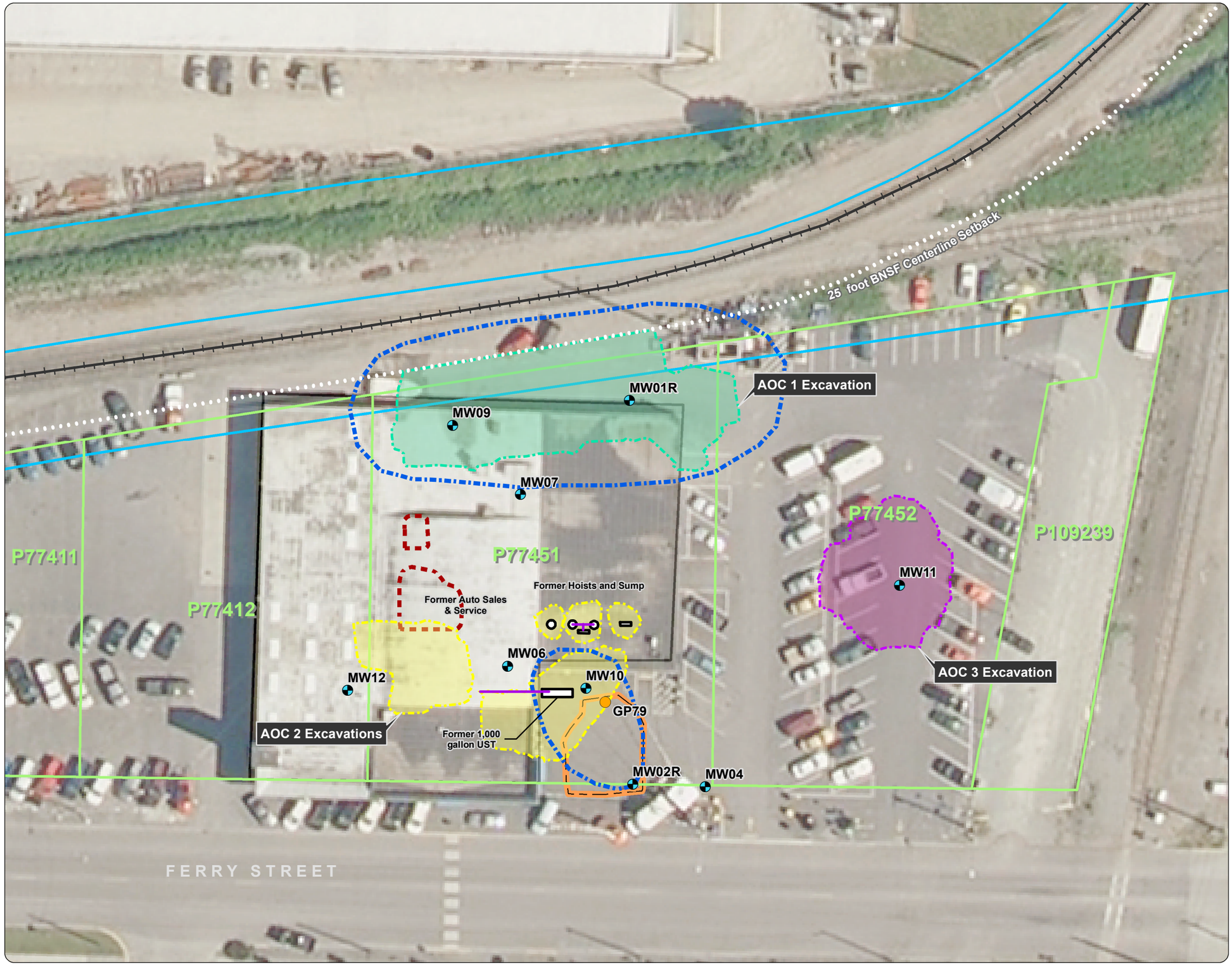

Figure 2
Compliance Monitoring Well Network

North Cascade Ford Property
Sedro-Woolley, Washington

Legend

- Compliance Monitoring Well
- Boring
- Product Line
- AOC 1 Excavation (MFA, 2020)
- AOC 2 Excavation (MFA, 2020)
- AOC 3 Excavation (MFA, 2020)
- Estimated Extent of Petroleum Impacts in Groundwater
- UST Interim Action (MFA, 2016)
- Hoist Removal Excavation (ZGA, 2017)
- Former Building Footprint
- Property Parcel
- BNSF-Owned Parcel

Notes:
All features are approximate.

All structures on the property were removed prior to remedial action.
The excavations areas are set back from the BNSF railroad centerline by 25 feet.
The surveyed Property parcel boundaries do not coincide with the adjacent parcel boundaries obtained from Skagit County; therefore, there is an overlap between the Property and BNSF parcels.
AOC = area of concern.
BNSF = Burlington Northern Santa Fe.
Property = North Cascade Ford Property.
UST = underground storage tank.
ZGA = Zipper Geo Associates.

Sources:
Aerial photograph obtained from ArcGIS Online.
Excavation extents surveyed by Pacific Geomatic Services, Inc. in March 2020.
Property parcel boundaries surveyed by Wilson Engineering, LLC.
Adjacent parcel boundaries obtained from Skagit County.

0 20 40
Feet

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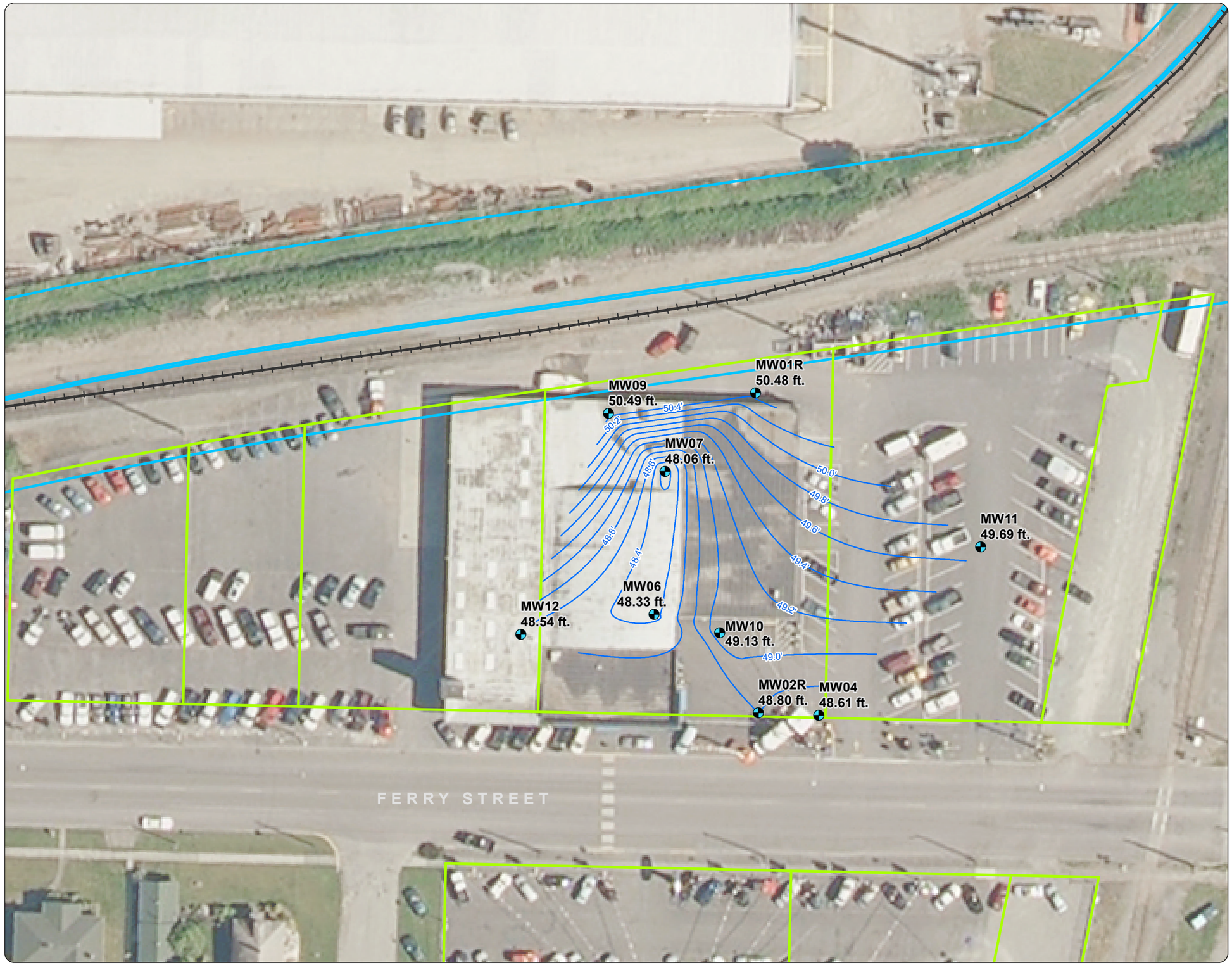
Path: X:\0747.01\12\Projects\Fig_ComplianceMWNetwork.mxd
Print Date: 11/19/2020
Approved By: cwise
Produced By: abixby
Project: 0747.01.11

Figure 3
Groundwater Elevation Contours - December 2020

North Cascade Ford Property
Sedro-Woolley, Washington



Legend

- Compliance Monitoring Well
- Groundwater Elevation Contour (feet NAVD 88; 0.2-ft. interval)
- Property Parcel
- BNSF-Owned Parcel

Notes:
The surveyed Property parcel boundaries do not coincide with the adjacent parcel boundaries obtained from Skagit County; therefore, there is an overlap between the Property and BNSF parcels.
Water levels measured on December 16, 2020.
BNSF = Burlington Northern Santa Fe Railway.
ft. = feet.
NAVD 88 = North American Vertical Datum of 1988.

0 25 50
Feet

Sources:
Adjacent parcel boundaries obtained from Skagit County.
Aerial photograph obtained from Mapbox.
Property parcel boundaries surveyed by Wilson Engineering, LLC.

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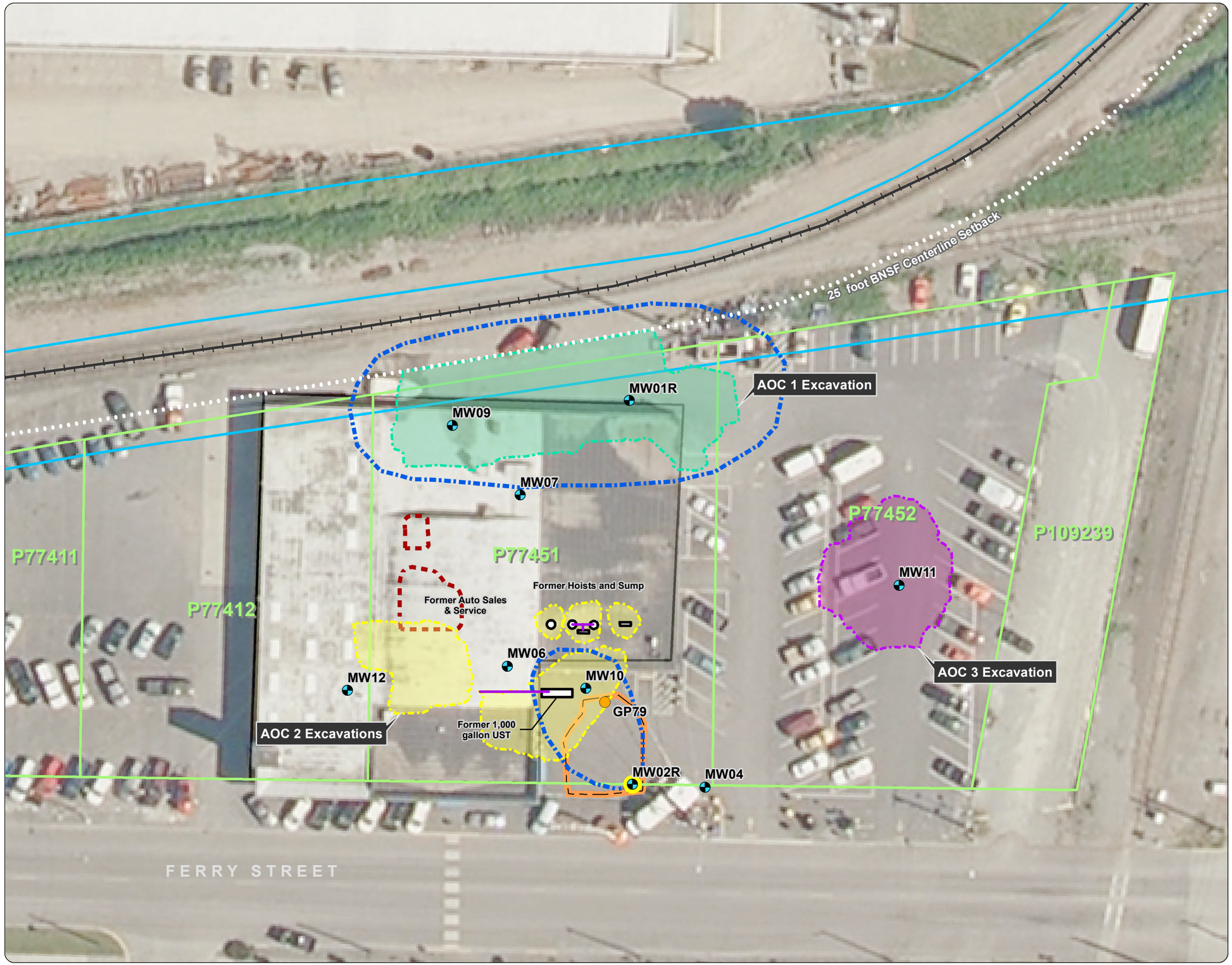
Path: X:\0747.01\12\Projects\Fig_GWContours_Dec2020.mxd
Print Date: 1/5/2021
Approved By: C. Wise
Produced By: abixby
Project: 0747.01.12

Figure 4
Groundwater Exceedances - December 2020

North Cascade Ford Property
Sedro-Woolley, Washington



Legend

- Compliance Monitoring Well
- Boring
- DRO Exceedance
- Product Line
- AOC 1 Excavation (MFA, 2020)
- AOC 2 Excavation (MFA, 2020)
- AOC 3 Excavation (MFA, 2020)
- Estimated Extent of Petroleum Impacts in Groundwater
- UST Interim Action (MFA,
- Hoist Removal Excavation (ZGA, 2017)
- Former Building Footprint
- Property Parcel
- BNSF-Owned Parcel

Notes:
All features are approximate.

All structures on the property were removed prior to remedial action.
The excavations areas are set back from the BNSF railroad centerline by 25 feet.
The surveyed Property parcel boundaries do not coincide with the adjacent parcel boundaries obtained from Skagit County; therefore, there is an overlap between the Property and BNSF parcels.
AOC = area of concern.
BNSF = Burlington Northern Santa Fe.
DRO = diesel-range organics.
Property = North Cascade Ford Property.
UST = underground storage tank.
ZGA = Zipper Geo Associates.

Sources:
Aerial photograph obtained from ArcGIS Online.
Excavation extents surveyed by Pacific Geomatic Services, Inc. in March 2020.
Property parcel boundaries surveyed by Wilson Engineering, LLC.
Adjacent parcel boundaries obtained from Skagit County.

0 20 40
Feet

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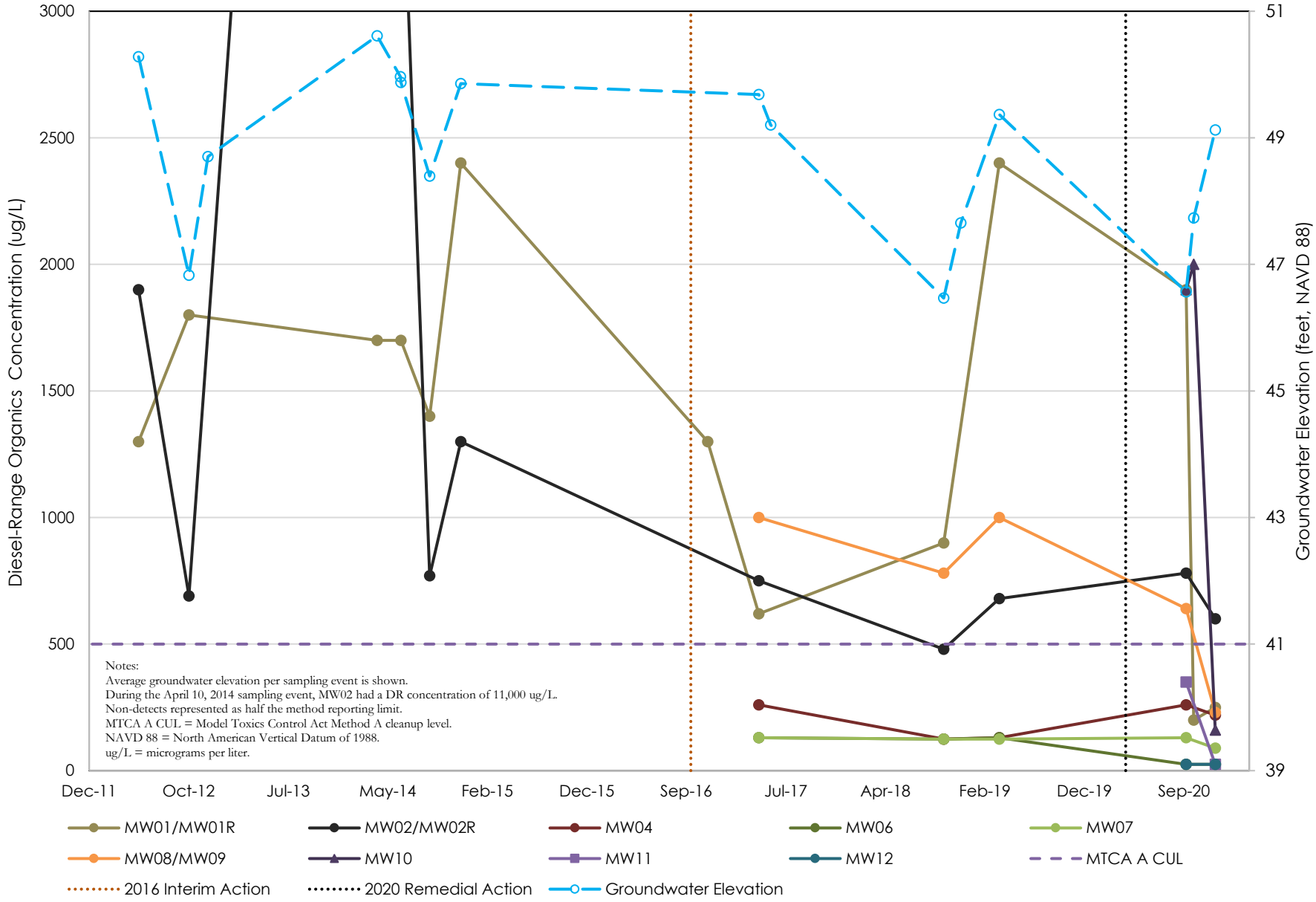
Figure 5
Diesel-Range Organics Concentrations
North Cascade Ford Property
Sedro-Woolley, Washington



0747.01.12, 1/26/2021, DRO

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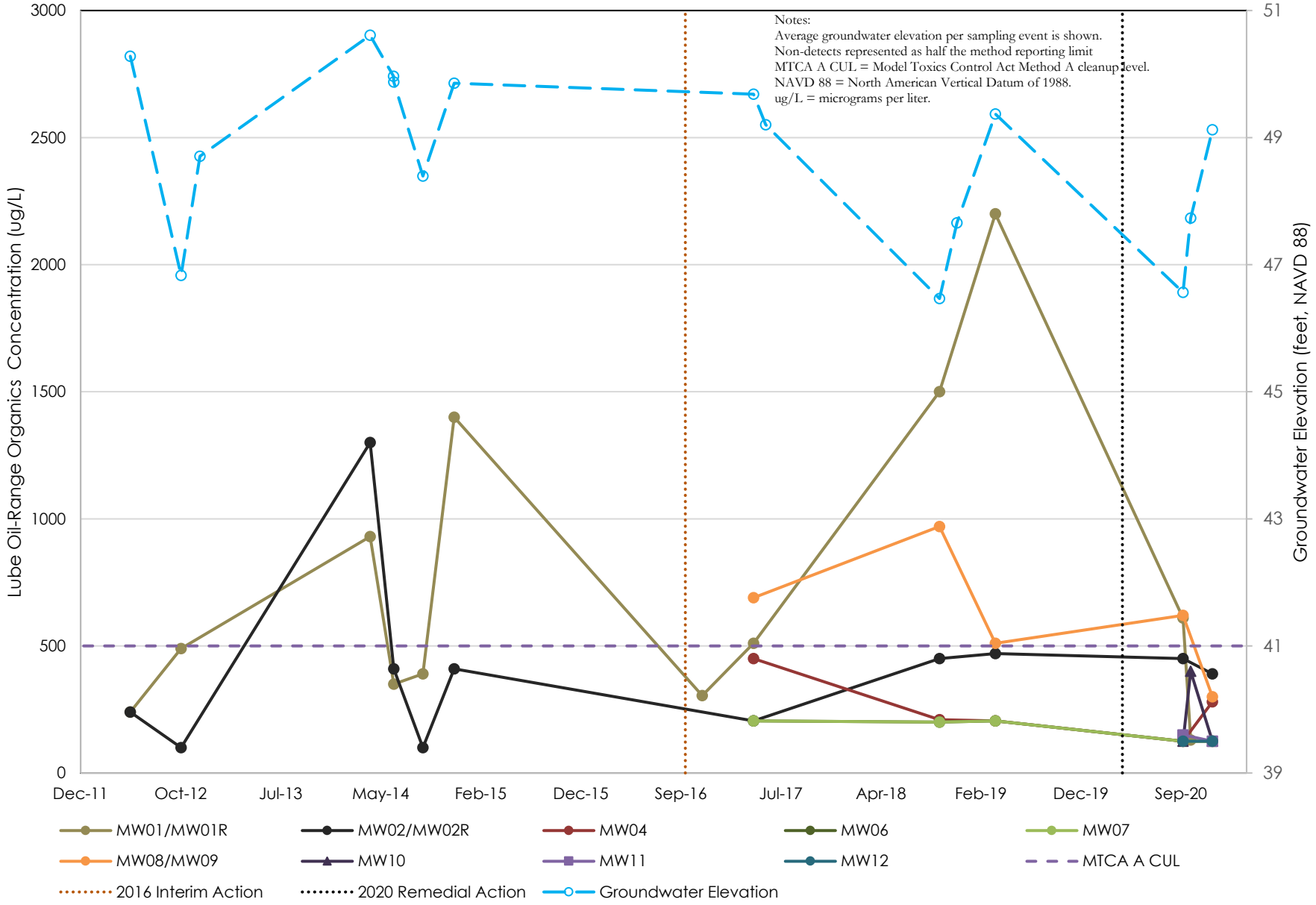
Figure 6
Lube Oil-Range Organics Concentrations
North Cascade Ford Property
Sedro-Woolley, Washington



ATTACHMENT A

WATER FIELD SAMPLING DATA SHEETS

Maul Foster & Alongi, Inc.

109 East 13th Street, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	**Sample Location**	MW01R		
Project #	0747.01.12	**Sampler**	A. Bixby		
Project Name	North Cascade Ford	**Sampling Date**	12/16/2020		
Sampling Event	December 2020	**Sample Name**	MW01R-GW-121620		
Sub Area		**Sample Depth**	10		
FSDS QA:	C. Wise 12/21/2020	**Easting**		**Northing**	**TOC**

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
12/16/2020	8:45	14.77		5.84		8.93	1.46

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**ORP**	**Turbidity**
(2) Peristaltic Pump	2:15:00 PM	1.8	0.2	9.61	10.4	365.7	7.81	90	5.9
	2:20:00 PM	2	0.2	9.63	10.5	365.3	7.73	93	5.81
	2:25:00 PM	2.2	0.2	9.61	10.3	364.5	7.78	94.7	4.32
Final Field Parameters	2:27:00 PM	2.3	0.2	9.6	10.3	365.2	7.77	95.1	4.26

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear; colorless; no odor; no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	2:30:00 PM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Began purge at 13:25.

Maul Foster & Alongi, Inc.

109 East 13th Street, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	**Sample Location**	MW02R				
Project #	0747.01.12	**Sampler**	A. Bixby				
Project Name	North Cascade Ford	**Sampling Date**	12/16/2020				
Sampling Event	December 2020	**Sample Name**	MW02R-GW-121620				
Sub Area		**Sample Depth**	10				
FSDS QA:	C. Wise 12/21/2020	**Easting**		**Northing**		**TOC**	

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
12/16/2020	8:23	14.81		7.79		7.02	1.14

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**ORP**	**Turbidity**
(2) Peristaltic Pump	10:10:00 AM	1.2	0.2	6.74	12.2	555	0.41	109.7	2.61
	10:15:00 AM	1.4	0.2	6.77	12.4	558.6	0.34	104.8	2.05
	10:20:00 AM	1.6	0.2	6.78	12.4	557.3	0.33	102.9	1.52
Final Field Parameters	10:25:00 AM	1.8	0.2	6.79	12.5	556.3	0.3	102.5	1.43

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear; colorless; no odor; no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	10:30:00 AM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Began purge at 9:03.

Maul Foster & Alongi, Inc.

109 East 13th Street, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	**Sample Location**	MW04		
Project #	0747.01.12	**Sampler**	A. Bixby		
Project Name	North Cascade Ford	**Sampling Date**	12/16/2020		
Sampling Event	December 2020	**Sample Name**	MW04-GW-121620		
Sub Area		**Sample Depth**	10		
FSDS QA:	C. Wise 12/21/2020	**Easting**		**Northing**	**TOC**

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
12/16/2020	8:18	13.61		7.71		5.9	0.96

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**ORP**	**Turbidity**
(2) Peristaltic Pump	9:50:00 AM	1.9	0.2	6.52	13.9	525.1	1.9	124.9	2.72
	9:53:00 AM	2	0.2	6.56	13.7	521.6	1.86	116.4	2.08
	9:56:00 AM	2.1	0.2	6.57	13.6	520.9	1.83	115.9	1.49
Final Field Parameters	9:58:00 AM	2.2	0.2	6.57	13.5	520.9	1.82	115.8	1.37

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations: Clear; colorless; no odor; no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	10:00:00 AM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments Began purge at 9:01.

Maul Foster & Alongi, Inc.

109 East 13th Street, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	**Sample Location**	MW06				
Project #	0747.01.12	**Sampler**	A. Bixby				
Project Name	North Cascade Ford	**Sampling Date**	12/16/2020				
Sampling Event	December 2020	**Sample Name**	MW06-GW-121620				
Sub Area		**Sample Depth**	15				
FSDS QA:	C. Wise 12/21/2020	**Easting**		**Northing**		**TOC**	

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
12/16/2020	8:32	19.78		8.25		11.53	1.88

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**ORP**	**Turbidity**
(2) Peristaltic Pump	11:20:00 AM	1.5	0.2	6.57	13.8	388.4	0.17	102.3	6.81
	11:25:00 AM	1.7	0.2	6.53	13.9	386.9	0.17	101	6.49
	11:30:00 AM	1.9	0.2	6.48	13.9	385.3	0.17	100.2	5.53
Final Field Parameters	11:35:00 AM	2.1	0.2	6.46	13.9	383.3	0.17	99.1	6.43

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear with some orange particulates in initial purge water; colorless; no odor; no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	11:40:00 AM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Began purge at 10:45.

Maul Foster & Alongi, Inc.

109 East 13th Street, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	**Sample Location**	MW07				
Project #	0747.01.12	**Sampler**	A. Bixby				
Project Name	North Cascade Ford	**Sampling Date**	12/16/2020				
Sampling Event	December 2020	**Sample Name**	MW07-GW-121620				
Sub Area		**Sample Depth**	15				
FSDS QA:	C. Wise 12/21/2020	**Easting**		**Northing**		**TOC**	

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
12/16/2020	8:55	19.65		8.24		11.41	1.86

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**ORP**	**Turbidity**
(2) Peristaltic Pump	12:30:00 PM	1.4	0.2	6.25	13.8	450.8	0.47	96.4	60.3
	12:35:00 PM	1.6	0.2	6.26	13.4	450.4	0.5	95.8	56.5
	1:03:00 PM	3.2	0.2	6.25	10.5	452.1	0.95	97.6	65
	1:06:00 PM	3.3	0.2	6.26	10.5	452.9	0.92	97.9	64.8
	1:09:00 PM	3.4	0.2	6.26	10.4	452.8	0.91	97.4	65.2
Final Field Parameters	1:12:00 PM	3.5	0.2	6.26	10.3	453.1	0.89	97.4	66.1

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations: Clear; orange tint; no odor; no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	1:20:00 PM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments Began purge at 11:50.

Maul Foster & Alongi, Inc.

109 East 13th Street, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	**Sample Location**	MW09				
Project #	0747.01.12	**Sampler**	A. Bixby				
Project Name	North Cascade Ford	**Sampling Date**	12/16/2020				
Sampling Event	December 2020	**Sample Name**	MW09-GW-121620				
Sub Area		**Sample Depth**	15				
FSDS QA:	C. Wise 12/21/2020	**Easting**		**Northing**		**TOC**	

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
12/16/2020	8:41	19.99		6.17		13.82	2.25

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**ORP**	**Turbidity**
(2) Peristaltic Pump	1:30:00 PM	1.7	0.3	7.72	11.6	606.4	3.2	85.9	11.1
	1:33:00 PM	1.9	0.3	7.72	11.5	609	3.19	86.3	5.72
	1:36:00 PM	2.1	0.3	7.75	11.6	608.5	3.15	86.2	3.58
Final Field Parameters	1:36:00 PM	2.3	0.3	7.77	11.5	607.8	3.12	86.7	2.64

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear; colorless; no odor; no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	1:40:00 PM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Began purge at 13:00.

Field duplicate MWDUP-GW-121620 collected here.

Maul Foster & Alongi, Inc.

109 East 13th Street, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	**Sample Location**	MW10		
Project #	0747.01.12	**Sampler**	A. Bixby		
Project Name	North Cascade Ford	**Sampling Date**	12/16/2020		
Sampling Event	December 2020	**Sample Name**	MW10-GW-121620		
Sub Area		**Sample Depth**	15		
FSDS QA:	C. Wise 12/21/2020	**Easting**		**Northing**	**TOC**

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
12/16/2020	8:28	19.86		7.13		12.73	2.07

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**ORP**	**Turbidity**
(2) Peristaltic Pump	10:55:00 AM	1.8	0.2	9.06	11.3	522	2.75	95.5	0.79
	10:58:00 AM	1.9	0.2	9.09	11.2	523.4	2.73	94.5	0.78
	11:02:00 AM	2	0.2	9.12	11.3	522	2.69	94.4	0.9
Final Field Parameters	11:05:00 AM	2.1	0.2	9.14	11.2	520.6	2.7	94.5	0.9

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear; slight yellow tint; no odor; no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	11:10:00 AM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Began purge at 10:15.

Maul Foster & Alongi, Inc.

109 East 13th Street, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	**Sample Location**	MW11		
Project #	0747.01.12	**Sampler**	A. Bixby		
Project Name	North Cascade Ford	**Sampling Date**	12/16/2020		
Sampling Event	December 2020	**Sample Name**	MW11-GW-121620		
Sub Area		**Sample Depth**	15		
FSDS QA:	C. Wise 12/21/2020	**Easting**		**Northing**	**TOC**

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
12/16/2020	8:50	19.65		6.51		13.14	2.14

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**ORP**	**Turbidity**
(2) Peristaltic Pump	3:20:00 PM	1.8	0.2	11.17	11.1	499.1	8.94	96.8	5.81
	3:23:00 PM	1.9	0.2	11.18	11	498.3	8.92	97.7	4.32
	3:26:00 PM	2.1	0.2	11.2	10.9	498	8.9	97.2	2.27
Final Field Parameters	3:29:00 PM	2.2	0.2	11.2	11	499	8.84	97.5	2.19

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear; colorless; no odor; no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	3:30:00 PM	VOA-Glass	3	No
			Amber Glass	2	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	5	

General Sampling Comments

Began purge at 14:35.

Maul Foster & Alongi, Inc.

109 East 13th Street, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	**Sample Location**	MW12				
Project #	0747.01.12	**Sampler**	A. Bixby				
Project Name	North Cascade Ford	**Sampling Date**	12/16/2020				
Sampling Event	December 2020	**Sample Name**	MW12-GW-121620				
Sub Area		**Sample Depth**	10				
FSDS QA:	C. Wise 12/21/2020	**Easting**		**Northing**		**TOC**	

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
12/16/2020	8:37	14.58		7.85		6.73	1.1

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**ORP**	**Turbidity**
(2) Peristaltic Pump	12:00:00 PM	1.2	0.2	6.16	13.6	403.6	0.8	102.3	15.6
	12:05:00 PM	1.4	0.2	6.15	13.7	403.3	0.78	101.1	14.2
	12:10:00 PM	1.6	0.2	6.14	13.8	402.4	0.72	100.5	13.8
Final Field Parameters	12:15:00 AM	1.8	0.2	6.14	13.6	403.9	0.8	100.5	13.6

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear; slight brownish yellow tint; no odor; no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	12:20:00 PM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Began purge at 11:20.

ATTACHMENT B

ANALYTICAL LABORATORY REPORT

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

December 29, 2020

Carolyn Wise, Project Manager
Maul Foster Alongi
2815 2nd Ave, Suite 540
Seattle, WA 98121

Dear Ms Wise:

Included are the results from the testing of material submitted on December 17, 2020 from the North Cascade Ford PO 0747.01.12, F&BI 012319 project. There are 10 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Amanda Bixby
MFA1229R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 17, 2020 by Friedman & Bruya, Inc. from the Maul Foster Alongi North Cascade Ford PO 0747.01.12, F&BI 012319 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
012319 -01	MW01R-GW-121620
012319 -02	MW02R-GW-121620
012319 -03	MW04-GW-121620
012319 -04	MW06-GW-121620
012319 -05	MW07-GW-121620
012319 -06	MW09-GW-121620
012319 -07	MWDUP-GW-121620
012319 -08	MW10-GW-121620
012319 -09	MW11-GW-121620
012319 -10	MW12-GW-121620
012319 -11	Trip Blank

All quality control requirements were acceptable.

Date of Report: 12/29/20
Date Received: 12/17/20
Project: North Cascade Ford PO 0747.01.12, F&BI 012319
Date Extracted: 12/22/20
Date Analyzed: 12/22/20

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
MW01R-GW-121620 012319-01	<1	<1	<1	<3	<100	83
MW02R-GW-121620 012319-02	<1	<1	<1	<3	<100	83
MW04-GW-121620 012319-03	<1	<1	<1	<3	<100	86
MW06-GW-121620 012319-04	<1	<1	<1	<3	<100	86
MW07-GW-121620 012319-05	<1	<1	<1	<3	<100	85
MW09-GW-121620 012319-06	<1	<1	<1	<3	<100	86
MWDUP-GW-121620 012319-07	<1	<1	<1	<3	<100	82
MW10-GW-121620 012319-08	<1	<1	<1	<3	<100	85
MW11-GW-121620 012319-09	<1	<1	<1	<3	<100	81
MW12-GW-121620 012319-10	<1	<1	<1	<3	<100	83
Method Blank 00-2724 MB	<1	<1	<1	<3	<100	79

Date of Report: 12/29/20
Date Received: 12/17/20
Project: North Cascade Ford PO 0747.01.12, F&BI 012319
Date Extracted: 12/22/20
Date Analyzed: 12/22/20

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES USING METHOD 8021B

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Surrogate (% Recovery) Limit (52-124)
Trip Blank 012319-11	<1	<1	<1	<3	86
Method Blank 00-2724 MB	<1	<1	<1	<3	79

Date of Report: 12/29/20
Date Received: 12/17/20
Project: North Cascade Ford PO 0747.01.12, F&BI 012319
Date Extracted: 12/18/20
Date Analyzed: 12/18/20

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
MW01R-GW-121620 012319-01	250 x	<250	106
MW02R-GW-121620 012319-02	600 x	390 x	102
MW04-GW-121620 012319-03	220 x	280 x	113
MW06-GW-121620 012319-04	<50	<250	94
MW07-GW-121620 012319-05	89 x	<250	94
MW09-GW-121620 012319-06	230 x	300 x	110
MWDUP-GW-121620 012319-07	210 x	390 x	98
MW10-GW-121620 012319-08	160 x	<250	102
MW11-GW-121620 012319-09	<50	<250	98
MW12-GW-121620 012319-10	<50	<250	102
Method Blank 00-2867 MB	<50	<250	116

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW11-GW-121620	Client:	Maul Foster Alongi
Date Received:	12/17/20	Project:	North Cascade Ford 0747.01.12
Date Extracted:	12/18/20	Lab ID:	012319-09 1/2
Date Analyzed:	12/22/20	Data File:	122208.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	37	15	99
Phenol-d6	29	11	65
Nitrobenzene-d5	78	10	145
2-Fluorobiphenyl	76	16	138
2,4,6-Tribromophenol	72	12	132
Terphenyl-d14	85	35	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	North Cascade Ford 0747.01.12
Date Extracted:	12/18/20	Lab ID:	00-2865 mb
Date Analyzed:	12/18/20	Data File:	121810.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	27	15	61
Phenol-d6	15	10	46
Nitrobenzene-d5	103	17	143
2-Fluorobiphenyl	92	50	150
2,4,6-Tribromophenol	77	50	150
Terphenyl-d14	102	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2

Date of Report: 12/29/20
Date Received: 12/17/20
Project: North Cascade Ford PO 0747.01.12, F&BI 012319

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 012355-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	113	65-118
Toluene	ug/L (ppb)	50	106	72-122
Ethylbenzene	ug/L (ppb)	50	106	73-126
Xylenes	ug/L (ppb)	150	103	74-118
Gasoline	ug/L (ppb)	1,000	108	69-134

Date of Report: 12/29/20
Date Received: 12/17/20
Project: North Cascade Ford PO 0747.01.12, F&BI 012319

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	104	104	63-142	0

Date of Report: 12/29/20
Date Received: 12/17/20
Project: North Cascade Ford PO 0747.01.12, F&BI 012319

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	5	86	85	70-130	1
2-Methylnaphthalene	ug/L (ppb)	5	88	90	70-130	2
1-Methylnaphthalene	ug/L (ppb)	5	88	90	70-130	2

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

~~012139~~ 012319

SAMPLE CHAIN OF CUSTODY MB 12-17-20 EDD/VWS

Page # 1 of 2

Report To Carolyn Wise
Company Maul Foster & Alongi
Address 1329 N State Street, #301
City, State, ZIP Bellingham, WA 98225
Phone (360) 690-5982 Email cwise@maulfoster.com

SAMPLERS (*signature*): Amanda Bixby

PROJECT NAME: North Cascade Ford

PO #: 0747.01.12

REMARKS: CC abixby@maulfoster.com on all project emails
Project specific RLs? - Yes / No

INVOICE TO: accounting@maulfoster.com

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: DRO+ORO by NWTPH-Dx	GRO by NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Total naphthalenes by EPA 8270SIM				Notes
MW01R-GW-121620	01A-D	12/16/20	1430	W	4	X	X	X									
MW02R-GW-121620	02	12/16/20	1030	W	4	X	X	X									
MW04-GW-121620	03	12/16/20	1000	W	4	X	X	X									
MW06-GW-121620	04	12/16/20	1140	W	4	X	X	X									
MW07-GW-121620	05	12/16/20	1320	W	4	X	X	X									
MW09-GW-121620	06	12/16/20	1340	W	4	X	X	X									
MW09D-GW-121620	07	12/16/20	1340	W	4	X	X	X									
MW10-GW-121620	08	12/16/20	1110	W	4	X	X	X									
MW11-GW-121620	09A-E	12/16/20	1530	W	5	X	X	X					X				
MW12-GW-121620	10A-D	12/16/20	1220	W	4	X	X	X									

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Amanda Bixby	Amanda Bixby	MFA	12/16/20	1630
Received by:	Eric Young	F&B	12/17/20	1645
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

Samples received at 4 °C

012319

SAMPLE CHAIN OF CUSTODY MS

12-17-20 EQ1/VAS

Page # 2 of 2

Report To Carolyn Wise
Company Maul Foster & Alongi
Address 1329 N State Street, #301
City, State, ZIP Bellingham, WA 98225
Phone (360)690-5982 Email cwise@maulfoster.com

SAMPLERS (signature)

PROJECT NAME: North Cascade Ford
PO #: 074701.12

REMARKS
Project specific RLs? - Yes / No

INVOICE TO: accounting@maulfoster.com

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
Trip Blank	11A-B	12/16/20	NA	W	2			X									

Samples received at 4 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Amanda Bixby	Amanda Bixby	MFA	12/16/20	1630
Received by: Eric Young	Eric Young	F&B	12/16/20	1645
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

ATTACHMENT C

DATA VALIDATION MEMORANDUM

DATA QUALITY ASSURANCE/QUALITY CONTROL REVIEW

PROJECT NO. 0747.01.12 | JANUARY 6, 2021 | VSF PROPERTIES, LLC

Maul Foster & Alongi, Inc. (MFA) conducted an independent review of the quality of analytical results for groundwater samples collected at the North Cascade Ford site on December 16, 2020.

Friedman & Bruya, Inc. (FBI) of Seattle, Washington performed the analyses. FBI report number 012319 was reviewed. The analyses performed and samples analyzed are listed below.

Analysis	Reference
BTEX	EPA 8021B
Diesel- and Motor Oil-Range Hydrocarbons	NWTPH-Dx
Gasoline-Range Hydrocarbons	NWTPH-Gx
Naphthalenes	EPA 8270E

NOTES:
BTEX = benzene, toluene, ethylbenzene, and xylenes.
EPA = U.S. Environmental Protection Agency.
NWTPH = Northwest Total Petroleum Hydrocarbons.

Samples Analyzed	
Report 012319	
MW01R-GW-121620	MWDUP-GW-121620
MW02R-GW-121620	MW10-GW-121620
MW04-GW-121620	MW11-GW-121620
MW06-GW-121620	MW12-GW-121620
MW07-GW-121620	Trip Blank
MW09-GW-121620	--

DATA QUALIFICATIONS

Analytical results were evaluated according to applicable sections of U.S. Environmental Protection Agency (EPA) procedures (EPA, 2017) and appropriate laboratory and method-specific guidelines (EPA, 1986; FBI, 2019).

Data validation procedures were modified, as appropriate, to accommodate quality-control requirements for methods not specifically addressed by the EPA procedures (e.g., NWTPH-Dx).

According to report 012319, FBI indicated that all detected NWTPH-Dx diesel-range hydrocarbon and oil-range hydrocarbon results had chromatographic patterns that did not

resemble the fuel standards used for quantitation. The results were reported as diesel and oil-range hydrocarbons; thus, qualification was not required.

The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

HOLDING TIMES, PRESERVATION, AND SAMPLE STORAGE

Holding Times

Extractions and analyses were performed within the recommended holding time criteria.

Preservation and Sample Storage

The samples were preserved and stored appropriately.

BLANKS

Method Blanks

Method blank results are used to demonstrate a lack of contamination from laboratory processes. Laboratory method blank analyses were performed at the required frequencies. For purposes of data qualification, the method blanks were associated with all samples prepared in the analytical batch.

All laboratory method blank results were non-detect to reporting limits.

Trip Blanks

A trip blank sample was submitted for analysis with the sample delivery group for report 012319. The trip blank sample was non-detect to reporting limits.

Equipment Rinsate Blanks

Equipment rinsate blanks were not required for this sampling event, as all samples were collected using dedicated, single-use equipment.

SURROGATE RECOVERY RESULTS

The samples were spiked with surrogate compounds to evaluate laboratory performance on individual samples.

All surrogate recoveries were within acceptance limits.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

Matrix spike/matrix spike duplicate (MS/MSD) results are used to evaluate laboratory precision and accuracy. MS/MSD results were not provided in report 012319; batch precision and accuracy were evaluated with laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) results. No action was required by the reviewer.

LABORATORY DUPLICATE RESULTS

Duplicate results are used to evaluate laboratory precision. All duplicate samples were extracted and analyzed at the required frequency. Laboratory duplicate results within five times the method reporting limit were not evaluated for precision. All laboratory duplicate relative percent differences (RPDs) were within acceptance limits.

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RESULTS

An LCS/LCSD is spiked with target analytes to provide information on laboratory precision and accuracy. The LCS/LCSD samples were extracted and analyzed at the required frequency.

All LCS/LCSD results were within acceptance limits for percent recovery and RPD.

FIELD DUPLICATE RESULTS

Field duplicate samples measure both field and laboratory precision. One field duplicate sample was submitted with report 012319 (MW09-GW-121620/MWDUP-GW-121620). MFA uses acceptance limit of 100 percent RPD for results that are less than five times the method reporting limit (MRL), or 50 percent RPD for results that are greater than five times the MRL. Non-detect data are not used in the evaluation of field duplicate results. All field duplicate sample results met RPD acceptance criteria.

CONTINUING CALIBRATION VERIFICATION RESULTS

Continuing calibration verification results are used to demonstrate instrument precision and accuracy through the end of the sample batch. FBI did not report continuing calibration verification results.

REPORTING LIMITS

FBI used routine reporting limits for non-detect results, except for samples requiring dilutions because of high analyte concentrations and/or matrix interferences.

According to report 012319, the EPA Method 8270E analysis was performed with a 1:2 dilution of sample MW11-GW-121620. The reviewer confirmed that the dilution was routine and required for the analysis. No action was required.

DATA PACKAGE

The data packages were reviewed for transcription errors, omissions, and anomalies.

According to report 012319, EPA Method 8270E-SIM analysis was requested for naphthalenes analysis of sample MW11-GW-121620; however, EPA Method 8270E was performed. The reviewer confirmed that EPA Method 8270E analysis met project requirements; no additional action was required.

No additional issues were found.

REFERENCES

EPA. 1986. Test methods for evaluating solid waste, physical/chemical methods. EPA publication SW-846. 3d ed. U.S. Environmental Protection Agency. Final updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), V (2015), VI phase I (2017), VI phase II (2018), and VI phase III (2019).

EPA. 2017. EPA contract laboratory program, national functional guidelines for Superfund organic methods data review. EPA 540-R-2017-002. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. January.

FBI. 2019. Quality assurance manual. Rev. 16. Friedman & Bruya, Inc., Seattle, Washington. October 2.