



April 4, 2022

Project No. M0747.01.013

Michael R. Warfel, LG, LHG, RG
Washington State Department of Ecology
15700 Dayton Avenue N
Shoreline, Washington 98133

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

Dear Michael Warfel:

In March 2022, on behalf of VSF Properties, LLC, Maul Foster & Alongi, Inc. (MFA) conducted the seventh quarterly monitoring well sampling activities 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 consistent with the groundwater compliance monitoring plan (CMP) (MFA, 2020a), the addendum to the groundwater CMP (MFA, 2020c), and the Washington State Model Toxics Control Act (MTCA; Washington Administrative Code [WAC] 173-340-410(b)) requirements for performance monitoring.

BACKGROUND

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

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

Table 1 shows historical groundwater analytical results associated with monitoring wells in AOCs 1 and 2 and reconnaissance groundwater samples collected in AOC 3 prior to initiating compliance monitoring.

In March 2020, a remedial action was completed in AOCs 1 through 3 (MFA, 2020b). In the summer of that year, the groundwater CMP and the associated addendum were developed in coordination with the Washington State Department of Ecology (Ecology) to guide

performance groundwater monitoring at the Site (MFA, 2020a,c). Per WAC 173-340(b), the purpose of performance monitoring is to confirm that a remedial action has attained cleanup levels (CULs). Six previous quarterly compliance groundwater monitoring events related to the March 2020 remedial action were conducted between September 2020 and December 2021 (MFA, 2020d, 2021a,b,c,d, 2022).

On September 9, 2021, Ecology approved the reduction of monitoring for constituents at the Site (i.e., limiting monitoring to DRO and ORO), as well as the removal of monitoring wells MW06 and MW12 from the compliance monitoring network (Ecology, 2021a). The September 2021 monitoring event was completed with these Ecology-approved modifications.

On December 10, 2021, Ecology requested additional analysis for two monitoring wells—1,4-dichlorobenzene for MW09 and naphthalenes for MW10—due to previous detections in those areas of the Site above the vapor intrusion screening level (Ecology, 2021b). These additional constituents were not detected in groundwater analyses conducted during the December 2021 monitoring event at MW09 and MW10. On March 15, 2022, Ecology concurred with eliminating sampling for naphthalenes and 1,4-dichlorobenzene for future groundwater monitoring events, including the March 2022 event described in this report (Ecology, 2022).

FIELD AND ANALYTICAL METHODS

All March 2022 groundwater monitoring activities were conducted consistent with the groundwater CMP (MFA, 2020a), the addendum to the groundwater CMP (MFA, 2020c), and Ecology-approved modifications to the CMP provided via email (Ecology, 2021a,b, 2022). Compliance monitoring well locations are shown on Figure 2.

Potentiometric Surface Evaluation

On March 15, 2022, MFA measured static water levels in the compliance monitoring wells (see Table 2). A potentiometric surface map is provided as Figure 3. The estimated potentiometric surface contours indicate that shallow groundwater at the Site is hydraulically discontinuous and show varied, localized groundwater migration at the Property. The discontinuity of the subsurface is likely a combination of the numerous types of backfill material placed on the Property during remedial actions and thin, discontinuous layers of silts in the native soils resulting in localized influences on the water table. Water levels measured during this event were generally 0.6 feet lower than in the December 2021 monitoring event, with one exception at MW07, where water levels measured 0.66 feet higher than in the previous event. In March 2022, groundwater generally flowed north to south, with a local maximum elevation at MW07 and components of flow towards the south-southwest in the southern portion of the Site. The average height of the water table in March 2022 was 0.69 feet higher than in March 2021.

Monitoring Well Sampling

MFA collected eight groundwater samples from seven compliance monitoring wells on the Property (MW01R, MW02R, MW04, MW07, and MW09 through MW11) on March 15 and 16, 2022, including a field duplicate sample from monitoring well MW10. Water quality field parameters (e.g., temperature, specific conductance, pH, turbidity) were allowed to stabilize before sample collection. During purging, the flow rates, water levels, and water quality parameters were recorded on field sampling data sheets (see Attachment A). Under standard chain-of-custody procedures, groundwater samples were submitted to Friedman & Bruya, Inc., of Seattle, Washington, for laboratory analysis.

RESULTS

The laboratory analytical report is provided as Attachment B, and analytical data are presented in Table 3. Exceedances of the MTCA Method A CUL for heavy oils (sum of DRO and ORO) are shown on Figure 4, and site trends for DRO, ORO, and heavy oils are presented in Figures 5, 6, and 7, respectively. Figure 8 shows the site trends for heavy oils from 2019 to 2022 to more clearly depict concentration trends that have occurred since the 2020 remedial action. 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, with the appropriate data qualifiers assigned, are considered acceptable for their intended use.

All groundwater samples were analyzed for DRO and ORO, and heavy oils were calculated by summing DRO and ORO concentrations (one-half the method reporting limit is used for non-detect values) for comparison to the DRO MTCA Method A CUL.

AOC 1: Former Auto Repair Shop

Three groundwater samples were collected from AOC 1 monitoring wells: one each from MW01R, MW07, and MW09.

All detections of DRO and ORO, as well as the sum of heavy oils in AOC 1, were below their respective MTCA Method A CULs.

AOC 2: Former Underground Storage Tanks

Four groundwater samples, including one field duplicate at MW10, were collected from AOC 2 monitoring wells MW02R, MW04, and MW10.

Detections of DRO and ORO in groundwater samples at MW02R, MW04, and MW10 were all below their respective MTCA Method A CULs. The sum of heavy oils in MW02R and

MW10 slightly exceeded the MTCA Method A CUL of 500 micrograms per liter (ug/L), at 525 ug/L and 510 ug/L, respectively.

AOC 3: Former Coal Storage Sheds/Possible Buried Object

One groundwater sample was collected from AOC 3 monitoring well MW11. DRO, ORO, and heavy oils were not detected in MW11.

SUMMARY

Results from the groundwater monitoring indicate the following:

- **AOC 1**
 - No detections of DRO, ORO, or heavy oils exceeded their respective MTCA Method A CULs.
- **AOC 2**
 - No detections of DRO or ORO exceeded their respective MTCA Method A CULs.
 - The sum of heavy oils (DRO and ORO) slightly exceeded the MTCA Method A CUL for DRO in monitoring wells MW02R and MW10.
- **AOC 3**
 - No detections of DRO, ORO, or heavy oils exceeded their respective MTCA Method A CULs.

Recommendations and Request for Opinion

In accordance with the CMP, the compliance monitoring may be reevaluated on a quarterly basis to include an assessment of current site conditions and trends (MFA, 2020a).

Based on the results of the seven quarterly monitoring events conducted as part of the compliance groundwater monitoring program, the following modification to the groundwater CMP is proposed for subsequent groundwater monitoring events:

- Removal of MW01R, MW04, and MW11 from the compliance monitoring well network

Monitoring wells MW04 and MW11 have not shown exceedances of the MTCA Method A CUL for DRO, ORO, or the sum of heavy oils during quarterly monitoring since compliance monitoring began in September 2020 (seven consecutive monitoring events). Monitoring well MW1R has not shown exceedances of the MTCA Method A CUL for DRO, ORO, or the sum

of heavy oils during quarterly monitoring since December 2020 (six consecutive monitoring events). In addition to concentrations detected consistently below MTCA Method A CULs, a consistently decreasing trend in concentrations has been observed during quarterly monitoring events. MFA proposes that Ecology remove the analytical requirement for future compliance monitoring at these three monitoring wells (MW01R, MW04, and MW11). During additional compliance monitoring events, MFA will continue to collect water level measurements at these monitoring wells to assess the potentiometric surface at the Site.

Overall, the remedial action conducted in spring 2020 has significantly reduced the concentrations of heavy oils in groundwater at the Site as observed throughout quarterly compliance monitoring (see Figure 8). Additionally, free product has not been observed since quarterly compliance groundwater monitoring began in September 2020. Trend plots show significant decreases in heavy-oils concentrations in monitoring wells during the compliance monitoring period and suggest that continual decreases in heavy-oils concentrations in groundwater likely will be observed during future quarterly monitoring events (see Figures 5 through 8).

CULs have not been met at all monitoring network wells; therefore, compliance monitoring will continue to be conducted and reevaluated on a quarterly basis, as required by the groundwater CMP. In accordance with the groundwater CMP, the next quarterly groundwater monitoring event is scheduled for June 2022.

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

Sincerely,

Maul Foster & Alongi, Inc.

Carolyn R. Wise, LHG
Project Hydrogeologist

04-04-2022



Christian Sifford, GIT
Staff Geologist

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

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

Ecology. 2021a. Email (re: VCP NW3031 North Cascade Ford, Sedro-Woolley, WA) to C. Wise, Maul Foster & Alongi, Inc., from M. Warfel, Washington State Department of Ecology. September 9.

Ecology. 2021b. Email (re: VSF Sedro-Woolley—fifth quarterly GW Report [VCP: NW3031]) to C. Wise, Maul Foster & Alongi, Inc., from M. Warfel, Washington State Department of Ecology. December 10.

Ecology. 2022. Email (re: VCP NW3031 North Cascade Ford, Sedro-Woolley, WA) to C. Wise, Maul Foster & Alongi, Inc., from M. Warfel, Washington State Department of Ecology. March 15.

MFA. 2015. Preliminary remedial investigation and feasibility study, North Cascade Ford property, Sedro-Woolley, Washington. Prepared for VSF Properties, LLC. 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. 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. 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. 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.

MFA. 2021a. Letter (re: second 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. January 26.

MFA. 2021b. Letter (re: third 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 M. Murray and C. Wise, Maul Foster & Alongi, Inc., Bellingham, Washington. April 8.

MFA. 2021c. Letter (re: fourth 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 M. Murray and C. Wise, Maul Foster & Alongi, Inc., Bellingham, Washington. August 9.

MFA. 2021d. Letter (re: fifth 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 C. Wise and A. Bixby, Maul Foster & Alongi, Inc., Bellingham, Washington. November 11.

MFA. 2022. Letter (re: sixth 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 C. Wise and A. Bixby, Maul Foster & Alongi, Inc., Bellingham, Washington. January 25.

TABLES



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 CUL:					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	--
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	--

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 CUL:					5	700	1,000	1,000	800	500	500	160
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	7,400 J	--	--	--
	GP76	GP76-W-10.0	04/25/2017	6.0-15.0	5.8	230	10 U	8.4	6,900	2,800 J	420 U	428
<div>NOTES:</div> <div>Analytical results are shown in micrograms per liter (parts per billion).</div> <div>Bolding indicates a detection.</div> <div>Shading indicates a MTCA Method A CUL exceedance; non-detect results ("U") were not compared with screening criteria.</div> <div>-- = not analyzed.</div> <div>AOC = area of concern.</div> <div>CUL = cleanup level.</div> <div>ft bgs = feet below ground surface.</div> <div>J = result is estimated.</div> <div>MTCA = Model Toxics Control Act.</div> <div>MW = monitoring well.</div> <div>ND = not detected.</div> <div>NM = water level not measured because of unanticipated presence of free product.</div> <div>U = analyte not detected at or above method reporting limit.</div> <div>^(a)Sample collection depths are from top of water table or top of screened interval, whichever is deeper, to bottom of screened interval.</div> <div>^(b)Total xylenes are sum of m,p-xylene and o-xylene. When both results are non-detect, the higher reporting limit is used.</div>												

Table 2
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 bgs)	NAPL-Corrected Depth to Water (feet bgs) ^(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
		03/17/2021	--	5.39	NA	50.93
		06/22/2021	--	7.27	NA	49.05
		09/27/2021	--	7.79	NA	48.53
		12/16/2021	--	4.19	NA	52.13
		03/15/2022	--	4.92	NA	51.40

Table 2
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 bgs)	NAPL-Corrected Depth to Water (feet bgs) ^(a)	Groundwater Elevation (feet, NAVD 88)
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
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
		03/17/2021	--	6.23	NA	50.36
		06/22/2021	--	8.12	NA	48.47
		09/27/2021	--	10.04	NA	46.55
		12/16/2021	--	5.31	NA	51.28
		03/15/2022	--	5.88	NA	50.71

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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 bgs)	NAPL-Corrected Depth to Water (feet bgs) ^(a)	Groundwater Elevation (feet, NAVD 88)
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
		03/17/2021	--	6.04	NA	50.28
		06/22/2021	--	7.96	NA	48.36
		09/27/2021	--	10.31	NA	46.01
		12/16/2021	--	5.12	NA	51.20
		03/15/2022	--	5.69	NA	50.63

Table 2
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 bgs)	NAPL-Corrected Depth to Water (feet bgs) ^(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
		03/17/2021	--	7.11	NA	49.47
		06/22/2021	--	8.72	NA	47.86
		09/27/2021	--	10.83	NA	45.75
		12/16/2021	--	5.60	NA	50.98
		03/15/2022	--	6.12	NA	50.46

Table 2
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 bgs)	NAPL-Corrected Depth to Water (feet bgs) ^(a)	Groundwater Elevation (feet, NAVD 88)
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
		03/17/2021	--	6.92	NA	49.38
		06/22/2021	--	8.80	NA	47.50
		09/27/2021	--	10.21	NA	46.09
		12/16/2021	--	5.17	NA	51.13
		03/05/2022	--	4.51	NA	51.79
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
		03/17/2021	--	5.70	NA	50.96
		06/22/2021	--	7.57	NA	49.09
		09/27/2021	--	8.74	NA	47.92
		12/16/2021	--	4.51	NA	52.15
		03/15/2022	--	5.23	NA	51.43

Table 2
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 bgs)	NAPL-Corrected Depth to Water (feet bgs) ^(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
		03/17/2021	--	5.80	NA	50.46
		06/22/2021	--	7.62	NA	48.64
		09/27/2021	--	9.42	NA	46.84
		12/16/2021	--	4.78	NA	51.48
		03/15/2022	--	5.44	NA	50.82
MW11	56.2	09/22/2020	--	10.48	NA	45.72
		12/16/2020	--	6.51	NA	49.69
		03/17/2021	--	5.46	NA	50.74
		06/22/2021	--	7.72	NA	48.48
		09/27/2021	--	9.21	NA	46.99
		12/16/2021	--	4.28	NA	51.92
		03/15/2022	--	5.03	NA	51.17
MW12	56.39	09/22/2020	--	10.24	NA	46.15
		12/16/2020	--	7.85	NA	48.54
		03/17/2021	--	6.67	NA	49.72
		06/22/2021	--	8.69	NA	47.70
		09/27/2021	--	10.59	NA	45.80
		12/16/2021	--	5.79	NA	50.60
		03/15/2022	--	6.33	NA	50.06

Table 2
Water Levels
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington



NOTES:

-- = NAPL not observed.

bgs = below ground surface.

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 grams 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)Well monument was compressed during implementation of remedial action, and casing had to be cut down to properly secure monument. Water level measurement not collected. New well monument installed on 10/01/2020.

Table 3
Groundwater Analytical Results—Compliance Monitoring
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington



AOC	Location	Collection Date	Benzene	Ethyl-benzene	Toluene	Total Xylenes	GRO	DRO	ORO	Heavy Oils ^(a)	1,4-Dichloro-benzene	Total Naphth. ^(b)
Units:			ug/L	ug/L	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 ^(c)	500	500	500	NV	160
1	MW01R	09/22/2020	1 U	1 U	1 U	3.7	160	1,900	610	2,510	--	--
		10/14/2020	20 U	20 U	20 U	60 U	100 U	200	260 U	330	--	20 U
		12/16/2020	1 U	1 U	1 U	3 U	100 U	250	250 U	375	--	--
		03/17/2021	1 U	1 U	1 U	3 U	100 U	120	250 U	245	--	--
		06/22/2021	1 U	1 U	1 U	3 U	100 U	370	250 U	495	--	--
		09/27/2021	--	--	--	--	--	93	250 U	218	--	--
		12/16/2021	--	--	--	--	--	70	250 U	195	--	--
		03/15/2022	--	--	--	--	--	79	250 U	204	--	--
	MW07	09/22/2020	1 U	1 U	1 U	3 U	100 U	130	250 U	255	--	--
		12/16/2020	1 U	1 U	1 U	3 U	100 U	89	250 U	214	--	--
		03/17/2021	1 U	1 U	1 U	3 U	100 U	96	250 U	221	--	--
		06/22/2021	1 U	1 U	1 U	3 U	100 U	360	290	650	--	--
		09/27/2021	--	--	--	--	--	160	250 U	285	--	--
		12/16/2021	--	--	--	--	--	59	250 U	184	--	--
		03/15/2022	--	--	--	--	--	50 U	250 U	250 U	--	--
	MW09	09/22/2020	1 U	1 U	1 U	3 U	100 U	640	620	1,260	--	--
		12/16/2020	1 U	1 U	1 U	3 U	100 U	230	300	530	--	--
		12/16/2020	1 U	1 U	1 U	3 U	100 U	210	390	600	--	--
		03/17/2021	1 U	1 U	1 U	3 U	100 U	120	250 U	245	--	--
		06/22/2021	1 U	1 U	1 U	3 U	100 U	150	250 U	275	--	--
		09/27/2021	--	--	--	--	--	270	290	560	--	--
		12/16/2021	--	--	--	--	--	91	300 U	241	1 U	--
		03/15/2022	--	--	--	--	--	69	250 U	194	--	--

Table 3
Groundwater Analytical Results—Compliance Monitoring
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington



AOC	Location	Collection Date	Benzene	Ethyl-benzene	Toluene	Total Xylenes	GRO	DRO	ORO	Heavy Oils ^(a)	1,4-Dichloro-benzene	Total Naphth. ^(b)
Units:			ug/L	ug/L	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 ^(c)	500	500	500	NV	160
2	MW02R	09/22/2020	1 U	1 U	1 U	3 U	100 U	780	450	1,230	--	--
		12/16/2020	1 U	1 U	1 U	3 U	100 U	600	390	990	--	--
		03/17/2021	1 U	1 U	1 U	3 U	100 U	680	310	990	--	--
		03/17/2021	1 U	1 U	1 U	3 U	100 U	580	270	850	--	--
		06/22/2021	1 U	1 U	1 U	3 U	100 U	560	250 U	685	--	--
		06/22/2021	1 U	1 U	1 U	3 U	100 U	530	250 U	655	--	--
		09/27/2021	--	--	--	--	--	440	250 U	565	--	--
		12/16/2021	--	--	--	--	--	580	330	910	--	--
		12/16/2021	--	--	--	--	--	390	250 U	515	--	--
		03/15/2022	--	--	--	--	--	400	250 U	525	--	--
	MW04	09/22/2020	1 U	1 U	1 U	3 U	100 U	260	250 U	385	--	--
		12/16/2020	1 U	1 U	1 U	3 U	100 U	220	280	500	--	--
		03/17/2021	1 U	1 U	1 U	3 U	100 U	220	250 U	345	--	--
		06/22/2021	1 U	1 U	1 U	3 U	100 U	300	250 U	425	--	--
		09/27/2021	--	--	--	--	--	290	250 U	415	--	--
		09/27/2021	--	--	--	--	--	180	250 U	305	--	--
		12/16/2021	--	--	--	--	--	150	250 U	275	--	--
		03/15/2022	--	--	--	--	--	190	250 U	315	--	--
	MW06	09/22/2020	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--	--
		12/16/2020	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--	--
		03/17/2021	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--	--
		06/22/2021	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--	--

Table 3
Groundwater Analytical Results—Compliance Monitoring
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington



AOC	Location	Collection Date	Benzene	Ethyl-benzene	Toluene	Total Xylenes	GRO	DRO	ORO	Heavy Oils ^(a)	1,4-Dichloro-benzene	Total Naphth. ^(b)
Units:			ug/L	ug/L	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 ^(c)	500	500	500	NV	160
2 (cont.)	MW10	09/22/2020	1 U	1 U	1 U	3 U	370	1,900	250 U	2,025	--	--
		10/14/2020	20 U	20 U	20 U	60 U	550	2,000	400	2,400	--	65.1
		12/16/2020	1 U	1 U	1 U	3 U	100 U	160	250 U	285	--	--
		03/17/2021	1 U	1 U	1 U	3 U	100 U	140	250 U	265	--	--
		06/22/2021	1 U	1 U	1 U	3 U	100 U	100	250 U	225	--	--
		09/27/2021	--	--	--	--	--	2,200	280	2,480	--	--
		12/16/2021	--	--	--	--	--	110	250 U	235	--	0.4 U
		03/15/2022	--	--	--	--	--	200	250 U	325	--	--
		03/15/2022	--	--	--	--	--	230	280	510	--	--
	MW12	09/22/2020	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--	--
		12/16/2020	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--	--
		03/17/2021	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--	--
		06/22/2021	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--	--
3	MW11	09/22/2020	1 U	30	1 U	16	390	350	300 U	500	--	18.8
		09/22/2020	1 U	30	1 U	17	380	200	250 U	325	--	21.7
		12/16/2020	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--	0.4 U
		03/17/2021	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--	0.4 U
		06/22/2021	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--	0.4 U
		09/27/2021	--	--	--	--	--	230	250 U	355	--	--
		12/16/2021	--	--	--	--	--	50 U	250 U	250 U	--	--
		03/16/2022	--	--	--	--	--	50 U	250 U	250 U	--	--

Table 3
Groundwater Analytical Results—Compliance Monitoring
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington



NOTES:

Detected values are shown in bold font.

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.

Naphth. = naphthalenes.

NV = no value.

ORO = lube-oil-range organics.

U = result is non-detect at the reporting limit.

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

^(a)Heavy oils are the sum of DRO and ORO. When results are non-detect, half the reporting limit is used. When all results are non-detect, the highest reporting limit is shown.

^(b)Total naphthalenes are the sum of 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene. Where 1- and 2-methylnaphthalene are not analyzed, total naphthalene is represented by the naphthalene result. When all results are non-detect, the highest reporting limit is shown.

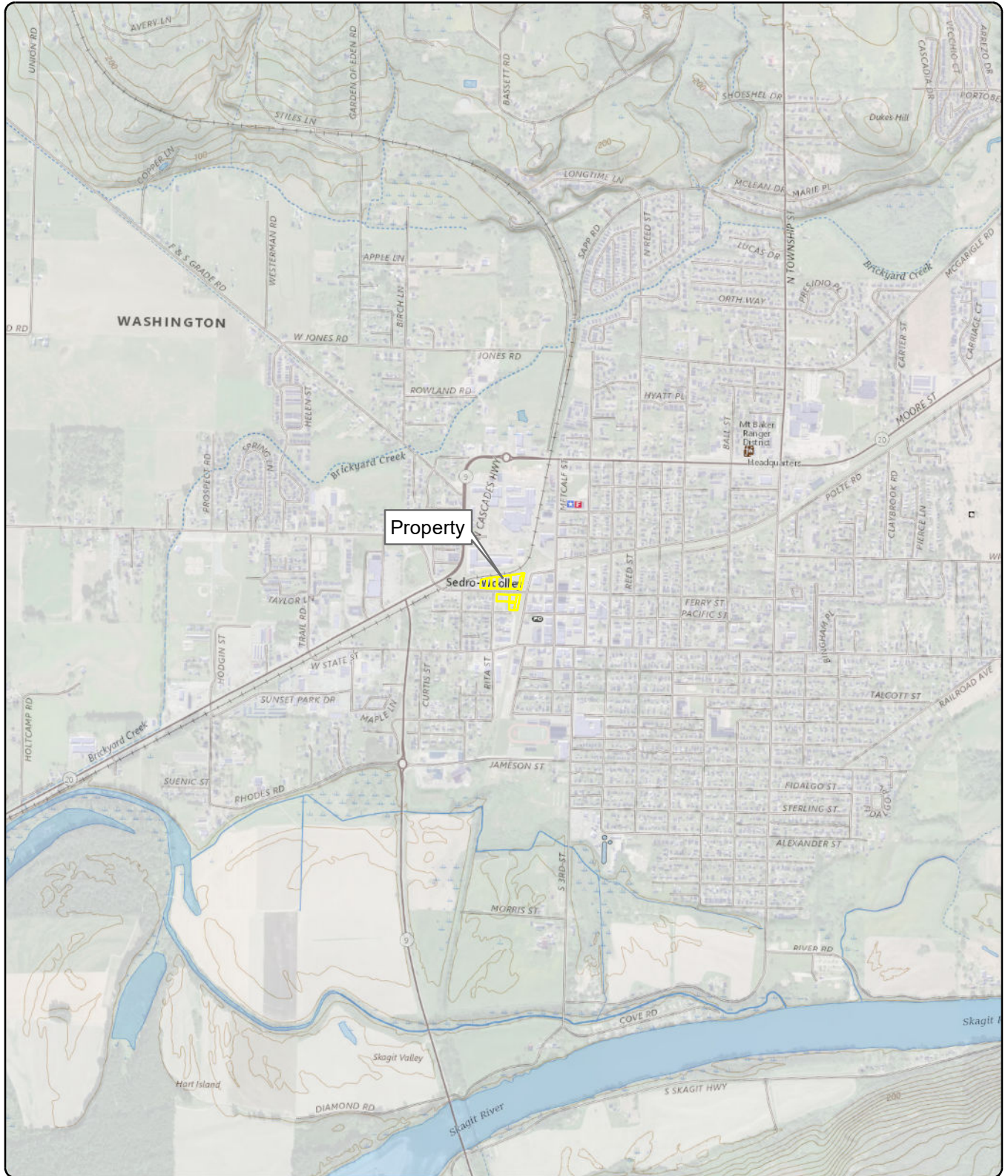
^(c)MTCA Method A CUL with no detectable benzene.

REFERENCE:

⁽¹⁾Washington State Department of Ecology. Cleanup Levels and Risk Calculation table. July 2021.

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

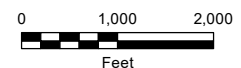
Figure 1 Property Location

North Cascade Ford Property
 Sedro-Woolley, Washington



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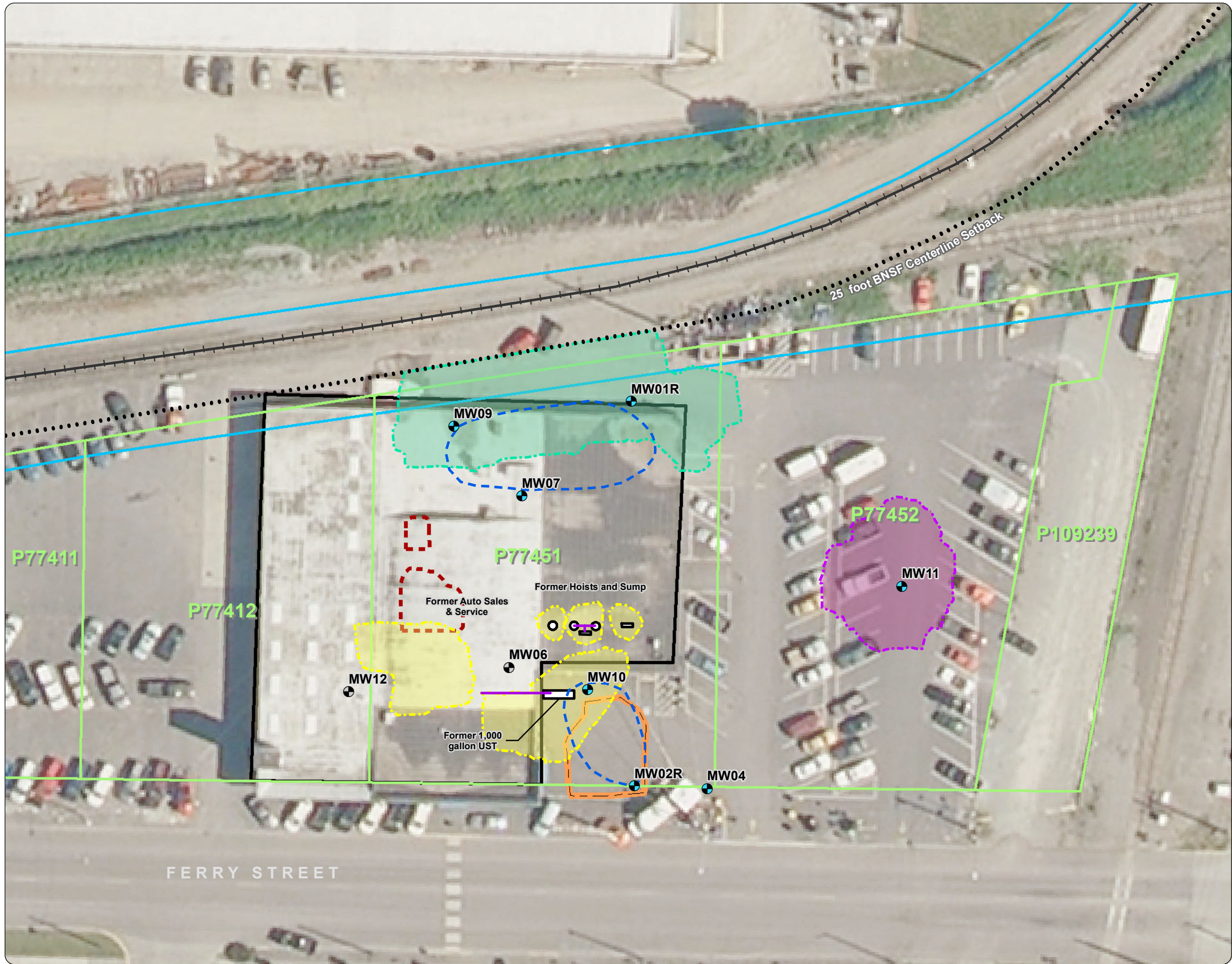


Figure 2
Compliance Monitoring
Well Network

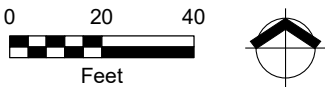
North Cascade Ford Property
Sedro-Woolley, Washington

Legend

- Compliance Monitoring Well
- Other Monitoring Well
- 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, 2020)
- 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 excavation 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 Railway.
Property = North Cascade Ford Property.
UST = underground storage tank.
ZGA = Zipper Geo Associates.

Sources:
Adjacent parcel boundaries obtained from Skagit County.
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.



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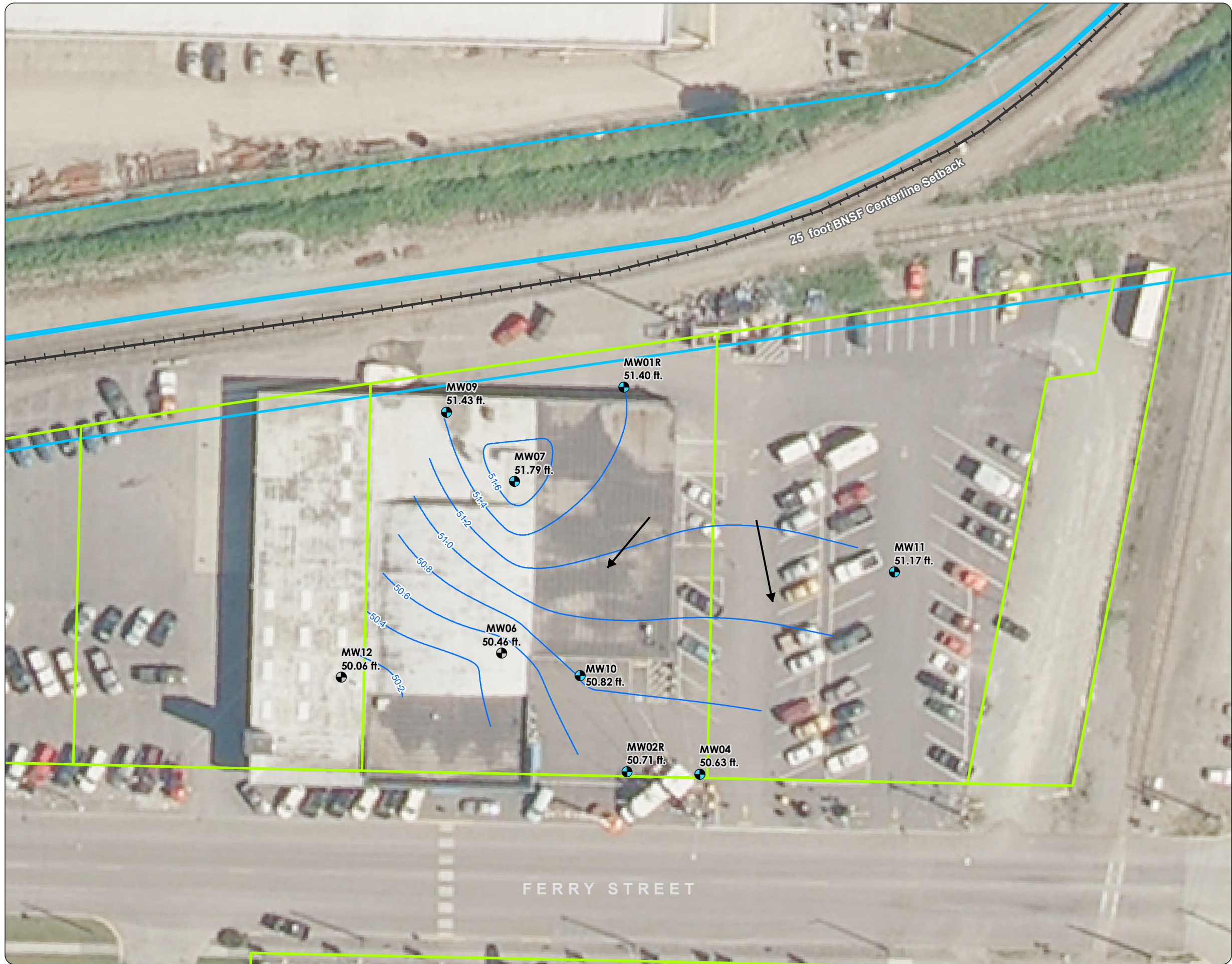


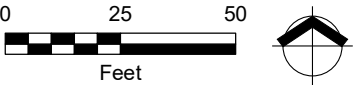
Figure 3
Groundwater Elevation
Contours—March 2022

North Cascade Ford Property
Sedro-Woolley, Washington

Legend

- Compliance Monitoring Well
- Other Monitoring Well
- Groundwater Elevation Contour (feet NAVD 88; 0.2-ft. interval)
- Approximate Groundwater Flow Direction
- ▭ 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 March 15, 2022.
BNSF = Burlington Northern Santa Fe Railway.
ft. = feet.
NAVD 88 = North American Vertical Datum of 1988.



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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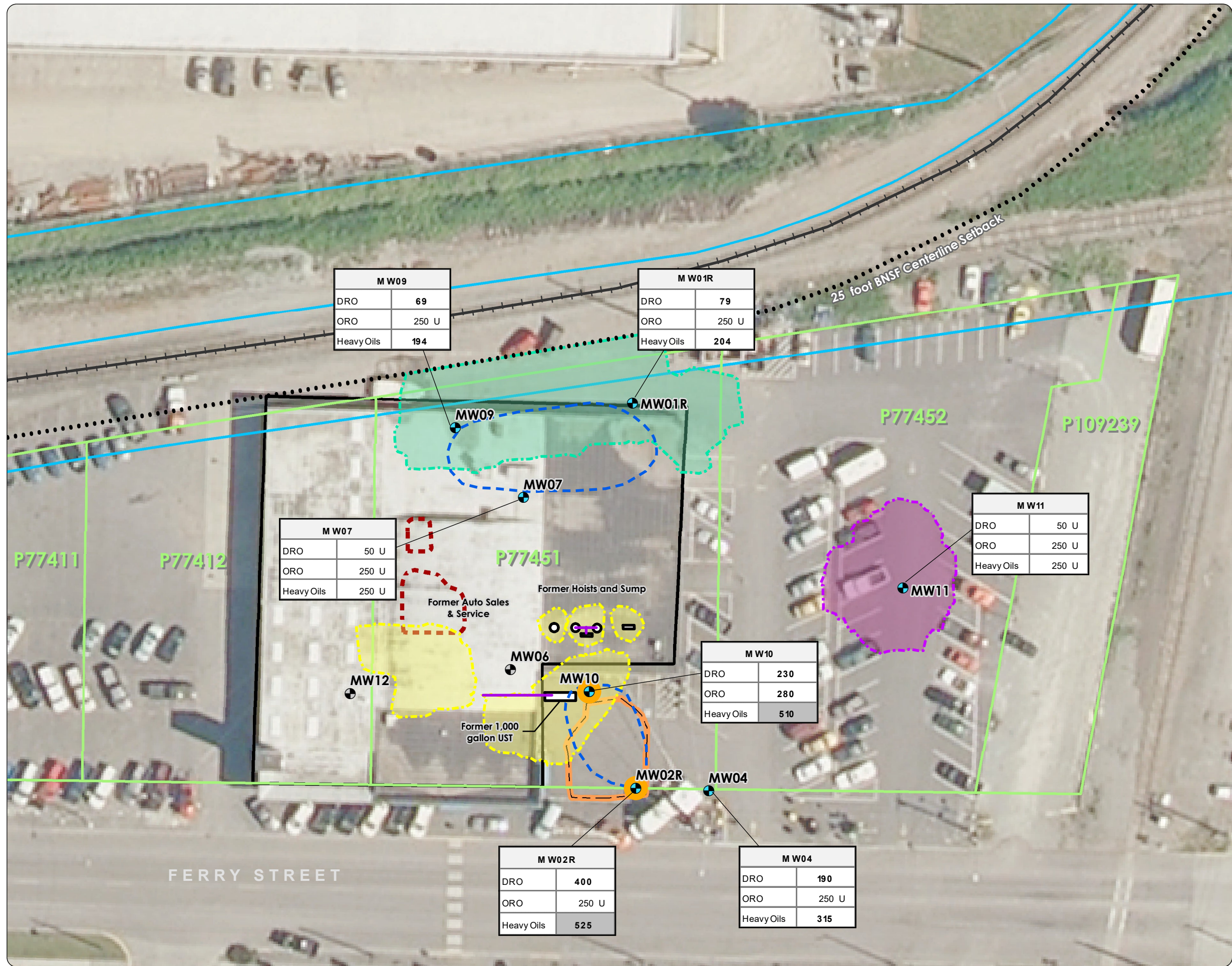















Figure 4
Groundwater Exceedances
—March 2022

North Cascade Ford Property
Sedro-Woolley, Washington

Legend

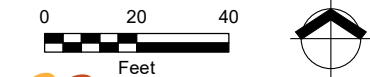
-  Compliance Monitoring Well
-  Other Monitoring Well
-  Heavy Oils Exceedance
-  Product Line
-  AOC 1 Excavation (MFA, 2020)
-  AOC 2 Excavation (MFA, 2020)
-  AOC 3 Excavation (MFA, 2020)
-  Estimated Extent of Petroleum Impacts in Groundwater
-  UST Interim Action (MFA, 2016)
-  Hoist Removal Excavation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

Notes:

All features are approximate.
All results were compared to the MTCA Method A DRO
cleanup level of 500 ug/L.
Analytical results are shown in ug/L.
Bolding indicates a detection.
Shading indicates a cleanup level exceedance.
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 Railway.
DRO = diesel-range organics.
heavy oils = sum of DRO and ORO.
MTCA = Model Toxics Control Act.
ORO = oil-range organics.
Property = North Cascade Ford Property.
U = result is not detected.
ug/L = micrograms per liter.
UST = underground storage tank.
ZGA = Zipper Geo Associates.

Sources:

Adjacent parcel boundaries obtained from Skagit County.
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.



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

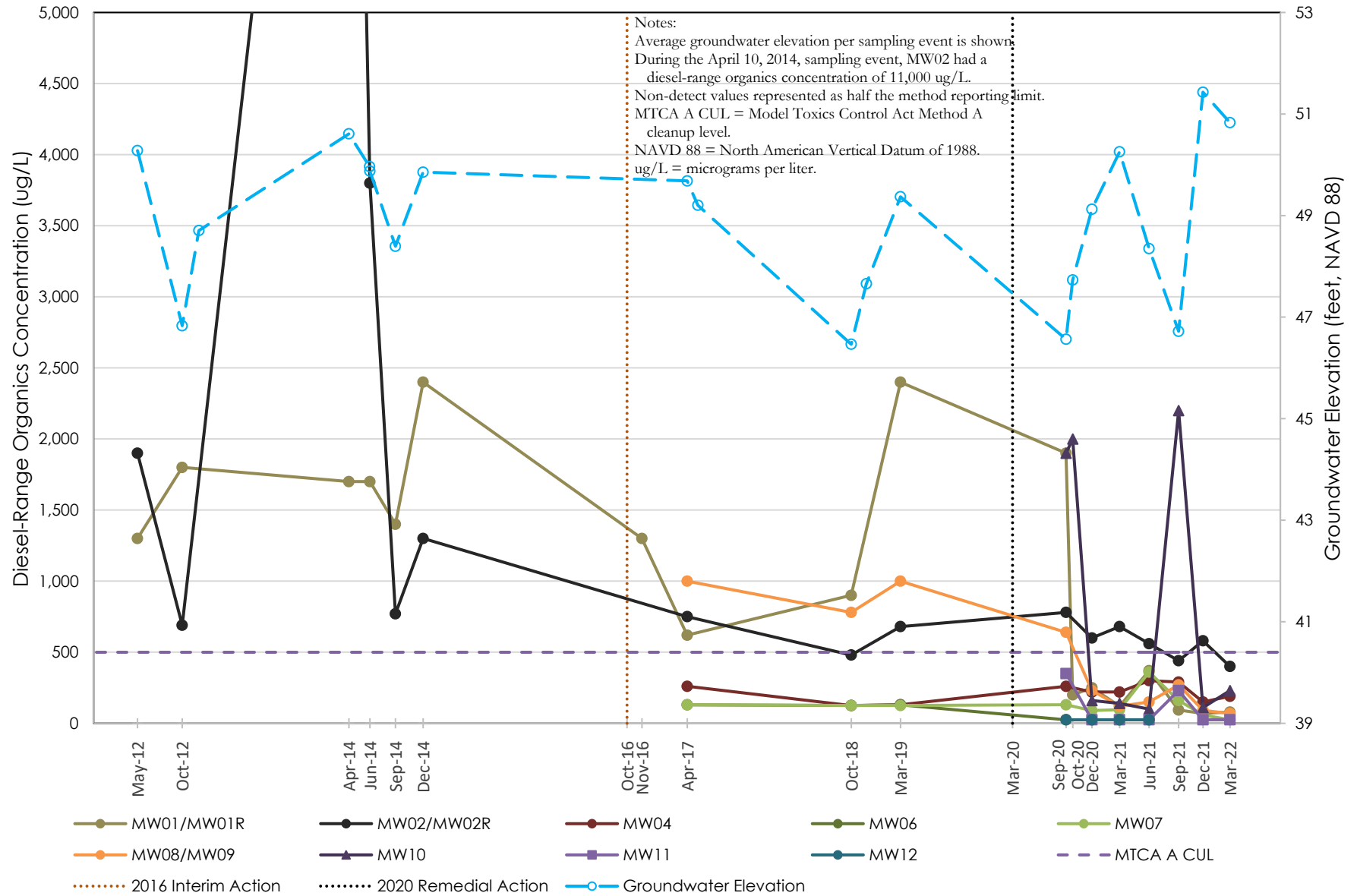


Figure 6
Lube-Oil-Range Organics Concentrations
North Cascade Ford Property
Sedro-Woolley, Washington

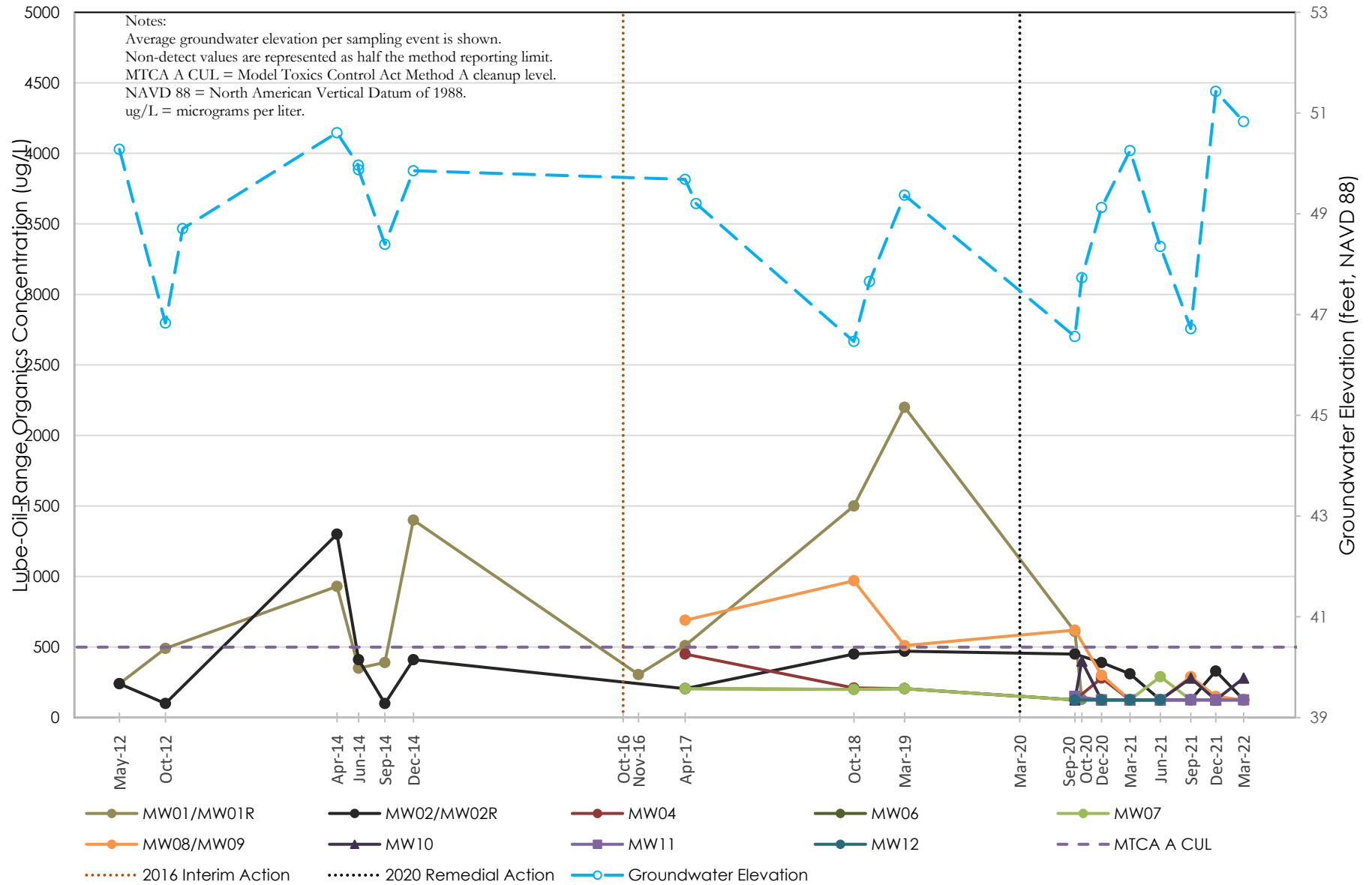


Figure 7
Heavy Oil Concentrations
North Cascade Ford Property
Sedro-Woolley, Washington

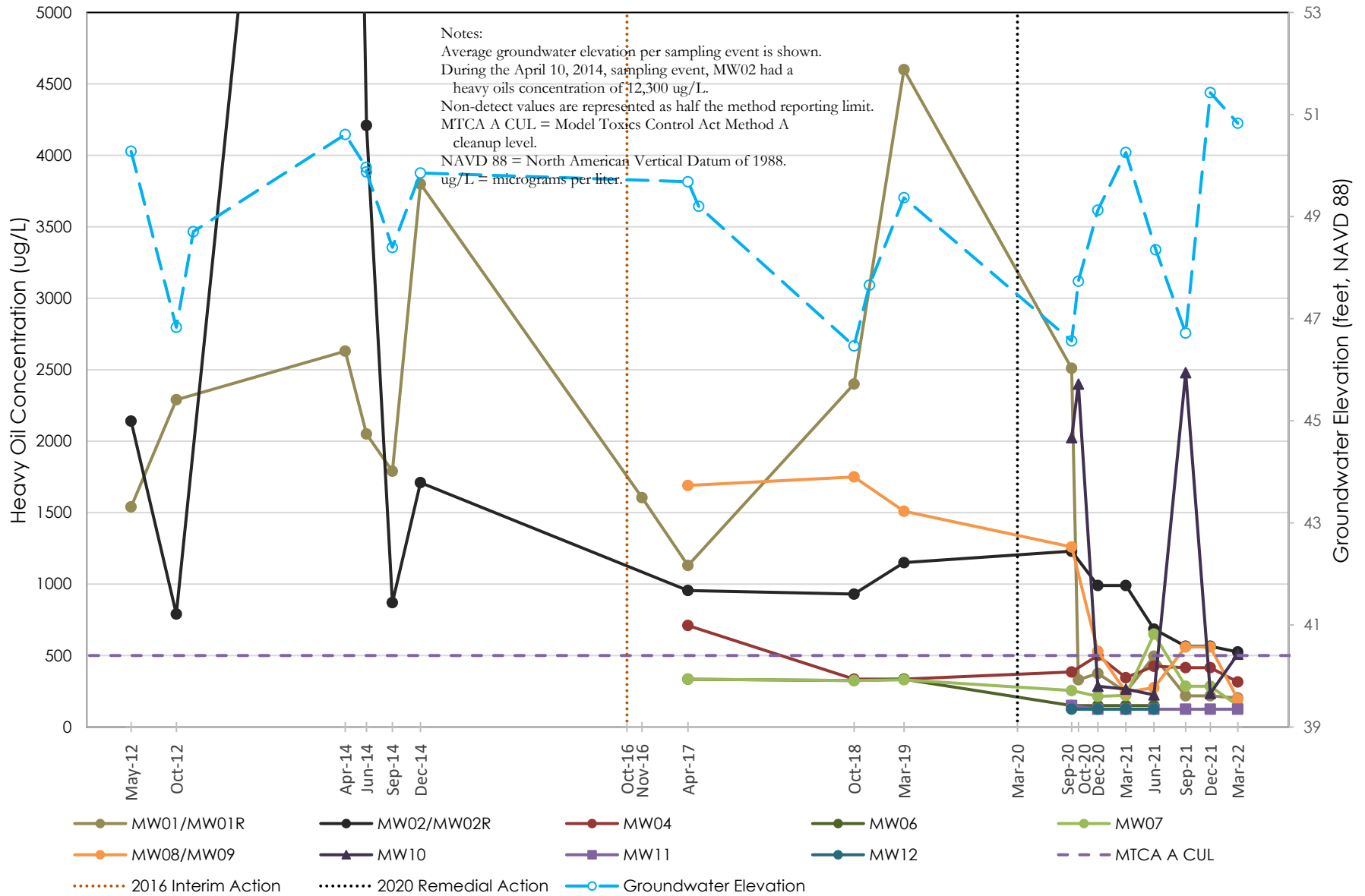
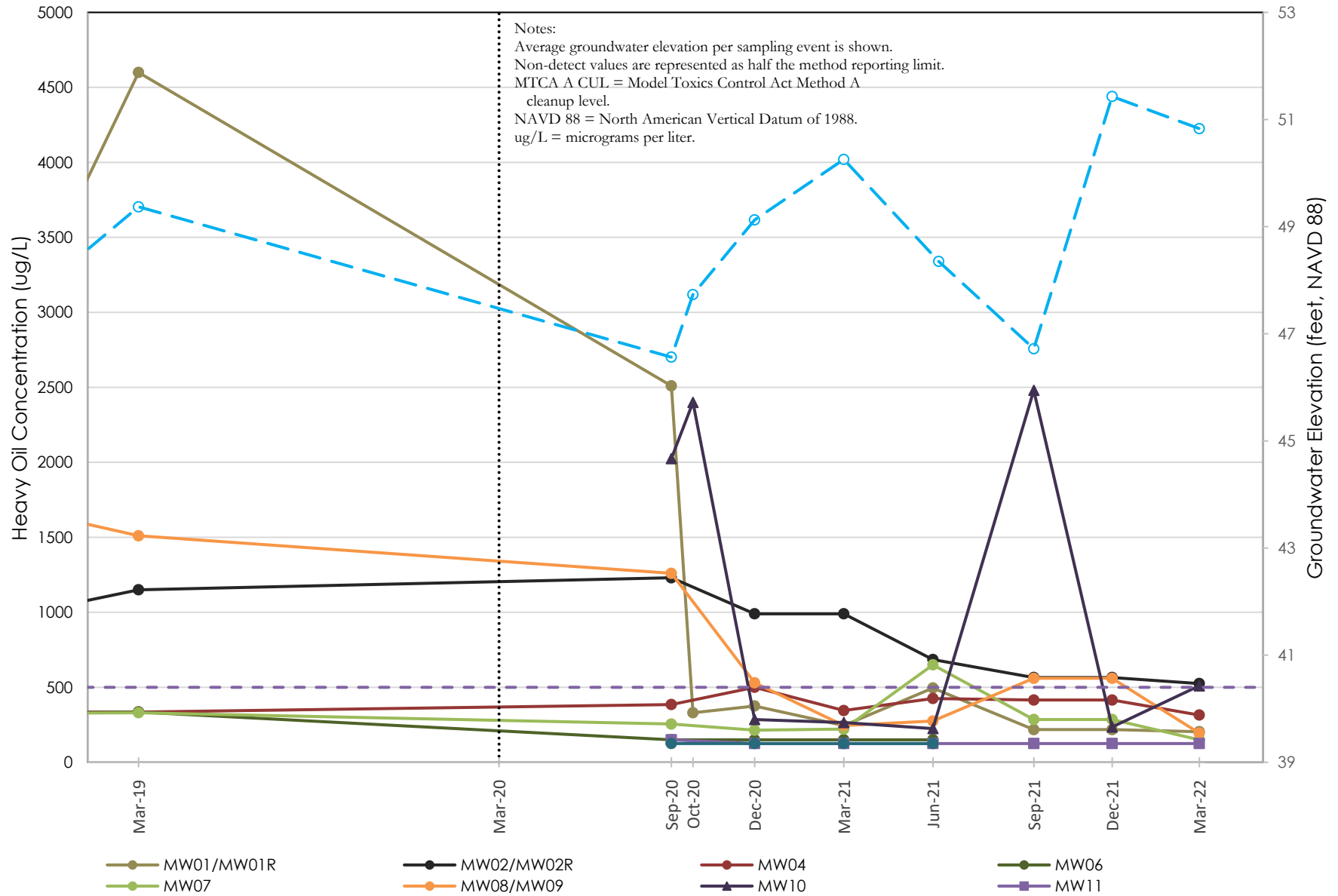


Figure 8
Heavy Oil Concentrations 2019 to 2022
North Cascade Ford Property
Sedro-Woolley, Washington



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 #	M0747.01.013	Sampler	C. Sifford				
Project Name	North Cascade Ford	Sampling Date	3/15/2022				
Sampling Event	Q7, March 2022	Sample Name	MW01R-GW-031522				
Sub Area	AOC 1	Sample Depth	9.7				
FSDS QA:	C. Wise 3/24/22	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
3/15/2022	9:35	14.56		4.92		9.64	1.57

(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	10:47:00 AM	5.1	0.3	7.47	8.3	305.7	8.03	163.2	5.14
	10:52:00 AM	5.3	0.3	8.21	8.3	283.8	6.91	153.9	4.49
	10:56:00 AM	5.5	0.3	8.38	8.3	283.8	6.7	148.6	4.68
	11:00:00 AM	5.7	0.3	8.45	8.3	277	6.71	144.3	4.52
Final Field Parameters	11:04:00 AM	6	0.3	8.56	8.3	278.6	6.72	140.6	3.7

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	11:15:00 AM	VOA-Glass		
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	1	

General Sampling Comments

Begin purge at 9:38.

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Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	Sample Location	MW02R				
Project #	M0747.01.013	Sampler	C. Sifford				
Project Name	North Cascade Ford	Sampling Date	3/15/2022				
Sampling Event	Q7, March 2022	Sample Name	MW02R-GW-031522				
Sub Area	AOC 2	Sample Depth	10.4				
FSDS QA:	C. Wise 3/24/22	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
3/15/2022	10:22	14.83		5.88		8.95	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	2:39:00 PM	2.4	0.3	7.44	10.1	545	2.13	122	3.93
	2:43:00 PM	2.7	0.3	7.21	10	542.2	0.97	123.1	4.68
	2:49:00 PM	3	0.3	7.17	10	538.5	0.77	121.8	4.41
Final Field Parameters	2:53:00 PM	3.2	0.3	7.16	10	536.1	0.69	121.1	3.78

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, light green tint, no odor, no sheen.

Sample Information

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

General Sampling Comments

Begin purge at 13:50.
Depth to water 5.90 feet at 13:46.

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Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	Sample Location	MW04				
Project #	M0747.01.013	Sampler	C. Sifford				
Project Name	North Cascade Ford	Sampling Date	3/15/2022				
Sampling Event	Q7, March 2022	Sample Name	MW04-GW-031522				
Sub Area	AOC 2	Sample Depth	9.7				
FSDS QA:	C. Wise 3/24/22	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
3/15/2022	10:26	13.63		5.69		7.94	1.29

(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	3:14:00 PM	1.6	0.3	6.78	11.8	598.9	2.54	122.7	3.92
	3:18:00 PM	1.8	0.3	6.77	11.9	599.7	1.41	122.4	3.67
	3:21:00 PM	2	0.3	6.76	11.9	601.2	1.18	122.1	3.51
Final Field Parameters	3:24:00 PM	2.2	0.3	6.76	11.9	599.9	1.11	121.8	3.14

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		
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	1	

General Sampling Comments

Begin purge at 14:36.
Depth to water 5.67 feet at 14:30.

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Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	Sample Location	MW06				
Project #	M0747.01.013	Sampler	C. Sifford				
Project Name	North Cascade Ford	Sampling Date					
Sampling Event	Q7, March 2022	Sample Name					
Sub Area	AOC 2	Sample Depth					
FSDS QA:	C. Wise 3/24/22	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
3/15/2022	10:11	19.72		6.12		13.6	2.22

(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									
Final Field Parameters									

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:

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater		VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	0	

General Sampling Comments

Sample not collected from this location for this event.

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	Sample Location	MW07				
Project #	M0747.01.013	Sampler	C. Sifford				
Project Name	North Cascade Ford	Sampling Date	3/15/2022				
Sampling Event	Q7, March 2022	Sample Name	MW07-GW-031522				
Sub Area	AOC 1	Sample Depth	12.1				
FSDS QA:	C. Wise 3/24/22	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
3/15/2022	9:54	19.61		4.51		15.1	2.46

(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	12:21:00 PM	2.5	0.3	7.91	9.5	84.4	8.27	114	177
	12:28:00 PM	2.8	0.3	7.29	9.6	83.8	7.81	113.3	174
	12:36:00 PM	3.1	0.3	7.01	9.7	86.8	7.59	112.8	139
	12:40:00 PM	3.3	0.3	6.94	9.8	87.9	7.72	112.4	134
Final Field Parameters	12:43:00 PM	3.5	0.3	6.9	9.8	89	7.58	112.2	124

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: Cloudy, strong orange tint, no odor, no sheen.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:50:00 PM	VOA-Glass		
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	1	

General Sampling Comments

Begin purge at 11:23.
Depth to water 4.24 feet at 11:18.

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Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	Sample Location	MW09				
Project #	M0747.01.013	Sampler	C. Sifford				
Project Name	North Cascade Ford	Sampling Date	3/15/2022				
Sampling Event	Q7, March 2022	Sample Name	MW09-GW-031522				
Sub Area	AOC 1	Sample Depth	12.6				
FSDS QA:	C. Wise 3/24/22	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
3/15/2022	9:45	19.94		5.23		14.31	2.33

(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	11:30:00 AM	4.9	0.3	8.75	8.4	263.9	3.35	135.8	3.41
	11:34:00 AM	5.1	0.3	8.81	8.3	264.4	2.41	133.6	3.64
	11:38:00 AM	5.2	0.3	8.82	8.4	264.1	2.45	132.5	3.34
Final Field Parameters	11:41:00 AM	5.4	0.3	8.82	8.4	263.7	2.38	131.9	3.08

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	11:45:00 AM	VOA-Glass		
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	1	

General Sampling Comments

Begin purge at 9:48.

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	Sample Location	MW10				
Project #	M0747.01.013	Sampler	C. Sifford				
Project Name	North Cascade Ford	Sampling Date	3/15/2022				
Sampling Event	Q7, March 2022	Sample Name	MW10-GW-031522				
Sub Area	AOC 2	Sample Depth	12.6				
FSDS QA:	C. Wise 3/24/22	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
3/15/2022	10:16	19.79		5.44		14.35	2.34

(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	1:54:00 PM	2.8	0.3	7.79	9.9	770	3.25	129.3	15.5
	2:00:00 PM	3.1	0.3	7.99	10	778	2.6	126.1	5.79
	2:04:00 PM	3.3	0.3	8.01	9.9	763	2.67	124.9	4.48
Final Field Parameters	2:08:00 PM	3.5	0.3	8.02	9.8	760	2.71	124.8	4.66

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	2:15:00 PM	VOA-Glass		
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	1	

General Sampling Comments

Begin purge at 13:06.
Depth to water 5.42 feet at 13:02.
Collected MWDUP-GW-031522 at this location.

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	Sample Location	MW11				
Project #	M0747.01.013	Sampler	C. Sifford				
Project Name	North Cascade Ford	Sampling Date	3/16/2022				
Sampling Event	Q7, March 2022	Sample Name	MW11-GW-031622				
Sub Area	AOC 3	Sample Depth	12.3				
FSDS QA:	C. Wise 3/24/22	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
3/15/2022	9:24	19.62		5.03		14.59	2.37

(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	11:38:00 AM	2.5	0.3	10.08	9.9	464.1	11.66	166.3	5.67
	11:42:00 AM	2.7	0.3	10.24	10	352.6	11.39	166.3	4.99
	11:46:00 AM	3	0.3	10.48	9.7	198.5	11.37	162.2	4.46
	11:50:00 AM	3.3	0.3	10.64	9.6	172	11.82	154.5	3.83
	11:56:00 AM	3.6	0.3	10.68	9.6	169.3	11.52	153.3	4.2
Final Field Parameters	12:00:00 PM	3.8	0.3	10.68	9.7	173.6	11.15	149.6	4.16

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	12:10:00 PM	VOA-Glass		
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	1	

General Sampling Comments

Begin purge at 10:45 on 3/16/22.
Depth to water 4.57 feet at 10:41 on 3/16/22.

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	Sample Location	MW12				
Project #	M0747.01.013	Sampler	C. Sifford				
Project Name	North Cascade Ford	Sampling Date					
Sampling Event	Q7, March 2022	Sample Name					
Sub Area	AOC 2	Sample Depth					
FSDS QA:	C. Wise 3/24/22	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
3/15/2022	10:05	14.55		6.33		8.22	1.34

(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									
Final Field Parameters									

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:

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Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater		VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	0	

General Sampling Comments

Sample not collected at this location for this event.

ATTACHMENT B

ANALYTICAL LABORATORY REPORT



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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March 21, 2022

Carolyn Wise, Project Manager
Maul Foster Alongi
1329 N State St, Suite 301
Bellingham, WA 98225

Dear Ms Wise:

Included are the results from the testing of material submitted on March 16, 2022 from the North Cascade Ford M0747.01.013, F&BI 203302 project. There are 4 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
MFA0321R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 16, 2022 by Friedman & Bruya, Inc. from the Maul Foster Alongi North Cascade Ford M0747.01.013, F&BI 203302 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Maul Foster Alongi</u>
203302 -01	MW01R-GW-031522
203302 -02	MW02R-GW-031522
203302 -03	MW04-GW-031522
203302 -04	MW07-GW-031522
203302 -05	MW09-GW-031522
203302 -06	MW10-GW-031522
203302 -07	MW12-GW-031522
203302 -08	MWDUP-GW-031522

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/21/22

Date Received: 03/16/22

Project: North Cascade Ford M0747.01.013, F&BI 203302

Date Extracted: 03/17/22

Date Analyzed: 03/17/22

**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)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 41-152)
MW01R-GW-031522 203302-01	79 x	<250	124
MW02R-GW-031522 203302-02	400 x	<250	128
MW04-GW-031522 203302-03	190 x	<250	114
MW07-GW-031522 203302-04	<50	<250	123
MW09-GW-031522 203302-05	69 x	<250	122
MW10-GW-031522 203302-06	200 x	<250	129
MWDUP-GW-031522 203302-08	230 x	280 x	118
Method Blank 02-672 MB	<50	<250	140

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/21/22

Date Received: 03/16/22

Project: North Cascade Ford M0747.01.013, F&BI 203302

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

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	100	108	63-142	8

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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.

SAMPLE CHAIN OF CUSTODY

03-16-22

E03

Report To Carolyn Wise

Company Maul Foster & Alongi

Address 1329 N State St., Suite 301

City, State, ZIP Bellingham, WA, 98225

Phone 360-690-5832 Email cwise@maul-foster.com

SAMPLERS (signature) 

PROJECT NAME
North Cascade Ford

PO #
M0747.01.013

REMARKS

INVOICE TO

Project specific RLs? - Yes / No

Page # 1 of 1

TURNAROUND TIME

☒ Standard turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

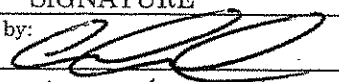

☐ Other

Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED											Notes
						ORP + DRP NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					
MW01R-GW-031522	01	3-15-22	11:15	Water	1	X											
MW02R-GW-031522	02	3-15-22	15:00	Water	1	X											
MW04-GW-031522	03	3-15-22	15:30	Water	1	X											
MW07-GW-031522	04	3-15-22	12:50	Water	1	X											
MW09-GW-031522	05	3-15-22	11:45	Water	1	X											
MW10-GW-031522	06	3-15-22	14:15	Water	1	X											
MW12-GW-031522	07	3-15-22	13:30	Water	1	X											HOLD PER CW 3/16/22 AE
MWDUP-GW-031522	08	3-15-22	14:15	Water	1	X											

Friedman & Bruya, Inc.
Ph. (206) 285-8282

(NP)

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Christian Sifford	MFA	3-15-22	16:40
Received by: 	Mac Goldman	FBI	3-16-22	16:30
Relinquished by:				
Received by:				
Samples received at <u>4</u> °C				

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 203302 CLIENT Maul Foster & Hargis INITIALS/DATE: MG 3/16/22

If custody seals are present on cooler, are they intact? ☐ NA ☒ YES ☐ NO

Cooler/Sample temperature 4 °C

Were samples received on ice/cold packs? ☒ YES ☐ NO

How did samples arrive?
☒ Over the Counter
☐ Picked up by F&BI
☒ FedEx/UPS/GSO

Number of days samples have been sitting prior to receipt at laboratory 1 days

Is there a Chain-of-Custody* (COC)? ☒ YES ☐ NO

*or other representative documents, letters, and/or shipping memos

Are the samples clearly identified? (explain "no" answer below) ☒ YES ☐ NO

Is the following information provided on the COC* ? (explain "no" answer below)

Sample ID's	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	# of Containers	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Date Sampled	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Relinquished	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Time Sampled	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Requested analysis	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☒ YES ☐ NO

Were appropriate sample containers used? ☒ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☒ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☒ NA ☐ YES ☐ NO

Air Samples: Were any additional canisters received? ☒ NA ☐ YES ☐ NO

If Yes, number of unused 1L canisters _____

number of unused 6L canisters _____

Explain "no" items from above (use the back if needed)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

March 23, 2022

Carolyn Wise, Project Manager
Maul Foster Alongi
1329 N State St, Suite 301
Bellingham, WA 98225

Dear Ms Wise:

Included are the results from the testing of material submitted on March 17, 2022 from the North Cascade Ford M0747.01.013, F&BI 203329 project. There are 4 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
MFA0323R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 17, 2022 by Friedman & Bruya, Inc. from the Maul Foster Alongi North Cascade Ford M0747.01.013, F&BI 203329 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Maul Foster Alongi</u>
203329 -01	MW11-GW-031622

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/23/22

Date Received: 03/17/22

Project: North Cascade Ford M0747.01.013, F&BI 203329

Date Extracted: 03/21/22

Date Analyzed: 03/21/22

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

Results Reported as ug/L (ppb)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(% Recovery)
			(Limit 41-152)
MW11-GW-031622	<50	<250	113
203329-01			
Method Blank	<50	<250	118
02-720 MB			

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/23/22

Date Received: 03/17/22

Project: North Cascade Ford M0747.01.013, F&BI 203329

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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.

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

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f - The sample was laboratory filtered prior to analysis.

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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.

203329

SAMPLE CHAIN OF CUSTODY

03-17-22

Report To Carolyn WiseCompany Maul Foster & AlongiAddress 1329 N State St, Suite 301City, State, ZIP Bellingham, WA, 98225Phone 360-690-5982 Email cwise@maulfoster.com

SAMPLERS (signature)

PROJECT NAME

North Cascade Ford

PO #

M0747.01.013

REMARKS

INVOICE TO

Project specific RLs? - Yes / No

Page # of 003

TURNAROUND TIME

☒ Standard turnaround☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples☐ Other

Default: Dispose after 30 days

						ANALYSES REQUESTED												Notes
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	DRO + DRO NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082						
MW11-GW-031622	01	3-16-22	12:10		1	X												

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

SIGNATURE

Relinquished by:



PRINT NAME

Christian Sifford

COMPANY

MFA

DATE

3-16-22

TIME

13:15

Received by:



Tokala Christensen

F+B

03/17/22

16:00

Relinquished by:

Received by:

ATTACHMENT C

DATA VALIDATION MEMORANDUM



DATA QUALITY ASSURANCE/QUALITY CONTROL REVIEW

PROJECT NO. M0747.01.013 | MARCH 23, 2022 | VSF PROPERTIES, LLC

Maul Foster & Alongi, Inc., conducted an independent stage 2A review of the quality of analytical results for groundwater samples and associated quality control samples collected at the North Cascade Ford site at 116 W Ferry Street, Sedro-Woolley, Washington, on March 15 and 16, 2022.

Friedman & Bruya, Inc. (FBI), performed the analyses. FBI report numbers 203302 and 203329 were reviewed. The analyses performed and samples analyzed are listed below. One sample was submitted on hold, as indicated below.

Analysis	Reference
Diesel- and motor-oil-range hydrocarbons	NWTPH-Dx
NOTE: NWTPH = Northwest Total Petroleum Hydrocarbons.	

Samples Analyzed
Report 203302
MW01R-GW-031522
MW02R-GW-031522
MW04-GW-031522
MW07-GW-031522
MW09-GW-031522
MW10-GW-031522
MW12-GW-031522 (hold)
MWDUP-GW-031522
Report 203329
MW11-GW-031622

DATA QUALIFICATION

Analytical results were evaluated according to applicable sections of U.S. Environmental Protection Agency (EPA) guidelines for data review (EPA, 2020) 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 that EPA data review procedures do not specifically address (e.g., Northwest Total Petroleum Hydrocarbons [NWTPH] Method NWTPH-Dx).

Based on the results of the data quality review procedures described below, the data are considered acceptable for their intended use, with the appropriate final data qualifiers assigned. Final data qualifiers represent qualifiers originating from the laboratory and accepted by the reviewer, as well as data qualifiers assigned by the reviewer during validation. The following is the final data qualifier:

- U = result is non-detect at the reporting limit.

According to report 203302, FBI flagged all detected NWTPH-Dx diesel- and motor-oil-range hydrocarbons results for having chromatographic patterns that did not resemble the fuel standards used for quantitation. These results were reported as diesel- and oil-range hydrocarbons instead of specific fuel products; thus, qualification was not required.

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

Laboratory method blanks are used to assess whether laboratory contamination was introduced during sample preparation and analysis. Laboratory method blank analyses were performed at the required frequencies. For purposes of data qualification, the laboratory method blanks were associated with all samples prepared in the analytical batch.

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

Equipment Rinsate Blanks

Equipment rinsate blanks are used to evaluate field equipment decontamination. These blanks were not required for this sampling event, as all samples were collected using dedicated, single-use equipment.

Trip Blanks

Trip blanks are used to evaluate whether volatile organic compound contamination was introduced during sample storage and shipment between the sampling location and the laboratory. No trip blank samples were submitted.

LABORATORY CONTROL SAMPLE AND LABORATORY CONTROL SAMPLE DUPLICATE RESULTS

A laboratory control sample (LCS) and a laboratory control sample duplicate (LCSD) are spiked with target analytes to provide information about laboratory precision and accuracy.

The LCS/LCSD samples were extracted and analyzed at the required frequency and the results were within acceptance limits for percent recovery and relative percent difference (RPD).

LABORATORY DUPLICATE RESULTS

Laboratory duplicate results are used to evaluate laboratory precision.

FBI did not report laboratory duplicate results. Laboratory precision was evaluated using LCS/LCSD results.

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE RESULTS

Matrix spike and matrix spike duplicate results are used to evaluate laboratory precision and accuracy as well as the effect of the sample matrix on sample preparation and analysis.

FBI did not report matrix spike and matrix spike duplicate results. Laboratory precision and accuracy were evaluated using LCS/LCSD results.

SURROGATE RECOVERY RESULTS

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

All surrogate results were within percent recovery acceptance limits.

FIELD DUPLICATE RESULTS

Field duplicate samples measure both field and laboratory precision. According to report 203302, the following field duplicate and parent sample pair was submitted for analysis (MW10-GW-031522 and MWDUP-GW-031522). Maul Foster & Alongi, Inc., uses acceptance criteria of 100 percent RPD for results that are less than five times the reporting limit. Non-detect data are not used in the evaluation of field duplicate results.

All field duplicate results met the RPD acceptance criteria.

REPORTING LIMITS

FBI used routine reporting limits for non-detect results.

DATA PACKAGE

The data package was reviewed for transcription errors, omissions, and anomalies. None 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), VI phase III (2019).

EPA. 2020. EPA contract laboratory program, national functional guidelines for organic Superfund methods data review. EPA 540-R-20-005. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. November.

FBI. 2019. Quality assurance manual. Rev. 17. Friedman & Bruya, Inc., Seattle, Washington. November 6.