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November 11, 2021
Project No. 0747.01.13

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

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

Dear Mr. Warfel:

In September 2021, on behalf of VSF Properties, LLC, Maul Foster & Alongi, Inc. (MFA) conducted the fifth 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.

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

In March 2020, a cleanup action was completed in AOCs 1 through 3 (MFA, 2020b). Following the remedial action, 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 cleanup action has attained cleanup levels (CULs). Previous quarterly compliance groundwater monitoring events were conducted between September 2020 and June 2021 (MFA, 2020d, 2021a,b,c).

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

FIELD AND ANALYTICAL METHODS

Groundwater monitoring activities were conducted in September 2021. All activities were conducted in accordance 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, 2021). Compliance monitoring well locations are shown on Figure 2.

Potentiometric Surface

On September 27, 2021, 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 are similar to those previously observed. They indicate that shallow groundwater at the Site is hydraulically discontinuous and show varied, localized groundwater migration at the Property. Water levels measured during this event were approximately 0.5 to 2.4 feet lower than in the June 2021 monitoring event. MFA also compared water levels and potentiometric surfaces between the September 2020 and 2021 monitoring events. In September 2020, there was generally more variability in groundwater flow direction, ranging from northwest to southeast in the northwest portion of the Site to southeast to northwest in the southeast portion of the Site. In September 2021, groundwater generally flowed north to south, with the exception of localized variation in the southwest portion of the Site. The average height of the water table in September 2021 was relatively consistent with September 2020.

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 September 27, 2021, including a field duplicate sample from monitoring well MW04. 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). Groundwater samples were submitted to Friedman & Bruya, Inc., for laboratory analysis under standard chain-of-custody procedures.

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 DRO and 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. 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.

All groundwater samples were analyzed for DRO and ORO. Heavy oils are 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 in AOC 1 were below their respective MTCA Method A CULs. The sum of heavy oils in MW09 was above the MTCA Method A CUL for DRO.

AOC 2: Former Underground Storage Tanks

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

DRO were detected in groundwater samples at MW02R, MW04, and MW10. Only one monitoring well, MW010, had a detection of DRO above the MTCA Method A CUL of 500 micrograms per liter (ug/L), at 2,200 ug/L. The sum of heavy oils also exceeded the MTCA Method A CUL in MW02R and MW10.

AOC 3: Former Coal Storage Sheds/Possible Buried Object

One groundwater sample was collected from AOC 3 monitoring well MW11.

ORO were not detected in MW11. Detections of DRO and heavy oils were below their respective MTCA Method A CULs.

SUMMARY

Results from the groundwater monitoring indicate the following:

- **AOC 1**
  - No detections of DRO or ORO exceeded their respective MTCA Method A CULs.
  - The sum of heavy oils (DRO and ORO) exceeded the MTCA Method A CUL for DRO in one monitoring well, MW09.
- **AOC 2**
  - The DRO concentration at one monitoring well, MW10, were above the MTCA Method A CUL.
  - The sum of heavy oils (DRO and ORO) exceeded the MTCA Method A CUL for DRO in two monitoring wells, MW02R and MW10.
- **AOC 3**
  - No detections of DRO, ORO, or heavy oils exceeded their respective MTCA Method A CULs.

Since quarterly groundwater monitoring began in September 2020, DRO and ORO concentrations in monitoring wells generally decreased (see Figures 5 and 6). However, during the September 2021 monitoring event, there was an increase in DRO at MW10, consistent with concentrations observed during the September 2020 monitoring event. The water level measured at MW10 in September 2021 was similar to the water level measured in September 2020; both are the lowest water levels recorded during compliance monitoring. During the low-water-table season, minimal water interacts with the ORC-amended backfill from the 2020 remediation event. Additionally, because of access constraints during the 2016 interim action, minor DRO contamination was left in place and may be contributing to DRO concentrations in MW10. The low water levels combined with the proximity to the 2016 interim action area in the vicinity of MW10 likely are contributing to the elevated DRO concentration. It is anticipated that over time, the concentrations of DRO in MW10 will decline as groundwater at the Property interacts with the amended backfill.

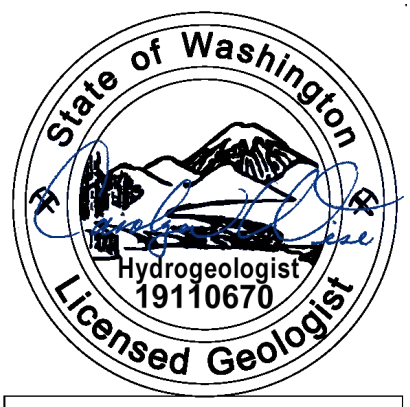
Overall, the remedial action conducted in spring 2020 has significantly reduced the concentrations of heavy oils in groundwater at the Site (see Figure 7). Additionally, free product has not been observed since quarterly compliance groundwater monitoring began in September 2020. Heavy oils concentrations have significantly decreased in most monitoring wells, and based on trend plots (see Figures 5 through 7), it is anticipated that heavy oils concentrations in groundwater will continue to decrease during future quarterly monitoring events.

In accordance with the groundwater CMP, the next quarterly groundwater monitoring event is scheduled for December 2021.

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

Sincerely,

Maul Foster & Alongi, Inc.



CAROLYN ROCHELLE WISE

Carolyn R. Wise, LHG 11-11-2021
Project Hydrogeologist

Amanda Bixby, 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. 2021. 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.

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.

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**	--
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**	--

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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	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**

NOTES:

Analytical results are shown in micrograms per liter (parts per billion).

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.

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

[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.

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
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

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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)
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
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

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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)
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
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

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
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
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

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)
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
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

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]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.

Table 3
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	Heavy Oils[a]	Total Naphth.[b]
		Units:	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	160
1	MW01R	09/22/20	1 U	1 U	1 U	**3.7**	**160**	**1,900**	**610**	**2,510**	--
		10/14/20	20 U	20 U	20 U	60 U	100 U	**200**	260 U	**330**	20 U
		12/16/20	1 U	1 U	1 U	3 U	100 U	**250**	250 U	**375**	--
		03/17/21	1 U	1 U	1 U	3 U	100 U	**120**	250 U	**245**	--
		06/22/21	1 U	1 U	1 U	3 U	100 U	**370**	250 U	**495**	--
		09/27/21	--	--	--	--	--	**93**	250 U	**218**	--
	MW07	09/22/20	1 U	1 U	1 U	3 U	100 U	**130**	250 U	**255**	--
		12/16/20	1 U	1 U	1 U	3 U	100 U	**89**	250 U	**214**	--
		03/17/21	1 U	1 U	1 U	3 U	100 U	**96**	250 U	**221**	--
		06/22/21	1 U	1 U	1 U	3 U	100 U	**360**	**290**	**650**	--
		09/27/21	--	--	--	--	--	**160**	250 U	**285**	--
	MW09	09/22/20	1 U	1 U	1 U	3 U	100 U	**640**	**620**	**1,260**	--
		12/16/20	1 U	1 U	1 U	3 U	100 U	**230**	**300**	**530**	--
		12/16/20	1 U	1 U	1 U	3 U	100 U	**210**	**390**	**600**	--
		03/17/21	1 U	1 U	1 U	3 U	100 U	**120**	250 U	**245**	--
		06/22/21	1 U	1 U	1 U	3 U	100 U	**150**	250 U	**275**	--
		09/27/21	--	--	--	--	--	**270**	**290**	**560**	--
2	MW02R	09/22/20	1 U	1 U	1 U	3 U	100 U	**780**	**450**	**1,230**	--
		12/16/20	1 U	1 U	1 U	3 U	100 U	**600**	**390**	**990**	--
		03/17/21	1 U	1 U	1 U	3 U	100 U	**680**	**310**	**990**	--
		03/17/21	1 U	1 U	1 U	3 U	100 U	**580**	**270**	**850**	--
		06/22/21	1 U	1 U	1 U	3 U	100 U	**560**	250 U	**685**	--
		06/22/21	1 U	1 U	1 U	3 U	100 U	**530**	250 U	**655**	--
		09/27/21	--	--	--	--	--	**440**	250 U	**565**	--

Table 3
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	Heavy Oils[a]	Total Naphth.[b]
		Units:	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	160
2 (cont.)	MW04	09/22/20	1 U	1 U	1 U	3 U	100 U	**260**	250 U	**385**	--
		12/16/20	1 U	1 U	1 U	3 U	100 U	**220**	**280**	**500**	--
		03/17/21	1 U	1 U	1 U	3 U	100 U	**220**	250 U	**345**	--
		06/22/21	1 U	1 U	1 U	3 U	100 U	**300**	250 U	**425**	--
		09/27/21	--	--	--	--	--	**290**	250 U	**415**	--
		09/27/21	--	--	--	--	--	**180**	250 U	**305**	--
	MW06	09/22/20	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--
		12/16/20	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--
		03/17/21	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--
		06/22/21	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--
	MW10	09/22/20	1 U	1 U	1 U	3 U	**370**	**1,900**	250 U	**2,025**	--
		10/14/20	20 U	20 U	20 U	60 U	**550**	**2,000**	**400**	**2,400**	**65.1**
		12/16/20	1 U	1 U	1 U	3 U	100 U	**160**	250 U	**285**	--
		03/17/21	1 U	1 U	1 U	3 U	100 U	**140**	250 U	**265**	--
		06/22/21	1 U	1 U	1 U	3 U	100 U	**100**	250 U	**225**	--
		09/27/21	--	--	--	--	--	**2,200**	**280**	**2,480**	--
	MW12	09/22/20	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--
		12/16/20	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--
		03/17/21	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--
		06/22/21	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	--
3	MW11	09/22/20	1 U	**30**	1 U	**16**	**390**	**350**	300 U	**500**	**18.8**
		09/22/20	1 U	**30**	1 U	**17**	**380**	**200**	250 U	**325**	**21.7**
		12/16/20	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	0.4 U
		03/17/21	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	0.4 U
		06/22/21	1 U	1 U	1 U	3 U	100 U	50 U	250 U	250 U	0.4 U
		09/27/21	--	--	--	--	--	**230**	250 U	**355**	--

Table 3
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.

cont. = continued.

CUL = cleanup level.

DRO = diesel-range organics.

GRO = gasoline-range organics.

MTCA = Model Toxics Control Act.

naphth. = naphthalenes.

ORO = lube-oil-range organics.

U = analyte not detected at or above method 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.

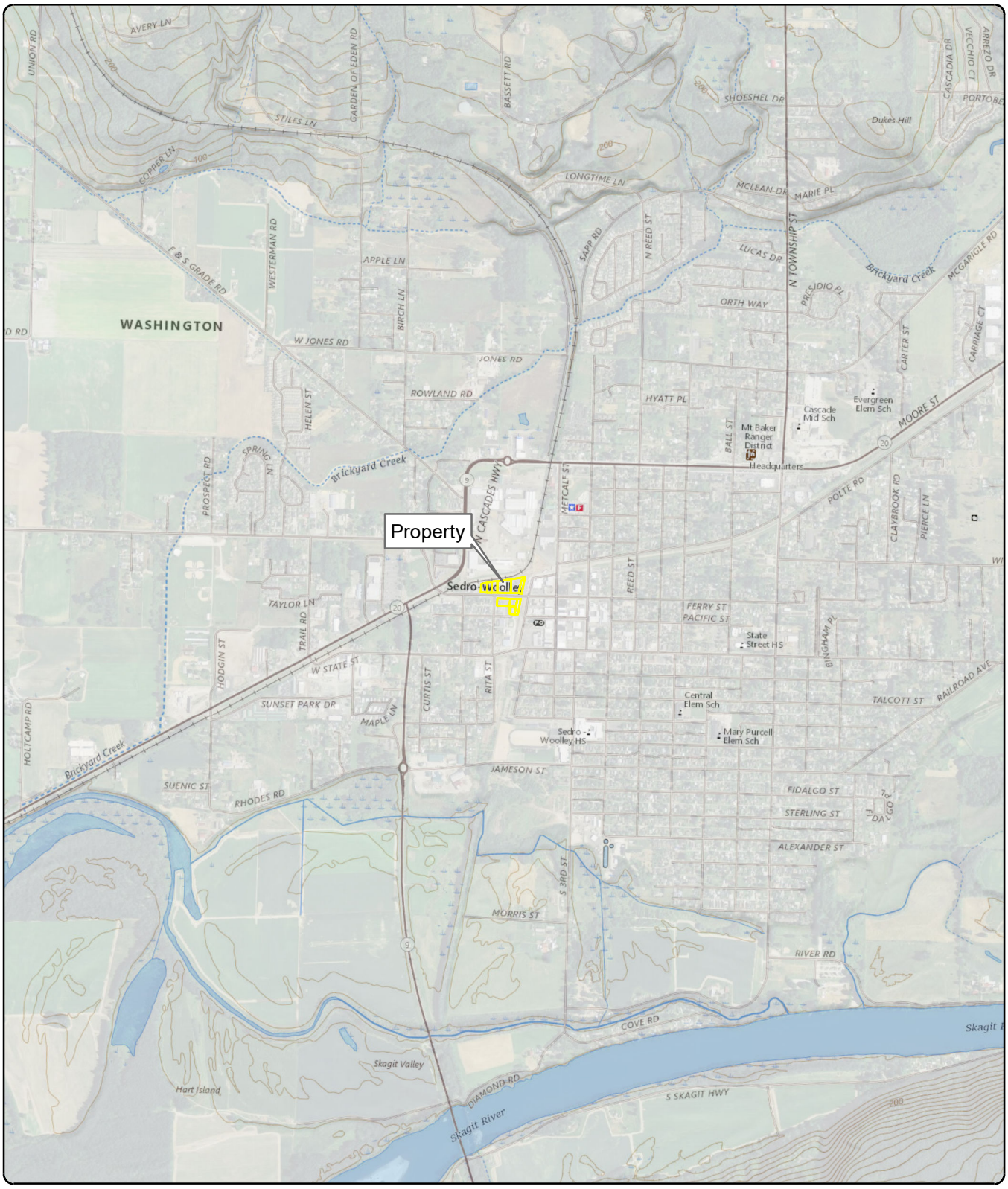
[b]Total naphthalenes are the sum of 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene. Where 1- and 2-methylnaphthalene are not analyzed, total naphthalene is represented by the naphthalene result. When all results are non-detect, the highest reporting limit is shown.

[c]MTCA Method A CUL with no detectable benzene.

REFERENCE:

[1]Washington State Department of Ecology. Cleanup Levels, and Risk Calculation table. February 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

0 1,000 2,000
Feet

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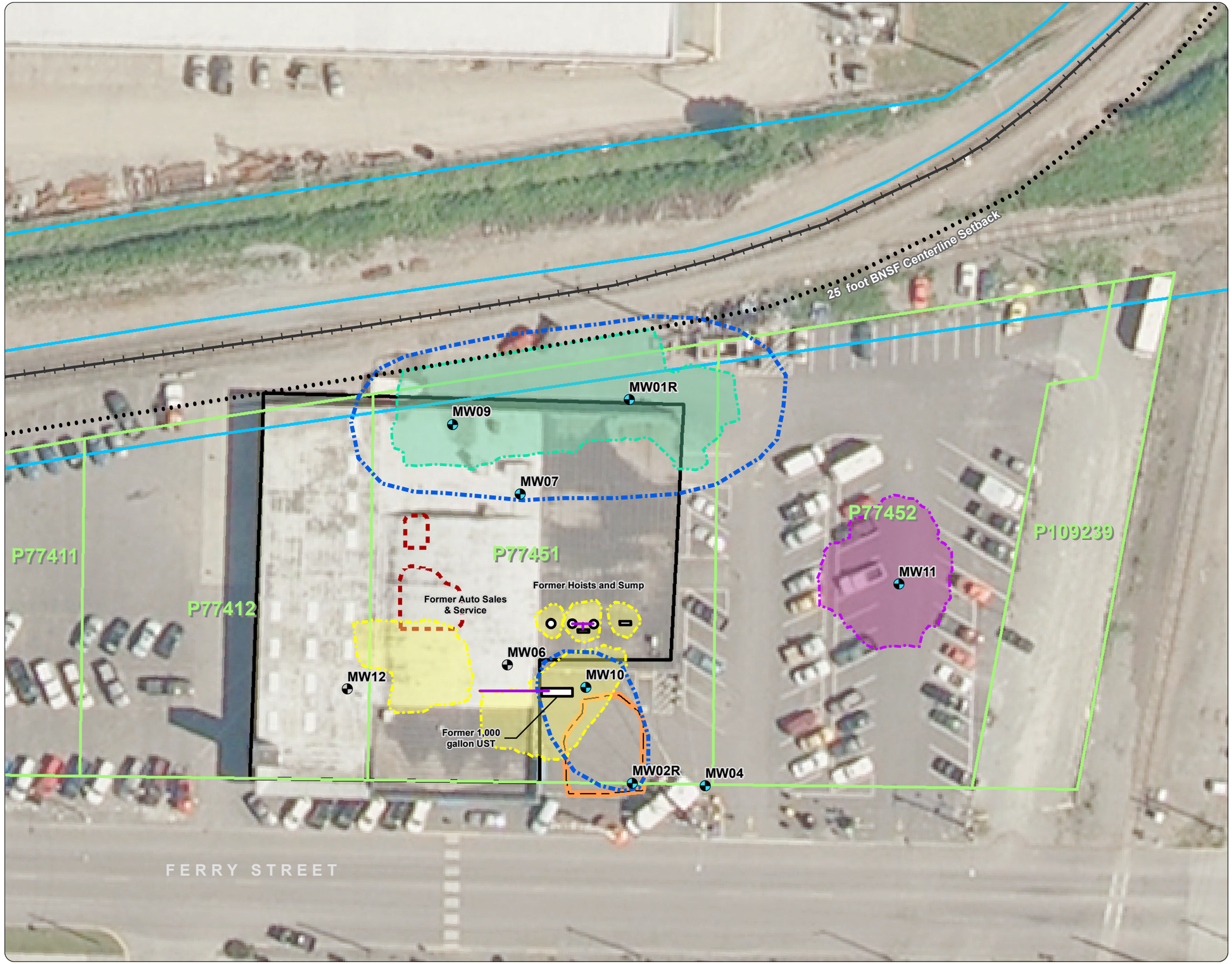
Path: X:\0747.01\12\Projects\Fig_PropertyLocation.mxd
Print Date: 9/30/2020
Approved By: C. Wise
Produced By: abixby
Project: 0747.01.12

Figure 2
Compliance Monitoring Well Network

North Cascade Ford Property
Sedro-Woolley, Washington



Legend

- Compliance Monitoring Well
- 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, 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 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.

0 20 40
Feet

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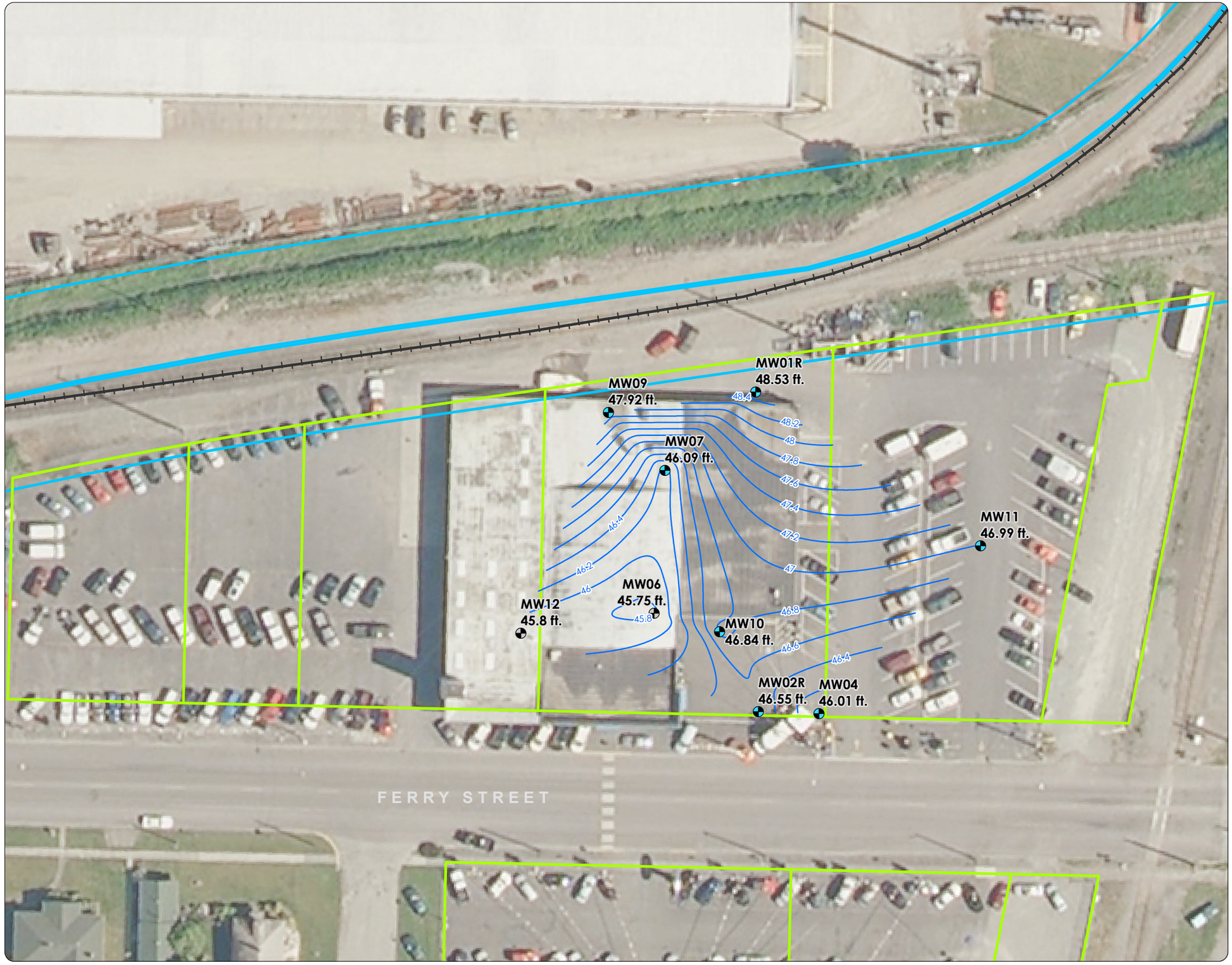
Path: X:\0747.01\12\Projects\Fig_ComplianceMWNetwork.mxd
Print Date: 10/22/2021
Approved By: cwise
Produced By: aguse
Project: 0747.01.11

Figure 3
Groundwater Elevation Contours - September 2021

North Cascade Ford Property
Sedro-Woolley, Washington



Legend

- Compliance Monitoring Well
- Other 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 September 27, 2021.
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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Project: 0747.01.11 Produced By: aguse Approved By: cwise Print Date: 10/22/2021 Path: X:\0747.01\12\Projects\Fig_GWExceedances_Sept2021.mxd

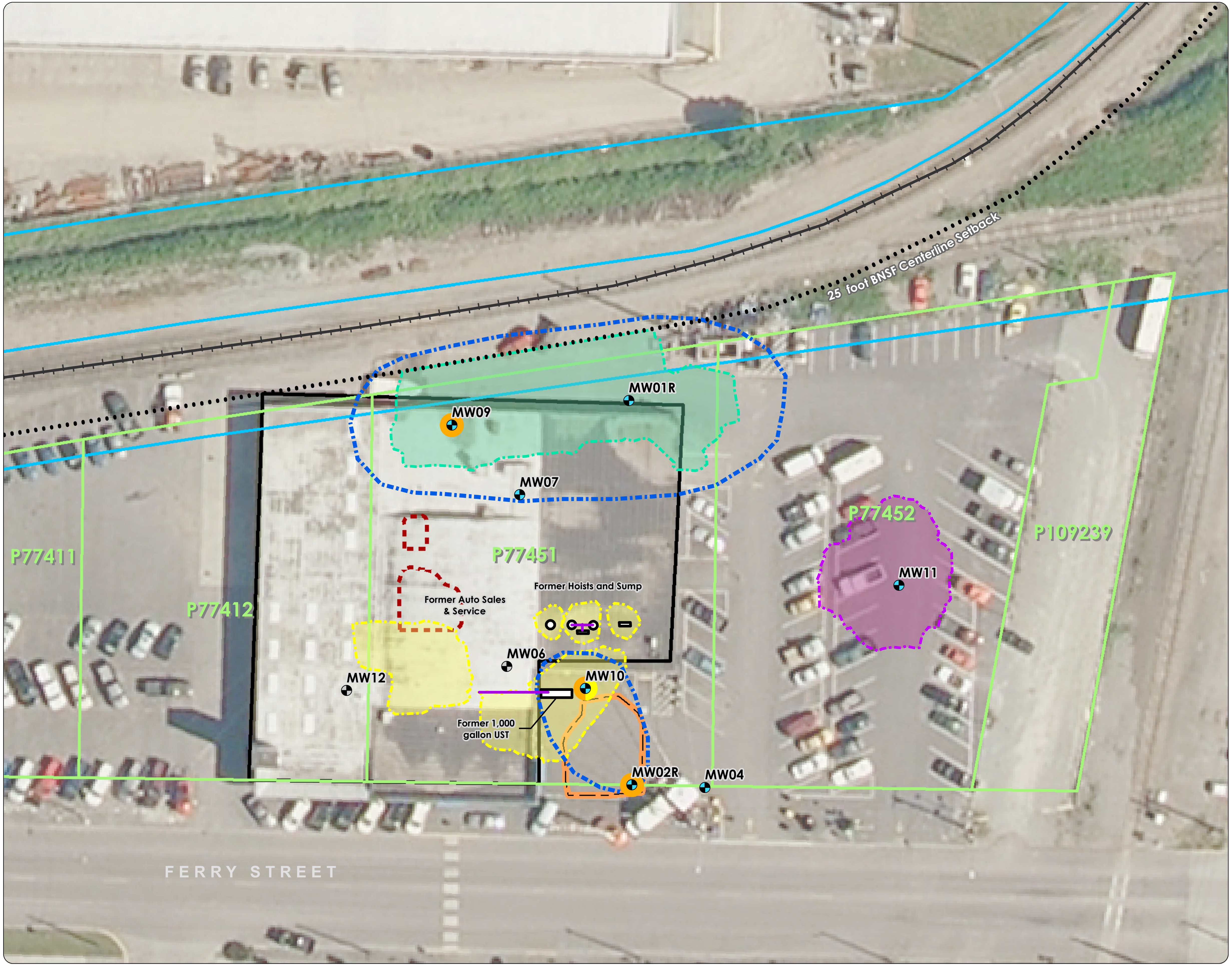

Figure 4
Groundwater Exceedances - September 2021

North Cascade Ford Property
Sedro-Woolley, Washington

Legend

- Compliance Monitoring Well
- Other Monitoring Well
- DRO Exceedance
- 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 structures on the property were removed prior to remedial action.
The excavations areas are set back from the BNSF railroad centerline by 25 feet.
Heavy oils were compared to the DRO cleanup level.
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.
ORO = oil-range organics.
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.

0 20 40
Feet

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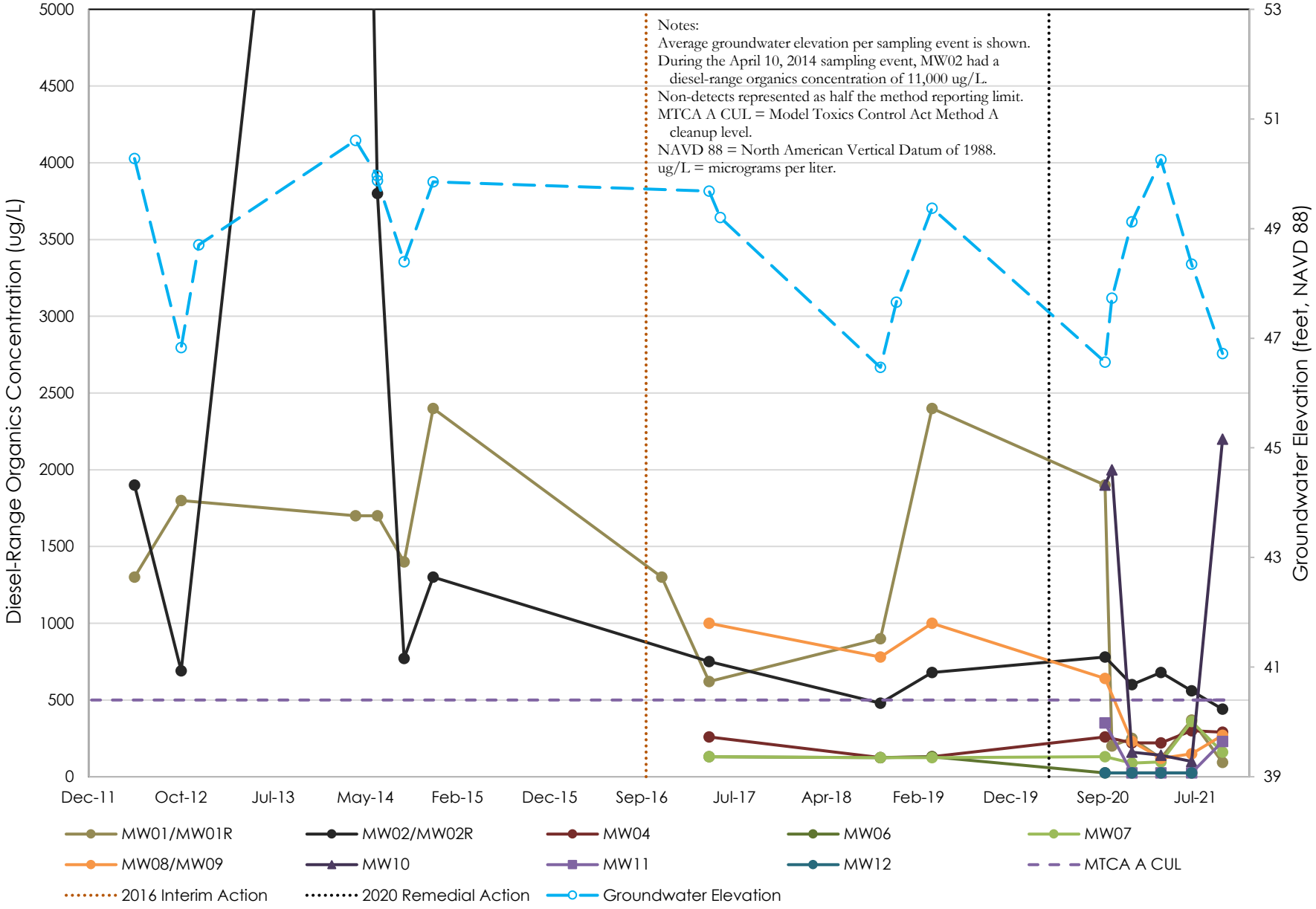
Figure 5
Diesel-Range Organics Concentrations
North Cascade Ford Property



0747.01.12, 11/1/2021, DRO

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Figure 6
Lube-Oil-Range Organics Concentrations
North Cascade Ford Property

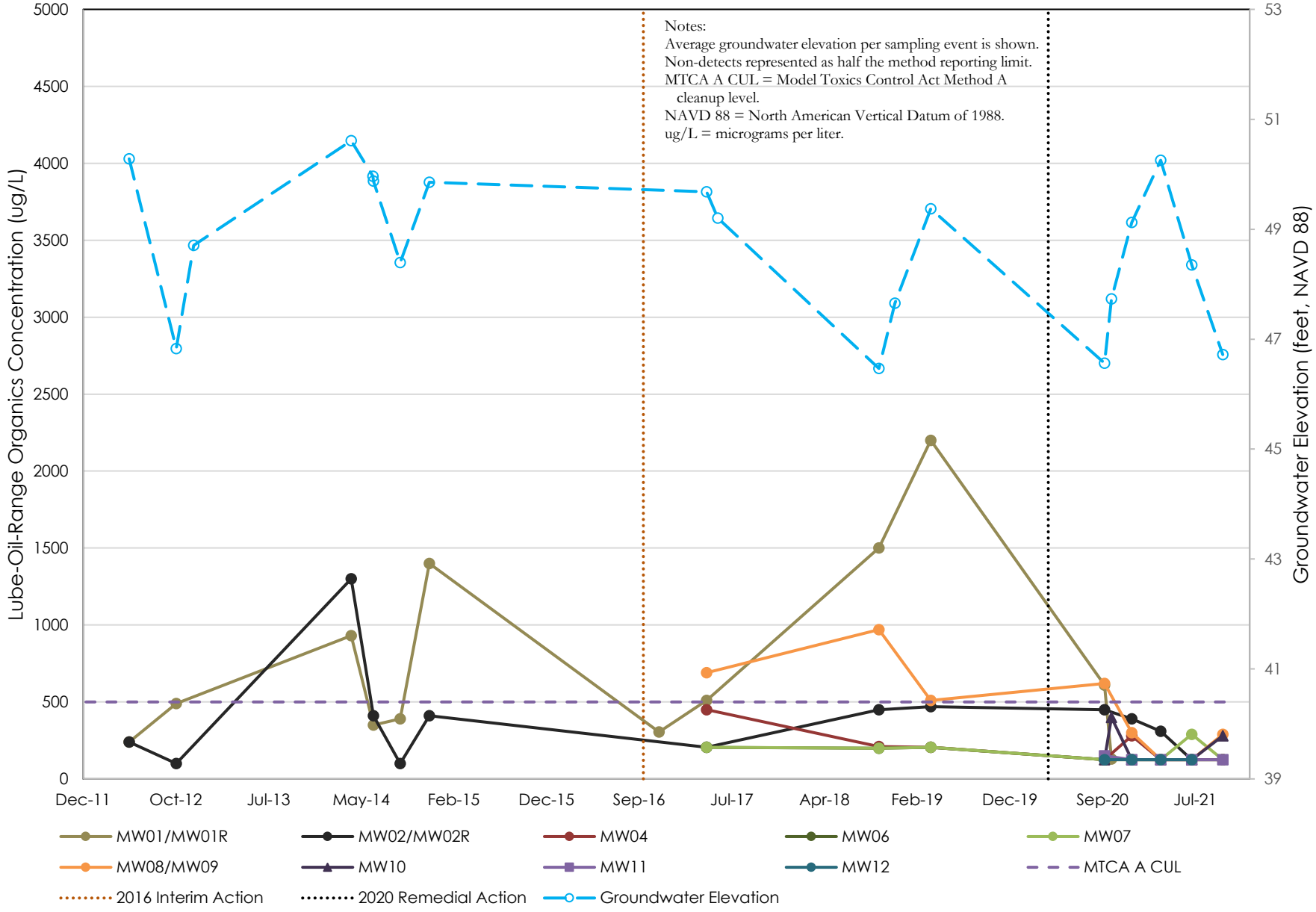

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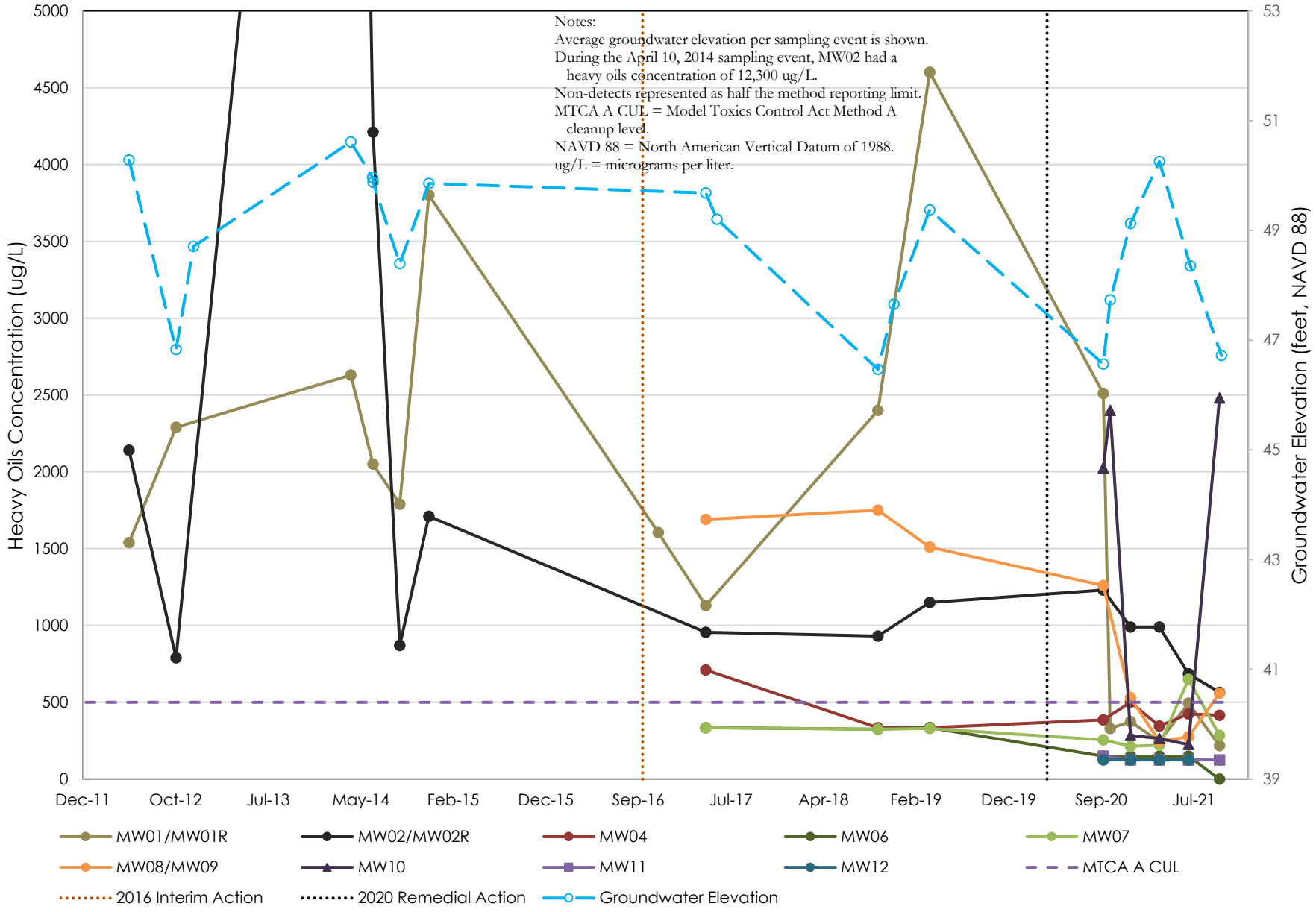
Figure 7
Heavy Oils Concentrations
North Cascade Ford Property



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 #	0747.01.13	**Sampler**	A. Bixby
Project Name	North Cascade Ford	**Sampling Date**	9/27/2021
Sampling Event	September 2021	**Sample Name**	MW01R-GW-092721
Sub Area		**Sample Depth**	10
FSDS QA:	A. Bixby 9/29/2021	**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**
9/27/2021	8:26	14.69		7.79		6.9	1.12

(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	12:38:00 PM	2	0.3	7.35	18.8	638	0.57	164.8	14.8
	12:41:00 PM	2.2	0.3	7.38	18.7	638	0.57	164.1	14.2
	12:44:00 PM	2.4	0.3	7.41	18.7	638	0.54	163.4	7.86
Final Field Parameters	12:47:00 PM	2.6	0.3	7.43	18.6	638	0.54	162.9	6.71

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	1:00:00 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 11:55.

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	**Sample Location**	MW02R
Project #	0747.01.13	**Sampler**	A. Bixby
Project Name	North Cascade Ford	**Sampling Date**	9/27/2021
Sampling Event	September 2021	**Sample Name**	MW02R-GW-092721
Sub Area		**Sample Depth**	12.5
FSDS QA:	A. Bixby 9/29/2021	**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**
9/27/2021	8:05	14.81		10.04		4.77	0.78

(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	9:40:00 AM	1	0.2	6.63	17.7	668	0.85	201	4.06
	9:43:00 AM	1.1	0.2	6.65	17.7	668	0.82	200	3.52
	9:46:00 AM	1.2	0.2	6.68	17.7	652	0.78	196.1	5.28
Final Field Parameters	9:49:00 AM	1.3	0.2	6.67	18.1	650	0.76	195.3	4.08

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	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 08:43.
At 9:45, well beginning to go dry; moved tubing down 0.5 feet.

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	**Sample Location**	MW04				
Project #	0747.01.13	**Sampler**	A. Bixby				
Project Name	North Cascade Ford	**Sampling Date**	9/27/2021				
Sampling Event	September 2021	**Sample Name**	MW04-GW-092721				
Sub Area		**Sample Depth**	12.5				
FSDS QA:	A. Bixby 9/29/2021	**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**
9/27/2021	8:00	13.57		10.31		3.26	0.53

(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	9:10:00 AM	0.5	0.2	6.42	16.3	550.4	1.15	211.3	7.98
	9:13:00 AM	0.6	0.2	6.47	16.5	553.8	1.16	208.3	4.12
	9:16:00 AM	0.7	0.2	6.47	16.6	547.8	1.14	205.1	4.08
Final Field Parameters	9:19:00 AM	0.8	0.2	6.49	16.6	545.8	1.16	204.3	4.04

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	9:30:00 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 08:34.
At 8:50, well beginning to go dry; move tubing down 0.5 feet. At 9:00, pause purging to allow recharge. Resume purging at 9:10.

Field duplicate MWDUP-GW-092721 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**	MW07		
Project #	0747.01.13	**Sampler**	A. Bixby		
Project Name	North Cascade Ford	**Sampling Date**	9/27/2021		
Sampling Event	September 2021	**Sample Name**	MW07-GW-092721		
Sub Area		**Sample Depth**	12		
FSDS QA:	A. Bixby 9/29/2021	**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**
9/27/2021	8:22	19.65		10.21		9.44	1.54

(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	1:05:00 PM	4.5	0.2	6.47	16.1	501.7	0.37	181.2	186
	1:08:00 PM	4.6	0.2	6.43	16.3	499.2	0.35	180.3	18
	1:11:00 PM	4.7	0.2	6.42	16.7	492	0.35	178.1	181
Final Field Parameters	1:14:00 PM	4.8	0.2	6.41	16.9	489.9	0.35	175.3	180

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, then clear; orange particulates; yellowish orange tint; no odor; no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	1:30:00 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 11:20.
At 11:45, turbidity = 178 NTUs.
At 12:00, turbidity = 300 NTUs; pulled tubing up ~0.5 feet.
At 12:45, turbidity = 170 NTUs; pulled tubing up ~0.5 feet.

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	**Sample Location**	MW09		
Project #	0747.01.13	**Sampler**	A. Bixby		
Project Name	North Cascade Ford	**Sampling Date**	9/27/2021		
Sampling Event	September 2021	**Sample Name**	MW09-GW-092721		
Sub Area		**Sample Depth**	15		
FSDS QA:	A. Bixby 9/29/2021	**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**
9/27/2021	8:19	19.98		8.74		11.24	1.83

(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	11:34:00 AM	2.3	0.3	6.95	18	569.6	0.46	170.8	2.38
	11:37:00 AM	2.5	0.3	6.94	17.9	568.9	0.46	170.3	1.42
	11:40:00 AM	2.7	0.3	6.94	17.9	567.7	0.45	170	1.23
Final Field Parameters	11:43:00 AM	2.9	0.3	6.94	17.9	567.4	0.45	169.8	1.05

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	11:50:00 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 10:25.

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Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	**Sample Location**	MW10
Project #	0747.01.13	**Sampler**	A. Bixby
Project Name	North Cascade Ford	**Sampling Date**	9/27/2021
Sampling Event	September 2021	**Sample Name**	MW10-GW-092721
Sub Area		**Sample Depth**	15
FSDS QA:	A. Bixby 9/29/2021	**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**
9/27/2021	8:08	19.84		9.42		10.42	1.7

(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	10:35:00 AM	1.5	0.3	6.75	16.1	629	0.92	198.3	3.23
	10:38:00 AM	1.7	0.3	6.76	16.1	615	0.63	195.9	3.27
	10:41:00 AM	1.9	0.3	6.76	16.1	605	0.61	194.5	3.01
	10:44:00 AM	2.1	0.3	6.76	16.1	602.7	0.59	194	2.13
Final Field Parameters	10:47:00 AM	2.3	0.3	6.77	16.1	599.8	0.57	193.4	2.09

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	11:00:00 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 10:04.

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	**Sample Location**	MW11		
Project #	0747.01.13	**Sampler**	A. Bixby		
Project Name	North Cascade Ford	**Sampling Date**	9/27/2021		
Sampling Event	September 2021	**Sample Name**	MW11-GW-092721		
Sub Area		**Sample Depth**	15		
FSDS QA:	A. Bixby 9/29/2021	**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**
9/27/2021	8:29	19.66		9.21		10.45	1.7

(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	1:52:00 PM	1.5	0.2	9.19	16.6	373.2	0.79	132.7	10.9
	1:55:00 PM	1.6	0.2	9.24	16.6	374.4	0.74	133.5	5.61
	1:58:00 PM	1.7	0.2	9.27	16.5	375.2	0.73	135	5.18
Final Field Parameters	2:01:00 PM	1.8	0.2	9.28	16.4	376.3	0.75	137.2	4.85

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	2:10:00 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.

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

October 4, 2021

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 September 28, 2021 from the North Cascade Ford 0747.01.13, F&BI 109522 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
MFA1004R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 28, 2020 by Friedman & Bruya, Inc. from the Maul Foster Alongi North Cascade Ford 0747.01.13, F&BI 109522 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
109522 -01	MW01R-GW-092721
109522 -02	MW02R-GW-092721
109522 -03	MWDUP-GW-092721
109522 -04	MW04-GW-092721
109522 -05	MW07-GW-092721
109522 -06	MW09-GW-092721
109522 -07	MW10-GW-092721
109522 -08	MW11-GW-092721
109522 -09	Trip Blank

All quality control requirements were acceptable.

Date of Report: 10/04/21
Date Received: 09/28/21
Project: North Cascade Ford 0747.01.13, F&BI 109522
Date Extracted: 09/29/21
Date Analyzed: 09/29/21

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-092721 109522-01	93 x	<250	83
MW02R-GW-092721 109522-02	440 x	<250	88
MWDUP-GW-092721 109522-03	180 x	<250	65
MW04-GW-092721 109522-04	290 x	<250	83
MW07-GW-092721 109522-05	160 x	<250	77
MW09-GW-092721 109522-06	270 x	290 x	88
MW10-GW-092721 109522-07	2,200	280 x	97
MW11-GW-092721 109522-08	230 x	<250	87
Method Blank 01-2200 MB2	<50	<250	96

Date of Report: 10/04/21
Date Received: 09/28/21
Project: North Cascade Ford 0747.01.13, F&BI 109522

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	84	100	63-142	17

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.

109522

SAMPLE CHAIN OF CUSTODY

ME 09-28-21

Page # 1 of 1 VW4

Report To Carolyn Wise
Company Maul Foster & Alongi
Address 1329 N State St, Suite 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 #: 0747.01.13

REMARKS
Project specific RLs? - Yes / No

INVOICE TO: accounting@maulfoster.com

TURNAROUND TIME
☒ Standard turnaround E04
☐ 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 NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
MW01R-GW-092721	01A-D	9/27/21	1300	W	4	X											
MW02R-GW-092721	02	9/27/21	1000	W	4	X											
MWDUP-GW-092721	03	9/27/21	1000	W	4	X											
MW04-GW-092721	04	9/27/21	0930	W	4	X											
MW07-GW-092721	05	9/27/21	1330	W	4	X											
MW09-GW-092721	06	9/27/21	1150	W	4	X											
MW10-GW-092721	07	9/27/21	1100	W	4	X											
MW11-GW-092721	08	9/27/21	1410	W	4	X											
Trip Blank	09A-B																
																	Samples received at 3 °C

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Amanda Bixby	Amanda Bixby	MFA	9/27/21	1600
Received by: Nhan Phan	Nhan Phan	FBI	09/28/21	1350
Relinquished by:				
Received by:				

ATTACHMENT C

DATA VALIDATION MEMORANDUM

DATA QUALITY ASSURANCE/QUALITY CONTROL REVIEW

PROJECT NO. 0747.01.13| OCTOBER 7, 2021 | VSF PROPERTIES, LLC

Maul Foster & Alongi, Inc. (MFA) conducted an independent stage 2A review of the quality of analytical results for groundwater samples collected at the North Cascade Ford property located at 116 W Ferry Street in Sedro-Woolley, Washington. The samples were collected on September 27, 2021.

Friedman & Bruya, Inc. (FBI) performed the analyses. FBI report number 109522 was reviewed. The analyses performed and samples analyzed are listed below.

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

Samples Analyzed		
Report 109522		
MW01R-GW-092721	MW04-GW-092721	MW10-GW-092721
MW02R-GW-092721	MW07-GW-092721	MW11-GW-092721
MWDUP-GW-092721	MW09-GW-092721	Trip Blank

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., NWTPH-Dx).

According to report 109522, FBI noted that all detected NWTPH-Dx diesel- and motor-oil-range hydrocarbon results, except for the diesel-range hydrocarbon result for sample MW10-GW-092721, had chromatographic patterns that did not resemble the fuel standards used for quantitation. The results were reported as diesel- and motor-oil-range hydrocarbons; thus, qualification was not required.

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 final data qualifier was used:

U = result is non-detect at the method reporting limit (MRL).

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 MRLs for all target analytes.

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.

A trip blank was submitted on hold with the sample delivery group 109522. The reviewer confirmed that the trip blank was included with the sample delivery group but had not been recorded on the chain of custody by the sampler. FBI recorded the trip blank name on the chain of custody at the time of receipt because it was included with the submitted sample set. The reviewer confirmed that trip blank analysis was not required. No additional action was required.

LABORATORY CONTROL SAMPLE/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.

All LCS/LCSD 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. A laboratory duplicate for method NWTPH-Dx was not reported. Batch precision was evaluated with LCS/LCSD results.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

Matrix spike/matrix spike duplicate (MS/MSD) results are used to evaluate laboratory precision and accuracy as well as the effect of the sample matrix on sample preparation and analysis. NWTPH-Dx MS/MSD were not reported. Batch precision and accuracy were evaluated with 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 109522, the following parent and field duplicate and sample pair was submitted for analysis (MW04-GW-092721/MWDUP-GW-092721). MFA uses acceptance criteria of 100 percent RPD for results that are less than five times the 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 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.

According to the chain of custody included in report 109522, the sample collection time for sample MWDUP-GW-092721 was 10:00. The reviewer confirmed that because the sample was collected at the same time as MW04-GW-092721, the collection time recorded on the chain of custody was incorrect and should be 09:30 instead. Sample collection time was not shown elsewhere in the laboratory report, so a revised report was not requested.

No additional issues were found.

REFERENCES

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