



August 9, 2021
Project No. 0747.01.12

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

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

Dear Mr. Warfel:

In June 2021, on behalf of VSF Properties, LLC, Maul Foster & Alongi, Inc. (MFA) conducted the fourth 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 in accordance 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 (COCs) in AOCs 1 through 3 include diesel-range organics (DRO); lube-oil-range organics (ORO); gasoline-range organics (GRO); benzene, toluene, ethylbenzene, total xylenes (BTEX); and/or total naphthalenes.

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

In March 2020, a cleanup action was completed in AOCs 1 through 3 (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 implement 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 in September and December 2020 and March 2021 (MFA, 2020d, 2021a, 2021b). The fourth groundwater monitoring event is described herein.

FIELD AND ANALYTICAL METHODS

Groundwater monitoring activities were conducted in June 2021, and all activities were conducted in accordance with the groundwater CMP (MFA, 2020a) and the addendum to the groundwater CMP (MFA, 2020c). Sample locations, sample depths, and chemical analyses are summarized in Table 2. Compliance monitoring well locations are shown on Figure 2.

Potentiometric Surface

On June 22, 2021, MFA measured static water levels in the compliance monitoring wells (see Table 3). A potentiometric surface map is provided as Figure 3. The estimated potentiometric surface contours are similar to those previously observed and indicate that shallow groundwater at the Site is hydraulically discontinuous and show minimal groundwater migration at this area of the Property.

Monitoring Well Sampling

MFA collected ten groundwater samples from nine compliance monitoring wells on the Property (MW01R, MW02R, MW04, MW06, MW07, and MW09 through MW12) on June 22, 2021, including a field duplicate sample from monitoring well MW02R. Chemical analyses and analytical methods are detailed in Table 2. Water quality field parameters (e.g., temperature, specific conductance, pH, turbidity) were allowed to stabilize prior to sample collection. During purging, the flow rates, water levels, and water quality parameters were recorded on field sampling data sheets (see Attachment A). Groundwater samples were submitted to 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 4. Exceedances of the MTCA Method A CUL for DRO are shown on Figure 4, and site trends for DRO, ORO, and heavy oil concentrations 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.

At the request of Ecology during a phone call on April 16, 2021, additional discussion relative to previous groundwater monitoring reports is provided within to evaluate heavy oil concentrations in groundwater. Heavy oils were calculated for comparison to the DRO MTCA Method A CUL. To calculate heavy oils, DRO and ORO concentrations were summed and one-half the method reporting limit was used in the calculations for non-detect values.

AOC 1: Former Auto Repair Shop

Three groundwater samples were collected from AOC 1 monitoring wells MW01R, MW07, and MW09 and analyzed for BTEX, GRO, DRO, and ORO.

All detections of DRO and ORO in AOC 1 were below their respective MTCA Method A CULs. The sum of heavy oils in MW07 was above the MTCA Method A CUL for DRO.

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

AOC 2: Former Underground Storage Tanks

Six groundwater samples, including one field duplicate, were collected from AOC 2 monitoring wells MW02R, MW04, MW06, MW10, and MW12 and analyzed for GRO, DRO, ORO, and BTEX.

DRO were detected in groundwater samples at MW02R, MW04, and MW10. Only one monitoring well, MW02R, had a detection of DRO slightly above the MTCA Method A CUL of 500 micrograms per liter (ug/L) at 560 ug/L. The sum of heavy oils also exceeded the MTCA Method A CUL in MW02R.

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

AOC 3: Former Coal Storage Sheds/Possible Buried Object

One groundwater sample was collected from AOC 3 monitoring well MW11 and analyzed for GRO, DRO, ORO, BTEX, and total naphthalenes.

No COCs were detected in the groundwater sample from AOC 3.

SUMMARY

Results from the groundwater monitoring indicate the following:

- **AOC 1**
 - BTEX and GRO were not detected.
 - 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, MW07.
- **AOC 2**
 - BTEX were not detected.
 - DRO concentrations remain slightly above the MTCA Method A CUL in groundwater at one monitoring well, MW02R.
 - The sum of heavy oils (DRO and ORO) also exceeds the MTCA Method A CUL for DRO in MW02R.
- **AOC 3**
 - No COCs were detected.

Recommendations and Request for Opinion

Following completion of four quarterly groundwater monitoring events, the groundwater CMP is reevaluated within this report (MFA, 2020a). CULs have not been met at all monitoring network wells; therefore, compliance monitoring will continue and be reevaluated on a quarterly basis, as required by the groundwater CMP.

Based on the results of the previous groundwater monitoring program, the following modifications to the groundwater CMP are proposed for subsequent groundwater monitoring events, as discussed below:

- Reduction in COCs to heavy oils (DRO and ORO) only
- Removal of MW06 and MW12 from the compliance monitoring well network

During the previous four quarters of groundwater monitoring, several COCs have not been detected or have only been detected at concentrations well below MTCA Method A CULs. BTEX, GRO, and total naphthalenes were initially selected as COCs for AOCs 1, 2, and/or 3, based on groundwater data collected prior to 2017, as discussed in the cleanup action plan and

feasibility study addendum (MFA, 2018a,b). The previous four quarters of groundwater monitoring data were collected subsequent to the March 2020 cleanup action and are more representative of current site conditions.

Since compliance monitoring began, there have been no detections of benzene or toluene. Only low-level detections of ethylbenzene, total xylenes, GRO, and total naphthalenes were reported from a single sampling event (i.e. September 2020), none of which exceed the applicable CULs for the Site. The data trends established during the previous four compliance monitoring events indicate that the cleanup action was effective and these COCs are no longer a potential concern for the Site. Therefore, MFA proposes that Ecology remove these COCs from the compliance groundwater monitoring analytical suite for the Site.

Similarly, there are two monitoring wells (MW06 and MW12) that have not had any detections of COCs since quarterly monitoring began in September 2020. MFA proposes that Ecology remove the analytical requirement for compliance monitoring at monitoring wells MW06 and MW12. 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.

Since quarterly groundwater monitoring began in September 2020, DRO and ORO concentrations in monitoring wells generally decreased, with only one monitoring well (MW02R) containing a detection of DRO slightly above the MTCA Method A CUL (see Figures 5 and 6). The remedial action conducted in spring of 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 oil concentrations have significantly reduced in most monitoring wells, and based on trend plots (see Figures 5 through 7), it is anticipated that heavy oil 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 September 2021.

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

Michael R. Warfel, LG, LHG, RG
August 9, 2021
Page 6

Project No. 0747.01.12

Sincerely,

Maul Foster & Alongi, Inc.



Carolyn R. Wise, LHG
Project Hydrogeologist

08.09.2021

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

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. 2018a. Cleanup action plan, North Cascade Ford property, Sedro-Woolley, Washington. Maul Foster & Alongi, Inc., Bellingham, Washington. March 30.

MFA. 2018b. Feasibility study addendum, North Cascade Ford property, Sedro-Woolley, Washington. Maul Foster & Alongi, Inc., Bellingham, Washington. November 21.

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.

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 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	--

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
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
<p>NOTES:</p> <p>Analytical results are shown in micrograms per liter (parts per billion).</p> <p>Bolding indicates a detection.</p> <p>Shading indicates a MTCA Method A CUL exceedance; non-detect results ("U") were not compared with screening criteria.</p> <p>-- = not analyzed.</p> <p>AOC = area of concern.</p> <p>CUL = cleanup level.</p> <p>ft bgs = feet below ground surface.</p> <p>J = result is an estimated value.</p> <p>MTCA = Model Toxics Control Act.</p> <p>MW = monitoring well.</p> <p>ND = not detected.</p> <p>NM = water level not measured because of unanticipated presence of free product.</p> <p>U = analyte not detected at or above method reporting limit.</p> <p>^(a)Sample collection depths are from top of water table or top of screened interval, whichever is deeper, to bottom of screened interval.</p> <p>^(b)Total xylenes are sum of m,p-xylene and o-xylene. When both results are non-detect, the higher reporting limit is used.</p>												

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



AOC	Well ID	Screened Interval (feet bgs)	Sample Date	Analytical Schedule					
				DRO	ORO	GRO	EPH/VPH	BTEX	Naphth.
1	MW01R	5 - 15	09/22/2020	X	X	X	--	X	--
			10/14/2020 ^(a)	X	--	X	X	--	X
			12/16/2020	X	X	X	--	X	--
			03/17/2021	X	X	X	--	X	--
			06/22/2021	X	X	X	--	X	--
	MW07	5 - 20	09/22/2020	X	X	X	--	X	--
			12/16/2020	X	X	X	--	X	--
			03/17/2021	X	X	X	--	X	--
			06/22/2021	X	X	X	--	X	--
	MW09	5 - 20	09/22/2020	X	X	X	--	X	--
			12/16/2020	X	X	X	--	X	--
			03/17/2021	X	X	X	--	X	--
			06/22/2021	X	X	X	--	X	--
2	MW02R	5 - 15	09/22/2020	X	X	X	--	X	--
			12/16/2020	X	X	X	--	X	--
			03/17/2021	X	X	X	--	X	--
			06/22/2021	X	X	X	--	X	--
	MW04	4 - 14	09/22/2020	X	X	X	--	X	--
			12/16/2020	X	X	X	--	X	--
			03/17/2021	X	X	X	--	X	--
			06/22/2021	X	X	X	--	X	--
	MW06	5 - 20	09/22/2020	X	X	X	--	X	--
			12/16/2020	X	X	X	--	X	--
			03/17/2021	X	X	X	--	X	--
			06/22/2021	X	X	X	--	X	--

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



AOC	Well ID	Screened Interval (feet bgs)	Sample Date	Analytical Schedule					
				DRO	ORO	GRO	EPH/VPH	BTEX	Naphth.
2	MW10	5 - 20	09/22/2020	X	X	X	--	X	--
			10/14/2020 ^(a)	X	--	X	X	--	X
			12/16/2020	X	X	X	--	X	--
			03/17/2021	X	X	X	--	X	--
			06/22/2021	X	X	X	--	X	--
	MW12	5 - 15	09/22/2020	X	X	X	--	X	--
			12/16/2020	X	X	X	--	X	--
			03/17/2021	X	X	X	--	X	--
			06/22/2021	X	X	X	--	X	--
3	MW11	5 - 20	09/22/2020	X	X	X	--	X	X
			12/16/2020	X	X	X	--	X	X
			03/17/2021	X	X	X	--	X	X
			06/22/2021	X	X	X	--	X	X

NOTES:

-- = not analyzed.

AOC = area of concern.

bgs = below ground surface.

BTEX = benzene, toluene, ethylbenzene, and total xylenes; analysis by EPA Method 8021.

DRO = diesel-range organics; analysis by NWTPH-Dx method.

EPA = U.S. Environmental Protection Agency.

EPH/VPH = extractable petroleum hydrocarbons/volatile petroleum hydrocarbons; analysis by NWTPH-EPH/VPH.

GRO = gasoline-range organics; analysis by NWTPH-Gx method.

ID = identification.

Naphth. = naphthalenes; analysis by EPA Method 8270 SIM.

NWTPH = Northwest Total Petroleum Hydrocarbons.

ORO = oil-range organics; analysis by NWTPH-Dx method.

SIM = selected ion monitoring.

X= yes.

^(a)Non-quarterly groundwater event that was conducted to evaluate EPH/VPH concentrations in two wells for potential cleanup level development.

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

Location	MP Elevation (feet, NAVD 88)	Measurement Date	NAPL Thickness (feet)	Depth to Water (feet 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
MW02 (decommissioned in September 2016)	56.73	05/15/2012	--	6.65	NA	50.08
		10/09/2012	--	9.29	NA	47.44
		12/03/2012	--	8.45	NA	48.28
		04/10/2014	--	6.12	NA	50.61
		06/17/2014	--	6.96	NA	49.77
		06/18/2014	--	6.98	NA	49.75
		09/10/2014	--	8.37	NA	48.36
		12/10/2014	--	7.11	NA	49.62

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



Location	MP Elevation (feet, NAVD 88)	Measurement Date	NAPL Thickness (feet)	Depth to Water (feet 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
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

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

Location	MP Elevation (feet, NAVD 88)	Measurement Date	NAPL Thickness (feet)	Depth to Water (feet 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
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

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

Location	MP Elevation (feet, NAVD 88)	Measurement Date	NAPL Thickness (feet)	Depth to Water (feet 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
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
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

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

Location	MP Elevation (feet, NAVD 88)	Measurement Date	NAPL Thickness (feet)	Depth to Water (feet 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
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
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 4
Groundwater Analytical Results—Compliance Monitoring
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington



AOC	Location	Collection Date	Benzene	Ethylbenzene	Toluene	Xylenes (total)	GRO	DRO	ORO	Heavy Oils ^(c)	Total Naphth. ^(a)
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 ^(b)	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	--
	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	--
	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	--
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	--
	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	--
	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	--

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

AOC	Location	Collection Date	Benzene	Ethylbenzene	Toluene	Xylenes (total)	GRO	DRO	ORO	Heavy Oils ^(c)	Total Naphth. ^(a)
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 ^(b)	500	500	500	160
2 (cont.)	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	--
		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	--
	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	--
	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

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.

NV = no value.

ORO = lube-oil-range organics.

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

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

^(a)Total naphthalenes are the sum of 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene. When all results are non-detect, the highest reporting limit is shown.

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

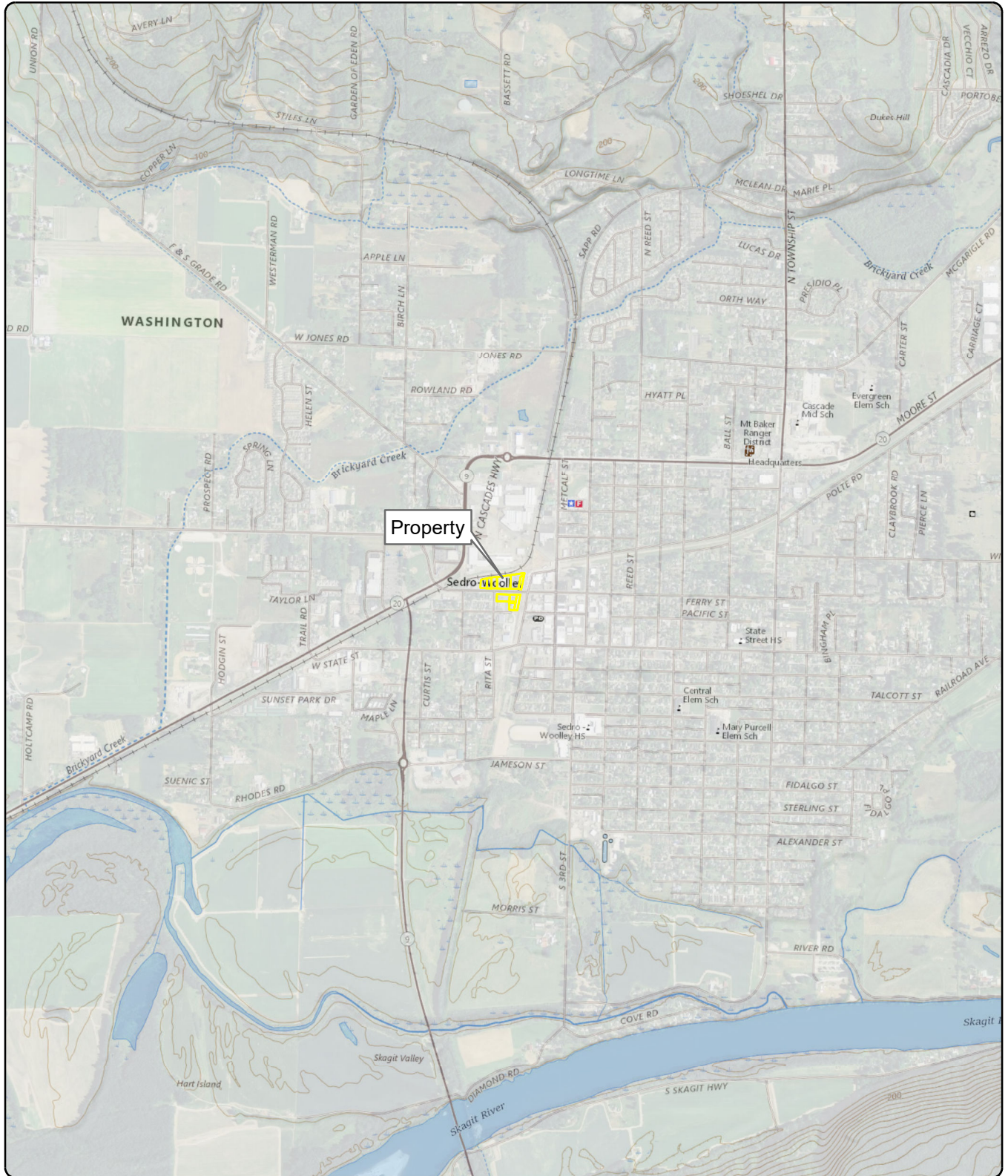
^(c)Heavy oils are the sum of DRO and ORO. When results are non-detect, half the reporting limit is used. When all results are non-detect, the highest reporting limit is shown.

REFERENCES:

⁽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

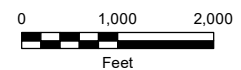
Figure 1 Property Location

North Cascade Ford Property
Sedro-Woolley, Washington



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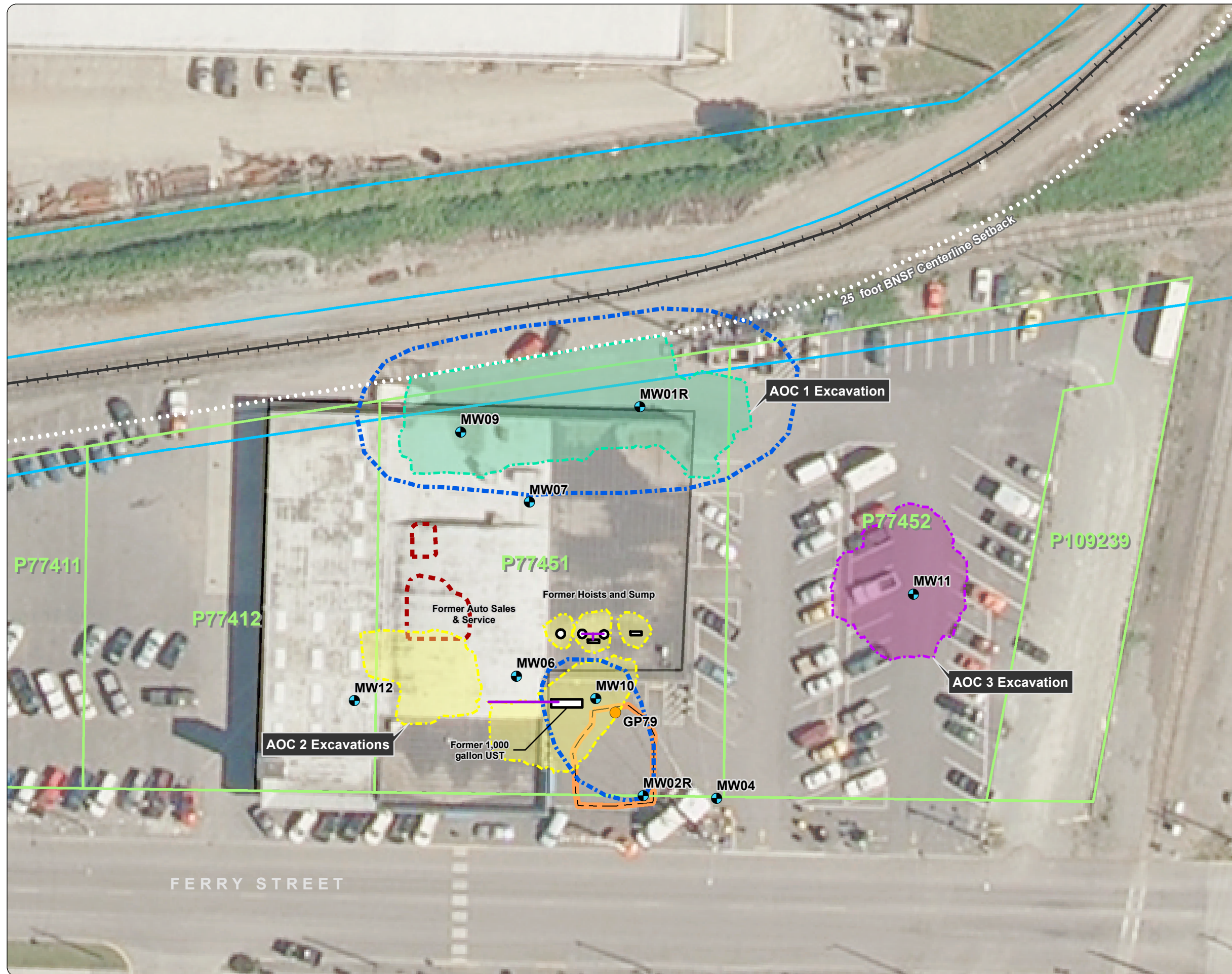














Figure 2
Compliance Monitoring
Well Network

North Cascade Ford Property
Sedro-Woolley, Washington

Legend

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

Notes:
All features are approximate.

All structures on the property were removed prior to remedial action.

The excavations areas are set back from the BNSF railroad centerline by 25 feet.

The surveyed Property parcel boundaries do not coincide with the adjacent parcel boundaries obtained from Skagit County; therefore, there is an overlap between the Property and BNSF parcels.

AOC = area of concern.

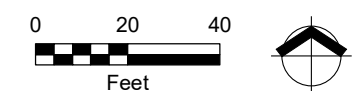
BNSF = Burlington Northern Santa Fe.

Property = North Cascade Ford Property.

UST = underground storage tank.

ZGA = Zipper Geo Associates.

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



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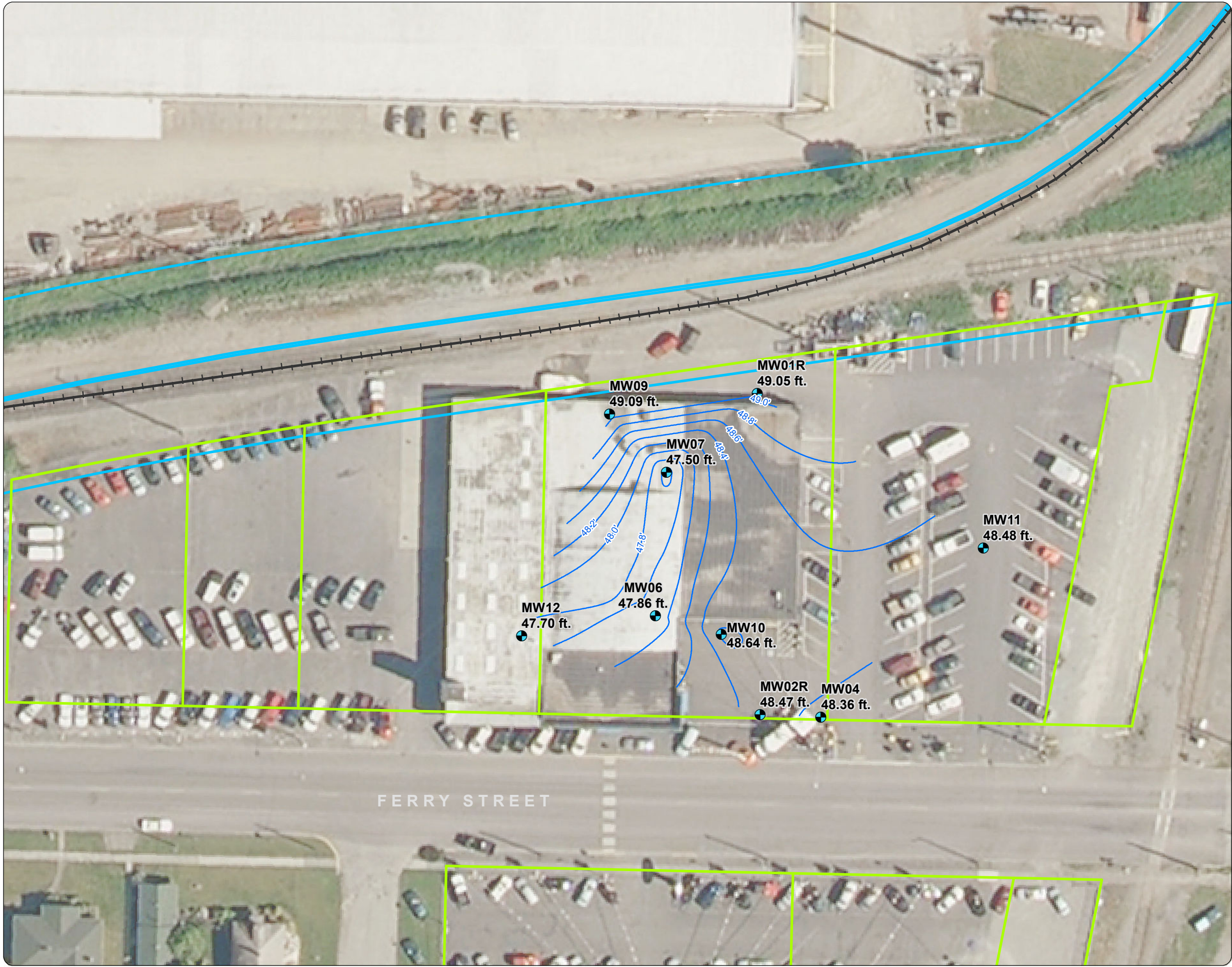


Figure 3
Groundwater Elevation Contours - June 2021

North Cascade Ford Property
Sedro-Woolley, Washington

Legend

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

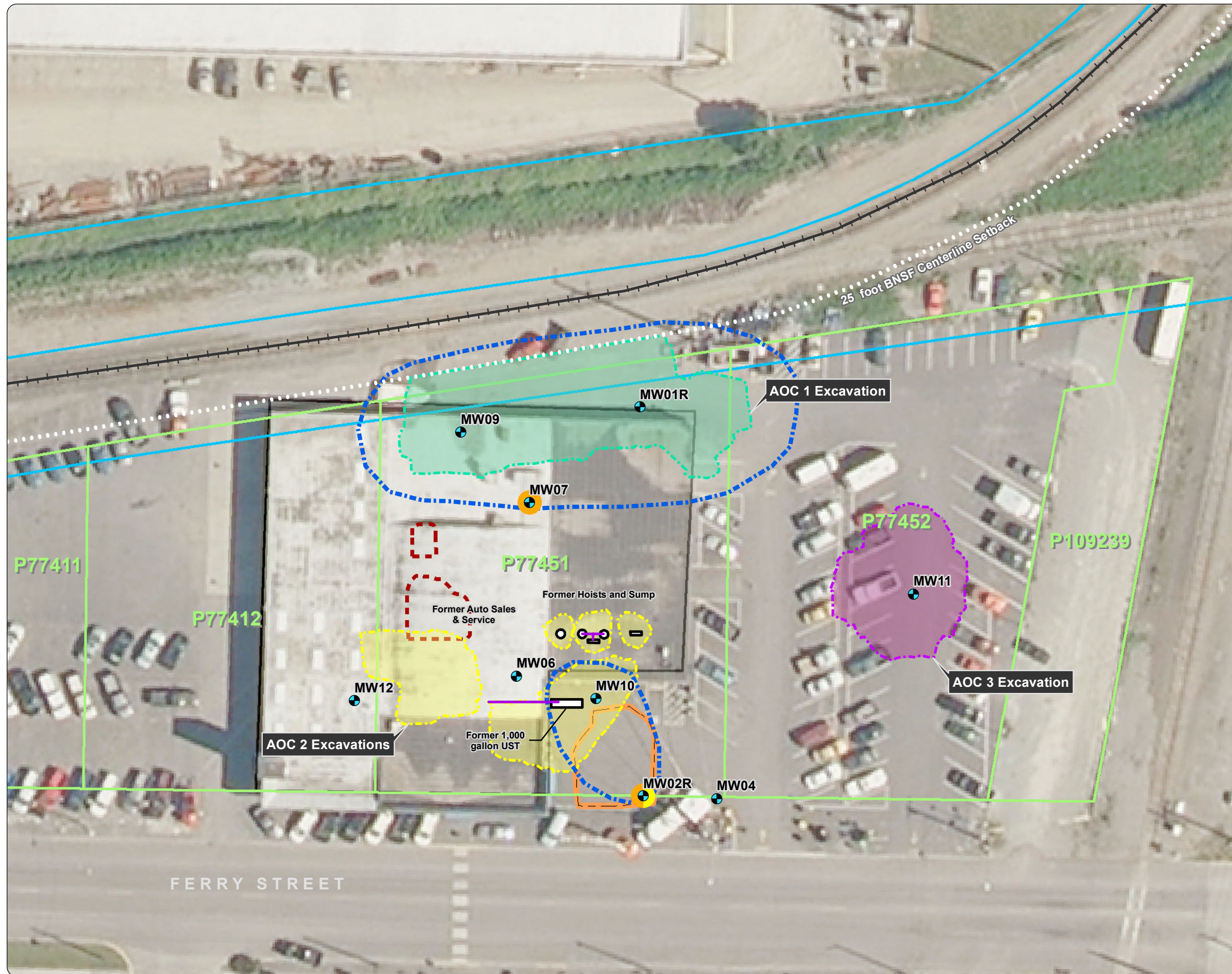
Notes:
The surveyed Property parcel boundaries do not coincide with the adjacent parcel boundaries obtained from Skagit County; therefore, there is an overlap between the Property and BNSF parcels. Water levels measured on June 22, 2021. BNSF = Burlington Northern Santa Fe Railway. ft. = feet. NAVD 88 = 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 5
Diesel-Range Organics Concentrations
North Cascade Ford Property

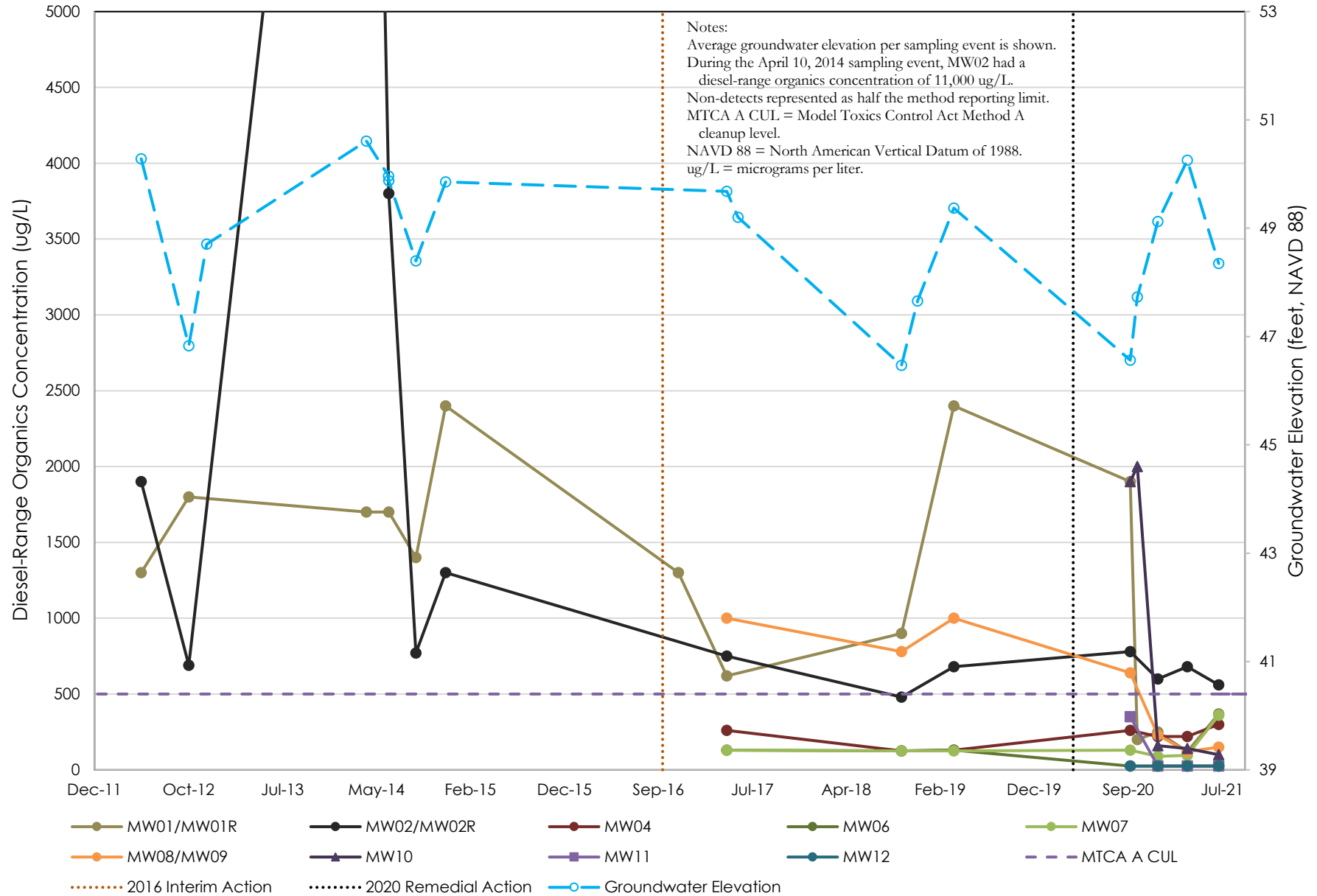


Figure 6
Lube-Oil-Range Organics Concentrations
North Cascade Ford Property

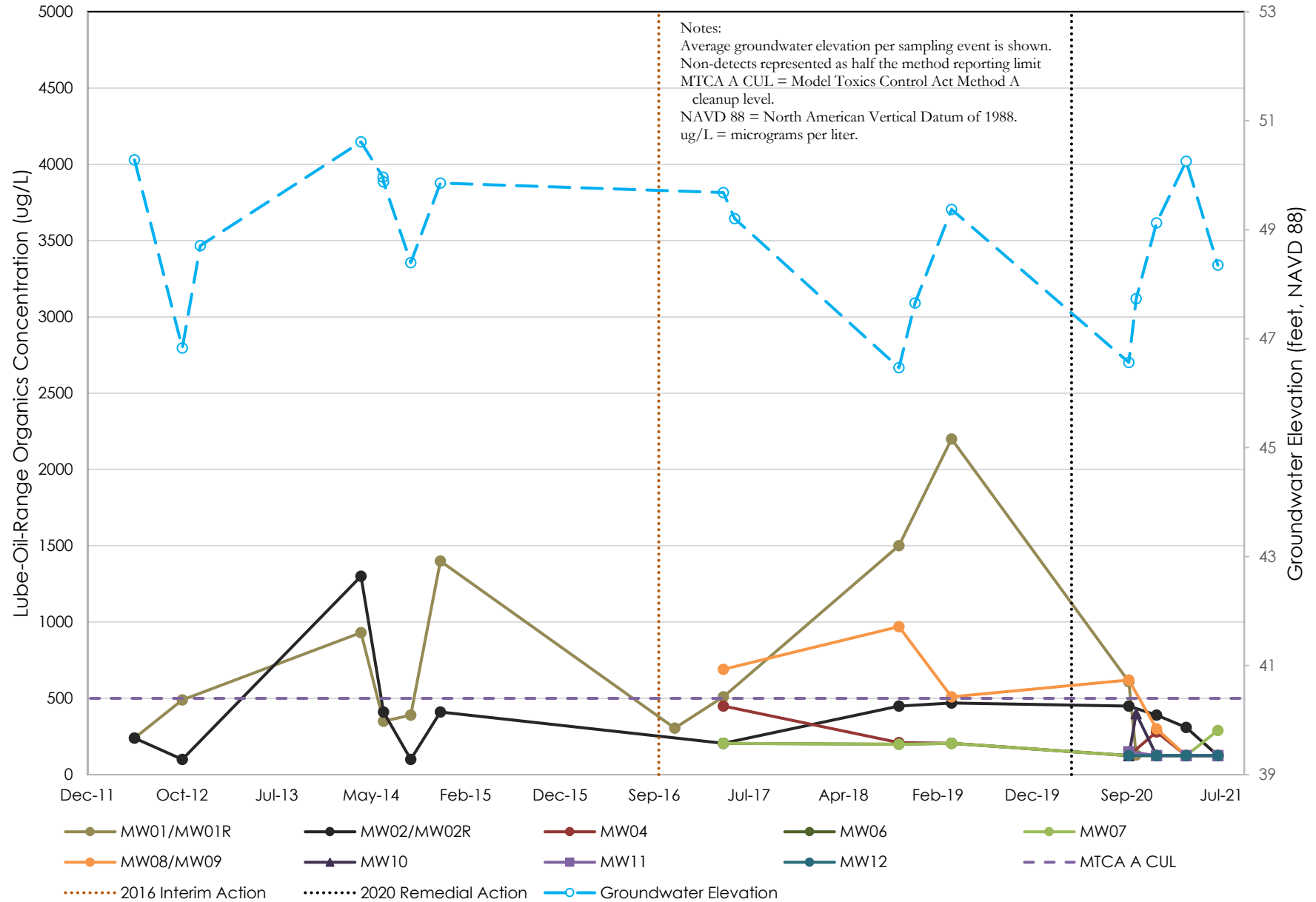
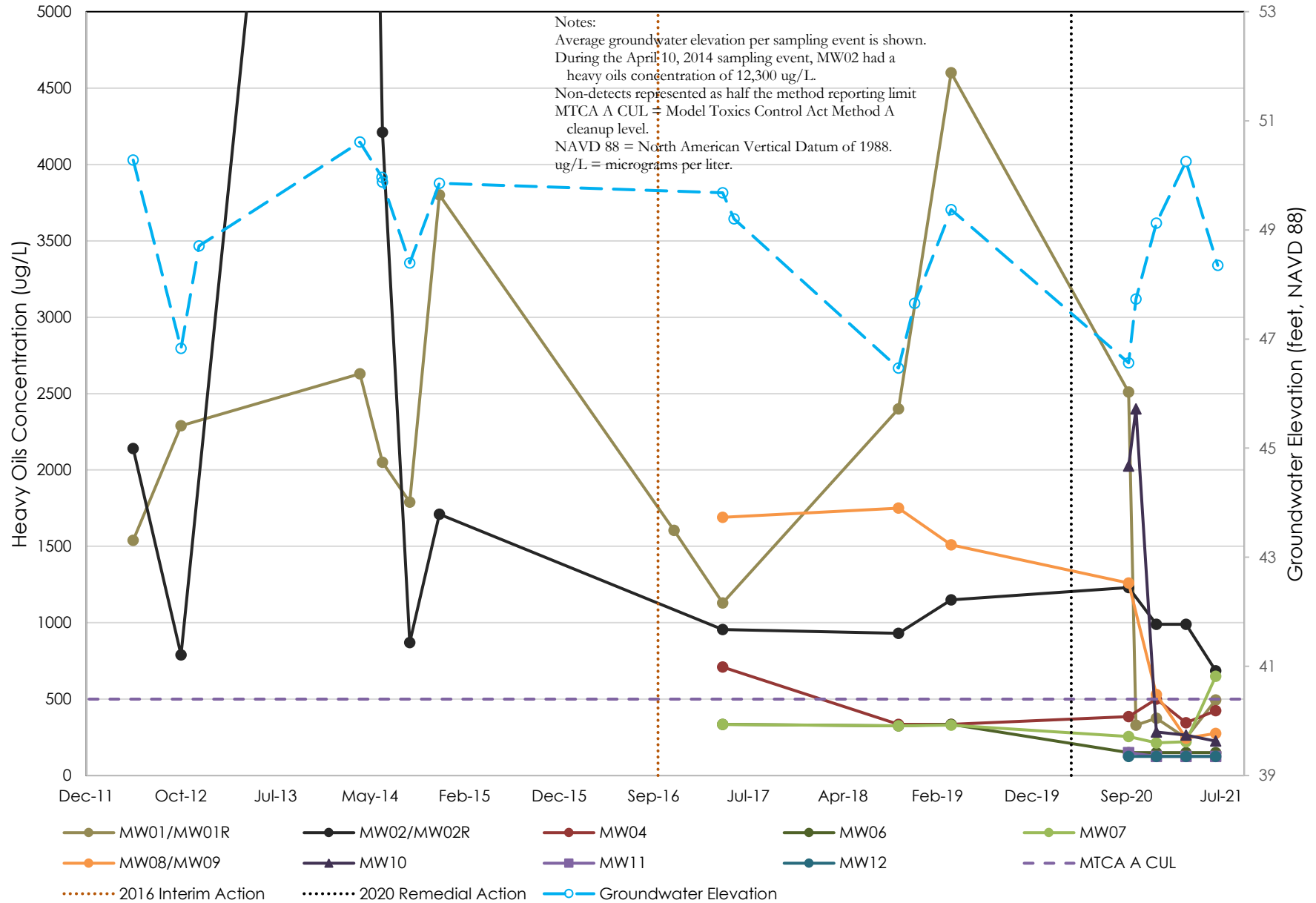


Figure 7
Heavy Oil Concentrations
North Cascade Ford Property



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 #	0747.01.12	Sampler	A. Bixby				
Project Name	North Cascade Ford	Sampling Date	6/22/2021				
Sampling Event	June 2021	Sample Name	MW01R-GW-062221				
Sub Area		Sample Depth	11				
FSDS QA:	C. Wise 6/30/21	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
6/22/2021	8:04	14.69		7.27		7.42	1.21

(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	1:47:00 PM	4	0.3	8.81	18.7	348.3	1.32	104.9	2.8
	1:50:00 PM	4.1	0.3	8.87	18.7	347.3	1.3	102.8	2.71
	1:53:00 PM	4.3	0.3	8.91	18.6	348.5	1.29	101.3	2.63
Final Field Parameters	1:56:00 PM	4.4	0.3	8.93	18.5	349.7	1.22	100.7	2.53

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	2:00:00 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 12:25.

Maul Foster & Alongi, Inc.

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

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	Sample Location	MW02R				
Project #	0747.01.12	Sampler	A. Bixby				
Project Name	North Cascade Ford	Sampling Date	6/22/2021				
Sampling Event	June 2021	Sample Name	MW02R-GW-062221				
Sub Area		Sample Depth	12				
FSDS QA:	C. Wise 6/30/21	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
6/22/2021	7:49	14.82		8.12		6.7	1.09

(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	9:12:00 AM	1.5	0.3	6.99	17.7	561.6	0.27	96.1	2.35
	9:15:00 AM	1.6	0.3	6.99	17.8	560.3	0.27	95.5	2.16
	9:18:00 AM	1.7	0.3	7	17.8	560.7	0.28	94.6	2.05
Final Field Parameters	9:21:00 AM	1.8	0.3	7	17.8	560.7	0.28	93.9	1.85

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; slight yellow tint; 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 8:12.

Field duplicate sample MWDUP-GW-062221 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	MW04				
Project #	0747.01.12	Sampler	A. Bixby				
Project Name	North Cascade Ford	Sampling Date	6/22/2021				
Sampling Event	June 2021	Sample Name	MW04-GW-062221				
Sub Area		Sample Depth	11				
FSDS QA:	C. Wise 6/30/21	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
6/22/2021	7:46	13.59		7.96		5.63	0.92

(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	8:45:00 AM	1	0.3	6.72	16.8	582.2	0.36	108.9	2.66
	8:48:00 AM	1.1	0.3	6.74	16.8	579.9	0.35	105.5	1.94
	8:51:00 AM	1.2	0.3	6.75	16.9	577.8	0.32	104.2	1.85
Final Field Parameters	8:54:00 AM	1.3	0.3	6.77	17	577	0.31	102.7	1.71

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	9:00:00 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 8:10.

Maul Foster & Alongi, Inc.

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

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	Sample Location	MW06				
Project #	0747.01.12	Sampler	A. Bixby				
Project Name	North Cascade Ford	Sampling Date	6/22/2021				
Sampling Event	June 2021	Sample Name	MW06-GW-062221				
Sub Area		Sample Depth	14				
FSDS QA:	C. Wise 6/30/21	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
6/22/2021	7:53	19.8		8.72		11.08	1.81

(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	10:40:00 AM	2	0.3	6.45	15.1	400.6	0.26	129.1	12.1
	10:43:00 AM	2.1	0.3	6.42	16	390.4	0.26	125.9	10
	10:46:00 AM	2.2	0.3	6.38	16.7	385.7	0.27	120.5	7.72
	10:49:00 AM	2.4	0.3	6.35	17	384.7	0.27	119.3	6.03
Final Field Parameters	10:52:00 AM	2.5	0.3	6.3	17	388.6	0.26	117.3	6.29

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; reddish brown particulates; 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 9:55.

Started purging at 0.4 L/min, then reduced purge rate for geochemical parameter and sample collection.

Maul Foster & Alongi, Inc.

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

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	Sample Location	MW07				
Project #	0747.01.12	Sampler	A. Bixby				
Project Name	North Cascade Ford	Sampling Date	6/22/2021				
Sampling Event	June 2021	Sample Name	MW07-GW-062221				
Sub Area		Sample Depth	14				
FSDS QA:	C. Wise 6/30/21	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
6/22/2021	7:59	19.64		8.8		10.84	1.77

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

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	ORP	Turbidity
(2) Peristaltic Pump	12:30:00 PM	0.6	0.2						75.4
	12:40:00 PM	0.9	0.2						44.3
	1:00:00 PM	1.6	0.2						32.2
	1:10:00 PM	1.9	0.2	6.29	19.7	474.4	0.33	137.8	29.9
	1:13:00 PM	2	0.2	6.28	20.3	471	0.33	135.1	29
	1:16:00 PM	2.1	0.2	6.29	20.5	476.7	0.3	132.9	27
	1:19:00 PM	2.2	0.2	6.27	20.8	467.7	0.27	130.1	25.6
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: Cloudy, then clear; 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 12:00.

Maul Foster & Alongi, Inc.

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

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	Sample Location	MW09				
Project #	0747.01.12	Sampler	A. Bixby				
Project Name	North Cascade Ford	Sampling Date	6/22/2021				
Sampling Event	June 2021	Sample Name	MW09-GW-062221				
Sub Area		Sample Depth	14				
FSDS QA:	C. Wise 6/30/21	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
6/22/2021	8:02	19.97		7.57		12.4	2.02

(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	12:03:00 PM	2	0.3	7.42	17.7	416.6	4.43	107.2	1.97
	12:06:00 PM	2.1	0.3	7.45	17.7	418.6	4.41	105.9	2.41
	12:09:00 PM	2.2	0.3	7.46	17.6	416.2	4.39	107.9	1.82
Final Field Parameters	12:12:00 PM	2.3	0.3	7.47	17.9	413.4	4.35	108.1	1.73

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	12:15:00 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 11:13.

Maul Foster & Alongi, Inc.

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

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	Sample Location	MW10				
Project #	0747.01.12	Sampler	A. Bixby				
Project Name	North Cascade Ford	Sampling Date	6/22/2021				
Sampling Event	June 2021	Sample Name	MW10-GW-062221				
Sub Area		Sample Depth	12				
FSDS QA:	C. Wise 6/30/21	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
6/22/2021	7:51	19.82		7.62		12.2	1.99

(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	10:02:00 AM	2.5	0.3	8.66	16.7	355.5	2.91	101.8	1.8
	10:05:00 AM	2.6	0.3	8.69	17	353.4	2.89	100.5	1.46
	10:08:00 AM	2.7	0.3	8.73	17.1	355.8	2.91	99	1.71
Final Field Parameters	10:12:00 AM	2.8	0.3	8.75	17.1	355.7	2.95	99.4	1.62

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	10:15:00 AM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Began purge at 9:07.

Maul Foster & Alongi, Inc.

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

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	Sample Location	MW11				
Project #	0747.01.12	Sampler	A. Bixby				
Project Name	North Cascade Ford	Sampling Date	6/22/2021				
Sampling Event	June 2021	Sample Name	MW11-GW-062221				
Sub Area		Sample Depth	13				
FSDS QA:	C. Wise 6/30/21	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
6/22/2021	8:08	19.65		7.72		11.93	1.94

(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	2:40:00 PM	2	0.3	10.93	18.3	468.3	9.96	118.6	3.75
	2:43:00 PM	2.1	0.3	10.98	18.4	471.3	9.85	118.3	2.89
	2:46:00 PM	2.3	0.3	10.98	18.3	474.3	9.95	116.8	1.94
Final Field Parameters	2:49:00 PM	2.4	0.3	10.98	18.4	474.1	9.92	117.7	1.83

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	3:00:00 PM	VOA-Glass	3	No
			Amber Glass	2	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	5	

General Sampling Comments

Began purge at 13:40.

Maul Foster & Alongi, Inc.

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

Water Field Sampling Data Sheet

Client Name	VSF Properties, LLC	Sample Location	MW12				
Project #	0747.01.12	Sampler	A. Bixby				
Project Name	North Cascade Ford	Sampling Date	6/22/2021				
Sampling Event	June 2021	Sample Name	MW12-GW-062221				
Sub Area		Sample Depth	11				
FSDS QA:	C. Wise 6/30/21	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
6/22/2021	7:56	14.58		8.69		5.89	0.96

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

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	ORP	Turbidity
(2) Peristaltic Pump	11:30:00 AM	2	0.3	6.1	16.2	493.6	0.31	116.6	4.23
	11:33:00 AM	2.1	0.3	6.1	16.5	493.7	0.31	116	3.69
	11:36:00 AM	2.2	0.3	6.1	16.4	491.7	0.31	115.4	4.04
Final Field Parameters	11:39:00 AM	2.4	0.3	6.11	16.3	493.7	0.3	114.4	3.22

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	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 10:30.

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
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www.friedmanandbruya.com

July 1, 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 June 23, 2021 from the North Cascade Ford 0747.01.12, F&BI 106406 project. There are 10 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
MFA0701R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 23, 2021 by Friedman & Bruya, Inc. from the Maul Foster Alongi North Cascade Ford 0747.01.12, F&BI 106406 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Maul Foster Alongi</u>
106406 -01	MW01R-GW-062221
106406 -02	MW02R-GW-062221
106406 -03	MWDUP-GW-062221
106406 -04	MW04-GW-062221
106406 -05	MW06-GW-062221
106406 -06	MW07-GW-062221
106406 -07	MW09-GW-062221
106406 -08	MW10-GW-062221
106406 -09	MW11-GW-062221
106406 -10	MW12-GW-062221
106406 -11	Trip Blank

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/01/21

Date Received: 06/23/21

Project: North Cascade Ford 0747.01.12, F&BI 106406

Date Extracted: 06/24/21

Date Analyzed: 06/25/21

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW01R-GW-062221 106406-01	<1	<1	<1	<3	<100	111
MW02R-GW-062221 106406-02	<1	<1	<1	<3	<100	109
MWDUP-GW-062221 106406-03	<1	<1	<1	<3	<100	107
MW04-GW-062221 106406-04	<1	<1	<1	<3	<100	108
MW06-GW-062221 106406-05	<1	<1	<1	<3	<100	109
MW07-GW-062221 106406-06	<1	<1	<1	<3	<100	108
MW09-GW-062221 106406-07	<1	<1	<1	<3	<100	109
MW10-GW-062221 106406-08	<1	<1	<1	<3	<100	102
MW11-GW-062221 106406-09	<1	<1	<1	<3	<100	102
MW12-GW-062221 106406-10	<1	<1	<1	<3	<100	103
Method Blank 01-1414 MB	<1	<1	<1	<3	<100	111

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/01/21

Date Received: 06/23/21

Project: North Cascade Ford 0747.01.12, F&BI 106406

Date Extracted: 06/24/21

Date Analyzed: 06/25/21

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Surrogate (% Recovery)</u> Limit (50-150)
Trip Blank 106406-11	<1	<1	<1	<3	104
Method Blank 01-1414 MB	<1	<1	<1	<3	111

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/01/21

Date Received: 06/23/21

Project: North Cascade Ford 0747.01.12, F&BI 106406

Date Extracted: 06/24/21

Date Analyzed: 06/24/21

**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)

<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-062221 106406-01	370 x	<250	113
MW02R-GW-062221 106406-02	560 x	<250	113
MWDUP-GW-062221 106406-03	530 x	<250	106
MW04-GW-062221 106406-04	300 x	<250	109
MW06-GW-062221 106406-05	<50	<250	107
MW07-GW-062221 106406-06	360 x	290 x	100
MW09-GW-062221 106406-07	150 x	<250	97
MW10-GW-062221 106406-08	100 x	<250	97
MW11-GW-062221 106406-09	<50	<250	111
MW12-GW-062221 106406-10	<50	<250	106
Method Blank 01-1484 MB	<50	<250	108

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW11-GW-062221	Client:	Maul Foster Alongi
Date Received:	06/23/21	Project:	North Cascade Ford 0747.01.12
Date Extracted:	06/28/21	Lab ID:	106406-09 1/2
Date Analyzed:	06/28/21	Data File:	062814.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	26	11	65
Phenol-d6	21	11	65
Nitrobenzene-d5	76	50	150
2-Fluorobiphenyl	67	50	150
2,4,6-Tribromophenol	73	30	131
Terphenyl-d14	102	50	150

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	North Cascade Ford 0747.01.12
Date Extracted:	06/28/21	Lab ID:	01-1500 mb
Date Analyzed:	06/28/21	Data File:	062811.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	22	11	65
Phenol-d6	16	11	65
Nitrobenzene-d5	80	50	150
2-Fluorobiphenyl	75	50	150
2,4,6-Tribromophenol	76	30	131
Terphenyl-d14	97	50	150

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/01/21

Date Received: 06/23/21

Project: North Cascade Ford 0747.01.12, F&BI 106406

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

Laboratory Code: 106390-01 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	100	65-118
Toluene	ug/L (ppb)	50	100	72-122
Ethylbenzene	ug/L (ppb)	50	101	73-126
Xylenes	ug/L (ppb)	150	98	74-118
Gasoline	ug/L (ppb)	1,000	93	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/01/21

Date Received: 06/23/21

Project: North Cascade Ford 0747.01.12, F&BI 106406

**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	116	128	63-142	10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/01/21

Date Received: 06/23/21

Project: North Cascade Ford 0747.01.12, F&BI 106406

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	5	65	73	62-90	12
2-Methylnaphthalene	ug/L (ppb)	5	70	79	64-93	12
1-Methylnaphthalene	ug/L (ppb)	5	69	78	65-93	12

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

ME 06/23/21 WWH/DOY

Page # 1 of 1

Report To Carolyn Wise

Company Maul Foster & Alongi

Address 1329 N State Street, Suite 301

City, State, ZIP Bellingham, WA 98225

Phone (360)690-5982 Email cwise@maulfoster.com

SAMPLERS (signature) Carol Bixby

PROJECT NAME

North Cascade Ford

PO#

0747.01.12

REMARKS

Please analyze the trip blank for BTEX only

INVOICE TO

accounting@maulfoster.com

TURNAROUND TIME

* Standard turnaround

RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

Archive samples

Other

Default: Dispose after 30 days

ANALYSES REQUESTED

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	DR-0+0P-0 NWTPH-Dx	GR-0 NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Total naphthalenes by EPA 8270 SIM	Notes
MW01R-GW-062221	01A-D	6/22/21	1400	W	4	X	X	X						
MW02R-GW-062221	02	6/22/21	0930	W	4	X	X	X						
MW00P-GW-062221	03	6/22/21	0930	W	4	X	X	X						
MW04-GW-062221	04	6/22/21	0900	W	4	X	X	X						
MW06-GW-062221	05	6/22/21	1100	W	4	X	X	X						
MW07-GW-062221	06	6/22/21	1330	W	4	X	X	X						
MW09-GW-062221	07	6/22/21	1215	W	4	X	X	X						
MW10-GW-062221	08	6/22/21	1015	W	4	X	X	X						
MW11-GW-062221	09A-E	6/22/21	1500	W	5	X	X	X				X		
MW12-GW-062221	10A-D	6/22/21	1145	W	4	X	X	X						

TRIP BLANK

SIGNATURE

PRINT NAME

COMPANY

DATE

TIME

Friedman & Bruya, Inc.

6/23/21 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Relinquished by:

Carol Bixby

Amanda Bixby

MFA

6/22/21 1700

Received by:

Carol Bixby

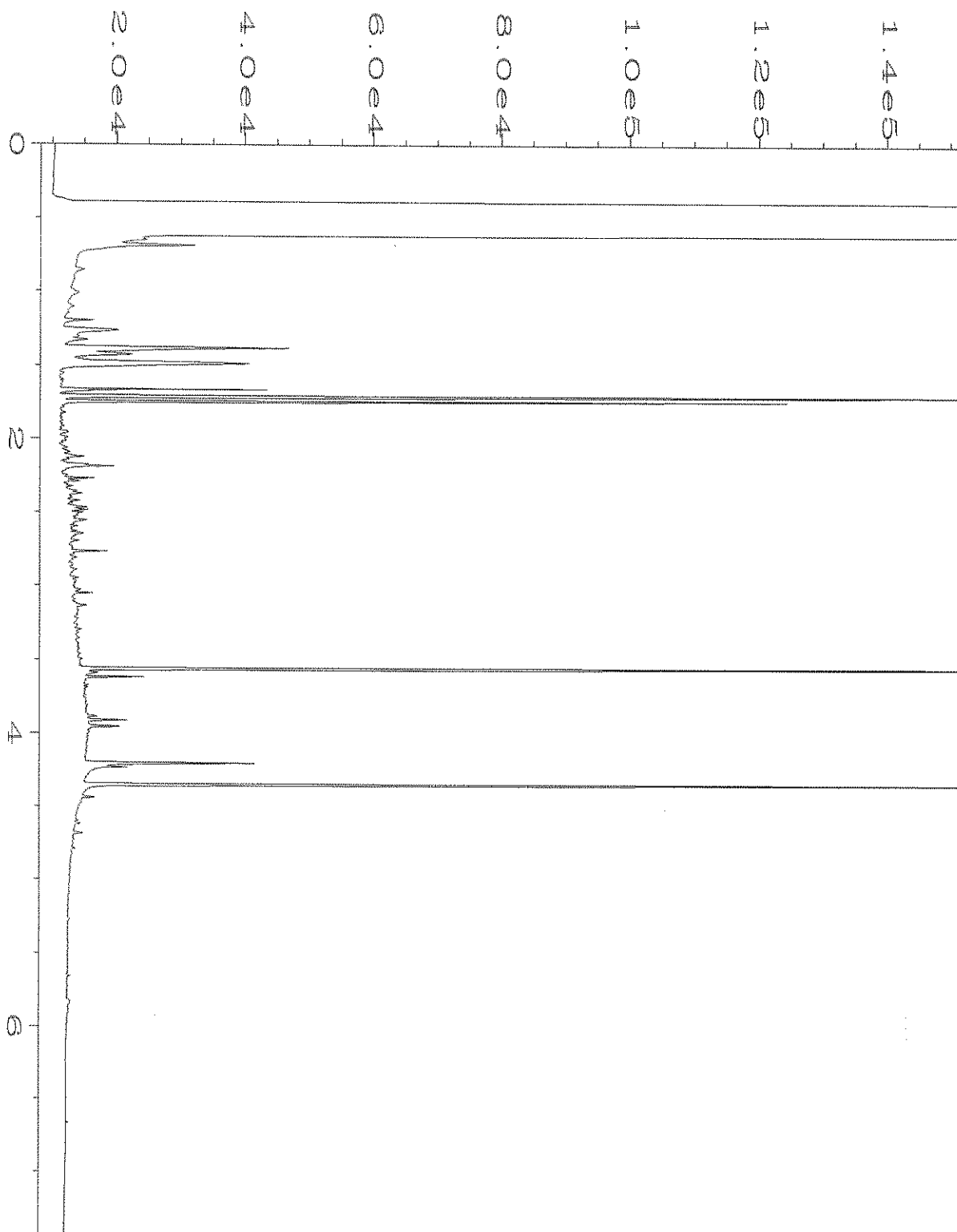
Robert Pham

Fe B T

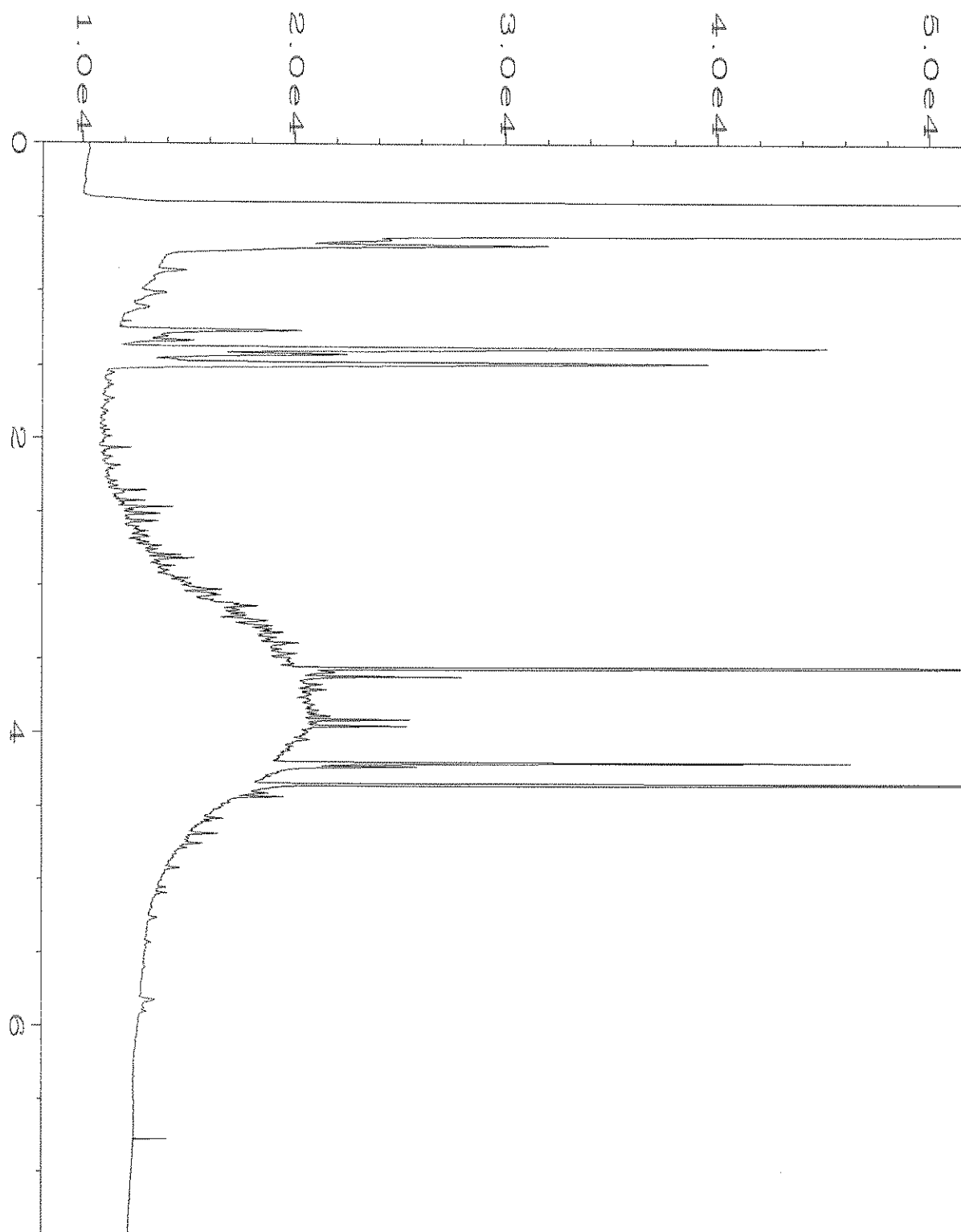
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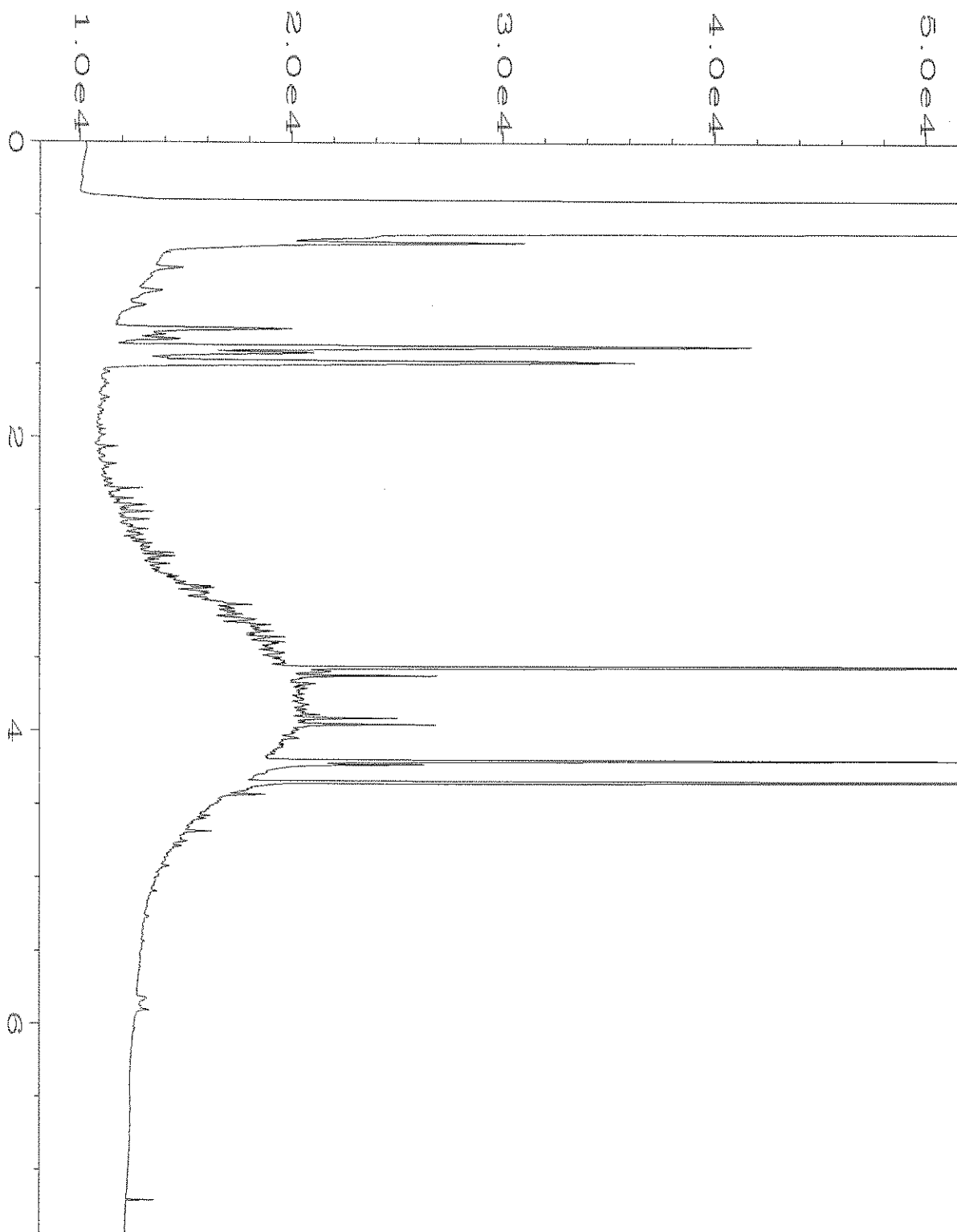
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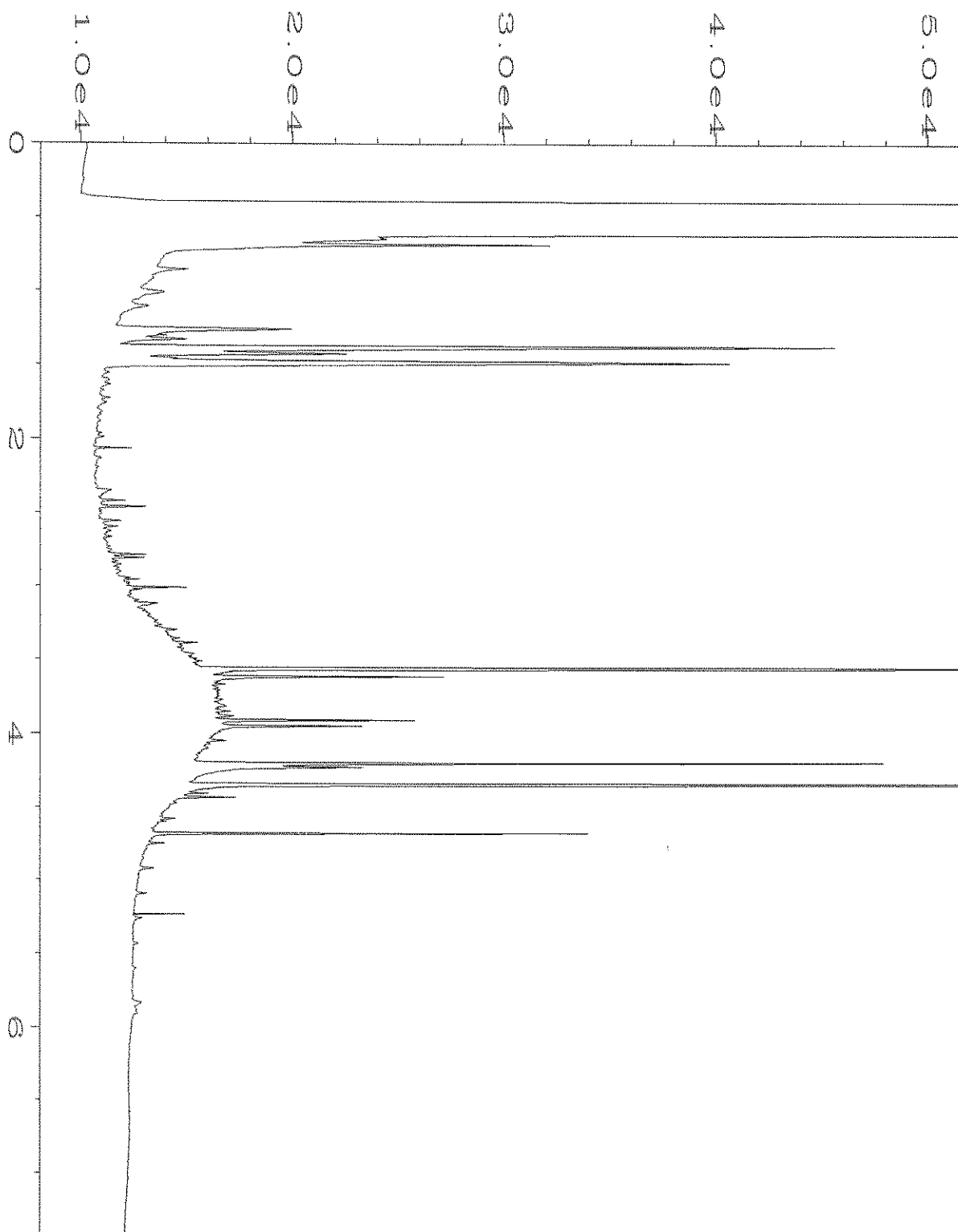
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Operator	: TL	Vial Number	: 47
Instrument	: GC1	Injection Number	: 1
Sample Name	: 106406-01	Sequence Line	: 12
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 24 Jun 21 06:44 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	25 Jun 21 11:00 AM		



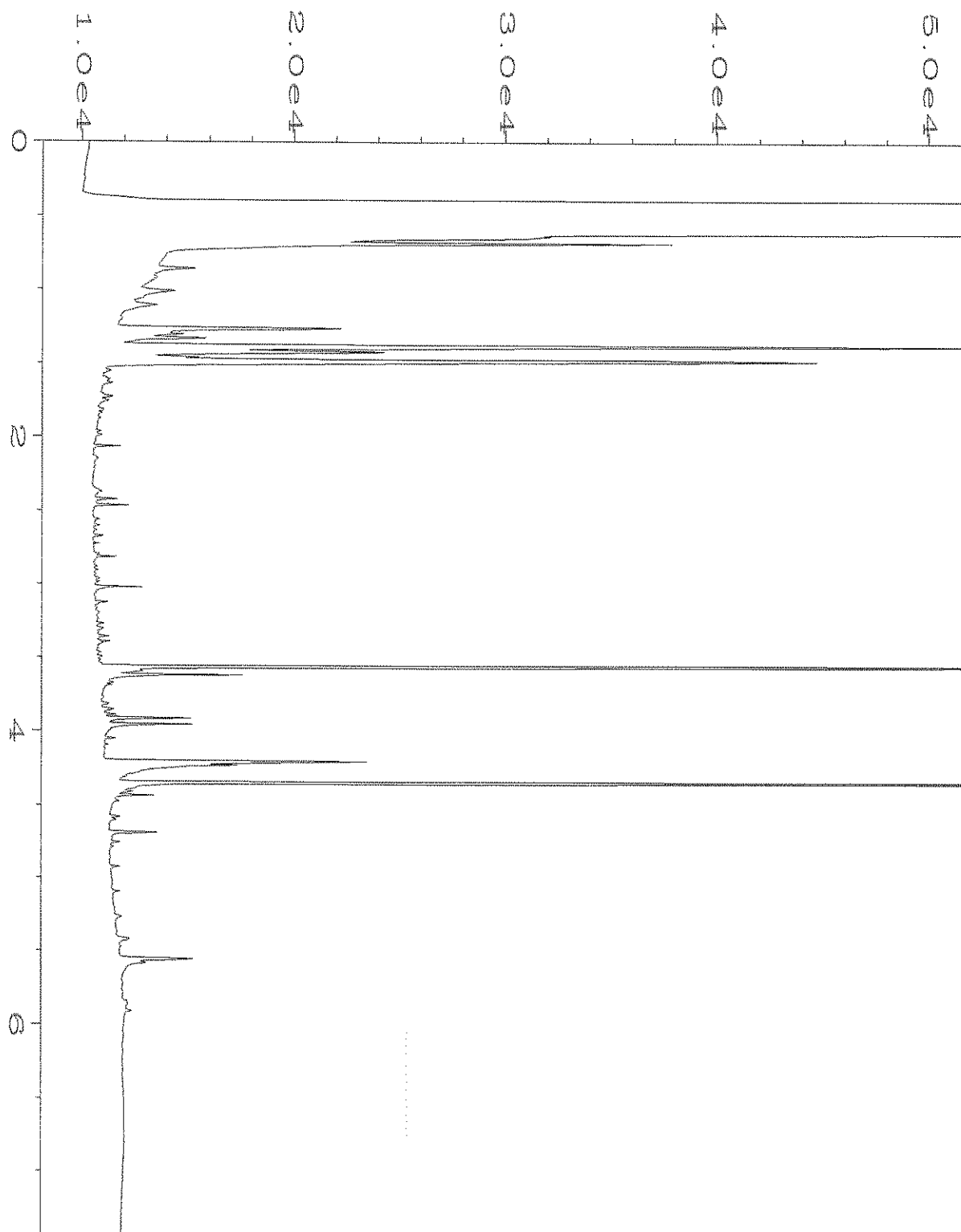
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Operator	: TL	Vial Number	: 48
Instrument	: GC1	Injection Number	: 1
Sample Name	: 106406-02	Sequence Line	: 12
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 24 Jun 21 06:56 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	25 Jun 21 11:00 AM		



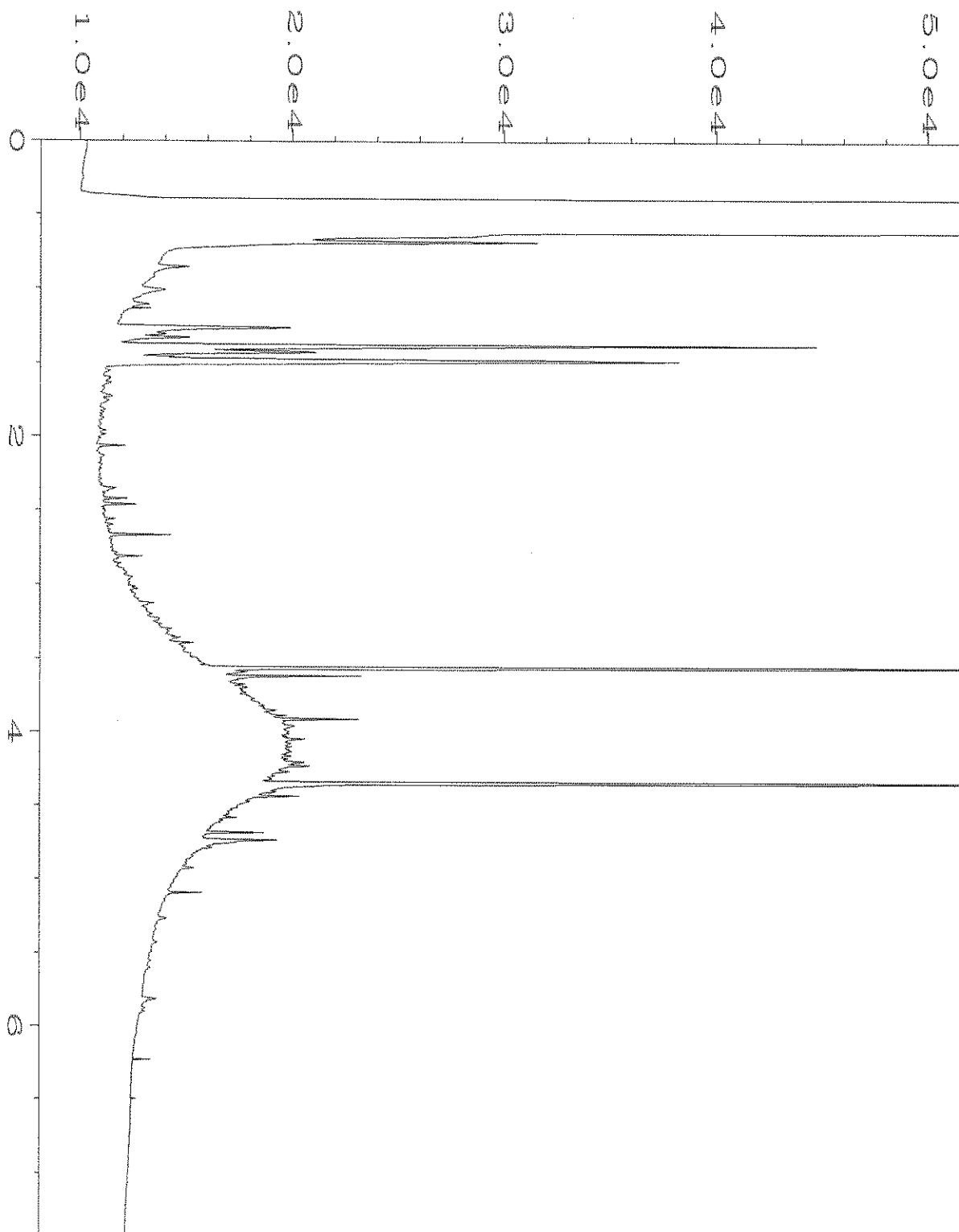
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Operator	: TL	Vial Number	: 49
Instrument	: GC1	Injection Number	: 1
Sample Name	: 106406-03	Sequence Line	: 12
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 24 Jun 21 07:08 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	: 25 Jun 21 11:01 AM		



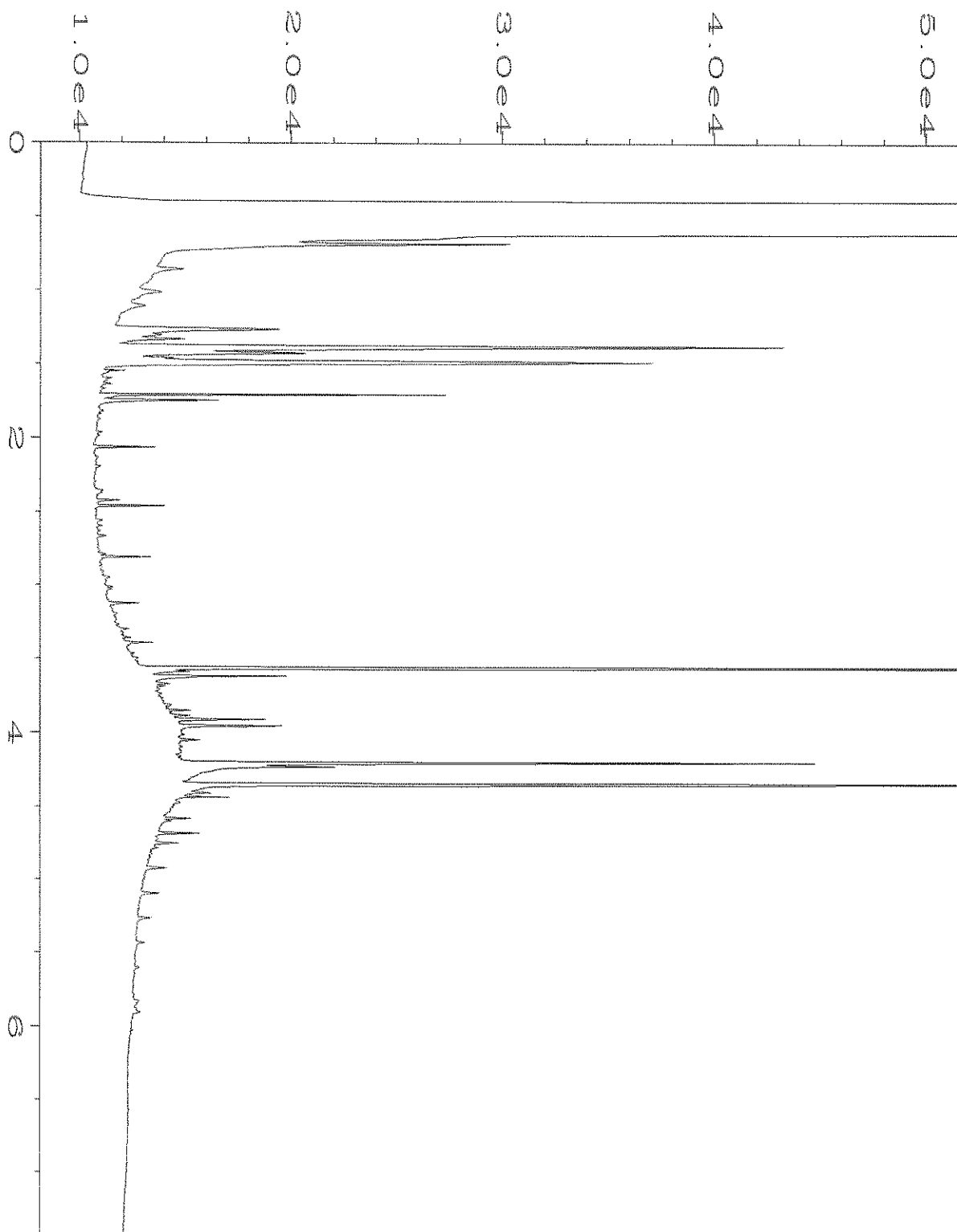
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Instrument	: GC1	Injection Number	: 1
Sample Name	: 106406-04	Sequence Line	: 12
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 24 Jun 21 07:20 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	25 Jun 21 11:01 AM		



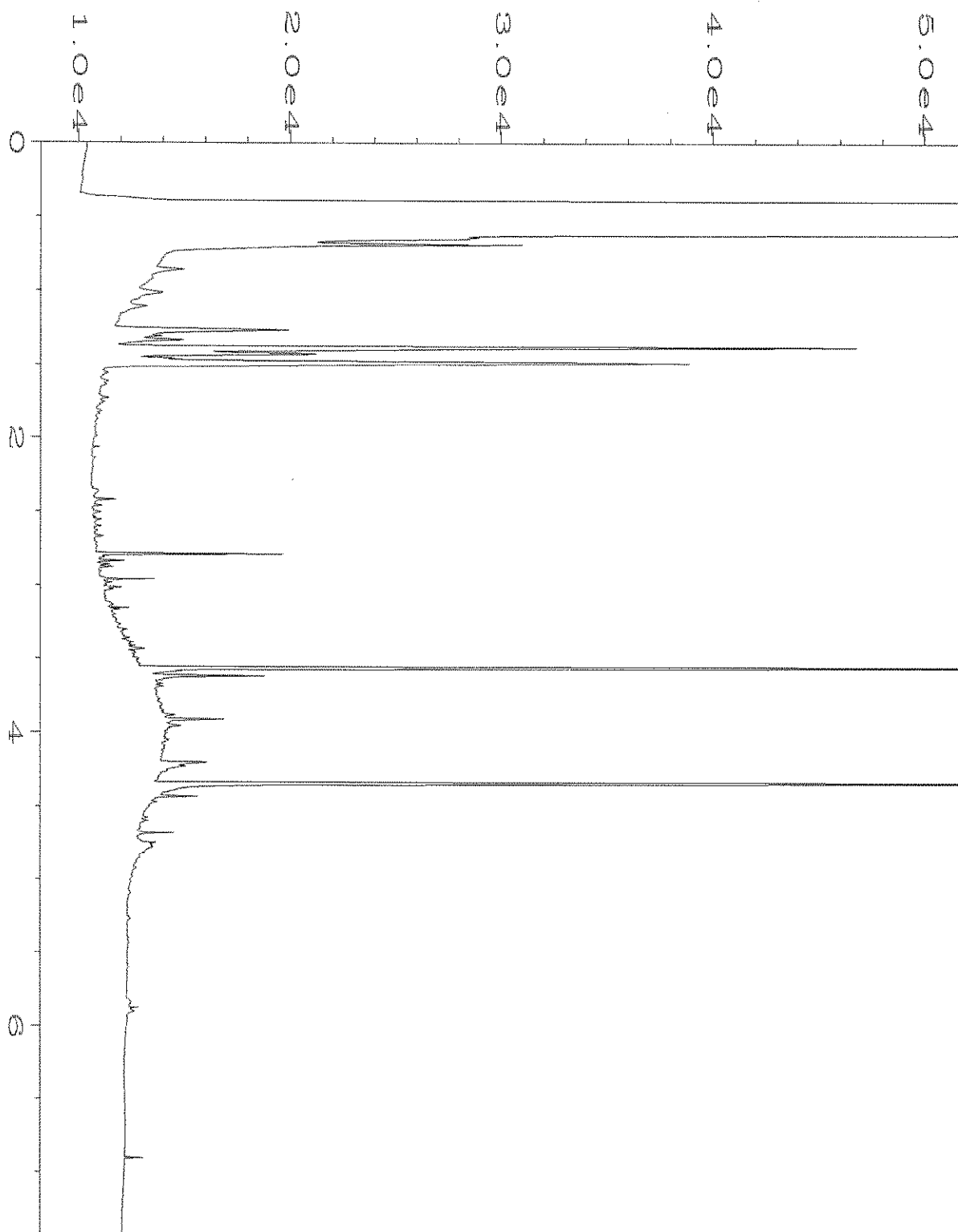
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Instrument	: GC1	Injection Number	: 1
Sample Name	: 106406-05	Sequence Line	: 12
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 24 Jun 21 07:32 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	25 Jun 21 11:01 AM		



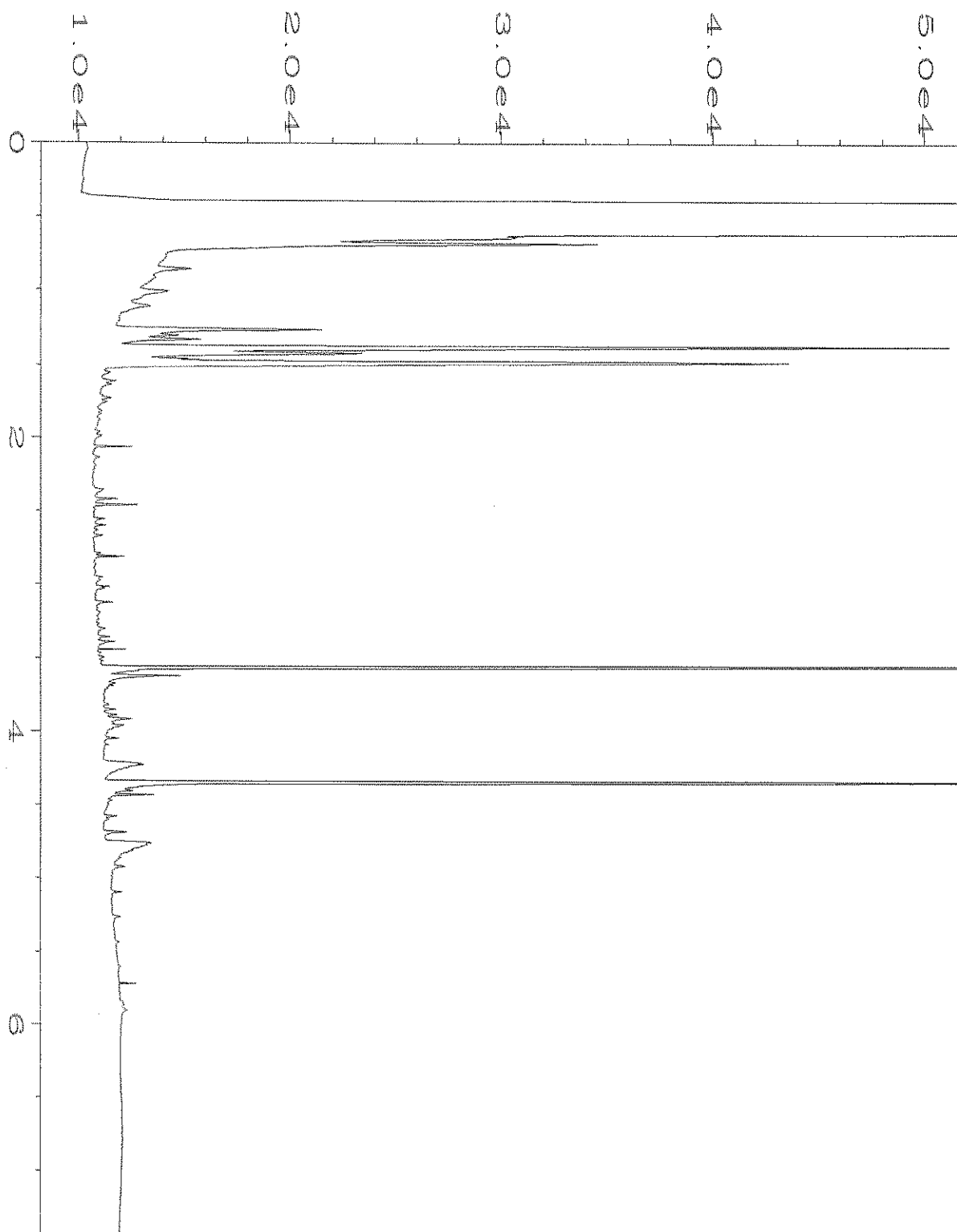
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Instrument	: GC1	Injection Number	: 1
Sample Name	: 106406-06	Sequence Line	: 12
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 24 Jun 21 07:43 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	: 25 Jun 21 11:01 AM		



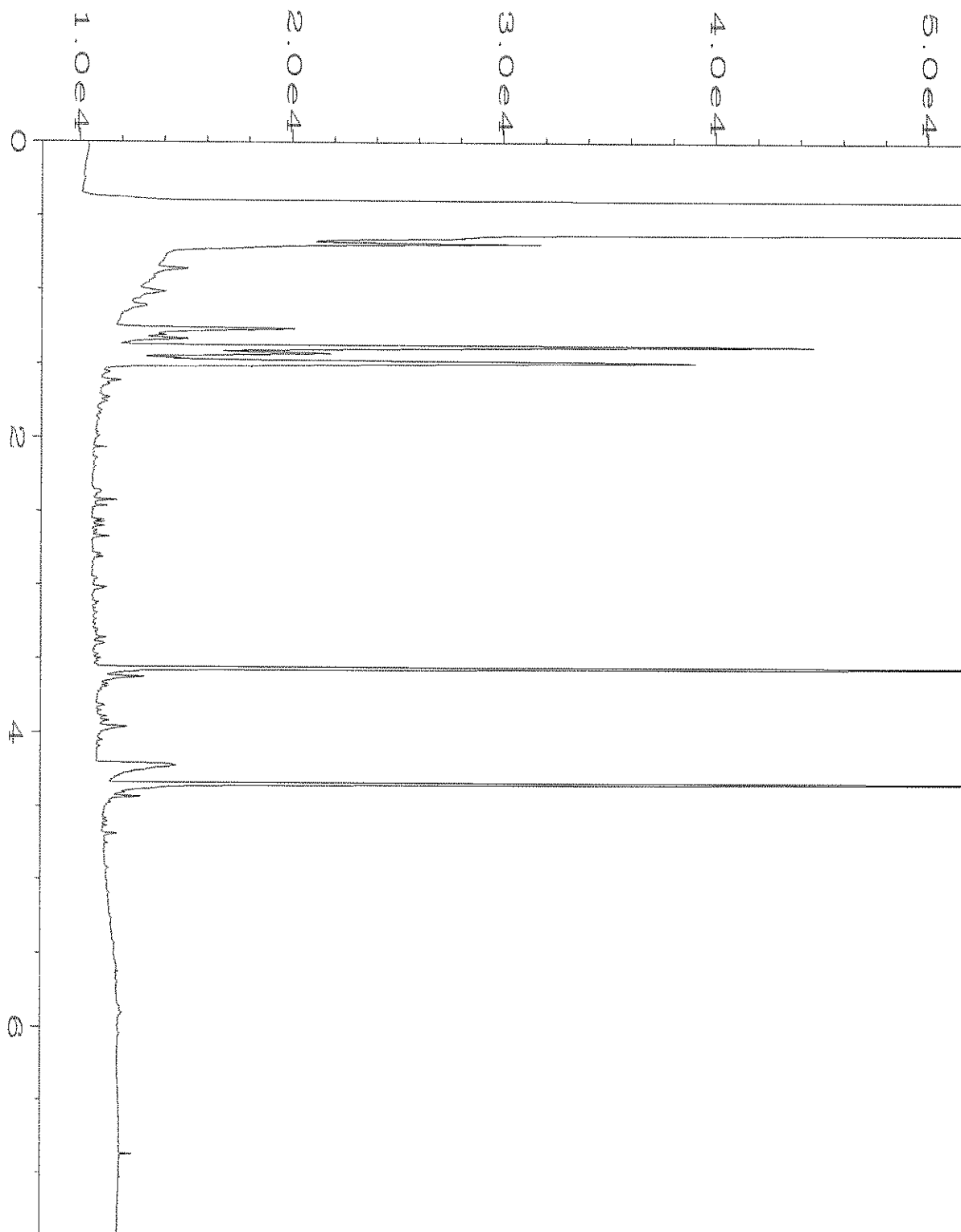
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Instrument	: GC1	Injection Number	: 1
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Report Created on:	: 25 Jun 21 11:01 AM		



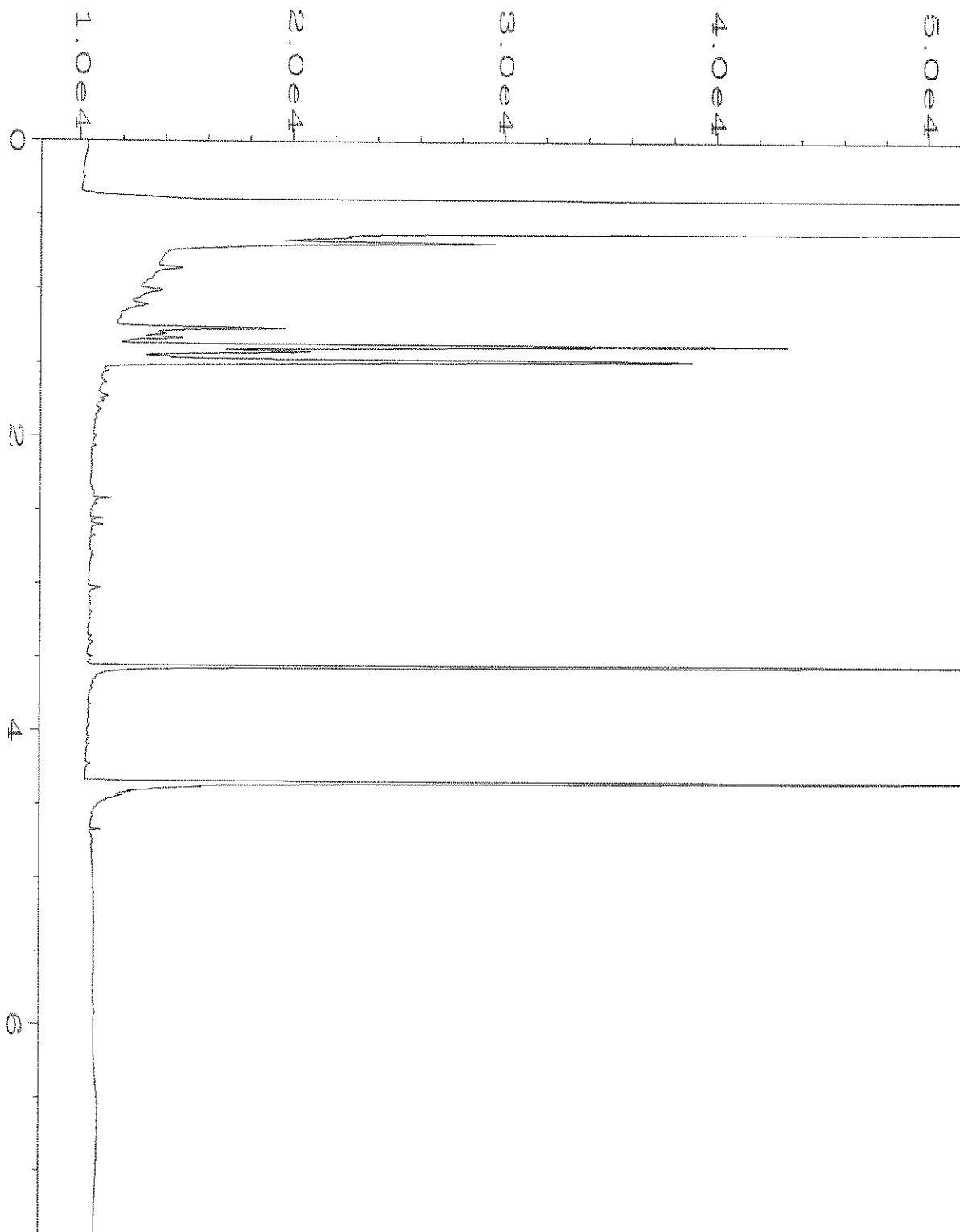
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Instrument	: GC1	Injection Number	: 1
Sample Name	: 106406-08	Sequence Line	: 12
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 24 Jun 21 08:07 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	: 25 Jun 21 11:01 AM		



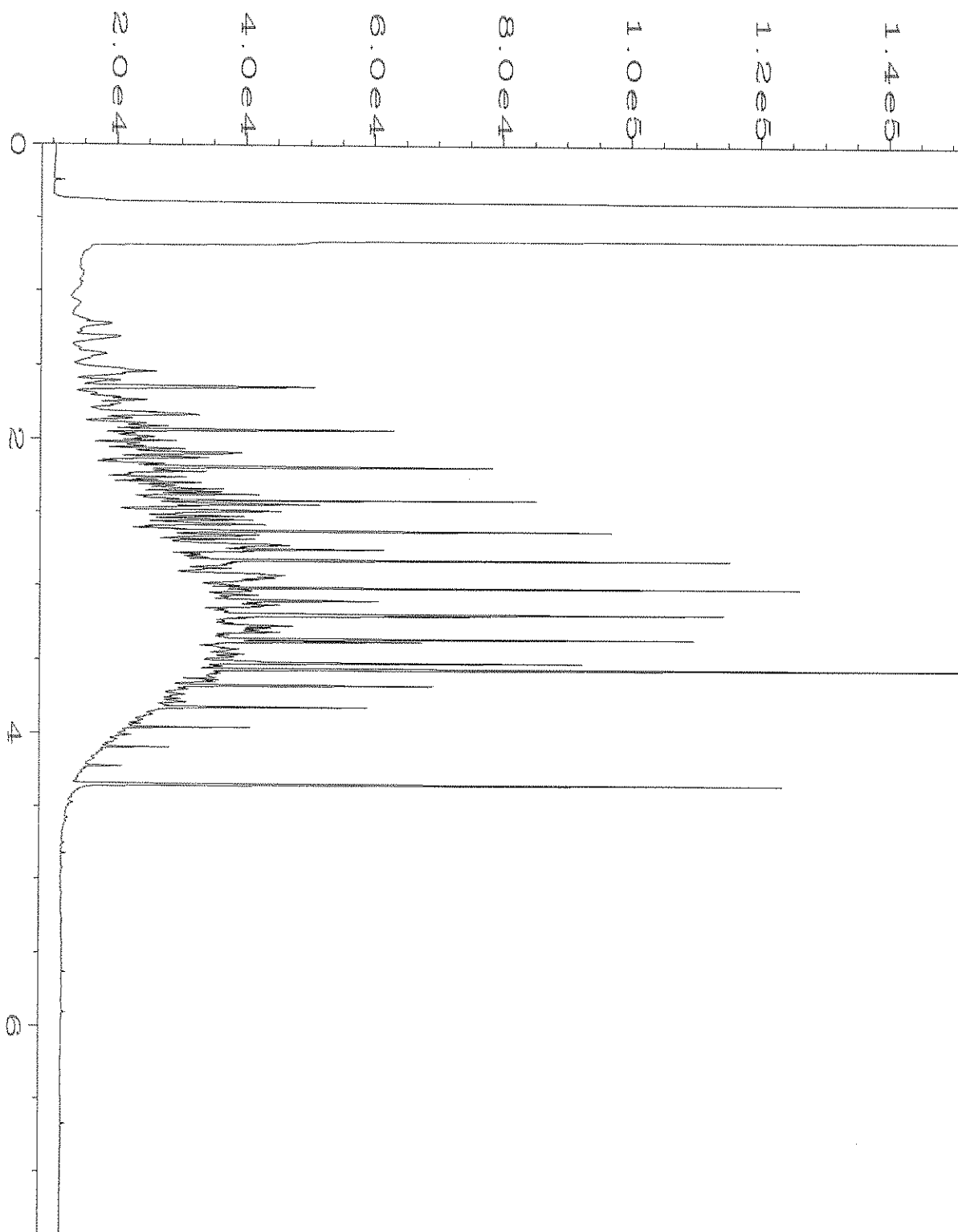
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Operator	: TL	Vial Number	: 55
Instrument	: GC1	Injection Number	: 1
Sample Name	: 106406-09	Sequence Line	: 12
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 24 Jun 21 08:19 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	25 Jun 21 11:01 AM		



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Operator	: TL	Vial Number	: 56
Instrument	: GC1	Injection Number	: 1
Sample Name	: 106406-10	Sequence Line	: 12
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 24 Jun 21 08:31 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	25 Jun 21 11:02 AM		



Data File Name	: C:\HPCHEM\1\DATA\06-24-21\039F1001.D	Page Number	: 1
Operator	: TL	Vial Number	: 39
Instrument	: GC1	Injection Number	: 1
Sample Name	: 01-1484 mb	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 24 Jun 21 04:45 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	: 25 Jun 21 11:02 AM		



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Operator	: TL	Vial Number	: 3
Instrument	: GC1	Injection Number	: 1
Sample Name	: 500 Dx 63-79C	Sequence Line	: 13
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 24 Jun 21 10:41 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	25 Jun 21 11:02 AM		

ATTACHMENT C

DATA VALIDATION MEMORANDUM



DATA QUALITY ASSURANCE/QUALITY CONTROL REVIEW

PROJECT NO. 0747.01.12 | JULY 7, 2021 | VSF PROPERTIES, LLC

Maul Foster & Alongi, Inc. (MFA) conducted an independent review of the quality of analytical results for groundwater samples collected at the North Cascade Ford property located at 116 W Ferry Street in Sedro-Woolley, Washington. The samples were collected on June 22, 2021.

Friedman & Bruya, Inc. (FBI), performed the analyses. FBI report number 106406 was reviewed. The analyses performed and samples analyzed are listed below.

Analysis	Reference
BTEX compounds	EPA 8021B
Diesel- and motor oil-range hydrocarbons	NWTPH-Dx
Gasoline-range hydrocarbons	NWTPH-Gx
Semivolatile organic compounds	EPA 8270E
NOTES: BTEX = benzene, toluene, ethylbenzene, xylenes. EPA = U.S. Environmental Protection Agency. NWTPH = Northwest Total Petroleum Hydrocarbons.	

Samples Analyzed		
Report 106406		
MW01R-GW-062221	MW06-GW-062221	MW11-GW-062221
MW02R-GW-062221	MW07-GW-062221	MW12-GW-062221
MWDUP-GW-062221	MW09-GW-062221	Trip Blank
MW04-GW-062221	MW10-GW-062221	--

DATA QUALIFICATIONS

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

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

According to report 106406, FBI noted that all detected NWTPH-Dx diesel- and motor oil-range hydrocarbon results 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.

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

HOLDING TIMES, PRESERVATION, AND SAMPLE STORAGE

Holding Times

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

Preservation and Sample Storage

The samples were preserved and stored appropriately.

BLANKS

Method Blanks

Laboratory method blank analyses were performed at the required frequencies. For purposes of data qualification, the method blanks were associated with all samples prepared in the analytical batch.

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

Trip Blanks

A trip blank sample was submitted for EPA Method 8021B analysis with the sample delivery group for report 106406. The trip blank sample results were non-detect to reporting limits.

Equipment Rinse Blanks

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

SURROGATE RECOVERY RESULTS

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

All surrogate recoveries were within acceptance limits.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

Matrix spike/matrix spike duplicate (MS/MSD) results are used to evaluate laboratory precision and accuracy.

MS/MSD results were not provided in report 106406; batch precision and accuracy were evaluated with laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) results. No action was required by the reviewer.

LABORATORY DUPLICATE RESULTS

Duplicate results are used to evaluate laboratory precision. All duplicate samples were extracted and analyzed at the required frequency.

Laboratory duplicate results were not provided in report 106406 for NWTPH-Dx and EPA Method 8270E; precision was evaluated through LCS/LCSD results. No action was required by the reviewer.

All laboratory duplicates were within acceptance limits for relative percent difference (RPD).

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RESULTS

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

LCSD results were not provided in report 106406 for NWTPH-Gx and EPA Method 8021B; precision was evaluated through laboratory duplicate results. No action was required by the reviewer.

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

FIELD DUPLICATE RESULTS

Field duplicate samples measure both field and laboratory precision. One field duplicate was submitted for analysis (MW02R-GW-062221 / MWDUP-GW-062221). MFA uses acceptance criteria of 100 percent RPD for results that are less than five times the reporting limit, or 50 percent RPD for results that are greater than five times the reporting limit. Non-detect data are not used in the evaluation of field duplicate results. All analytes were within the acceptance criteria.

REPORTING LIMITS

FBI used routine reporting limits for non-detect results.

DATA PACKAGE

The data packages were 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), and VI phase III (2019).

EPA. 2016. EPA contract laboratory program, national functional guidelines for high resolution Superfund methods data review. EPA 542-B-16-001. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. April.

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

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