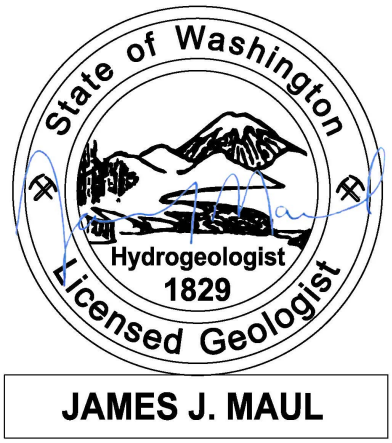
MEMORANDUM

To: Michael R. Warfel, LG, LHG, RG
Washington State Department of Ecology

Date: December 3, 2018

From: James J. Maul, LHG

Project No.: 0747.01.09



Carolyn R. Wise, GIT

RE: Response to Ecology Comments
North Cascade Ford site, 116 West Ferry Street, Sedro-Woolley, Washington
FSID: 58313566, CSID: 12075, VCP No. NW3031

Maul Foster & Alongi, Inc. (MFA) has prepared this memorandum on behalf of VSF Properties, LLC for the North Cascade Ford property at 116 West Ferry Street in Sedro-Woolley, Washington (the Property). This memorandum summarizes comments provided by Washington State Department of Ecology (Ecology) on November 13, 2018 and MFA's responses.

COMMENT 1

Ecology comment: *A summary table of all subsurface explorations, including date, consulting firm, drilling method, total depth, types of samples collected (soil, groundwater), monitoring well screen intervals, and report references for geologic log and sample results.*

MFA response: The requested summary table is been prepared in Attachment A.

COMMENT 2

Ecology comment: *AOC Maps (AOCs 1 through 4) for each Chemical of Concern (COC) group by media (soil and groundwater) that show the estimated aerial extent of concentrations > MTCA, including data collected on BNSF property:*

- *TPH-G, TPH-D, TPH-O, and BTEX*
- *Metals*
- *PAH and PCB*

MFA response: AOC maps for AOCs 1 through 3 were provided in the data gap investigation report and the supplemental data gap investigation report (MFA, 2017a, b). AOC maps for AOC 4 were provided in the 2015 preliminary remedial investigation and feasibility study (RI/FS) (MFA, 2015).

COMMENT 3

Ecology comment: *Show the estimated vertical extent of soil and groundwater concentrations > MTCA on geologic cross sections A-A' and B-B' from the 8/17/2018 Conceptual Site Model memo.*

MFA response: Updated cross sections have been included in the revised conceptual site model (CSM) included as Attachment B. These updated cross sections show the estimated vertical and lateral extent of soil and groundwater concentrations above Model Toxics Control Act (MTCA) Method A cleanup levels.

COMMENTS 4 THROUGH 8

Ecology comment: *Additional items to support a Property NFA Likely and a future Property Environmental Covenant:*

- *Details of Selected Remedies*
  - *AOC 1*
    - *A barrier along the northern property boundary is needed to prevent recontamination of groundwater, which flows to the southwest. Soil and groundwater with TPH > MTCA on BNSF property will continue to contribute contamination to groundwater flowing beneath the property. See "Guidelines for Property Cleanups under the Voluntary Cleanup Program," Ecology Publication No. 08-09-044, Revised July 2015; search the document for "recontamination."*

      MFA response: A revised FS Addendum has been prepared. The proposed remedy for AOC 1 now includes a physical barrier along the northern property boundary to reduce the potential for recontamination of groundwater from the Burlington Northern Santa Fe (BNSF) property. The proposed remedy for this area is in accordance with the "Guidelines for Property Cleanups under the

Voluntary Cleanup Program," Ecology Publication No. 08-09-044, Revised July 2015.

- *Provide documentation of BNSF refusal to grant access to their property for cleanup of soil and groundwater contamination that originated on the Property.*

  MFA response: On May 22, 2018, MFA formally requested access to BNSF-owned property to assess subsurface conditions and conduct remedial actions. After several meetings and email exchanges, BNSF remained unable to provide any assurances that they would allow access to the BNSF-owned property for completion of assessment and/or remedial actions. BNSF requested MFA move through the formal permitting process which was likely to cost tens of thousands of dollars, and again BNSF could not provide any certainty on the timeline for completing the permitting process to allow for MFA access to their property. Previous engagement with BNSF resulted in an access approval process of over two years in order to revise BNSF access agreement conditions. Given previous interactions with BNSF and their inability to provide any assurances on the cost and time required to gain access to their property, and following discussion of BNSF's recalcitrance in this matter with Ecology, we agreed that access to BNSF-owned property to assess and conduct remedial actions for the Property was not feasible. All correspondences and meeting notes with BNSF have been provided as Attachment C.

- *AOC 2*

  - *Extend cross section B-B' from the 8/17/2018 Conceptual Site Model memo southward (with soil and groundwater chemical data), to confirm that soil and groundwater concentrations > MTCA do not extend into the Ferry Street right-of-way.*

    MFA response: As discussed above, a revised CSM has been provided as Attachment B with an updated cross section. Cross section B-B' has been extended southward across the Ferry Street right-of-way.

- *AOC 3*

  - *The selected cleanup alternative needs to be documented by the soil and groundwater COC maps, showing absence of groundwater impacts from soils.*

    MFA response: There are limited groundwater impacts within AOC 3 associated with a possible buried object near borings GP51 and GP76, as shown in Figure 6-6 of the supplemental data gap investigation (MFA, 2017b). The recommended remedial action within AOC 3 includes excavation and application of bioremediation-amended backfill to remediate the localized groundwater impacts, as discussed in Section 4.3 of the updated FS Addendum (MFA, 2018).

Remaining portions of AOC 3 do not have groundwater impacts, as illustrated by Figure 6-6 of the supplemental data gap investigation and Figure 8-2 of the preliminary RI/FS (MFA, 2015, 2017b).

- *AOC 4*
  - *Two additional quarters of ground water sample results from monitoring well MW03 are needed to confirm that the following COCs are below MTCA Method A ground water cleanup levels for four quarters: TPH-G, benzene, toluene, ethylbenzene, and xylenes. Data from two quarterly events (5/15/2012 and 10/9/2012) were provided in reports submitted to Ecology.*

    MFA response: Based on Ecology's recommendation, two additional quarterly groundwater sampling events will be completed at MW03 to confirm four quarters of compliance with MTCA Method A cleanup levels. Groundwater samples will be analyzed for gasoline-range organics, benzene, toluene, ethylbenzene, and xylenes. Technical memorandums will be prepared summarizing the results from the two sampling events and submitted to Ecology.

COMMENT 9

Ecology comment: *A summary table by AOC of the cleanup alternatives evaluated, with a brief description of the components.*

MFA response: This summary table has been prepared and is included in the updated FS Addendum, as Table 3-1 (MFA, 2018).

COMMENT 10

Ecology comment: *A cost-benefit summary table (showing the rankings for all factors) and graph for the Disproportionate Cost Analysis (DCA), to clearly document with selection of the preferred cleanup alternatives.*

MFA response: The cost-benefit summary table (and graph for the DCA) has been prepared and is included in the updated FS Addendum as Tables 3-2 and 3-3, respectively (MFA, 2018).

COMMENT 11

Ecology comment: *After the previous information has been provided to Ecology, please email a signed VCP opinion form to me regarding the request for Ecology to consider a Property NFA Likely Opinion.*

MFA response: A signed voluntary cleanup program (VCP) opinion form is included in Attachment D.

Attachments:

A – Sampling and Analyses Summary Table
B – Conceptual Site Model
C – BNSF Communications
D – VCP Opinion Form

References:

MFA. 2015. Preliminary remedial investigation and feasibility study, North Cascade Ford property, Sedro-Woolley, Washington. 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 site, Sedro-Woolley, Washington. Maul Foster & Alongi, Inc., Bellingham, Washington. August 18.

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

ATTACHMENT A

SAMPLING AND ANALYSES SUMMARY TABLE

Table
Sample and Analytical Summary
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington

Areas of Concern	Features of Environmental Concern	Location ID	Consulting Firm and Report Reference	Drilling Method	Total Depth (ft bgs)	Sample ID	Sample Matrix	Sample Date	Sample Interval (ft bgs)	HCID	GRO	DRO and ORO	EPH	VPH	BTEX	Metals (total)	Metals (dissolved)[a]	As, Cd, Cr (total)	As and Cd (total)	Cd, Cr, Ni, Pb, Zn (total)	Cd, Cr, Ni, Zn (dissolved)	Hg (total)	Pb (total)	Pb (dissolved)
AOC 1	Former 500-gallon waste oil AST, former 10,000-gallon oil AST, waste oil spill, puddles with sheen	GP01 (BNSF Boring)	MFA (MFA, 2015)	Geoprobe	10	GP1-S-2.5	Soil	05/06/2012	1.0-3.4		X	X	X	X		X								
						GP1-W-7.5	Groundwater	05/06/2012	5.0-10.0		X	X					X							
		GP10	MFA (MFA, 2015)	Geoprobe	20	GP10-S-2.0	Soil	12/03/2012	1.3-2.8		X	X												
						GP10-W-7.5	Groundwater	12/03/2012	5.0-10.0		X	X												
						GPDUP-W-7.5	Groundwater	12/03/2012	5.0-10.0		X	X												
						GP10-W-16.5	Groundwater	12/03/2012	14.0-19.0														
		GP11	MFA (MFA, 2015)	Geoprobe	20	GP11-S-1.25	Soil	12/02/2012	0.5-2.0		X	X												
						GP11-S-7.5	Soil	12/02/2012	6.0-9.0														
						GP11-W-17.5	Groundwater	12/02/2012	15.0-20.0		X	X												
		GP12	MFA (MFA, 2015)	Geoprobe	35	GP12-S-12.0	Soil	12/02/2012	10.0-14.0														
						GP12-W-7.5	Groundwater	12/02/2012	5.0-10.0		X	X												
						GP12-W-25.5	Groundwater	12/02/2012	23.0-28.0			X												
		GP13	MFA (MFA, 2015)	Geoprobe	10	GP13-S-1.6	Soil	12/02/2012	0.5-2.7		X	X												
		GP36	MFA (MFA, 2017a)	Geoprobe	16	GP36-S-5.0	Soil	11/14/2016	4.8-5.2		X	X												
						GP36-S-7.0	Soil	11/14/2016	6.8-7.2		X	X												
						GP36-S-9.0	Soil	11/14/2016	8.8-9.2		X	X												
						GP36-W-11.0	Groundwater	11/14/2016	11.0-16.0		X	X												
		GP37	MFA (MFA, 2017a)	Geoprobe	14	GP37-S-6.0	Soil	11/14/2016	5.8-6.2	X	X	X									X			
						GP37-S-8.5	Soil	11/14/2016	8.3-8.7	X		X									X			
						GP37-S-11.0	Soil	11/14/2016	10.8-11.2	X											X			
						GP37-W-10.0	Groundwater	11/14/2016	9.0-14.0	X	X	X										X		
		GP38	MFA (MFA, 2017a)	Geoprobe	15	GP38-S-4.5	Soil	11/15/2016	4.0-5.0	X											X			
						GP38-S-5.5	Soil	11/15/2016	5.0-6.0		X	X												
						GP38-S-8.0	Soil	11/15/2016	7.0-8.0		X	X												
						GP38-W-11.0	Groundwater	11/15/2016	10.0-15.0		X	X												
		GP39 (BNSF Boring)	MFA (MFA, 2017a)	Geoprobe	15	GP39-S-3.5	Soil	11/15/2016	3.0 - 3.6	X														
						GP39-S-6.0	Soil	11/15/2016	5.5 - 6.5	X														
						GP39-S-8.0	Soil	11/15/2016	7.5 - 8.5	X														
						GP39-W-7.0	Groundwater	11/15/2016	10.0-15.0			X												
		GP40	MFA (MFA, 2017a)	Geoprobe	15	GP40-S-3.5	Soil	11/15/2016	3.0-4.0		X	X												
						GP40-S-6.0	Soil	11/15/2016	5.5-6.5		X	X												
						GP40-S-10.0	Soil	11/15/2016	10.0-11.0		X	X												
						GP40-W-7.0	Groundwater	11/15/2016	6.0-11.0			X												

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AOC 1	Former 500-gallon waste oil AST, former 10,000-gallon oil AST, waste oil spill, puddles with sheen	GP41	MFA (MFA, 2017a)	Geoprobe	15	GP41-S-2.5	Soil	11/15/2016	2.0-2.8	X														
						GP41-S-6.5	Soil	11/15/2016	5.5-6.5		X	X												
						GP41-S-8.5	Soil	11/15/2016	8.0-9.0		X	X												
						GP41-W-11.5	Groundwater	11/15/2016	10.0-15.0			X												
		GP42	MFA (MFA, 2017a)	Geoprobe	15	GP42-S-1.5	Soil	11/15/2016	1.0-2.2		X	X												
						GP42-S-6.0	Soil	11/15/2016	5.8-6.8		X	X												
						GP42-S-12.5	Soil	11/15/2016	12.0-13.0		X	X												
						GP42-W-10.0	Groundwater	11/15/2016	9.5-14.5		X	X												
		GP43 (BNSF Boring)	MFA (MFA, 2017a)	Geoprobe	15	GP43-S-1.5	Soil	11/15/2016	1.25-1.75	X		X												
						GP43-S-7.0	Soil	11/15/2016	6.5-7.1	X	X	X												
						GP43-S-13.5	Soil	11/15/2016	13.0-14.0	X														
						GP43-W-9.0	Groundwater	11/15/2016	10.0-15.0			X												
		GP44 (BNSF Boring)	MFA (MFA, 2017a)	Geoprobe	15	GP44-S-3.5	Soil	11/15/2016	3.2-3.8	X	X	X												
						GP44-S-6.0	Soil	11/15/2016	6.0-6.5	X	X	X												
						GP44-S-10.5	Soil	11/15/2016	10.2-10.6	X	X	X												
						GP44-W-9.0	Groundwater	11/15/2016	10.0-15.0			X												
		GP45 (BNSF Boring)	MFA (MFA, 2017a)	Geoprobe	15	GP45-W-13.0	Groundwater	11/16/2016	10.0-15.0			X												
		GP46 (BNSF Boring)	MFA (MFA, 2017a)	Geoprobe	15	GP46-W-10.0	Groundwater	11/16/2016	10.0-15.0			X												
		GP47 (BNSF Boring)	MFA (MFA, 2017a)	Geoprobe	15	GP47-W-8.0	Groundwater	11/16/2016	10.0-15.0			X												
		GP48	MFA (MFA, 2017a)	Geoprobe	15	GP48-W-10.0	Groundwater	11/16/2016	10.0-15.0			X												
		GP49 (BNSF Boring)	MFA (MFA, 2017a)	Geoprobe	15	GP49-W-9.0	Groundwater	11/16/2016	8.5-13.5			X												
		MW01	MFA (MFA, 2015)	Geoprobe	15	MW1-S-3.1	Soil	05/07/2012	1.2-5.0		X	X	X	X		X								
						MW1-W-8.5	Groundwater	05/15/2012	3.5-13.5		X	X					X							
						Field Duplicate	Groundwater	05/15/2012	3.5-13.5		X	X					X							
						MW01-GW-121009	Groundwater	10/09/2012	3.5-13.5			X												
						MW01	Groundwater	04/10/2014	3.5-13.5		X	X	X											
						MWDUP	Groundwater	04/10/2014	3.5-13.5		X	X												
						MW01-GW-140618	Groundwater	06/18/2014	3.5-13.5			X												
						FD-GW-140618	Groundwater	06/18/2014	3.5-13.5			X												
						MW01-GW-091014	Groundwater	09/10/2014	3.5-13.5			X												
						FD-091014	Groundwater	09/10/2014	3.5-13.5			X												
						MW01-GW-121014	Groundwater	12/10/2014	3.5-13.5			X												

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AOC 1	Former 500-gallon waste oil AST, former 10,000-gallon oil AST, waste oil spill, puddles with sheen	MW01	MFA (MFA, 2015)	Geoprobe	15	FD-121014	Groundwater	12/10/2014	3.5-13.5			X												
						MW01-GW-112816	Groundwater	11/28/2016	3.5-13.5			X												
						MWDUP-GW-112816	Groundwater	11/28/2016	3.5-13.5			X												
						MW01-GW-042617	Groundwater	04/26/2017	3.5-13.5		X	X												
						MWDUP-GW-042617	Groundwater	04/26/2017	3.5-13.5		X	X												
		MW05	MFA (MFA, 2017b)	Geoprobe	15	MW05-S-0.8	Soil	04/24/2017	0.6 - 0.9	X	X	X			X									
						MW05-S-2.3	Soil	04/24/2017	2.0 - 2.3	X														
						MW05-S-5.5	Soil	04/24/2017	5.2 - 5.8	X														
						MW05-GW-042617	Groundwater	04/26/2017	6.0 - 11.0		X	X												
						MW05-GW-101718	Groundwater	10/17/2018	6.0 - 11.0		X	X												
		MW07	MFA (MFA, 2017b)	Geoprobe	20	MW07-S-1.2	Soil	04/25/2017	1.0 - 1.5	X														
						MW07-S-5.5	Soil	04/25/2017	5.2 - 5.8	X														
						MW07-S-6.5	Soil	04/25/2017	6.2 - 6.8	X														
						MW07-GW-042617	Groundwater	04/26/2017	5.0 - 20.0		X	X												
						MW07-GW-101718	Groundwater	10/17/2018	5.0 - 20.0		X	X												
		MW08	MFA (MFA, 2017b)	Geoprobe	16	MW08-GW-042617	Groundwater	04/26/2017	6.0 - 16.0		X	X												
						MW08-GW-101718	Groundwater	10/17/2018	6.0 - 16.0		X	X												
		B-1 (Whatcom & BNSF Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	15	B-1	Soil	11/15/2011	5		X	X			X			X				X	X	
						B-1	Groundwater	11/15/2011	NA		X	X			X									
		B-2 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	15	B-2	Soil	11/15/2011	14		X	X			X			X				X	X	
						B-2	Groundwater	11/15/2011	NA		X	X			X									
		SV1	MFA (MFA, 2015)	Hand Drill	--	SV01-121204	Soil Vapor	12/04/2012	NA															
		Washroom	MFA (MFA, 2015)	--	--	Ambient-Indoor-24HR-121204	Indoor Air	12/04/2012	NA	*Not analyzed*														
AOC 2	Former gasoline and heating oil underground storage tanks and former 500-gallon waste oil AST	GP16	MFA (MFA, 2015)	Geoprobe	20	GP16-W-17.5	Groundwater	12/02/2012	15.0-20.0		X	X												
		GP33	MFA (MFA, 2017a)	Geoprobe	15	GP33-S-6.0	Soil	11/14/2016	5.8-6.2			X												
						GP33-S-7.0	Soil	11/14/2016	6.8-7.2			X												
						GP33-S-8.0	Soil	11/14/2016	7.8-8.2			X												
		GP34	MFA (MFA, 2017a)	Geoprobe	15	GP34-S-2.5	Soil	11/14/2016	2.3-2.7			X												
						GP34-S-6.4	Soil	11/14/2016	6.2-6.6			X												
						GP34-S-7.5	Soil	11/14/2016	7.3-7.7			X												
						GP34-W-9.0	Groundwater	11/14/2016	8.0-13.0			X												

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AOC 2	Former gasoline and heating oil underground storage tanks and former 500-gallon waste oil AST	GP35	MFA (MFA, 2017a)	Geoprobe	15	GP35-S-5.5	Soil	11/14/2016	5.3-5.7			X												
						GP35-S-6.5	Soil	11/14/2016	6.3-6.7			X												
						GP35-S-12.0	Soil	11/14/2016	11.8-12.2			X												
		GP52	MFA (MFA, 2017a)	Geoprobe	15	GP52-W-8.0	Groundwater	11/17/2016	8.0-13.0			X												
		GP53	MFA (MFA, 2017a)	Geoprobe	15	GP53-S-1.0	Soil	11/17/2016	0.0-1.6		X	X			X			X					X	
						GP53-S-3.0	Soil	11/17/2016	2.3-3.3	*Not analyzed*														
						GP53-W-12.0	Groundwater	11/17/2016	9.5-14.5			X												
		GP54	MFA (MFA, 2017a)	Geoprobe	15	GP54-W-10.0	Groundwater	11/17/2016	9.5-14.5		X	X			X									X
		GP74	MFA (MFA, 2017b)	Geoprobe	15	GP74-W-9.0	Groundwater	04/25/2017	5.0 - 15.0			X												
		GP75	MFA (MFA, 2017b)	Geoprobe	15	GP75-W-10.0	Groundwater	04/25/2017	3.0 - 13.0			X												
		MW02 (Decommissioned September 2016)	MFA (MFA, 2015)	Geoprobe	15	MW2-W-9	Groundwater	05/16/2012	4.0-14.0		X	X					X							
						MW02-GW-121009	Groundwater	10/09/2012	4.0-14.0			X												
						MW02	Groundwater	04/10/2014	4.0-14.0			X	X											
						MW02-GW-140618	Groundwater	06/18/2014	4.0-14.0			X												
						MW02-GW-091014	Groundwater	09/10/2014	4.0-14.0			X												
						MW02-GW-121014	Groundwater	12/10/2014	4.0-14.0			X												
		MW02R	MFA (MFA, 2017b)	Geoprobe	15	MW02R-GW-042617	Groundwater	04/26/2017	5.0 - 15.0			X												
						MW02R-GW-101718	Groundwater	10/17/2018	5.0 - 15.0			X												
		MW04	MFA (MFA, 2017b)	Geoprobe	15	MW04-GW-042617	Groundwater	04/26/2017	4.0 - 14.0			X												
						MW04-GW-101718	Groundwater	10/17/2018	4.0 - 14.0			X												
		MW06	MFA (MFA, 2017b)	Geoprobe	20	MW06-S-1.2	Soil	04/24/2017	1.0 - 1.4			X												
						MW06-S-5.2	Soil	04/24/2017	5.0 - 5.3			X												
						MW06-S-5.8	Soil	04/24/2017	5.5 - 6.0			X												
						MW06-GW-042617	Groundwater	04/26/2017	5.0 - 20.0			X												
						MW06-GW-101718	Groundwater	10/17/2018	5.0 - 20.0		X	X												
		B-4 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	15	B-4	Soil	11/15/2011	6		X	X			X			X				X	X	
						B-4	Groundwater	11/15/2011	NA		X	X			X									
		B-5 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	15	B-5	Soil	11/15/2011	8		X	X			X			X				X	X	
						B-5	Groundwater	11/15/2011	NA		X	X			X									

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AOC 3	Former coal sheds and possible buried object	GP05	MFA (MFA, 2015)	Geoprobe	15	GP5-S-2	Soil	05/08/2012	1.5-2.6	X		X				X								
						GP5-S-5.6	Soil	05/08/2012	5.0-6.3	X						X								
						GP5-W-10	Groundwater	05/08/2012	8.0-12.0	X							X							
		GP09	MFA (MFA, 2015)	Geoprobe	15	GP9-S-2	Soil	05/08/2012	1.1-3.0	X						X								
						GP9-S-5.6	Soil	05/08/2012	5.0-6.2	X						X								
						GP9-W-10	Groundwater	05/08/2012	8.0-12.0	X							X							
		GP18	MFA (MFA, 2015)	Geoprobe	5	GP18-S-1.9	Soil	12/03/2012	1.4-2.4	*Not analyzed*														
		GP19	MFA (MFA, 2015)	Geoprobe	5	GP19-S-0.7	Soil	12/03/2012	0.3-3.1										X				X	
		GP20	MFA (MFA, 2015)	Geoprobe	5	GP20-S-1.5	Soil	12/03/2012	1.2-1.8	*Not analyzed*														
		GP21	MFA (MFA, 2015)	Geoprobe	5	GP21-S-1.4	Soil	12/03/2012	0.6-2.1	*Not analyzed*														
		GP22	MFA (MFA, 2015)	Geoprobe	5	GP22-S-1.8	Soil	12/03/2012	1.3-2.3										X				X	
		GP23	MFA (MFA, 2015)	Geoprobe	5	GP23-S-0.9	Soil	12/03/2012	0.4-1.4										X				X	
		GP24	MFA (MFA, 2015)	Geoprobe	5	GP24-S-0.8	Soil	12/03/2012	0.3-1.2										X				X	
		GP25	MFA (MFA, 2015)	Geoprobe	5	GP25-S-1.1	Soil	12/03/2012	0.6-1.6										X				X	
		GP26	MFA (MFA, 2015)	Geoprobe	5	GP26-S-1.7	Soil	12/04/2012	1.1-2.4										X				X	
		GP27	MFA (MFA, 2015)	Geoprobe	5	GP27-S-1.5	Soil	12/04/2012	1.0-1.9	*Not analyzed*														
		GP28	MFA (MFA, 2015)	Geoprobe	5	GP28-S-1.5	Soil	12/04/2012	0.5-2.5	*Not analyzed*														
		GP29	MFA (MFA, 2015)	Geoprobe	5	GP29-S-1.0	Soil	12/04/2012	0.5-1.5										X				X	
		GP30	MFA (MFA, 2015)	Geoprobe	5	GP30-S-0.9	Soil	12/04/2012	0.5-2.1										X				X	
		GP31	MFA (MFA, 2015)	Geoprobe	5	GP31-S-0.9	Soil	12/04/2012	0.4-1.3										X				X	
		GP32	MFA (MFA, 2015)	Geoprobe	5	GP32-S-1.2	Soil	12/04/2012	0.8-1.5										X				X	

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AOC 3	Former coal sheds and possible buried object	GP42	MFA (MFA, 2017a)	Geoprobe	15	GP42-S-1.5	Soil	11/15/2016	1.0-2.2		X	X												
						GP42-S-6.0	Soil	11/15/2016	5.8-6.8		X	X												
						GP42-S-12.5	Soil	11/15/2016	12.0-13.0		X	X												
						GP42-W-10.0	Groundwater	11/15/2016	9.5-14.5		X	X												
		GP50	MFA (MFA, 2017a)	Geoprobe	15	GP50-S-1.5	Soil	11/16/2016	1.0-1.75		X	X						X					X	
						GP50-S-6.5	Soil	11/16/2016	6.3-7.3		X	X						X					X	
						GP50-S-13.5	Soil	11/16/2016	13.0-14.0		X	X						X					X	
						GP50-W-11.0	Groundwater	11/16/2016	10.0-15.0			X												
		GP51	MFA (MFA, 2017a)	Geoprobe	15	GP51-S-1.5	Soil	11/16/2016	1.2-1.7	X		X												
						GP51-S-3.0	Soil	11/16/2016	2.7-3.0	X	X	X			X								X	
						GP51-S-7.5	Soil	11/16/2016	7.1-7.8	X	X	X			X								X	
						GP51-S-14.5	Soil	11/16/2016	14.3-14.8	X														
						GP51-W-11.0	Groundwater	11/16/2016	7.0-12.0	X	X				X									
		GP53	MFA (MFA, 2017a)	Geoprobe	15	GP53-S-1.0	Soil	11/17/2016	0.0-1.6		X	X			X			X					X	
						GP53-S-3.0	Soil	11/17/2016	2.3-3.3															
						GP53-W-12.0	Groundwater	11/17/2016	9.5-14.5			X												
		GP55	MFA (MFA, 2017a)	Geoprobe	5	GP55-S-1.5	Soil	11/17/2016	1.0-2.0		X	X			X									
						GP55-S-3.0	Soil	11/17/2016	2.5-3.5		X	X			X									
		GP56	MFA (MFA, 2017a)	Geoprobe	1.8	GP56-S-1.5	Soil	11/17/2016	1.0-1.8	X														
		GP57	MFA (MFA, 2017a)	Geoprobe	5	GP57-S-1.0	Soil	11/17/2016	0.5-1.3									X					X	
						GP57-S-2.0	Soil	11/17/2016	1.8-2.5	*Not analyzed*														
		GP58	MFA (MFA, 2017a)	Geoprobe	5	GP58-S-1.5	Soil	11/17/2016	0.7-1.7									X					X	
						GP58-S-2.5	Soil	11/17/2016	2.0-3.0															
		GP59	MFA (MFA, 2017a)	Geoprobe	5	GP59-S-2.0	Soil	11/17/2016	1.5-2.5									X					X	
						GP59-S-3.0	Soil	11/17/2016	2.8-3.3									X					X	
		GP60	MFA (MFA, 2017a)	Geoprobe	5	GP60-S-2.3	Soil	11/17/2016	1.8-2.6									X					X	
						GP60-S-3.0	Soil	11/17/2016	2.8-3.4	*Not analyzed*														
		GP61	MFA (MFA, 2017a)	Geoprobe	5	GP61-S-1.5	Soil	11/17/2016	1.3-1.7									X					X	
						GP61-S-2.2	Soil	11/17/2016	2.0-2.4	*Not analyzed*														
		GP62	MFA (MFA, 2017a)	Geoprobe	5	GP62-S-1.0	Soil	11/17/2016	0.5-1.0									X					X	
						GP62-S-2.0	Soil	11/17/2016	1.7-2.2	*Not analyzed*														
		GP63	MFA (MFA, 2017a)	Geoprobe	5	GP63-S-1.0	Soil	11/17/2016	0.8-1.3									X					X	
						GP63-S-2.0	Soil	11/17/2016	1.8-2.2	*Not analyzed*														
		GP64	MFA (MFA, 2017a)	Geoprobe	5	GP64-S-1.2	Soil	11/18/2016	0.9-1.6									X					X	
						GP64-S-2.0	Soil	11/18/2016	1.8-2.2	*Not analyzed*														

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AOC 3	Former coal sheds and possible buried object	GP65	MFA (MFA, 2017a)	Geoprobe	5	GP65-S-1.0	Soil	11/18/2016	0.4-1.3									X					X	
						GP65-S-2.0	Soil	11/18/2016	1.5-2.2	*Not analyzed*														
		GP66	MFA (MFA, 2017a)	Geoprobe	5	GP66-S-2.0	Soil	11/18/2016	1.7-2.1									X					X	
						GP66-S-2.5	Soil	11/18/2016	2.2-2.7	*Not analyzed*														
		GP67	MFA (MFA, 2017a)	Geoprobe	5	GP67-S-2.0	Soil	11/18/2016	1.5-2.3									X					X	
						GP67-S-3.5	Soil	11/18/2016	2.7-3.5	*Not analyzed*														
		GP68	MFA (MFA, 2017a)	Geoprobe	5	GP68-S-1.8	Soil	11/18/2016	1.4-2.0									X					X	
						GP68-S-3.0	Soil	11/18/2016	2.5-3.2	*Not analyzed*														
		GP69	MFA (MFA, 2017a)	Geoprobe	5	GP69-S-1.0	Soil	11/18/2016	0.5-1.2									X					X	
						GP69-S-2.0	Soil	11/18/2016	1.5-2.2															
		GP70	MFA (MFA, 2017a)	Geoprobe	5	GP70-S-1.0	Soil	11/18/2016	0.7-1.1									X					X	
						GP70-S-1.5	Soil	11/18/2016	1.2-1.7															
		GP71	MFA (MFA, 2017a)	Geoprobe	5	GP71-S-0.3	Soil	11/18/2016	0.2-0.4	*Not analyzed*														
						GP71-S-1.0	Soil	11/18/2016	0.8-1.2	*Not analyzed*														
		GP72	MFA (MFA, 2017a)	Geoprobe	5	GP72-S-1.0	Soil	11/18/2016	0.4-1.2									X					X	
						GP72-S-2.0	Soil	11/18/2016	1.6-2.1	*Not analyzed*														
		GP73	MFA (MFA, 2017a)	Geoprobe	5	GP73-S-0.5	Soil	11/18/2016	0.3-0.8	*Not analyzed*														
						GP73-S-1.5	Soil	11/18/2016	1.3-1.7	*Not analyzed*														
		GP76	MFA (MFA, 2017b)	Geoprobe	15	GP76-S-1.8	Soil	04/25/2017	1.6 - 2.0	X					X									
						GP76-S-2.8	Soil	04/25/2017	2.6 - 3.0	X		X			X									
						GP76-S-7.0	Soil	04/25/2017	6.8 - 7.2	X	X	X			X									
						GP76-W-10.0	Groundwater	04/25/2017	5.0 - 15.0	X	X	X			X									
		GP77	MFA (MFA, 2017b)	Geoprobe	15	GP77-S-1.2	Soil	04/25/2017	1.0 - 1.4	X					X									
						GP77-S-3.0	Soil	04/25/2017	2.8 - 3.2	X					X									
						GP77-S-6.5	Soil	04/25/2017	6.3 - 6.8	X					X									
						GP77-W-10.0	Groundwater	04/25/2017	5.0 - 15.0	X					X									
		GP78	MFA (MFA, 2017b)	Geoprobe	15	GP78-S-1.0	Soil	04/25/2017	0.8 - 1.2	X		X			X									
						GP78-S-2.5	Soil	04/25/2017	2.5 - 2.8	X					X									
						GP78-S-7.0	Soil	04/25/2017	6.8 - 7.2	X		X			X									
						GP78-W-10.0	Groundwater	04/25/2017	5.0 - 15.0	X					X									
		B-8 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	10	B-8	Soil	11/15/2011	2															

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AOC 3	Former coal sheds and possible buried object	B-9 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	5	B-9	Soil	11/15/2011	2															
AOC 4	Former Tire Vulcanizing, Battery Servicing, and Gas and Oils	GP06	MFA (MFA, 2015)	Geoprobe	15	GP6-S-2.9	Soil	05/08/2012	2.3-3.6		X			X									X	
						GP6-W-9	Groundwater	05/08/2012	7.0-11.0		X													X
		GP07	MFA (MFA, 2015)	Geoprobe	10	GP7-S-2.9	Soil	05/08/2012	2.2-3.7		X			X									X	
						GP7-W-8	Groundwater	05/08/2012	6.0-10.0		X													X
		GP08	MFA (MFA, 2015)	Geoprobe	10	GP8-S-2.8	Soil	05/08/2012	2.1-3.5		X			X									X	
						GP8-W-8	Groundwater	05/08/2012	6.0-10.0		X													X
		GP14	MFA (MFA, 2015)	Geoprobe	10	GP14-W-7.5	Groundwater	12/03/2012	5.0-10.0			X												
		GP15	MFA (MFA, 2015)	Geoprobe	10	GP15-W-7.5	Groundwater	12/03/2012	5.0-10.0			X												
		MW03	MFA (MFA, 2015)	Geoprobe	15	MW3-S-1.9	Soil	05/07/2012	1.5-2.3		X			X									X	
						MW3-W-9	Groundwater	05/15/2012	4.0-14.0		X													X
						MW03-GW-121009	Groundwater	10/09/2012	4.0-14.0		X	X												
						FD-GW-121009	Groundwater	10/09/2012	4.0-14.0		X	X												
						MW03	Groundwater	04/10/2014	4.0-14.0			X	X											
						MW03-GW-140618	Groundwater	06/18/2014	4.0-14.0			X												
						MW03-GW-091014	Groundwater	09/10/2014	4.0-14.0			X												
						MW03-GW-121014	Groundwater	12/10/2014	4.0-14.0			X												
		B-6 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	15	B-6	Soil	11/15/2011	6		X	X			X									
		B-7 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	15	B-7	Soil	11/15/2011	11		X	X			X			X				X	X	
						B-7	Groundwater	11/15/2011	NA		X	X			X									

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Other	Underground hydraulic lifts	GP02	MFA (MFA, 2015)	Geoprobe	15	GP2-S-1.1	Soil	05/06/2012	0.0-2.2	X						X								
						GP2-W-10	Groundwater	05/06/2012	5.0-15.0		X	X					X							
		GP03	MFA (MFA, 2015)	Geoprobe	10	GP3-S-2	Soil	05/06/2012	1.3-2.7	X						X								
		B-3 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	15	B-3	Soil	11/15/2011	5		X	X			X									
	Former Automobile Shop and Oil House	GP04	MFA (MFA, 2015)	Geoprobe	12	GP4-W-10	Groundwater	05/07/2012	8.0-12.0		X	X					X							
		GP17	MFA (MFA, 2015)	Geoprobe	15	GP17-S-9.5	Soil	12/03/2012	8.0-11.0			X												
						GP17-W-12.5	Groundwater	12/03/2012	10.0-15.0		X	X												

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AOC 1	Former 500-gallon waste oil AST, former 10,000-gallon oil AST, waste oil spill, puddles with sheen	GP01 (BNSF Boring)	MFA (MFA, 2015)	Geoprobe	10	GP1-S-2.5	Soil	05/06/2012	1.0-3.4		X			X	X		X				
						GP1-W-7.5	Groundwater	05/06/2012	5.0-10.0		X			X	X		X				
		GP10	MFA (MFA, 2015)	Geoprobe	20	GP10-S-2.0	Soil	12/03/2012	1.3-2.8		X				X		X				X
						GP10-W-7.5	Groundwater	12/03/2012	5.0-10.0	X	X				X						
						GPDUP-W-7.5	Groundwater	12/03/2012	5.0-10.0	X	X				X						
						GP10-W-16.5	Groundwater	12/03/2012	14.0-19.0	X											
		GP11	MFA (MFA, 2015)	Geoprobe	20	GP11-S-1.25	Soil	12/02/2012	0.5-2.0		X				X		X				
						GP11-S-7.5	Soil	12/02/2012	6.0-9.0												X
						GP11-W-17.5	Groundwater	12/02/2012	15.0-20.0	X	X				X						
		GP12	MFA (MFA, 2015)	Geoprobe	35	GP12-S-12.0	Soil	12/02/2012	10.0-14.0												X
						GP12-W-7.5	Groundwater	12/02/2012	5.0-10.0	X	X				X						
						GP12-W-25.5	Groundwater	12/02/2012	23.0-28.0	X	X				X						
		GP13	MFA (MFA, 2015)	Geoprobe	10	GP13-S-1.6	Soil	12/02/2012	0.5-2.7		X				X		X				
		GP36	MFA (MFA, 2017a)	Geoprobe	16	GP36-S-5.0	Soil	11/14/2016	4.8-5.2						X						
						GP36-S-7.0	Soil	11/14/2016	6.8-7.2						X						
						GP36-S-9.0	Soil	11/14/2016	8.8-9.2						X						
						GP36-W-11.0	Groundwater	11/14/2016	11.0-16.0						X						
		GP37	MFA (MFA, 2017a)	Geoprobe	14	GP37-S-6.0	Soil	11/14/2016	5.8-6.2		X				X				X		
						GP37-S-8.5	Soil	11/14/2016	8.3-8.7		X				X				X		
						GP37-S-11.0	Soil	11/14/2016	10.8-11.2		X				X				X		
						GP37-W-10.0	Groundwater	11/14/2016	9.0-14.0		X				X			X	X		
		GP38	MFA (MFA, 2017a)	Geoprobe	15	GP38-S-4.5	Soil	11/15/2016	4.0-5.0		X				X		X		X		
						GP38-S-5.5	Soil	11/15/2016	5.0-6.0						X						
						GP38-S-8.0	Soil	11/15/2016	7.0-8.0						X						
						GP38-W-11.0	Groundwater	11/15/2016	10.0-15.0	X	X				X			X	X	X	X
		GP39 (BNSF Boring)	MFA (MFA, 2017a)	Geoprobe	15	GP39-S-3.5	Soil	11/15/2016	3.0 - 3.6						X						
						GP39-S-6.0	Soil	11/15/2016	5.5 - 6.5						X						
						GP39-S-8.0	Soil	11/15/2016	7.5 - 8.5						X						
						GP39-W-7.0	Groundwater	11/15/2016	10.0-15.0												
		GP40	MFA (MFA, 2017a)	Geoprobe	15	GP40-S-3.5	Soil	11/15/2016	3.0-4.0						X						
						GP40-S-6.0	Soil	11/15/2016	5.5-6.5						X						
						GP40-S-10.0	Soil	11/15/2016	10.0-11.0						X						
						GP40-W-7.0	Groundwater	11/15/2016	6.0-11.0						X						

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Areas of Concern	Features of Environmental Concern	Location ID	Consulting Firm and Report Reference	Drilling Method	Total Depth (ft bgs)	Sample ID	Sample Matrix	Sample Date	Sample Interval (ft bgs)	Fe (dissolved)[b]	VOCs	Low-level VOCs (including EDC and MTBE)	He	SVOCs	PAHs	Naphthalenes	PCBs	EDB	n-Hexane	Conventionals	TOC
AOC 1	Former 500-gallon waste oil AST, former 10,000-gallon oil AST, waste oil spill, puddles with sheen	GP41	MFA (MFA, 2017a)	Geoprobe	15	GP41-S-2.5	Soil	11/15/2016	2.0-2.8		X				X				X		
						GP41-S-6.5	Soil	11/15/2016	5.5-6.5						X						
						GP41-S-8.5	Soil	11/15/2016	8.0-9.0						X						
						GP41-W-11.5	Groundwater	11/15/2016	10.0-15.0						X						
		GP42	MFA (MFA, 2017a)	Geoprobe	15	GP42-S-1.5	Soil	11/15/2016	1.0-2.2						X						
						GP42-S-6.0	Soil	11/15/2016	5.8-6.8						X						
						GP42-S-12.5	Soil	11/15/2016	12.0-13.0						X						
						GP42-W-10.0	Groundwater	11/15/2016	9.5-14.5						X						
		GP43 (BNSF Boring)	MFA (MFA, 2017a)	Geoprobe	15	GP43-S-1.5	Soil	11/15/2016	1.25-1.75						X						
						GP43-S-7.0	Soil	11/15/2016	6.5-7.1						X						
						GP43-S-13.5	Soil	11/15/2016	13.0-14.0						X						
						GP43-W-9.0	Groundwater	11/15/2016	10.0-15.0												
		GP44 (BNSF Boring)	MFA (MFA, 2017a)	Geoprobe	15	GP44-S-3.5	Soil	11/15/2016	3.2-3.8						X						
						GP44-S-6.0	Soil	11/15/2016	6.0-6.5						X						
						GP44-S-10.5	Soil	11/15/2016	10.2-10.6						X						
						GP44-W-9.0	Groundwater	11/15/2016	10.0-15.0												
		GP45 (BNSF Boring)	MFA (MFA, 2017a)	Geoprobe	15	GP45-W-13.0	Groundwater	11/16/2016	10.0-15.0												
		GP46 (BNSF Boring)	MFA (MFA, 2017a)	Geoprobe	15	GP46-W-10.0	Groundwater	11/16/2016	10.0-15.0												
		GP47 (BNSF Boring)	MFA (MFA, 2017a)	Geoprobe	15	GP47-W-8.0	Groundwater	11/16/2016	10.0-15.0												
		GP48	MFA (MFA, 2017a)	Geoprobe	15	GP48-W-10.0	Groundwater	11/16/2016	10.0-15.0												
		GP49 (BNSF Boring)	MFA (MFA, 2017a)	Geoprobe	15	GP49-W-9.0	Groundwater	11/16/2016	8.5-13.5												
		MW01	MFA (MFA, 2015)	Geoprobe	15	MW1-S-3.1	Soil	05/07/2012	1.2-5.0		X			X	X		X				
						MW1-W-8.5	Groundwater	05/15/2012	3.5-13.5		X			X	X						
						Field Duplicate	Groundwater	05/15/2012	3.5-13.5		X			X	X						
						MW01-GW-121009	Groundwater	10/09/2012	3.5-13.5						X						
						MW01	Groundwater	04/10/2014	3.5-13.5		X										
						MWDUP	Groundwater	04/10/2014	3.5-13.5		X										
						MW01-GW-140618	Groundwater	06/18/2014	3.5-13.5												
						FD-GW-140618	Groundwater	06/18/2014	3.5-13.5												
						MW01-GW-091014	Groundwater	09/10/2014	3.5-13.5												
						FD-091014	Groundwater	09/10/2014	3.5-13.5												
						MW01-GW-121014	Groundwater	12/10/2014	3.5-13.5												

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AOC 1	Former 500-gallon waste oil AST, former 10,000-gallon oil AST, waste oil spill, puddles with sheen	MW01	MFA (MFA, 2015)	Geoprobe	15	FD-121014	Groundwater	12/10/2014	3.5-13.5												
						MW01-GW-112816	Groundwater	11/28/2016	3.5-13.5											X	
						MWDUP-GW-112816	Groundwater	11/28/2016	3.5-13.5												
						MW01-GW-042617	Groundwater	04/26/2017	3.5-13.5												
						MWDUP-GW-042617	Groundwater	04/26/2017	3.5-13.5												
		MW05	MFA (MFA, 2017b)	Geoprobe	15	MW05-S-0.8	Soil	04/24/2017	0.6 - 0.9												
						MW05-S-2.3	Soil	04/24/2017	2.0 - 2.3												
						MW05-S-5.5	Soil	04/24/2017	5.2 - 5.8												
						MW05-GW-042617	Groundwater	04/26/2017	6.0 - 11.0												
						MW05-GW-101718	Groundwater	10/17/2018	6.0 - 11.0												
		MW07	MFA (MFA, 2017b)	Geoprobe	20	MW07-S-1.2	Soil	04/25/2017	1.0 - 1.5												
						MW07-S-5.5	Soil	04/25/2017	5.2 - 5.8												
						MW07-S-6.5	Soil	04/25/2017	6.2 - 6.8												
						MW07-GW-042617	Groundwater	04/26/2017	5.0 - 20.0												
						MW07-GW-101718	Groundwater	10/17/2018	5.0 - 20.0												
		MW08	MFA (MFA, 2017b)	Geoprobe	16	MW08-GW-042617	Groundwater	04/26/2017	6.0 - 16.0												
						MW08-GW-101718	Groundwater	10/17/2018	6.0 - 16.0												
		B-1 (Whatcom & BNSF Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	15	B-1	Soil	11/15/2011	5						X		X				
						B-1	Groundwater	11/15/2011	NA												
		B-2 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	15	B-2	Soil	11/15/2011	14						X		X				
						B-2	Groundwater	11/15/2011	NA												
		SV1	MFA (MFA, 2015)	Hand Drill	--	SV01-121204	Soil Vapor	12/04/2012	NA		X		X								
		Washroom	MFA (MFA, 2015)	--	--	Ambient-Indoor-24HR-121204	Indoor Air	12/04/2012	NA	*Not analyzed*											
AOC 2	Former gasoline and heating oil underground storage tanks and former 500-gallon waste oil AST	GP16	MFA (MFA, 2015)	Geoprobe	20	GP16-W-17.5	Groundwater	12/02/2012	15.0-20.0												
		GP33	MFA (MFA, 2017a)	Geoprobe	15	GP33-S-6.0	Soil	11/14/2016	5.8-6.2							X					
						GP33-S-7.0	Soil	11/14/2016	6.8-7.2							X					
						GP33-S-8.0	Soil	11/14/2016	7.8-8.2							X					
		GP34	MFA (MFA, 2017a)	Geoprobe	15	GP34-S-2.5	Soil	11/14/2016	2.3-2.7							X					
						GP34-S-6.4	Soil	11/14/2016	6.2-6.6							X					
						GP34-S-7.5	Soil	11/14/2016	7.3-7.7							X					
						GP34-W-9.0	Groundwater	11/14/2016	8.0-13.0							X					

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AOC 2	Former gasoline and heating oil underground storage tanks and former 500-gallon waste oil AST	GP35	MFA (MFA, 2017a)	Geoprobe	15	GP35-S-5.5	Soil	11/14/2016	5.3-5.7							X					
						GP35-S-6.5	Soil	11/14/2016	6.3-6.7							X					
						GP35-S-12.0	Soil	11/14/2016	11.8-12.2							X					
		GP52	MFA (MFA, 2017a)	Geoprobe	15	GP52-W-8.0	Groundwater	11/17/2016	8.0-13.0							X					
		GP53	MFA (MFA, 2017a)	Geoprobe	15	GP53-S-1.0	Soil	11/17/2016	0.0-1.6						X						
						GP53-S-3.0	Soil	11/17/2016	2.3-3.3	*Not analyzed*											
						GP53-W-12.0	Groundwater	11/17/2016	9.5-14.5							X					
		GP54	MFA (MFA, 2017a)	Geoprobe	15	GP54-W-10.0	Groundwater	11/17/2016	9.5-14.5			X				X		X	X		
		GP74	MFA (MFA, 2017b)	Geoprobe	15	GP74-W-9.0	Groundwater	04/25/2017	5.0 - 15.0												
		GP75	MFA (MFA, 2017b)	Geoprobe	15	GP75-W-10.0	Groundwater	04/25/2017	3.0 - 13.0												
		MW02 (Decommissioned September 2016)	MFA (MFA, 2015)	Geoprobe	15	MW2-W-9	Groundwater	05/16/2012	4.0-14.0		X			X	X						
						MW02-GW-121009	Groundwater	10/09/2012	4.0-14.0												
						MW02	Groundwater	04/10/2014	4.0-14.0												
						MW02-GW-140618	Groundwater	06/18/2014	4.0-14.0												
						MW02-GW-091014	Groundwater	09/10/2014	4.0-14.0												
						MW02-GW-121014	Groundwater	12/10/2014	4.0-14.0												
		MW02R	MFA (MFA, 2017b)	Geoprobe	15	MW02R-GW-042617	Groundwater	04/26/2017	5.0 - 15.0												
						MW02R-GW-101718	Groundwater	10/17/2018	5.0 - 15.0												
		MW04	MFA (MFA, 2017b)	Geoprobe	15	MW04-GW-042617	Groundwater	04/26/2017	4.0 - 14.0												
						MW04-GW-101718	Groundwater	10/17/2018	4.0 - 14.0												
		MW06	MFA (MFA, 2017b)	Geoprobe	20	MW06-S-1.2	Soil	04/24/2017	1.0 - 1.4							X					
						MW06-S-5.2	Soil	04/24/2017	5.0 - 5.3							X					
						MW06-S-5.8	Soil	04/24/2017	5.5 - 6.0							X					
						MW06-GW-042617	Groundwater	04/26/2017	5.0 - 20.0												
						MW06-GW-101718	Groundwater	10/17/2018	5.0 - 20.0												
		B-4 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	15	B-4	Soil	11/15/2011	6												
						B-4	Groundwater	11/15/2011	NA												
		B-5 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	15	B-5	Soil	11/15/2011	8												
						B-5	Groundwater	11/15/2011	NA												

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AOC 3	Former coal sheds and possible buried object	GP05	MFA (MFA, 2015)	Geoprobe	15	GP5-S-2	Soil	05/08/2012	1.5-2.6					X	X		X				
						GP5-S-5.6	Soil	05/08/2012	5.0-6.3						X						
						GP5-W-10	Groundwater	05/08/2012	8.0-12.0						X						
		GP09	MFA (MFA, 2015)	Geoprobe	15	GP9-S-2	Soil	05/08/2012	1.1-3.0						X						
						GP9-S-5.6	Soil	05/08/2012	5.0-6.2						X						
						GP9-W-10	Groundwater	05/08/2012	8.0-12.0						X						
		GP18	MFA (MFA, 2015)	Geoprobe	5	GP18-S-1.9	Soil	12/03/2012	1.4-2.4	*Not analyzed*											
		GP19	MFA (MFA, 2015)	Geoprobe	5	GP19-S-0.7	Soil	12/03/2012	0.3-3.1						X						
		GP20	MFA (MFA, 2015)	Geoprobe	5	GP20-S-1.5	Soil	12/03/2012	1.2-1.8	*Not analyzed*											
		GP21	MFA (MFA, 2015)	Geoprobe	5	GP21-S-1.4	Soil	12/03/2012	0.6-2.1	*Not analyzed*											
		GP22	MFA (MFA, 2015)	Geoprobe	5	GP22-S-1.8	Soil	12/03/2012	1.3-2.3						X						
		GP23	MFA (MFA, 2015)	Geoprobe	5	GP23-S-0.9	Soil	12/03/2012	0.4-1.4						X						
		GP24	MFA (MFA, 2015)	Geoprobe	5	GP24-S-0.8	Soil	12/03/2012	0.3-1.2						X						
		GP25	MFA (MFA, 2015)	Geoprobe	5	GP25-S-1.1	Soil	12/03/2012	0.6-1.6						X						
		GP26	MFA (MFA, 2015)	Geoprobe	5	GP26-S-1.7	Soil	12/04/2012	1.1-2.4						X						
		GP27	MFA (MFA, 2015)	Geoprobe	5	GP27-S-1.5	Soil	12/04/2012	1.0-1.9	*Not analyzed*											
		GP28	MFA (MFA, 2015)	Geoprobe	5	GP28-S-1.5	Soil	12/04/2012	0.5-2.5	*Not analyzed*											
		GP29	MFA (MFA, 2015)	Geoprobe	5	GP29-S-1.0	Soil	12/04/2012	0.5-1.5						X						
		GP30	MFA (MFA, 2015)	Geoprobe	5	GP30-S-0.9	Soil	12/04/2012	0.5-2.1						X						
		GP31	MFA (MFA, 2015)	Geoprobe	5	GP31-S-0.9	Soil	12/04/2012	0.4-1.3						X						
		GP32	MFA (MFA, 2015)	Geoprobe	5	GP32-S-1.2	Soil	12/04/2012	0.8-1.5						X						

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AOC 3	Former coal sheds and possible buried object	GP42	MFA (MFA, 2017a)	Geoprobe	15	GP42-S-1.5	Soil	11/15/2016	1.0-2.2						X						
						GP42-S-6.0	Soil	11/15/2016	5.8-6.8						X						
						GP42-S-12.5	Soil	11/15/2016	12.0-13.0						X						
						GP42-W-10.0	Groundwater	11/15/2016	9.5-14.5						X						
		GP50	MFA (MFA, 2017a)	Geoprobe	15	GP50-S-1.5	Soil	11/16/2016	1.0-1.75						X						
						GP50-S-6.5	Soil	11/16/2016	6.3-7.3						X						
						GP50-S-13.5	Soil	11/16/2016	13.0-14.0						X						
						GP50-W-11.0	Groundwater	11/16/2016	10.0-15.0												
		GP51	MFA (MFA, 2017a)	Geoprobe	15	GP51-S-1.5	Soil	11/16/2016	1.2-1.7												
						GP51-S-3.0	Soil	11/16/2016	2.7-3.0												
						GP51-S-7.5	Soil	11/16/2016	7.1-7.8												
						GP51-S-14.5	Soil	11/16/2016	14.3-14.8												
						GP51-W-11.0	Groundwater	11/16/2016	7.0-12.0												
		GP53	MFA (MFA, 2017a)	Geoprobe	15	GP53-S-1.0	Soil	11/17/2016	0.0-1.6						X						
						GP53-S-3.0	Soil	11/17/2016	2.3-3.3												
						GP53-W-12.0	Groundwater	11/17/2016	9.5-14.5							X					
		GP55	MFA (MFA, 2017a)	Geoprobe	5	GP55-S-1.5	Soil	11/17/2016	1.0-2.0												
						GP55-S-3.0	Soil	11/17/2016	2.5-3.5												
		GP56	MFA (MFA, 2017a)	Geoprobe	1.8	GP56-S-1.5	Soil	11/17/2016	1.0-1.8												
		GP57	MFA (MFA, 2017a)	Geoprobe	5	GP57-S-1.0	Soil	11/17/2016	0.5-1.3						X						
						GP57-S-2.0	Soil	11/17/2016	1.8-2.5	*Not analyzed*											
		GP58	MFA (MFA, 2017a)	Geoprobe	5	GP58-S-1.5	Soil	11/17/2016	0.7-1.7						X						
						GP58-S-2.5	Soil	11/17/2016	2.0-3.0						X						
		GP59	MFA (MFA, 2017a)	Geoprobe	5	GP59-S-2.0	Soil	11/17/2016	1.5-2.5						X						
						GP59-S-3.0	Soil	11/17/2016	2.8-3.3												
		GP60	MFA (MFA, 2017a)	Geoprobe	5	GP60-S-2.3	Soil	11/17/2016	1.8-2.6						X						
						GP60-S-3.0	Soil	11/17/2016	2.8-3.4	*Not analyzed*											
		GP61	MFA (MFA, 2017a)	Geoprobe	5	GP61-S-1.5	Soil	11/17/2016	1.3-1.7						X						
						GP61-S-2.2	Soil	11/17/2016	2.0-2.4	*Not analyzed*											
		GP62	MFA (MFA, 2017a)	Geoprobe	5	GP62-S-1.0	Soil	11/17/2016	0.5-1.0						X						
						GP62-S-2.0	Soil	11/17/2016	1.7-2.2	*Not analyzed*											
		GP63	MFA (MFA, 2017a)	Geoprobe	5	GP63-S-1.0	Soil	11/17/2016	0.8-1.3						X						
						GP63-S-2.0	Soil	11/17/2016	1.8-2.2	*Not analyzed*											
		GP64	MFA (MFA, 2017a)	Geoprobe	5	GP64-S-1.2	Soil	11/18/2016	0.9-1.6						X						
						GP64-S-2.0	Soil	11/18/2016	1.8-2.2	*Not analyzed*											

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AOC 3	Former coal sheds and possible buried object	GP65	MFA (MFA, 2017a)	Geoprobe	5	GP65-S-1.0	Soil	11/18/2016	0.4-1.3						X						
						GP65-S-2.0	Soil	11/18/2016	1.5-2.2	*Not analyzed*											
		GP66	MFA (MFA, 2017a)	Geoprobe	5	GP66-S-2.0	Soil	11/18/2016	1.7-2.1						X						
						GP66-S-2.5	Soil	11/18/2016	2.2-2.7	*Not analyzed*											
		GP67	MFA (MFA, 2017a)	Geoprobe	5	GP67-S-2.0	Soil	11/18/2016	1.5-2.3						X						
						GP67-S-3.5	Soil	11/18/2016	2.7-3.5	*Not analyzed*											
		GP68	MFA (MFA, 2017a)	Geoprobe	5	GP68-S-1.8	Soil	11/18/2016	1.4-2.0						X						
						GP68-S-3.0	Soil	11/18/2016	2.5-3.2	*Not analyzed*											
		GP69	MFA (MFA, 2017a)	Geoprobe	5	GP69-S-1.0	Soil	11/18/2016	0.5-1.2						X						
						GP69-S-2.0	Soil	11/18/2016	1.5-2.2						X						
		GP70	MFA (MFA, 2017a)	Geoprobe	5	GP70-S-1.0	Soil	11/18/2016	0.7-1.1						X						
						GP70-S-1.5	Soil	11/18/2016	1.2-1.7						X						
		GP71	MFA (MFA, 2017a)	Geoprobe	5	GP71-S-0.3	Soil	11/18/2016	0.2-0.4	*Not analyzed*											
						GP71-S-1.0	Soil	11/18/2016	0.8-1.2	*Not analyzed*											
		GP72	MFA (MFA, 2017a)	Geoprobe	5	GP72-S-1.0	Soil	11/18/2016	0.4-1.2						X						
						GP72-S-2.0	Soil	11/18/2016	1.6-2.1	*Not analyzed*											
		GP73	MFA (MFA, 2017a)	Geoprobe	5	GP73-S-0.5	Soil	11/18/2016	0.3-0.8	*Not analyzed*											
						GP73-S-1.5	Soil	11/18/2016	1.3-1.7	*Not analyzed*											
		GP76	MFA (MFA, 2017b)	Geoprobe	15	GP76-S-1.8	Soil	04/25/2017	1.6 - 2.0			X				X					
						GP76-S-2.8	Soil	04/25/2017	2.6 - 3.0			X				X					
						GP76-S-7.0	Soil	04/25/2017	6.8 - 7.2			X				X					
						GP76-W-10.0	Groundwater	04/25/2017	5.0 - 15.0			X				X					
		GP77	MFA (MFA, 2017b)	Geoprobe	15	GP77-S-1.2	Soil	04/25/2017	1.0 - 1.4												
						GP77-S-3.0	Soil	04/25/2017	2.8 - 3.2												
						GP77-S-6.5	Soil	04/25/2017	6.3 - 6.8							X					
						GP77-W-10.0	Groundwater	04/25/2017	5.0 - 15.0							X					
		GP78	MFA (MFA, 2017b)	Geoprobe	15	GP78-S-1.0	Soil	04/25/2017	0.8 - 1.2							X					
						GP78-S-2.5	Soil	04/25/2017	2.5 - 2.8												
						GP78-S-7.0	Soil	04/25/2017	6.8 - 7.2							X					
						GP78-W-10.0	Groundwater	04/25/2017	5.0 - 15.0			X				X					
		B-8 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	10	B-8	Soil	11/15/2011	2						X						

Table
Sample and Analytical Summary
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington

Areas of Concern	Features of Environmental Concern	Location ID	Consulting Firm and Report Reference	Drilling Method	Total Depth (ft bgs)	Sample ID	Sample Matrix	Sample Date	Sample Interval (ft bgs)	Fe (dissolved)[b]	VOCs	Low-level VOCs (including EDC and MTBE)	He	SVOCs	PAHs	Naphthalenes	PCBs	EDB	n-Hexane	Conventionals	TOC
AOC 3	Former coal sheds and possible buried object	B-9 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	5	B-9	Soil	11/15/2011	2						X						
AOC 4	Former Tire Vulcanizing, Battery Servicing, and Gas and Oils	GP06	MFA (MFA, 2015)	Geoprobe	15	GP6-S-2.9	Soil	05/08/2012	2.3-3.6		X										
						GP6-W-9	Groundwater	05/08/2012	7.0-11.0		X										
		GP07	MFA (MFA, 2015)	Geoprobe	10	GP7-S-2.9	Soil	05/08/2012	2.2-3.7		X										
						GP7-W-8	Groundwater	05/08/2012	6.0-10.0		X										
		GP08	MFA (MFA, 2015)	Geoprobe	10	GP8-S-2.8	Soil	05/08/2012	2.1-3.5		X										
						GP8-W-8	Groundwater	05/08/2012	6.0-10.0		X										
		GP14	MFA (MFA, 2015)	Geoprobe	10	GP14-W-7.5	Groundwater	12/03/2012	5.0-10.0												
		GP15	MFA (MFA, 2015)	Geoprobe	10	GP15-W-7.5	Groundwater	12/03/2012	5.0-10.0												
		MW03	MFA (MFA, 2015)	Geoprobe	15	MW3-S-1.9	Soil	05/07/2012	1.5-2.3		X										
						MW3-W-9	Groundwater	05/15/2012	4.0-14.0		X										
						MW03-GW-121009	Groundwater	10/09/2012	4.0-14.0		X				X						
						FD-GW-121009	Groundwater	10/09/2012	4.0-14.0		X				X						
						MW03	Groundwater	04/10/2014	4.0-14.0								X				
						MW03-GW-140618	Groundwater	06/18/2014	4.0-14.0												
						MW03-GW-091014	Groundwater	09/10/2014	4.0-14.0												
						MW03-GW-121014	Groundwater	12/10/2014	4.0-14.0												
		B-6 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	15	B-6	Soil	11/15/2011	6												
		B-7 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	15	B-7	Soil	11/15/2011	11												
						B-7	Groundwater	11/15/2011	NA												

Table
Sample and Analytical Summary
VSF Properties, LLC, North Cascade Ford Property
Sedro-Woolley, Washington

Areas of Concern	Features of Environmental Concern	Location ID	Consulting Firm and Report Reference	Drilling Method	Total Depth (ft bgs)	Sample ID	Sample Matrix	Sample Date	Sample Interval (ft bgs)	Fe (dissolved)[b]	VOCs	Low-level VOCs (including EDC and MTBE)	He	SVOCs	PAHs	Naphthalenes	PCBs	EDB	n-Hexane	Conventionals	TOC
Other	Underground hydraulic lifts	GP02	MFA (MFA, 2015)	Geoprobe	15	GP2-S-1.1	Soil	05/06/2012	0.0-2.2												
						GP2-W-10	Groundwater	05/06/2012	5.0-15.0		X				X						
		GP03	MFA (MFA, 2015)	Geoprobe	10	GP3-S-2	Soil	05/06/2012	1.3-2.7												
		B-3 (Whatcom Boring)	Whatcom Environmental (Whatcom, 2011)	Geoprobe	15	B-3	Soil	11/15/2011	5												
	Former Automobile Shop and Oil House	GP04	MFA (MFA, 2015)	Geoprobe	12	GP4-W-10	Groundwater	05/07/2012	8.0-12.0		X				X						
		GP17	MFA (MFA, 2015)	Geoprobe	15	GP17-S-9.5	Soil	12/03/2012	8.0-11.0												
						GP17-W-12.5	Groundwater	12/03/2012	10.0-15.0												

NOTES:

MFA. 2015. Preliminary remedial investigation and feasibility study, North Cascade Ford property, Sedro-Woolley, Washington. 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. Maul Foster & Alongi, Inc., Bellingham, Washington. August 18.

Whatcom. 2011. Phase II environmental site assessment, North Cascade Ford, Inc., 116 West Ferry Street, Sedro Woolley, Washington. Whatcom Environmental Services, Bellingham, Washington. December 7.

AOC = area of concern.

As (total) = total arsenic; analyzed by USEPA Method 200.8 or 6010C.

AST = aboveground storage tank.

BNSF = Burlington Northern Santa Fe railroad.

BTEX = benzene, toluene, ethylbenzene, and xylenes.

Cd (dissolved) = dissolved cadmium; analyzed by USEPA Method 200.8 or 6010C.

Cd (total) = total cadmium; analyzed by USEPA Method 200.8 or 6010C.

Conventionals = methane, analyzed by RSK 175; sulfate, analyzed by ASTM D516-07; calcium, magnesium, manganese, analyzed by USEPA Method 6010C; chloride, analyzed by SM 4500-Cl E; nitrate, analyzed by USEPA Method 353.2; nitrite, analyzed by USEPA Method 353.2; total phosphorus, analyzed by USEPA Method 365.1; total orthophosphate, analyzed by USEPA Method 365.1; total organic carbon, analyzed by SM 5310B; and ferrous iron, analyzed in the field using visual test kit.

Cr (dissolved) = total chromium; analyzed by USEPA Method 200.8 or 6010C.

Cr (total) = total chromium; analyzed by USEPA Method 200.8 or 6010C.

DRO and ORO = diesel- and oil-range organics; analyzed by Northwest Total Petroleum Hydrocarbons Method.

EDB = 1,2-dibromoethane; analyzed by USEPA Method 8011.

EDC = 1,2-dichloroethane; analyzed by USEPA Method 8260C.

EPH = extractable petroleum hydrocarbons; analyzed by Northwest Total Petroleum Hydrocarbons Method.

Fe (dissolved) = dissolved iron; analyzed by USEPA Method 6010C.

ft bgs = feet below ground surface.

GRO = gasoline-range hydrocarbons; analyzed by Northwest Total Petroleum Hydrocarbons Method.

HCID = hydrocarbon identification by Northwest Total Petroleum Hydrocarbons Method.

He = helium; analyzed by modified ASTM D-1946.

Hg (total) = mercury; analyzed by USEPA Method SW7471A.

Metals (dissolved) = dissolved metals (arsenic, barium, cadmium, chromium, lead, selenium, and silver); analyzed by USEPA Method 200.8 or 6010C; mercury by USEPA Method SW7471A.

Metals (total) = total metals (arsenic, barium, cadmium, chromium, lead, selenium, and silver); analyzed by USEPA Method 200.8 or 6010C; mercury by USEPA Method SW7471A.

MFA = Maul Foster & Alongi, Inc.

MTBE = methyl-tert-butylether; analyzed by USEPA Method 8260C.

NA = not applicable.

Ni (dissolved) = total nickel; analyzed by USEPA Method 200.8 or 6010C.

Ni (total) = total nickel; analyzed by USEPA Method 200.8 or 6010C.

PAH = polycyclic aromatic hydrocarbon; analyzed by USEPA Method SW8270D selective ion monitoring.

Pb (dissolved) = dissolved lead; analyzed by USEPA Method 200.8.

Pb (total) = total lead; analyzed by USEPA Method 200.8 or 6010C.

PCB = polychlorinated biphenyl; analyzed by USEPA Method SW8082.

SVOC = semivolatile organic compound; analyzed by USEPA Method SW8270D.

TOC = total organic carbon; analyzed by USEPA SW9060M.

USEPA = U.S. Environmental Protection Agency.

VOC = volatile organic compound—full list; analyzed by USEPA Method SW8260C (soil and groundwater samples) and selected list by USEPA Method TO-15 low-level (vapor sample).

VPH = volatile petroleum hydrocarbons; analyzed by Northwest Total Petroleum Hydrocarbons Method.

Zn (dissolved) = total zinc; analyzed by USEPA Method 200.8 or 6010C.

Zn (total) = total zinc; analyzed by USEPA Method 200.8 or 6010C.

[a]Samples were field-filtered using in-line 0.45-micron filters and were preserved with nitric acid.

[b]Samples were filtered and preserved at the laboratory. Because of the delay between sample collection and filtering/preservation, sample results are considered estimates.

ATTACHMENT B

CONCEPTUAL SITE MODEL

MEMORANDUM

To: Mike Warfel, Washington State Department of Ecology Date: November 21, 2018

From: Jim Maul, LHG Project: 0747.01.09

RE: Revised Conceptual Site Model
North Cascade Ford site, 116 West Ferry Street, Sedro-Woolley, Washington
FSID: 58313566, CSID: 12075, VCP No.: NW3031

On behalf of VSF Properties, LLC (VSF), Maul Foster & Alongi, Inc. (MFA) has prepared this memorandum to update the conceptual site model (CSM) presented in the preliminary remedial investigation and feasibility study (RI/FS) for the North Cascade Ford property at 116 West Ferry Street in Sedro-Woolley, Washington (the Property) (see Figure 1) (MFA, 2015). This memorandum synthesizes relevant updates to the CSM for the Property by incorporating information gained during data gap investigations performed since completion of the preliminary RI/FS.

BACKGROUND

The Property and an adjacent property to the north that is owned by the Burlington Northern Santa Fe Railway Company (BNSF) are included in the North Cascade Ford site (the Site). The Site is currently enrolled in the Washington State Department of Ecology's Voluntary Cleanup Program. Given the restricted access to the BNSF property, VSF is now pursuing a property-specific No Further Action (NFA) opinion. This memorandum has been prepared to fulfill the reporting requirements for a property-specific NFA-likely opinion for the Property issuance of such an opinion.

In 2015, MFA prepared a preliminary RI/FS for the Property and developed a preliminary CSM using the information obtained during previous investigations at the Site (MFA, 2015). Two data gap investigations conducted at the Site (MFA, 2017a,b) since completion of the preliminary RI/FS provided additional information that has enabled refinement of the CSM for the Property.

CONCEPTUAL SITE MODEL

Components of the CSM that have been updated based on information gained since completion of the preliminary RI/FS are discussed below. The CSM for the Property is provided as Figure 2.

Source Characterization

Chemical detections indicate that multiple hazardous-substance releases have occurred at the Property. Chemicals of interest were detected in association with three areas of concern (i.e., AOCs 1 through 3), as discussed in the most recent data gap investigation report (MFA, 2017b).

Fate and Transport of Contaminants

Since completion of the preliminary RI/FS, additional information on the fate and transport of chemicals on the Property has been gained through the installation and sampling of additional groundwater monitoring wells. Additional wells were installed at the Property to better understand groundwater flow direction and the interaction between shallow and deep groundwater at the Property. The monitoring well network has been expanded from three to eight monitoring wells since completion of the preliminary RI/FS (see Figure 1).

Previous monitoring events indicated a consistent southeast groundwater flow (MFA, 2015). However, water levels measured from the expanded monitoring well network suggested a groundwater was present in the central portion of the Property, beneath the auto sales and service building (see Figures 5-1 and 5-2 of MFA, 2017b). Therefore, to better assess the underlying lithology and potential influences on localized groundwater flow at the Property, two cross sections were prepared to illustrate subsurface conditions along two perpendicular profiles at the Property (see Figures 3 and 4). The cross-sectional transects are aligned from west to east (transect A-A') and north to south (transect B-B') (see Figure 1). Features shown on the cross sections include geologic units, well screens, water levels observed during well installation, and the inferred water table measured from the well network on May 31, 2017 (see Figures 3 and 4). Based on the information provided in the cross sections, silt lenses appear at varying depths and are interbedded in a thick unit of silty sand to poorly graded sand. These silt lenses appear to affect the top of the groundwater table at the Property. The intermittent presence of the silt units interacting with the relatively higher permeability silty sand to poorly graded sand and the top of the water table, as illustrated on the cross sections, suggests that localized variations in groundwater flow are the result of differing, localized infiltration rates and groundwater ponding. The lithology presented in the cross sections confirms that a dominant groundwater flow pattern at the Property remains uncertain and, instead, supports the presence of localized flow variations resulting from varying transmissivity of lithology beneath the Property. Therefore, localized groundwater flow variations present at the Property may result in dissolved-phase contamination movement throughout the subsurface in varying localized directions.

The cross sections also indicate that there is no contiguous confining unit that creates distinct shallow and deep water-bearing zones but, rather, a single, shallow water-bearing zone comprising intermittent, low-transmissivity silt units (see Figures 3 and 4).

The other fate and transport mechanisms discussed in the preliminary RI/FS have not changed and are retained for the Property (MFA, 2015).

Terrestrial Ecological Evaluation

A simplified terrestrial ecological evaluation (TEE) presented for the Property in the preliminary RI/FS determined that the Site does not pose a substantial threat to potential ecological receptors (MFA, 2015). Taking into consideration information gained through completion of the data gap investigations, the TEE exclusion remains applicable for the Property. Therefore, soil analytical results have not been compared to ecological screening values.

Potential Receptors and Exposure Pathways

A beneficial water use determination was conducted during the preliminary RI/FS (MFA, 2015). As discussed above, based on regional topography and on hydrogeological conditions observed on the Property, the following surface water and shallow groundwater conditions were revised for the Property (the region of study):

> Localized groundwater flow variations influence shallow groundwater; there is no dominant groundwater flow direction.

The remaining components of the beneficial water use determination presented in the preliminary RI/FS are unchanged.

There has been no change to the receptors and the potentially complete exposure pathways at the Property that were presented in the preliminary RI/FS (MFA, 2015).

Cleanup Level Development

Potentially complete exposure pathways have not changed, nor have the MTCA cleanup levels (CULs) relied on for the Property, since the completion of the preliminary RI/FS (MFA, 2015). Therefore, the CUL development presented in the preliminary RI/FS is retained for the Property.

REFERENCES

MFA. 2015. Preliminary remedial investigation and feasibility study, North Cascade Ford property, Sedro-Woolley, Washington. 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 site, Sedro-Woolley, Washington. Maul Foster & Alongi, Inc., Bellingham, Washington. August 18.

ATTACHMENTS:

Figure 1—Cross-Section Transects
Figure 2—Conceptual Site Model
Figure 3—Geologic Cross-Section A-A'
Figure 4—Geologic Cross-Section B-B'

cc: Larry Setchell, Helsell Fetterman, LLP
Frank Chmelik and Holly Stafford; Chmelik, Sitkin & Davis, PS

ATTACHMENTS

Figure 1
Cross Section Transects

North Cascade Ford Property
116 West Ferry Street
Sedro-Woolley, Washington

Legend

- UST Removal Excavation Area
- Hoist Removal Excavation Area
- Property Parcel
- BNSF-owned Parcel
- Sub-slab Soil Vapor Probe
- Monitoring Well Location
- Monitoring Well Location (decommissioned)
- Phase II ESA Boring Location
- Phase II ESA Boring Location (soil removed)
- MFA Boring, Groundwater
- MFA Boring, Soil
- MFA Boring, Soil and Groundwater
- Cross Section Transect

NOTES:
AOC boundaries represent the extent of investigation locations included in the assessment of environmental impacts associated with potential releases within each AOC and are not necessarily representative of the extent of contamination associated with each AOC.
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.
AST = aboveground storage tank.
BNSF = Burlington Northern Santa Fe Railway.
ESA = environmental site assessment.
MFA = Maul Foster & Alongi, Inc.
Property = North Cascade Ford Property
UST = underground storage tank.

0 31.5 63
Feet

Source: Aerial photograph obtained from ArcGIS Online. Property parcel boundaries surveyed by Wilson Engineering, LLC. Adjacent parcel boundaries obtained from Skagit County.

AOC 1: Auto Repair Shop
AOC 2: Former USTs
AOC 3: Former Coal Storage Sheds/Possible Fill Area

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Print Date: 11/15/2018
Approved By: H. Good
Produced By: alxby
Project: 0747.01.07

Figure 2
Conceptual Site Model
North Cascade Ford Property
116 West Ferry Street, Sedro-Woolley, Washington

Primary Sources	Primary Release Mechanism	Secondary Sources	Secondary Release Mechanism	Tertiary Source	Point of Potential Contact	Exposure Route	Current and Potential Future Receptors				
							Construction Workers	Occupational Workers	Off-Property Residents	Recreational Fishers	Aquatic Ecological Receptors
Releases to Surface or Subsurface Soil					Soil	Incidental Ingestion Dermal Contact Inhalation (dust and vapors)	✓ ✓ ✓	✓ ✓ ✓	∅ ∅ ✓	∅ ∅ ∅	∅ ∅ ∅
	Volatilization				Indoor air	Inhalation	∅	I	I	∅	∅
			Volatilization		Outdoor air	Inhalation	I	I	I	∅	∅
	Leaching	Groundwater			Groundwater	Incidental Ingestion Dermal Contact Inhalation (vapors)	✓ ✓ ✓	I I I	I I I	∅ ∅ ∅	∅ ∅ ∅
Releases to Groundwater			Discharge	Brickyard Creek	Surface Water and Sediment	Incidental Ingestion Dermal Contact	∅ ∅	∅ ∅	∅ ∅	I I	I I
					Fish Tissue (via bio-accumulation)	Ingestion	∅	∅	∅	I	I

Notes:

Primary pathway →
Potential pathway - - →
Potentially Complete exposure route ✓
Incomplete exposure route ∅
Insignificant exposure route I

Figure 3
Geologic Cross-Section A-A'
North Cascade Ford Property
116 West Ferry Street, Sedro-Woolley, Washington

A (West)

A' (East)

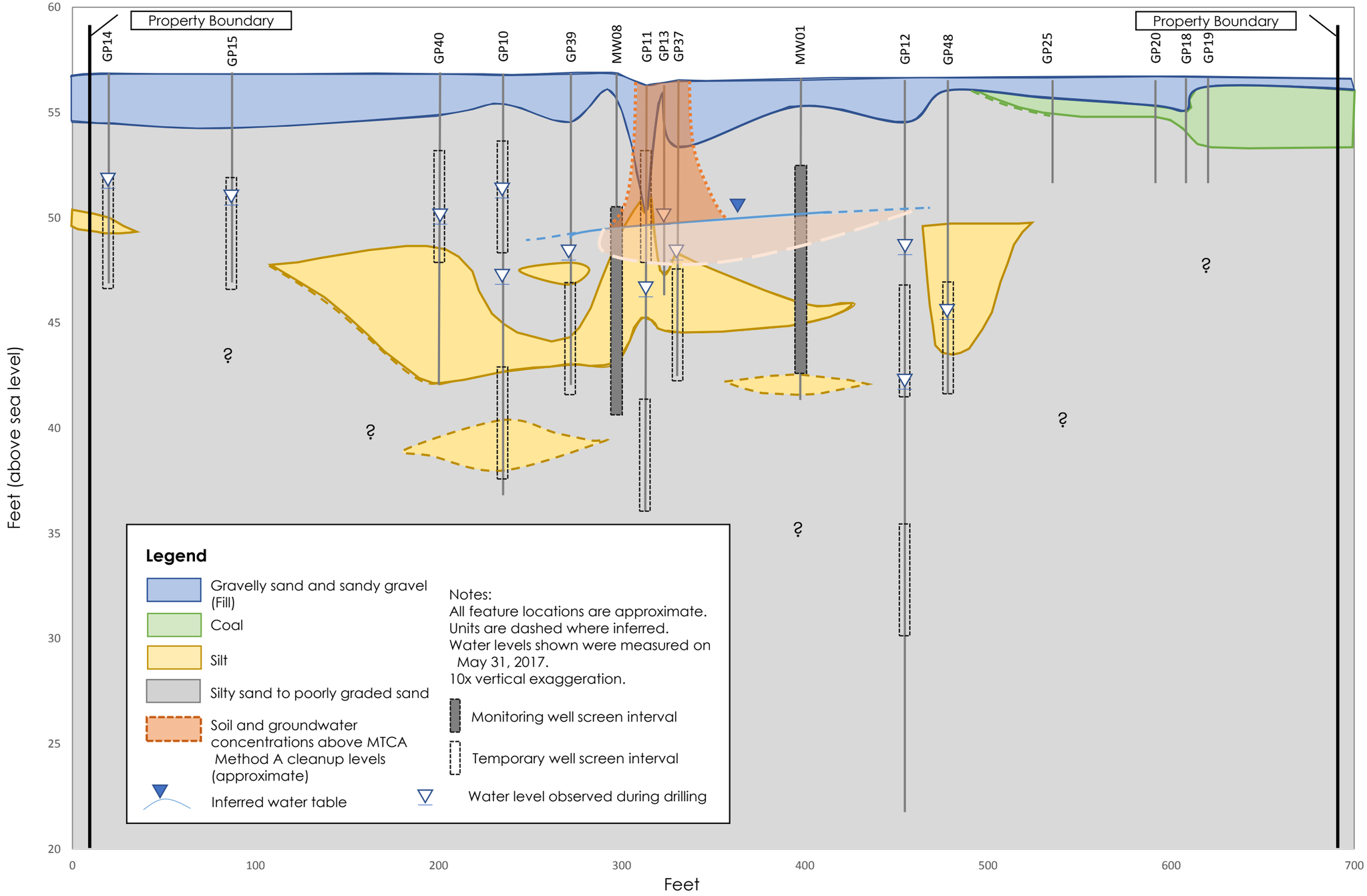
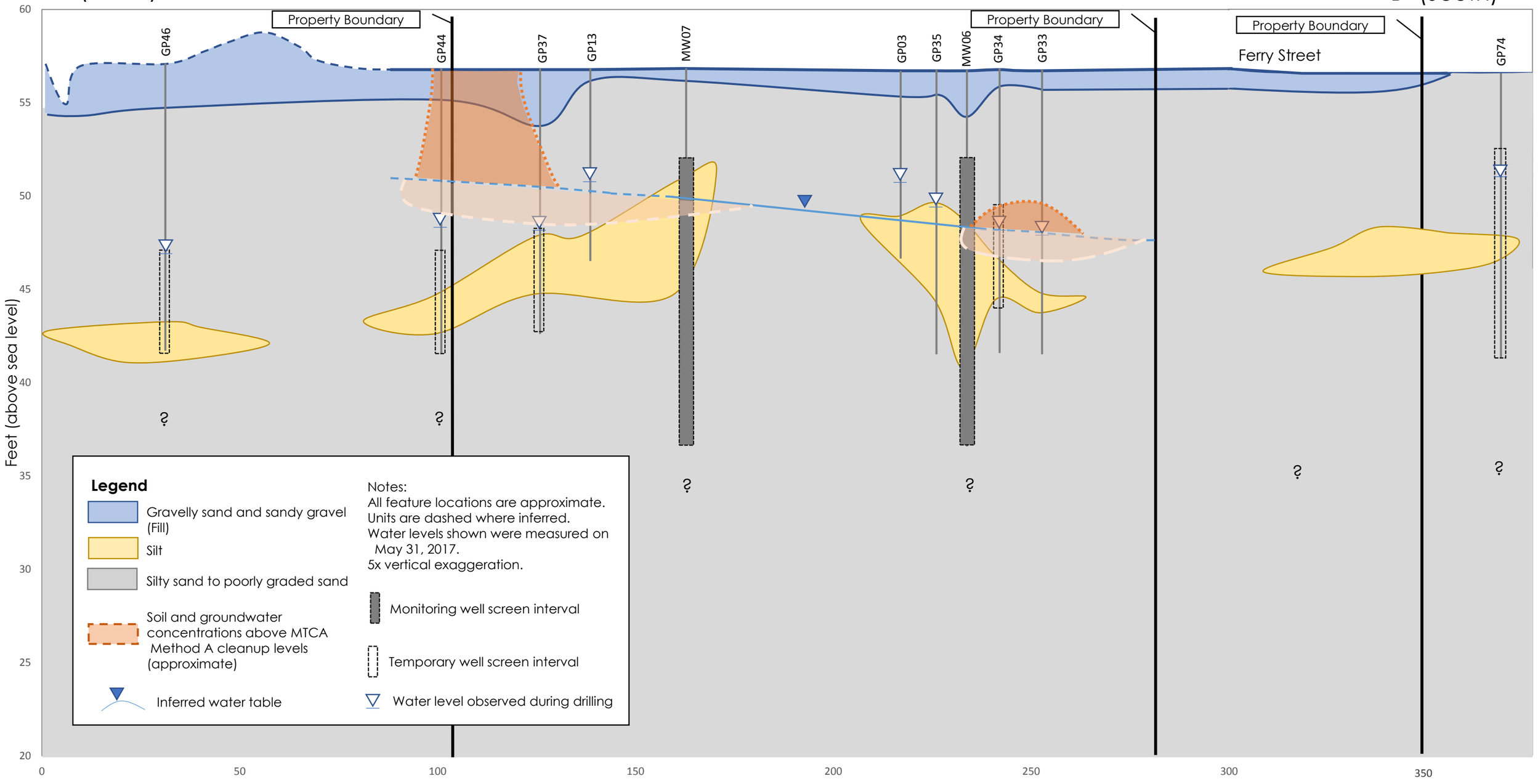


Figure 4
Geologic Cross-Section B-B'
North Cascade Ford Property
116 West Ferry Street, Sedro-Woolley, Washington



ATTACHMENT C

BNSF COMMUNICATIONS

MAUL FOSTER ALONGI
1329 North State Street, Suite 301 | Bellingham, WA 98225 | 360 594 6262 | www.maulfoster.com

May 22, 2018
Project No. 0747.01.09

DELIVERY VIA EMAIL
Matt Graham
Environmental Project Controls Director
BNSF Railway Company
matt.graham@bnsf.com

DELIVERY VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED
Blake Jung
Jones Lang LaSalle Brokerage, Inc.
4300 Amon Carter Boulevard, Suite 100
Fort Worth, Texas 76155

DELIVERY VIA EMAIL
Brooke Gaede
General Attorney, Environmental Department
BNSF Railway Company
brook.gaede@bnsf.com

Re: Authorization to Access BNSF Railway Property
Property Adjoining Skagit County Parcel Nos. P77410, P77411, P77412, P77451, P77452, and P109239. Sedro-Woolley, Washington

Dear Mr. Graham, Ms. Gaede, and Mr. Jung:

On behalf of VSF Properties, LLC, Maul Foster & Alongi, Inc. (MFA) requests that BNSF Railway Company (BNSF) authorize access to BNSF-owned property to conduct an environmental-related remedial action associated with the North Cascade Ford cleanup site (the Site) (Washington State Department of Ecology [Ecology] facility site identification number 58313566 and cleanup site identification number 12075). The Site includes Skagit County Parcel Nos. P77410, P77411, P77412, P77451, P77452, and P109239, and extends to the north of those parcels onto BNSF-owned property (see attached figure).

Through prior authorization granted to MFA (Tracking No. 13-48381 dated December 7, 2015) MFA confirmed the presence of contamination within subsurface soil and groundwater extending onto BNSF-owned property associated with Site area of concern (AOC) 1 (Auto Repair Shop). Based upon the investigation conducted at the Site associated with the prior access agreement, MFA evaluated viable remedial action alternatives to address contamination associated with AOC 1; the preferred alternative is contaminated soil excavation and off-site disposal with in situ bioremediation-amended backfill.

VSF Properties, LLC desires to proceed with implementation of the preferred remedial action; however, to comprehensively complete the action, authorization to access and conduct the remedial action on BNSF-owned property is necessary. Therefore, **MFA requests BNSF authorization to access and conduct remedial actions on the subject BNSF-owned**

property. To allow for timely completion of the remedial action, **MFA requests BNSF provide formal response to this letter within 14 days of receipt.** MFA remains ready to provide any design documents and pay any permit fees necessary to assist BNSF and its agents in providing an expeditious response to this request.

If you have any questions, please feel free to contact Heather Good at 360-594-6257 or by email at hgood@maulfoster.com.

Sincerely,

Maul Foster & Alongi, Inc.

Heather Good, LHG
Senior Hydrogeologist

James Maul, LHG
Principal Hydrogeologist

Attachments: Figure

cc: Frank Chmelik, Chmelik Sitkin & Davis
Holly Stafford, Chmelik Sitkin & Davis
Larry Setchell, Helsell Fetterman
Tom Lane, Dwayne Lane's North Cascade Ford
Candy Marine, Dwayne Lane's North Cascade Ford

FIGURE

Figure
BNSF Property Sample Locations

North Cascade Ford Property
Sedro-Woolley, Washington

Legend

- Boring, Groundwater
- Boring, Soil and Groundwater
- BNSF Rail Line (Approximate)
- BNSF-owned Parcels
- North Cascade Ford Property Parcel
- Skagit County Parcel
- Areas within 25 feet of BNSF rail line
- Areas within 50 feet of BNSF rail line

Notes:
1. BNSF = Burlington Northern Santa Fe Railway.

0 40 80
Feet

Source: Aerial photograph (2015) obtained from Skagit County iMap. Parcel boundaries obtained from Skagit County.

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Print Date: 5/25/2017
Approved By: H. Good
Produced By: cwise
Project: 0747.01.06

ATTACHMENT D

VCP OPINION FORM

DEPARTMENT OF ECOLOGY
State of Washington

Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

REQUEST FOR OPINION FORM

Use this form to request a written opinion on your planned or completed independent remedial action under the Voluntary Cleanup Program (VCP). Attach to this form the plans or reports documenting the remedial action. Please submit only one form for each request.

Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are requesting a written opinion under the VCP. This information may be found on the VCP Agreement.

Facility/Site Name: North Cascade Ford

Facility/Site Address: 116 West Ferry Street

Facility/Site No: 58313566	VCP Project No.: NW3031

Step 2: REQUEST WRITTEN OPINION ON PLAN OR REPORT

What type of independent remedial action plan or report are you submitting to Ecology for review under the VCP? Please check all that apply.

- ☐ Remedial investigation plan
- ☐ Remedial investigation report
- ☒ Feasibility study report
- ☒ Property cleanup* plan (* cleanup of one or more parcels located within the Site)
- ☐ Property cleanup* report
- ☐ Site cleanup plan
- ☐ Site cleanup report
- ☐ Other – please specify:

Do you want Ecology to provide you with a written opinion on the planned or completed independent remedial action?

☒ Yes ☐ No

Please note that Ecology's opinion will be limited to:

- Whether the planned or completed remedial action at the site meets the substantive requirements of the Model Toxics Control Act (MTCA), and/or
- Whether further remedial action is necessary at the site under MTCA.

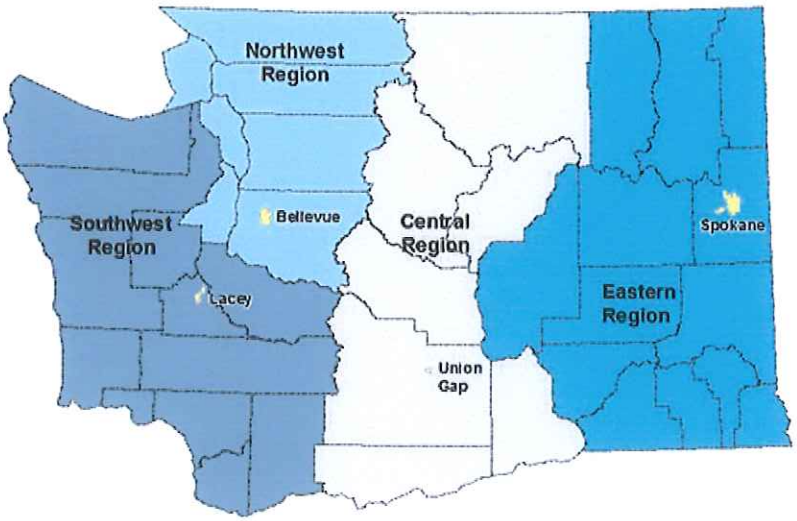
Step 3: REPRESENTATIONS AND SIGNATURE

The undersigned representative of the Customer hereby certifies that he or she is fully authorized to request services from Ecology under the Agreement for this VCP Project.

Name: Dan Sims		Title: President
Signature: Dan Sims		Date: 11-28-18
Organization: VSF Properties, LLC		
Mailing address: 1615 S. Goldenrod Rd.		
City: Burlington	State: WA	Zip code: 98223
Phone: 360-757-7467	Fax:	E-mail:

Step 4: SUBMITTAL

Please mail your completed form and the independent remedial action plan or report that you are requesting Ecology review to the site manager Ecology assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



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

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