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DEPARTMENT OF ECOLOGY
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April 20, 2016

Mr. Kris Peterson
VSF Properties
1615 South Goldenrod Road
Burlington, WA 98223

Re: Opinion Pursuant to WAC 173-340-515(5) on Proposed Remedial Action for the Following Hazardous Waste Site:

- **Site Name:** North Cascade Ford
- **Address:** 116 Ferry Street, Sedro-Woolley, WA 98284
- **Facility/Site No.:** 58313566
- **VCP No.:** NW3031
- **Cleanup Site ID No.:** 12075

Dear Mr. Peterson:

Thank you for submitting documents regarding your proposed remedial action for the North Cascade Ford (Site) for review by the Washington State Department of Ecology (Ecology) under the Voluntary Cleanup Program (VCP). Ecology appreciates your initiative in pursuing this administrative option for cleaning up hazardous waste sites under the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

This letter constitutes an advisory opinion regarding a review of submitted documents/reports pursuant to requirements of MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following releases at the Site:

- Petroleum hydrocarbons in the gasoline-, diesel- and oil-ranges (TPH-g, TPH-d and TPH-o) into the soil and ground water
- Benzene, toluene, ethylbenzene and xylenes into the soil and ground water
- Polychlorinated biphenyls (PCBs) into the soil
- Methylene chloride into the soil
- Polycyclic aromatic hydrocarbons (PAHs) into the soil and ground water

- Arsenic, lead and cadmium into the soil
- Chlorobenzene and 1,4-dichlorobenzene into the ground water
- 1,2,3-trichloropropane into the ground water

Ecology is providing this advisory opinion under the specific authority of RCW 70.105D.030(1)(i) and WAC 173-340-515(5).

This opinion does not resolve a person's liability to the state under MTCA or protect a person from contribution claims by third parties for matters addressed by the opinion. The state does not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). The opinion is advisory only and not binding on Ecology.

Ecology's Toxics Cleanup Program has reviewed the following information regarding your proposed remedial actions:

1. Maul Foster & Alongi, Inc., *Preliminary Remedial Investigation and Feasibility Study*, December 9, 2015.

The report listed above will be kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. Appointments can be made by calling the NWRO resource contact at (425) 649-7235 or sending an e-mail to nwro_public_request@ecy.wa.gov.

The Site is more particularly described in Enclosure A to this letter, which includes a detailed Site diagram. The description of the Site is based solely on the information contained in the documents listed above.

Based on a review of supporting documentation listed above, pursuant to **requirements contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the release(s) at the Site, Ecology has determined:**

- Ecology currently does not have sufficient data on the nature and extent of contamination to determine the appropriateness of the proposed cleanup alternatives at this time. Once Site characterization is complete and sufficient data is presented to demonstrate that the selected cleanup alternative is appropriate for Site conditions, Ecology may consider issuing a "No Further Action Likely" opinion letter.

- Ecology agrees data provided to date suggests that an approach that includes an active cleanup alternative (such as in-situ bioremediation and/or excavation) will be necessary to achieve cleanup levels in a reasonable restoration time frame. A passive approach, such as monitored natural attenuation, would likely result in too long of a restoration time frame and not be effective for all contaminants of concern to be a viable cleanup option for this Site. Ecology agrees that to assess in-situ remediation options, it will be necessary to delineate the extent of contamination of each media, characterization of subsurface geochemical environment and a pilot-scale study to collect information needed to perform a full-scale design (such as appropriate injection well/point spacing, injection flow rates, injectant concentrations, radius of influence and injection volumes). It should be noted that due to the potential for concentrations of contaminants to rebound following in-situ remediation, Ecology requires a minimum of eight consecutive quarters of ground water monitoring to determine compliance with MTCA cleanup levels.

- The Preliminary Remedial Investigation states that cleanup levels for protection of the leaching pathway are not recommended as potential cleanup targets for soil on the Property and that the point of compliance for soil is based only on the direct contact pathway. Soil cleanup levels must be protective of the leaching to ground water pathway, not just direct contact. Therefore, the point of compliance for soil is throughout the Site.

- Ecology agrees that based on the data collected to date and the distance from the Site to the nearest surface water body (approximately 7,000 feet), ground water cleanup levels that are protective of the ground water to surface water pathway are likely not necessary for this Site.

- The identified releases need to be delineated prior to establishing the locations of conditional points of compliance for ground water. Conditional points of compliance must be as close to the source of contamination as practicable (therefore, it may be appropriate for releases associated with Area of Concern (AOC) 2 but not AOC 1). The extent of contamination must be defined prior to determining if the Property line is an appropriate point of compliance.

- Although characterization of the nature and extent of soil and ground water in AOC 1 is not sufficient to determine the appropriateness of the selected cleanup (excavation with bioremediation-amended backfill and off-Site disposal), based on the soil and groundwater contamination identified to the north of the parcel boundary Ecology agrees a cleanup alternative which extends north of the Property boundary (as proposed in **Figure 8-1**) would be necessary to obtain a Property-specific No Further Action determination from Ecology. Soil and ground water data collected to date have confirmed the impacted area extends north of the Property boundary in the upgradient direction.

- Ecology recommends installing a permanent monitoring well down gradient of ground water contamination above MTCA identified in GP-1 and GP-11. Proposed borings 3 and 4 will further delineate the TPH-d and TPH-g plume. However, a permanent down gradient ground water monitoring well is recommended to monitor potential contaminant migration and assess plume stability.

- The former gasoline UST located in the southeast corner of the former automobile shop and oil house needs to be assessed. Soil borings B4 and B5 located south of the former gasoline UST identified TPH-g in soil at depths of 6 and 8 feet respectively at concentrations exceeding MTCA Method A cleanup levels (270 and 470 mg/kg respectively). These samples were determined to be not representative as the soil was saturated. However, the soil data in conjunction with TPH-g concentrations in ground water at both locations (detected but below cleanup levels) confirm that a gasoline release occurred. According to the ground water elevation contour maps provided, these locations would be cross-gradient. As proposed, boring locations 15, 16 and 17 will likely further delineate the extent of the TPH-g release. However, a boring should also be sited as close to the likely source of TPH-g (the former gasoline UST) as possible. A sufficient number of soil and ground water samples need to be collected to characterize the extent of contamination directly down gradient of this closed-in-place UST.

- The Terrestrial Ecological Evaluation (TEE) needs to be revised to include a figure illustrating a 500-foot radius around the Site. The park located approximately 250 feet west of the westernmost part of the Site should be included as part of the TEE.

This opinion does not represent a determination by Ecology that a proposed remedial action will be sufficient to characterize and address the specified contamination at the Site or that no further remedial action will be required at the Site upon completion of the proposed remedial action. To obtain either of these opinions, you must submit appropriate documentation to Ecology and request such an opinion under the VCP. **This letter also does not provide an opinion regarding the sufficiency of any other remedial action proposed for or conducted at the Site.**

Please note that this opinion is based solely on the information contained in the documents listed above. Therefore, if any of the information contained in those documents is materially false or misleading, then this opinion will automatically be rendered null and void.

The state, Ecology, and its officers and employees make no guarantees or assurances by providing this opinion, and no cause of action against the state, Ecology, its officers or employees may arise from any act or omission in providing this opinion.

Again, Ecology appreciates your initiative in conducting independent remedial action and requesting technical consultation under the VCP. As the cleanup of the Site progresses, you may

request additional consultative services under the VCP, including assistance in identifying applicable regulatory requirements and opinions regarding whether remedial actions proposed for or conducted at the Site meet those requirements.

If you have any questions regarding this opinion, please contact me at (425) 649-7097 or e-mail at diane.escobedo@ecy.wa.gov.

Sincerely,

Diane Escobedo
Site Manager
Toxics Cleanup Program

Enclosure: A – Description and Diagrams of the Site

cc: Heather Good, Maul Foster and Alongi
Sonia Fernandez, Ecology
Michael Warfel, Ecology

Site Description

This section provides Ecology's understanding and interpretation of Site conditions, and is the basis for the opinions expressed in the body of the letter.

Site: The Site is defined by the release of petroleum hydrocarbons in the gasoline-, diesel- and oil-ranges (TPH-g, TPH-d and TPH-o), benzene, toluene, ethylbenzene, xylenes (BTEX), polychlorinated biphenyls (PCBs), methylene chloride, polycyclic aromatic hydrocarbons (PAHs), arsenic, lead, cadmium to soil. The Site is also defined as the release of TPH-g, TPH-d, TPH-o, BTEX, PAHs, chlorobenzene, 1,4-dichlorobenzene and 1,2,3-trichloropropane to ground water. The releases are associated with a former steam and fuel-powered electric plant, former and current auto repair shops, battery servicing and tire vulcanizing facility, coal-storage sheds associated with former train depots and gasoline, heating oil and waste oil aboveground and underground storage tanks (AST and UST). The Site is located at 100, 115, and 116 West Ferry Street in Sedro-Woolley, WA (Property).

Area and Property Description: The Property corresponds to Skagit County parcel numbers P77410, P77411, P77412, P77451, P77452, P109239, P109239, P77493 and P77492 which is a total of approximately 3.5 acres in size. The Property is bisected by West Ferry Street. The Property is occupied by two buildings, one on the north side of West Ferry Street and one on the south side of West Ferry Street. The Property is bounded by BNSF Railway to the north, Eastern Avenue and a True Value hardware store to the east; Napa Auto Parts, and a Chevron gas station to the west on the north side of West Ferry Street and residences and Rita Street to the west on the south side of West Ferry Street. Residential homes and Woodword Street are located to the south. Land use surrounding the Site includes commercial businesses and residential homes.

Property History and Current Use: The first known development of the Property was primarily for residences in the early 1900s through the 1950s. The 1907 Sanborn map identifies an electric plant, powered by steam and fuel oil located on the northern portion of P77451, which was replaced by a woodshed and wood yard in the 1920s. By 1925, an automobile shop with an oil house was historically located in the same location as the current automobile dealership building. Two abandoned floor drains and one operational floor drain are located in the main building. The abandoned floor drains were plugged in approximately 1975. A hospital was located on parcel P77412 during the early 1900s and 1910s. Prior to construction of the dealership building two residential homes and a feed mill and storage facility (Lentz Supply) was located on parcel P77452 from the early 1900s to at least the 1950s. A hotel was located on parcel P77492 from the early 1900s to at least the 1950s. By 1925, a battery servicing and tire vulcanizing facility with oil and gas storage was formerly located on the southern portion of parcel P77410. An operational floor drain is located in the car washing room of the automobile dealership building and is connected to a catch basin in the main exterior lot. A railroad depot was located on the northern half of parcel P109239 from the early 1900s to at least the 1950s. A second depot was located on parcel P77493 during the 1920s, which became a veterinary office and a fuel and transfer station by the 1940s and 1950s. The automobile dealership and repair facility currently occupy the building on the north side of West Ferry Street (the building is primarily on parcel P77451). The original dealership building was built in approximately 1949. Three additions to the building constructed in the early to mid-

1960s are still present today. The office building located on the south side of West Ferry Street (primarily on parcel P77493) was constructed in 2007.

Contaminant Source and History: A 200-gallon heating oil UST was located on the east side of the building approximately 40 feet in front of the entrance door to the showroom. A gasoline UST was located in front of the garage door on the south side. The gasoline UST was closed-in-place in the 1960s however no soil or ground water samples were collected at the time of decommissioning. The heating oil and gasoline USTs were both located in the southeastern portion of parcel P77451. A 10,000-gallon AST oil tank was historically located on the north central portion of parcel P77451. Coal sheds were located on eastern parcels P109239 and P77493. Coal was likely mixed with soil in association with historical operations at the train depots and later covered with fill material.

Physiographic Setting: The Site is located within the Puget Sound Lowland physiographic province, which is a north-south oriented topographic depression bounded by the Olympic mountains to the west and the Cascade range to the east. Sedro Woolley is located in a two mile wide section of the Skagit Valley, a lowland delta area of the Skagit River. The Property is at an elevation of approximately 56 feet above mean sea level.

Surface/Storm Water System: Brickyard Creek is the nearest surface water located approximately 2,800 feet north of the Property. The Skagit River is the nearest down gradient surface water located approximately 7,000 feet south of the Property. Pavement surfaces that are sloped towards the catch basins.

Ecological Setting: The Property is located in a mixed-use commercial and residential area primarily covered with buildings, asphalt and concrete with strips of gravel cover on either side of the rail line and along the eastern side of the Property. Harry Osborne Park and Caboose, a small park (approximately 260 feet by 65 feet) with a grass lawn, a tree and manicured plant beds, is located approximately 225 feet west of the westernmost parcel. Small yards with manicured lawns and trees are located to the west of the Property on the south side of Ferry Street. A vacant approximately 1.5-acre triangular shaped dirt lot is located northeast of the Property.

Geology: Approximately 1.5 feet of gravelly sand fill was observed under the asphalt pavement, concrete building foundation and gravel driveways. Underlying the fill and in areas where fill was not encountered sand with varying amounts of silt extended to approximately 10 feet below ground surface (bgs). At approximately 10 feet bgs, a well-sorted sand with a trace of woody debris and gravel extended down to 25 feet bgs. A poorly sorted sand extended to approximately the maximum explored depth of 32.9 feet bgs. An approximately two foot thick lens of clay and silt was encountered in some locations at approximately 15 feet bgs. Beneath the former coal storage area, a two to five foot-thick layer of coal-like material and gravelly sand with coal fragments was encountered.

Ground Water: Ground water was typically encountered between approximately five and 10 feet bgs. Ground water flow is primarily to the southeast (with the exception of an October 2012 event where flow was to the northeast).

Water Supply: The primary water source for the city of Sedro Woolley is the Judy Reservoir, which collects water from the Skagit River and multiple tributary streams. Three ground water

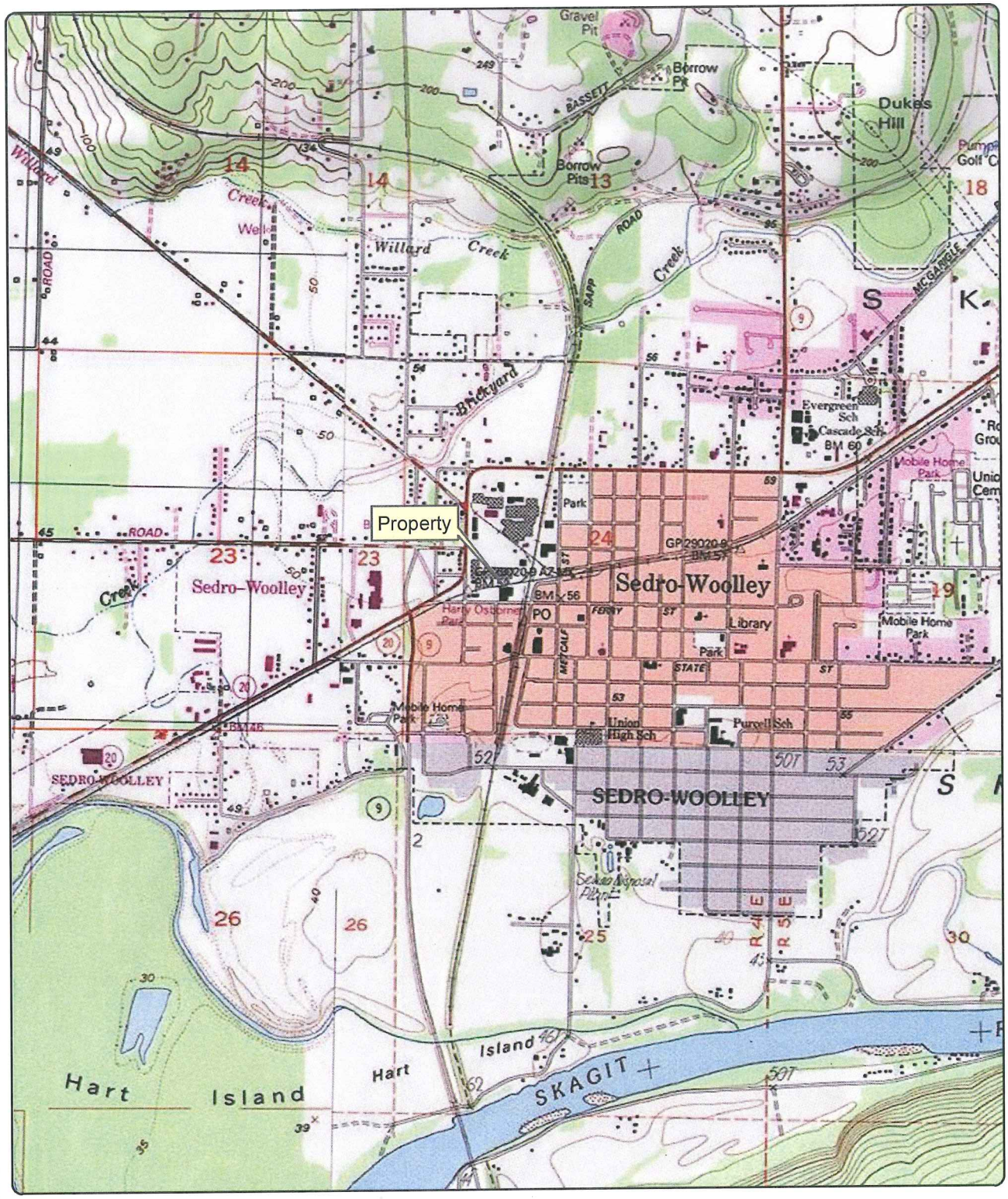
wells are located within a half-mile radius of the Property. The nearest well is located 450 feet west of the Property (an irrigation well). The other two wells (use unknown) are located just under a half-mile to the southwest.

Release and Extent of Soil and Ground Water Contamination: Four Areas of Concern (AOC) were identified in association with prior and current use of the Property. In AOC 1 TPH-g, TPH-d, TPH-o, lead, PCBs, PAHs concentrations were detected in soil at concentrations exceeding MTCA Method A cleanup levels on the north side of the current auto sales and service building. TPH-g, TPH-d, TPH-o, 1,2,3-trichloropropane, 1,4-dichlorobenzene and chlorobenzene were detected in ground water at concentrations exceeding respective MTCA Method A or B cleanup levels. A former 10,000-gallon oil AST, active 500-gallon waste oil UST, former steam and fuel-powered electric plant, former automobile repair shop with oil house and current automobile repair shop are all potential former and current uses that may have contributed to contamination identified in the northern portion of parcel P77451. The source of the gasoline contamination is unknown at this time. The vertical and lateral extent of TPH-g contamination has not been delineated in soil or ground water.

In AOC 2, south of the current auto service area, TPH-g and TPH-d were detected in saturated soil samples at concentrations exceeding MTCA Method A cleanup levels on the north side of the former heating oil UST and south of the former gasoline UST. TPH-g, TPH-d and TPH-o were detected in ground water samples collected from monitoring well MW-2, located between the former heating oil UST and former waste oil tank. The vertical and lateral extent of contamination in soil and ground water associated with the USTs in AOC2 (including the gasoline UST) is unknown at this time.

In AOC 3, arsenic, lead, cadmium and PAH contamination was detected at concentrations exceeding MTCA Method A cleanup levels (depths of 0.3 to 2.6 feet bgs; coal observed in soils to a depth of five feet bgs) along the eastern edge of the Property in association with former coal sheds. Two ground water samples were collected in the vicinity of the former coal sheds. Arsenic, barium, cadmium and PAH contamination was detected at concentrations below MTCA Method A cleanup levels.

In AOC 4, releases are associated an area marked as a "gas and oil" area on Sanborn maps located at a tire vulcanizing and battery service facility. TPH-g and VPH concentrations were not detected in soil (TPH-d and TPH-o analysis was not included). TPH-d and TPH-o were detected in ground water at a concentration exceeding the MTCA Method A cleanup level. The vertical and lateral extent of TPH-d and TPH-o contamination in soil and ground water has not been determined.



Site 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

Figure 1-1
Property Location

North Cascade Ford Property
Sedro-Woolley, Washington

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0 750 1,500
Feet

Path: X:\0747.01\Projects\04 Historical Data Memo\Fig1_Property Location.mxd
Print Date: 11/30/2015
Approved By: H. Good
Produced By: cwise
Project: 0747.01.05

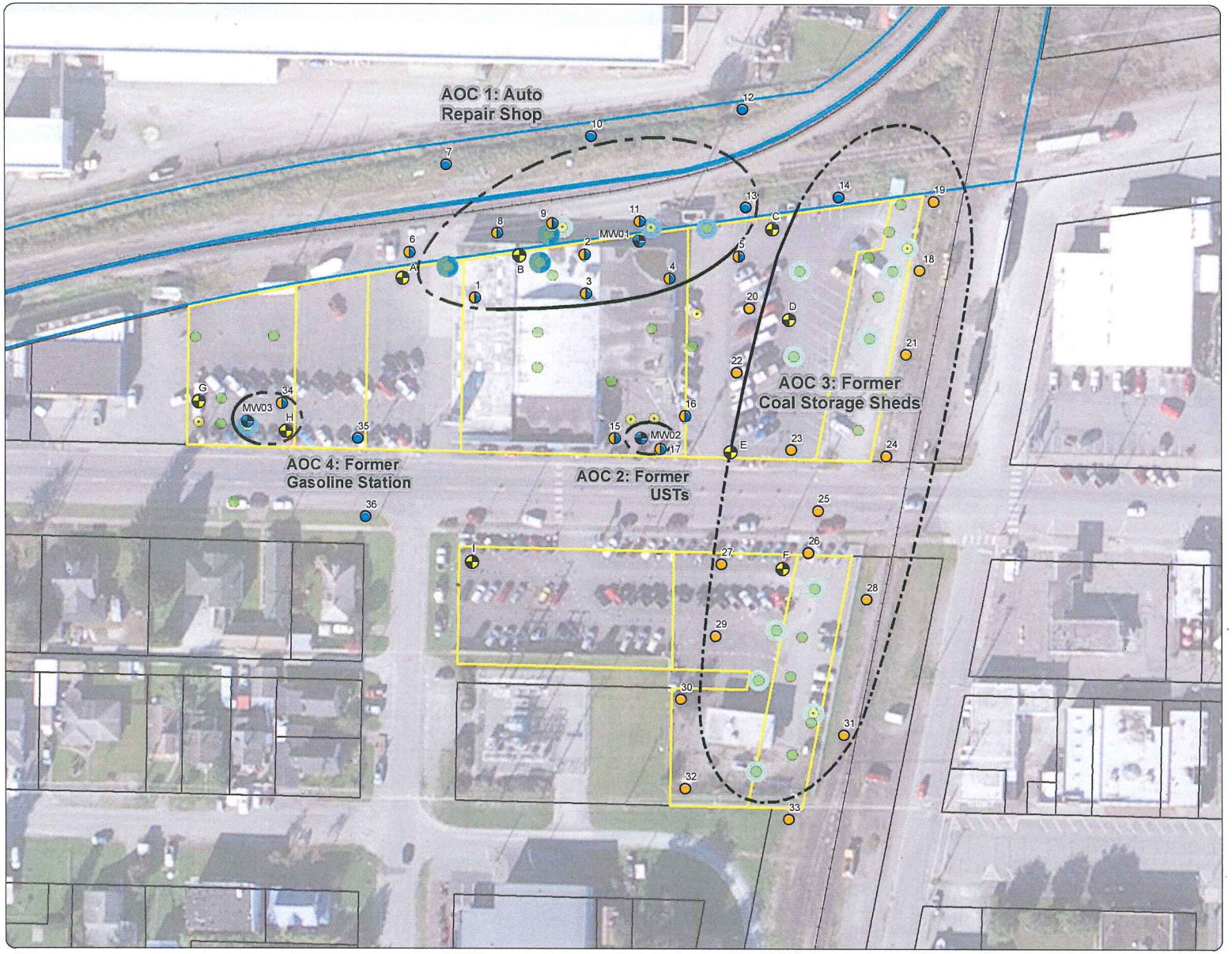

Figure 3-1
Proposed Sample Locations

North Cascade Ford Property
Sedro-Woolley, Washington

Legend

- Proposed Boring (Groundwater)
- Proposed Boring (Soil)
- Proposed Boring (Soil and Groundwater)
- Proposed Monitoring Well
- Existing Monitoring Well
- Phase II ESA Boring Location
- Former Boring Location
- Soil Exceedance*
- Groundwater Exceedance*
- Soil and Groundwater Exceedance*
- AOC Boundary (dashed where inferred)
- Property Parcel and Parcel Number
- BNSF-owned Parcels
- Skagit County Parcels

Notes:
1. All historical feature locations are approximate and shown for relative location reference only.
2. Chemical detections in soil samples that were collected below the water table during the 2011 Phase II ESA were not compared to soil cleanup levels.
3. AOC = area of concern
4. BNSF = Burlington Northern Santa Fe Railway Company
5. ESA = environmental site assessment
6. UST = underground storage tank

*Model Toxics Control Act Method A cleanup level exceedance detected.

0 40 80
Feet

Source: Aerial photograph obtained from Esri, ArcGIS Online; parcels obtained from Skagit County GIS Department.

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Path: X:\0747.01\Project\005\Data Gap Work Plan\Fig3-1 Proposed Sample Locations.mxd
Project: 0747.01.02-01 Produced By: jmiller Approved By: H. Good Print Date: 11/09/2015