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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Region Office
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June 8, 2022

Andrey Chepel
Washington State Department of Transportation
999 3rd Avenue, Suite 2200
Seattle, WA 98104
(chepela@wsdot.wa.gov)

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

- **Site Name:** Valley I-5 a.k.a. Poulsbo RV
- **Site Address:** 23051 Military Road South, Kent WA 98032
- **Facility/Site No.:** 78643737
- **Cleanup Site ID No.:** 6674
- **VCP Project No.:** NW3335

Dear Andrey Chepel:

The Washington State Department of Ecology (Ecology) received your request for an opinion on work planned at the Valley I-5 facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70A.305 RCW.

Issue Presented and Opinion

Pursuant to completion of the Site characterization work described in *Remedial Action Work Plan, dated August 18, 2021 (August 2021 RAWP)*, is additional work necessary to resolve data gaps?

YES. Ecology has determined that additional characterization of groundwater is necessary to confirm the absence of groundwater impacts at the Site.

Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release:

- Gasoline-range total petroleum hydrocarbons (TPH-G), benzene, ethylbenzene, and total xylenes into the Soil.

Enclosure A includes a detailed description and diagrams of the Site, as currently known to Ecology.

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information

that the parcel(s) associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the documents listed in **Enclosure B**.

A number of these documents are accessible in electronic form from the [Site web page](#)¹. The complete records are kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. Visit our [Public Records Request page](#)² to submit a public records request or get more information about the process. If you require assistance with this process, you may contact the Public Records Officer at publicrecordsofficer@ecy.wa.gov or 360-407-6040.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis and Opinion

Based on a review of the *August 2021 RAWP*, Ecology has determined:

1. Characterization of the Site.

Your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in **Enclosure A**.

a. Soil contamination at the Site has been sufficiently characterized.

The Site is contaminated with petroleum hydrocarbons that are sourced from historic operations of recreational vehicle service from approximately 1980 to the present. The contaminants of concern (COCs) include TPH-G, benzene, ethylbenzene, and total xylenes. The extent of soil contamination has been defined laterally to the north, east, south, and west.

Contaminated soil is confirmed at depths from 8 to 13 feet below ground surface (bgs) in excavation samples Exc.2-East, Exc.2-South, Exc.2-Bottom, and boring HB-1 (see **Enclosure A, Figure 2**). Sample Exc.2-Bottom appears to have been over excavated in 1998, but an additional bottom confirmation sample was not collected at the time (see **Enclosure A**). Based on analytical results as well as the density and lithology of soils below 10 feet bgs, contaminated soil is not expected to extend below the maximum excavation depth of 15 feet bgs.

Ecology appreciates your additional effort in submission of samples from the east sidewall of the proposed excavation for analysis of waste oil analytes in MTCA Table 830-1.

The Site is located within the projected boundary of the [Tacoma Smelter Plume](#)³. Surface soil sampling for lead and arsenic has not yet been conducted at the site. Surface soil samples

¹ <https://apps.ecology.wa.gov/cleanupsearch/site/6674>

² <https://ecology.wa.gov/publicrecords>

³ <https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanups/Cleanup-sites/Tacoma-smelter>

should be collected and analyzed for arsenic and lead to evaluate the potential for contamination from this source.

b. **Additional sampling is necessary to confirm the absence of contamination in groundwater.**

Groundwater sampling was first conducted at the Site in March 2020. Initial results presented in the *August 2021 RAWP* indicate that groundwater at the Site has not been impacted by known releases to soil. Results of additional groundwater monitoring events should be provided to document any potential changes in contaminant concentrations due to seasonal groundwater variability. Figures should be provided for each sampling event in future reports, which present the groundwater elevation contours to demonstrate the magnitude and direction of the hydraulic gradient, and a Rose diagram illustrating seasonal variations in groundwater flow directions.

The *August 2021 RAWP* includes considerations for replacement of monitoring wells decommissioned during the proposed remedial excavation. The monitoring well network should include a well to replace existing well MW-3 within the proposed remedial excavation footprint, to monitor the performance of the remedial action, and monitoring wells upgradient and downgradient of the contamination source area.

c. **Evaluation of the vapor intrusion pathway is needed.**

Ecology understands demolition of the southern shop building on the Site will take place prior to remedial excavation. The cleanup action detailed in the *August 2021 RAWP* includes the removal of all contaminated soil at the Site and is likely to be protective of vapor intrusion. In the event contaminated soil is left in place after excavation, the potential for vapor intrusion must be evaluated. Please refer to Ecology's [Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action, March 2022](https://apps.ecology.wa.gov/publications/SummaryPages/1909051.html/SummaryPages/0909047.html)⁴, for assessing and addressing soil vapor issues.

2. **Establishment of cleanup standards.**

a. **Soil.**

Ecology concurs that MTCA Method A soil cleanup levels for unrestricted uses (Table 740-1) with the standard point of compliance throughout the Site to a depth of 15 bgs, per WAC 173-340-740(6)(d), are appropriate.

b. **Groundwater.**

Groundwater is present at a depth of approximately 21 feet bgs. The highest beneficial use for groundwater is considered to be as a potable source, unless it can be demonstrated that groundwater is non-potable. MTCA Method A cleanup levels, which are protective of groundwater as a potable source, have been selected (Table 720-1). Ecology agrees that MTCA Method A cleanup levels for groundwater are appropriate for this Site.

⁴ <https://apps.ecology.wa.gov/publications/SummaryPages/1909051.html/SummaryPages/0909047.html>

The standard point of compliance is throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest depth which could potentially be affected (WAC 173-340-720(8)(b)).

c. **A Terrestrial Ecological Evaluation (TEE) is needed for the Site.**

A TEE has not been completed for the Site. The TEE form is located on Ecology's [website](#)⁵. The completed TEE form needs to be submitted to Ecology before a No Further Action (NFA) determination can be made.

3. Selection of cleanup action.

The *August 2021 RAWP* proposed excavation of contaminated soils as the selected cleanup action for the Site.

Ecology concurs with your proposed remediation as an interim action for the Site. Based on results of prior investigations, contamination at the Site appears to be limited to soils above 16 feet bgs in a limited area southeast of the shop building. Site characterization conducted to date indicates this action is likely to meet the threshold requirements for cleanup actions per WAC 173-340-360(2)(a-b). Please note that the interim action cannot be considered as the cleanup action for the Site pending documentation by a Feasibility Study or a Model Remedy that all pertinent MTCA requirements have been met.

Following the implementation of the interim action, a model remedy should be considered when the cleanup action report is submitted. If the Site qualifies for a model remedy, a FS is not needed to document the cleanup action. Please refer to Ecology's [Model Remedies for Sites with Petroleum Contaminated Soils, Revised December 2017](#)⁶ and [Model Remedies for Sites with Petroleum Impacts to Groundwater, Revised December 2017](#)⁷ for further information on requirements for model remedies.

Ecology appreciates your consideration of the process for removing the existing restrictive covenant currently filed for the Property. Once the cleanup action has been completed, further coordination with Ecology will be necessary to assess the potential for removal of the existing restrictive covenant, complete the necessary documentation, and conduct a public comment period.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

⁵ <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation>

⁶ <https://apps.ecology.wa.gov/publications/SummaryPages/1509043.html>

⁷ <https://apps.ecology.wa.gov/publications/SummaryPages/1609057.html>

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70A.305.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. See RCW 70A.305.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. See RCW 70A.305.170(6).

Contact Information

Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may request another review of your cleanup. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/vcp. If you have any questions about this opinion, please contact me by phone at (206) 459-6287 or email at david.unruh@ecy.wa.gov.

Sincerely,



David Unruh
Toxics Cleanup Program, NWRO

Enclosures (2): A – Description and Diagrams of the Site
 B – Basis for the Opinion: List of Documents

cc: David Clarke, WSDOT, (clarkedh@wsdot.wa.gov)
 Kevin Hood, PBS Engineering & Environmental, Inc. (Kevin.Hood@PBSUSA.com)
 Sonia Fernandez, Ecology VCP Coordinator (sonia.fernandez@ecy.wa.gov)

Enclosure A

Description and Diagrams of the Site

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 gasoline-range total petroleum hydrocarbons (TPH-G), benzene, ethylbenzene, and total xylenes into the soil at 23051 Military Road South, Kent, Washington.

Area and Property Description: The Property, which includes the Site contamination sources, corresponds to two King County tax parcel numbers. Parcel # 1522049027 is 4.16 acres in size and includes two buildings with the addresses 22951 and 23051 Military Road South. Parcel # 7260200060 is 0.77 acre in size and includes a portion of the 23051 building. The Property is bounded to the north by undeveloped land, to the east by Military Drive South, to the south by exit ramps for Interstate Highway 5 (I-5), and to the west by I-5 (**Figure 1**).

Property History and Current Use: Records indicate the Property was undeveloped until as early as the 1930s, when two residences and associated outbuildings were constructed on the southern half of the Property. A third residence was constructed on the southern portion of the Property in 1960, but appears to have burnt down the following year. In 1972, a bakery was constructed in the central portion of the Property. The current office and warehouse in the northern portion of the Property was built in 1973.

The houses on the southern portion of the property were replaced with the current shop building by approximately 1980. The Site is currently in use as a recreational vehicle sales and service business. The building on the southern portion of the property (23051 Military Rd S; **Figure 2**) will be demolished and replaced with a roadway as part of the SR509 project.

Sources of Contamination: Assessor documents from the construction of the 1980 shop building indicate the presence of at least two 1,000 to 2,000-gallon underground storage tanks (USTs) and at least one dispenser island on the southeast side of the shop building. In 1998, one 1,000-gallon and two 2,000-gallon fuel storage USTs were removed from the southeast side of the shop. Observations from tank removal activities indicate leakage from an oil-water separator as a possible source of contamination. Confirmation samples taken from the excavation contained TPH-G, ethylbenzene, and total xylenes above Method A cleanup levels.

Further subsurface investigations conducted in 2004 and 2005 indicated soils contained TPH-G, benzene, and total xylenes above Method A cleanup levels near the USTs and dispenser island (HB-1; **Figure 2**).

Physiographic Setting: The Site is located in the Puget Sound Lowland physiographic province of western Washington, which is bounded on the west by the Olympic Mountains and on the east by the Cascade Mountain foothills. The Site is located on the eastern margin of the Des Moines

upland, a glaciated topographic high on the western margin of the Green River floodplain. Ground surface at the Site is approximately 370 feet above mean sea level and slopes gently to the southeast.

Surface/Storm Water System: Stormwater runoff on and in the vicinity of the Property disperses via sheet flow to catch basins connected to the City of Kent stormwater system.

Ecological Setting: The area surrounding the Site to the west and south is primarily covered with buildings and pavement. The Property is bordered to the north and east by undeveloped land. Surface water in the vicinity of the Site includes Massey Creek, located approximately 1,600 feet west and upgradient of the Site. The Green River is located 3,800 feet downgradient of the Site.

Geology: Borings and excavations completed on the Site indicate it is situated on approximately 3 to 9 feet of fill material consisting of sand and silty sand with varying amounts of gravel. Fill material is underlain by very dense silty sand with varying amounts of gravel, to a maximum exploration depth of 30.5 feet below ground surface (bgs). Native soils on the Site are interpreted to be glacial till associated with the Vashon Stage of the Fraser Glacial period¹.

Groundwater: Groundwater was encountered at a depth of approximately 21 feet bgs in monitoring wells (B-1 through -3; **Figure 2**). Shallow groundwater is inferred to flow to the southeast toward the Green River.

Water Supply: Potable water is supplied to the Property by the Highline Water District. Approximately one third of the District's water is supplied by wells screened in medium to deep aquifers in Seatac and Des Moines. Seattle Public Utilities supplies the remainder of District water, which is sourced from the Cedar and Tolt River watersheds. The Site is located approximately 0.85 miles south of the nearest 10-year wellhead protection zone for District wells.

Release and Extent of Contamination: In October 1998, in order to comply with decommissioning rules for USTs, two 2,000-gallon gasoline storage USTs and one 1,000-gallon waste oil UST were decommissioned by removal from the Site. Two excavations were extended to remove the waste oil and gasoline storage USTs (Exc. 1 and Exc. 2 respectively; **Figure 3**). During excavation of the gasoline-storage USTs, soils contaminated with petroleum were encountered on the east side of the excavation near a damaged pipe connected to an oil-water separator. Confirmation samples collected from the east sidewall and bottom of Exc. 2 (Exc. 2-East and Exc. 2-South, respectively; **Figure 3**) contained TPH-G, ethylbenzene, and total xylenes above Method A cleanup levels.

After bottom and sidewall sample results were received, Exc. 2 was extended to a total depth of

¹ Tabor, R. W. and Booth, D. B., *Lidar-Revised Geologic Map of the Des Moines 7.5' Quadrangle, King County, Washington*, August 2, 2017.

16 feet bgs (Exc. 3; **Figure 3**). Additional sidewall and bottom samples confirmed the absence of TPH-G, ethylbenzene, and total xylenes above Method A cleanup levels on the south sidewall of the excavation. A total of approximately 30 yards of contaminated soil was removed from the Site for disposal at a permitted facility.

In August 2004, based on the results of a Phase I Environmental Site Assessment (ESA) conducted as part of due diligence activities for sale of the Property, a Phase II ESA was conducted at the Site. Soil samples were collected from nine explorations, eight advanced with direct-push drilling methods and one with a hand auger (GP-1 to GP-8, HB-1; **Figure 2**). Soil from HB-1 contained TPH-G, benzene, and total xylenes above Method A cleanup levels. No other explorations contained TPH-G, benzene, ethylbenzene, or total xylenes above Method A cleanup levels.

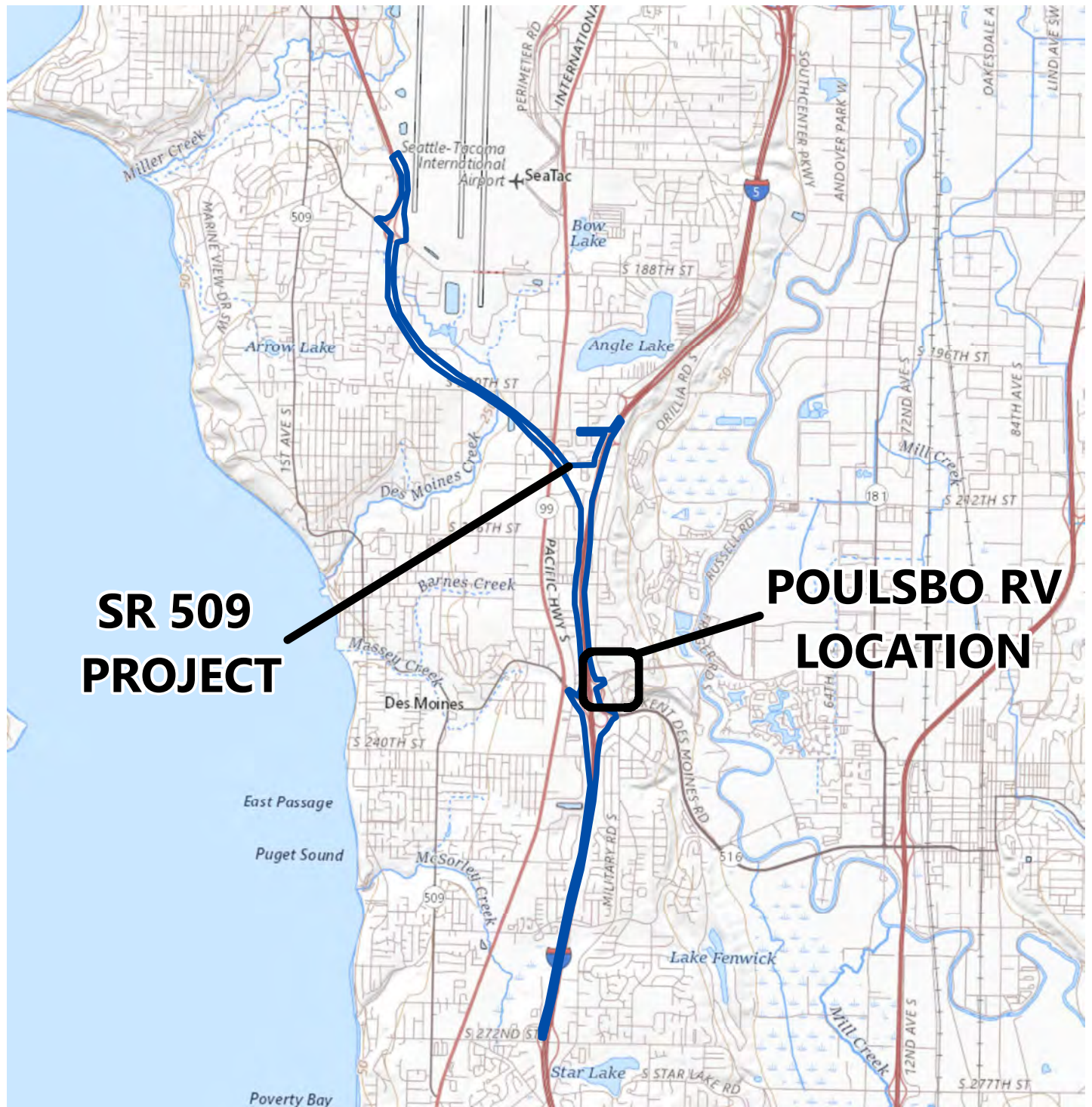
Three additional borings were advanced on the Site in July 2005 to further characterize the extent of contaminated soil (B-1 to B-3; **Figure 2**). Borings were advanced to approximately 30 feet bgs and did not contain recoverable groundwater after time was allowed for seepage. Site contaminants of concern (COCs) were not detected in soil from any of the borings.

Based on the results of soil sampling, the Site received a no further action (NFA) determination from Ecology on November 16, 2006 (VCP Site number NW1486). As a requirement of the NFA determination, a restrictive covenant was filed for the Property to limit disturbance of the ground surface at the Site, since soils with concentrations of TPH-G, benzene, ethylbenzene, and total xylenes exceeding Method A cleanup levels remain on the Site.

In February 2020, as part of due diligence activities for the SR509 project, an additional Phase II ESA was conducted at the Site. Four borings were advanced on the Site and completed as monitoring wells (MW-1 to MW-4; **Figure 2**). Soil samples did not contain any contaminants above Method A cleanup levels. Groundwater collected from MW-3 contained diesel-range TPH (TPH-D) below Method A cleanup levels. Groundwater in the other three monitoring wells did not contain contaminants above Method A cleanup levels.

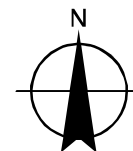
Ecology received a VCP application from Sound Transit in December 2021, expressing the intent to complete the Site cleanup of residual soil contamination identified in the restrictive covenant. The application was accepted on April 28, 2022, and assigned VCP Site number NW3335.

C:\Users\nathand\Desktop\GIS\poulsbo\Fig1_SiteVicinity.mxd



SOURCES: USGS NATIONAL MAP, 2020

PROJECTION: NAD 2011 WA STATE PLANE NORTH LAMBERT INTL FT



SCALE: 1" = 1 miles



PREPARED FOR: GUY ATKINSON CONSTRUCTION



SITE VICINITY Enclosure A Figure 1

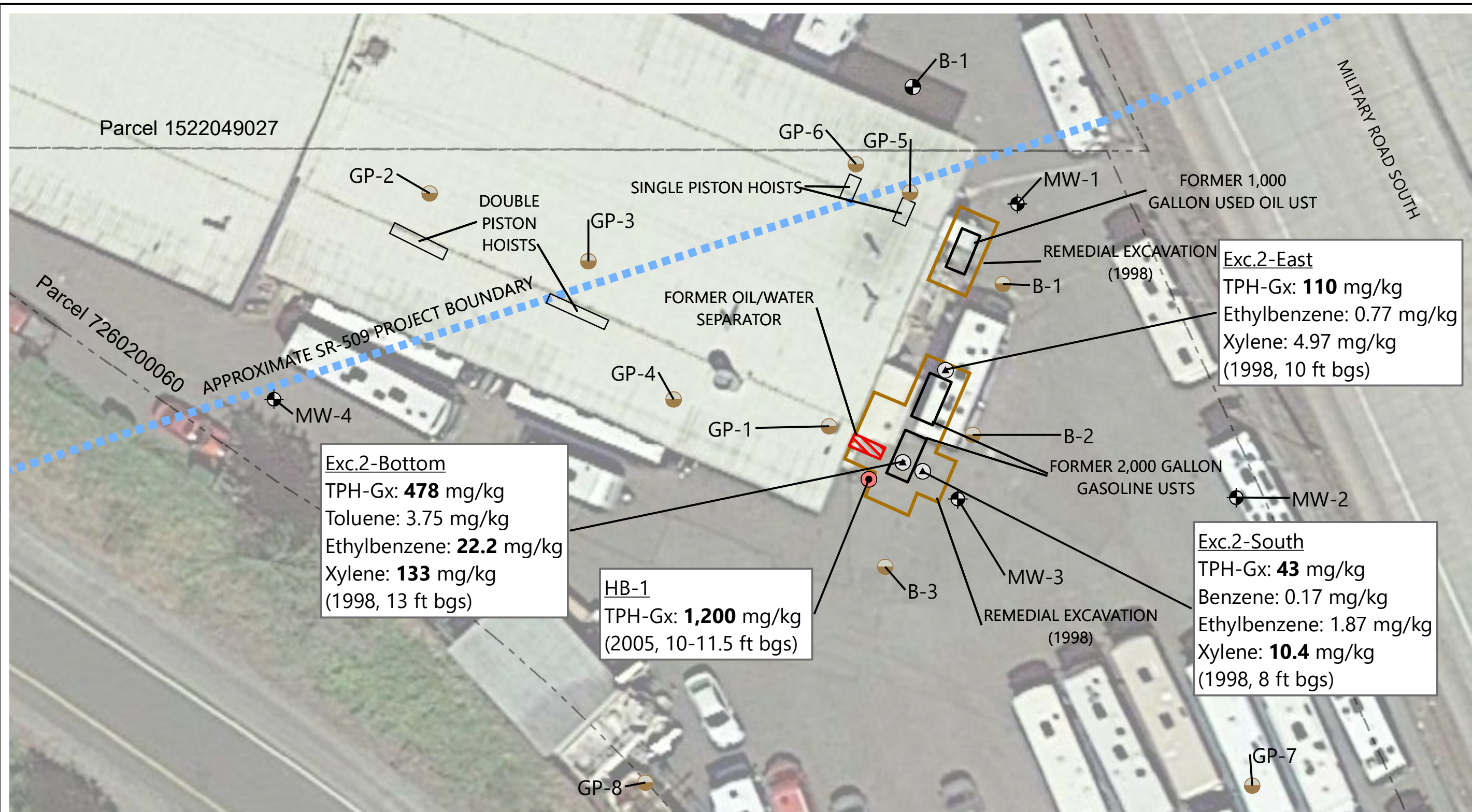
23051 MILITARY ROAD SOUTH, KENT, WASHINGTON

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FIGURE

1

C:\Users\nathand\Desktop\GIS\poulsbo\Fig2_SitePlanwConcentrations.mxd



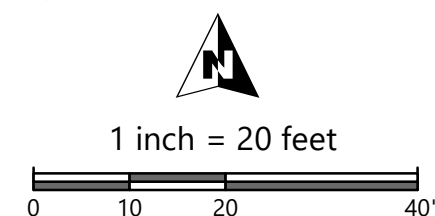
LEGEND

- Exc.2 Excavation Sample (Sound Env., 1998)
- GP-1 Direct Push Boring (Adapt, 2004)
- HB-1 Hand Boring (Adapt, 2004)
- B-1 Direct Push Boring (EHSI, 2020)
- MW-1 Monitoring Well (EHSI, 2020)

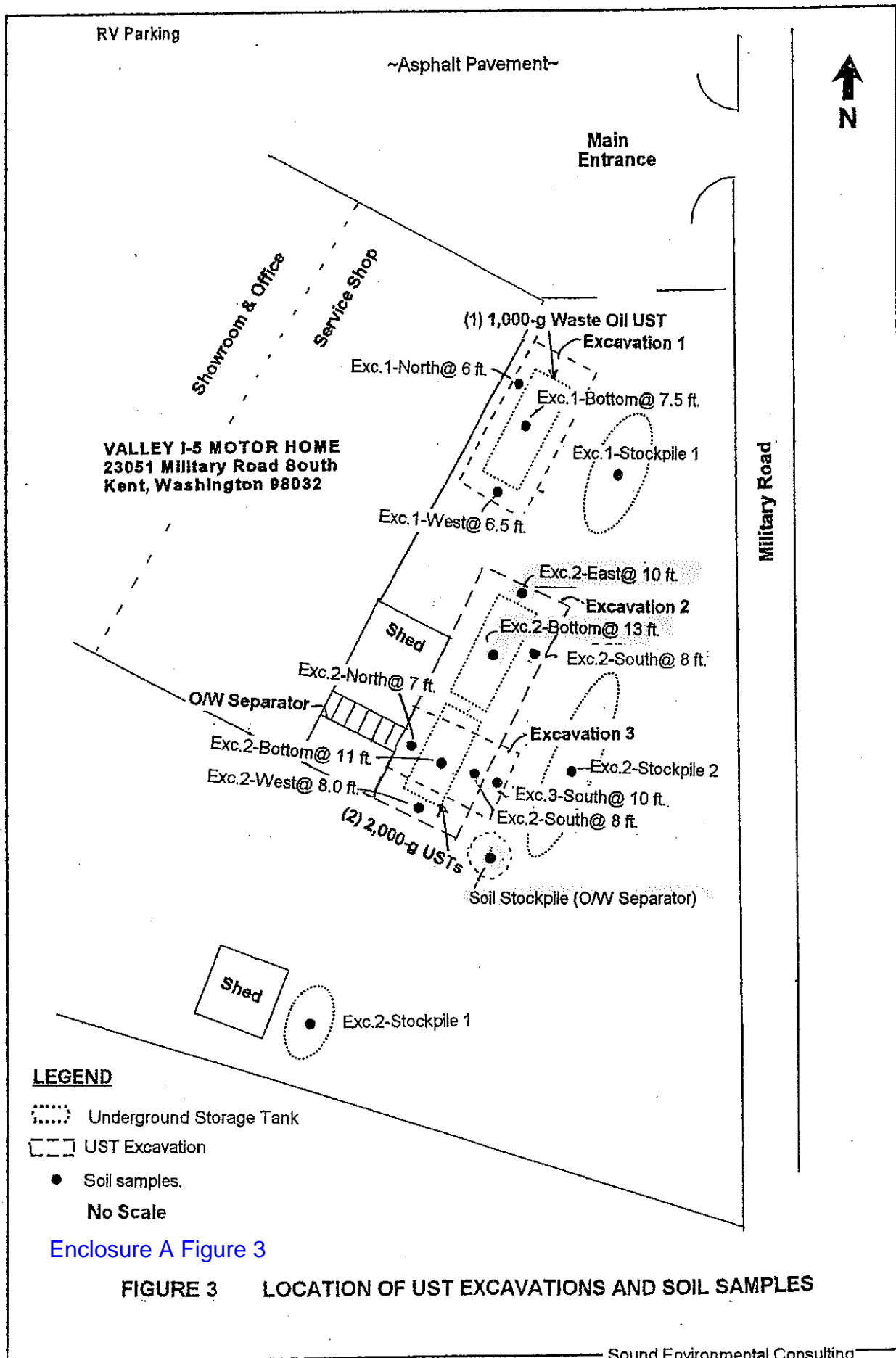
Notes:

- Concentrations in **bold** exceed MTCA Method A Cleanup Levels for Unrestricted Land Use
- TPH-Gx = Total Petroleum Hydrocarbons, Gasoline-range
- mg/kg = milligrams per kilogram
- ft bgs = feet below ground surface

Enclosure A Figure 2



PREPARED FOR: GUY ATKINSON CONSTRUCTION



Enclosure B

**Basis for the Opinion:
List of Documents**

1. PBS Environmental and Engineering, Inc., *Remedial Action Work Plan, Poulsbo RV, Puget Sound Gateway Program, SR509 Completion, Stage 1B, Contract no. 9424*, August 18, 2021.
2. Department of Ecology, *Periodic Review, Valley I5 RV, Facility Site ID#: 78643737, 23051 Military Road South, Kent, Washington*, April 2019.
3. Environmental Associates, Inc., *Phase I Environmental Site Assessment, Poulsbo RV Property, Parcels 1522049027, 7260200060, 23051 & 22951 Military Road South, Kent, Washington 98032*, October 14, 2015.
4. Department of Ecology, *Periodic Review, Valley I5 RV, Facility/Site No. 78643737, 23051 Military Road South, Kent, WA*, November, 2012.
5. Department of Ecology, *No Further Action Determination under WAC 173-340-515(5) for the following Hazardous Waste Site: Kent – Poulsbo RV, 23051 Military Road South, Kent, WA, 98032, Facility/Site No. 73643737, VCP No. NW1486*, November 16, 2006.
6. Military Road Investments, LLC, *Restrictive Covenant, King County Tax Parcel 1552049027*, Recorded in King County October 9. 2006.
7. LSI Adapt Inc., *Supplemental Limited Phase II Environmental Site Assessment, Kent – Poulsbo RV, 23051 Military Road South, Kent, Washington 98032*, July 14, 2005.
8. LSI Adapt Inc., *Limited Phase II Environmental Site Assessment, Kent – Poulsbo RV, 23051 Military Road South, Kent, Washington, 98032*, August 2004.
9. LSA Adapt Inc., *Phase I Environmental Site Assessment, Kent – Poulsbo RV, 23051 Military Road South, Kent, Washington, 98032*, June 14, 2004.
10. Sound Environmental Consulting, *Underground Storage Tank Closure Site Assessment, Valley I-5 Motor Home, Kent, Washington*, December 4, 1998.
11. Enviros, Inc., *Tank Removal Observation and Limited Environmental Site Assessment of Valley I-5 Located at: 23005 Military Road South, Kent, Washington*, October 15, 1991.