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T E C H N I C A L M E M O R A N D U M

TO: Joseph Kasperski – Washington State Department of Ecology

FROM: Gabriela Ferreira, R.G., Associate Geologist
Chris Poulsen, P.E., Principal Engineer

DATE: January 14, 2022

RE: **SUBSURFACE INVESTIGATION WORK PLAN**
U-HAUL CENTER OF HAZEL DELL
8250 NORTHEAST HIGHWAY 99
VANCOUVER, WASHINGTON
FARALLON PN: 1419-006

Farallon Consulting, L.L.C. (Farallon) has prepared this Technical Memorandum on behalf of 8250 Hwy 99, LLC to present a Subsurface Investigation (SSI) Work Plan for the U-Haul Center of Hazel Dell at 8250 Northeast Highway 99 in Vancouver, Washington (herein referred to as the Property) (Figure 1). The "Site," as defined under the Washington State Model Toxics Control Act Cleanup Regulation (MTCA), is the area where petroleum hydrocarbons have come to be located at concentrations exceeding regulatory cleanup levels. The Site is fully contained within the boundaries of the Property, shown on Figure 2.

BACKGROUND

Constituents of potential concern (COPCs) for the Site consist of total petroleum hydrocarbons as diesel-range organics (DRO), as oil-range organics (ORO), and as gasoline-range organics (GRO); and benzene. The source of the petroleum hydrocarbons was assumed to be a former fuel dispenser that was part of a underground storage tank system that formerly operated at the Property. Property history and former investigations are summarized in the Remedial Investigation and Focused Feasibility Study, U-Haul Moving & Storage of Hazel Dell, 8250 Northeast Highway 99, Vancouver, Washington dated October 24, 2017 prepared by Farallon for 8250 Hwy 99, LLC (2017 RI/FFS).

According to the 2017 RI/FFS, COPCs were not detected at a concentration exceeding MTCA Method A cleanup levels in soil samples collected during a 2017 subsurface investigation conducted by Farallon. GRO and DRO were detected at concentrations exceeding MTCA Method A cleanup levels in groundwater samples collected from monitoring well 263-1A, located

proximate to the former fueling island, and from its replacement, monitoring well 263-1B, in 2017 and 2018.

Farallon submitted to the Washington State Department of Ecology (Ecology) the Technical Memorandum regarding Cleanup Status Update dated February 8, 2021[1] (2021 Cleanup Status TM), which summarized cleanup activities conducted at the Site in 2018 and 2019 consisting of in-situ remediation of groundwater by injection of chemical oxidant and bioremediation stimulant (Figure 2). As described in the 2021 Cleanup Status TM, four quarters of groundwater monitoring were conducted following completion of the remedial injections. All concentrations of COPCs detected at the Site were less than MTCA Method A cleanup levels.

In response to the 2021 Cleanup Status TM, Ecology prepared the 2021 Further Action Letter[2] stating that additional confirmation sampling was required to evaluate the effectiveness of the cleanup remedy. Farallon has prepared this SSI Work Plan in response to the 2021 Further Action Letter.

SUBSURFACE INVESTIGATION SCOPE OF WORK

As requested by Ecology, the SSI scope of work consists of advancing temporary borings using a direct-push drill rig to collect soil, groundwater, and soil gas samples (Figure 3). Two temporary borings will be advanced in the vicinity of former monitoring wells 263-1A and 263-1B to an anticipated depth of 15 feet below ground surface (bgs) to collect groundwater and soil samples, respectively. Two additional borings will be advanced in the vicinity of former monitoring wells 2631-1 and B-4 to an anticipated depth of 10 feet bgs. One soil sample will be collected from the borehole near the location of former monitoring well 263-1 at a depth of 6 feet bgs, and one soil sample will be collected from the borehole near the location of former monitoring well B-4 at a depth of 7 feet bgs. Two boreholes will be advanced near areas of documented impact to a depth of 5 feet bgs for collection of soil gas samples.

During drilling activities, the borings will be described in accordance with the Unified Soil Classification System, and will be field-screened for potential evidence of contamination. Visual observations, notations of odor, and headspace analysis using a photoionization detector will be performed to note the presence of volatile organic vapors. The Unified Soil Classification System symbol, visual and olfactory notations for the samples, and photoionization detector readings will be recorded on the boring log form by a Farallon Scientist.

A Farallon Scientist also will observe subsurface conditions, and will retain soil, groundwater, and soil gas samples from each boring for submittal to an analytical laboratory. Reconnaissance groundwater samples will be collected from temporary polyvinyl chloride casing in temporary

[1] From Gabriela Ferreira and Chris Poulsen of Farallon to Joseph Kasperski of Ecology.
[2] Letter regarding Further Action at the following Site: Site Name: U Haul Center of Hazel Dell, Site Address: 8250 Hwy 99 Vancouver, Clark County, WA 98665-8817 dated May October 25, 2021 from Joe Kasperski of Ecology to Haley Ziesemer of AEIRCO Real Estate Company.

wells constructed in the boreholes. The reconnaissance groundwater samples will be extracted using a peristaltic pump and clean dedicated tubing. Soil gas samples will be collected by advancing post-run tubing and a disposable point to a depth of 5 feet bgs. Prior to sample collection, a leak check will be performed by placing a shroud around the sample point, introducing helium to the shroud, and measuring for helium in the purge effluent. Once the temporary soil gas point has been confirmed to be free of leaks, the soil gas samples will be collected using a laboratory-certified 1-liter Summa canister and dedicated tubing.

Groundwater and soil samples will be submitted for analysis for benzene by U.S. Environmental Protection Agency (EPA) Method 8260B; for GRO by Northwest Method TPH-Gx; and for DRO and ORO by Northwest Method TPH-Dx. Soil gas samples will be held for analysis based on soil sample results for volatile organic compounds analyzed by EPA Method TO-15.

Following sample collection, each boring will be backfilled with hydrated granular bentonite, and topped with an asphalt or concrete cap to match the existing ground surface.

CLOSING

Farallon requests a phone call with Ecology to discuss the SSI Work Plan described above to ensure that the Work Plan meets the requirements set out by Ecology to complete the characterization of the Site. The proposed SSI scope of work would provide the additional soil, groundwater, and potential soil gas data requested in the 2021 Further Action Letter.

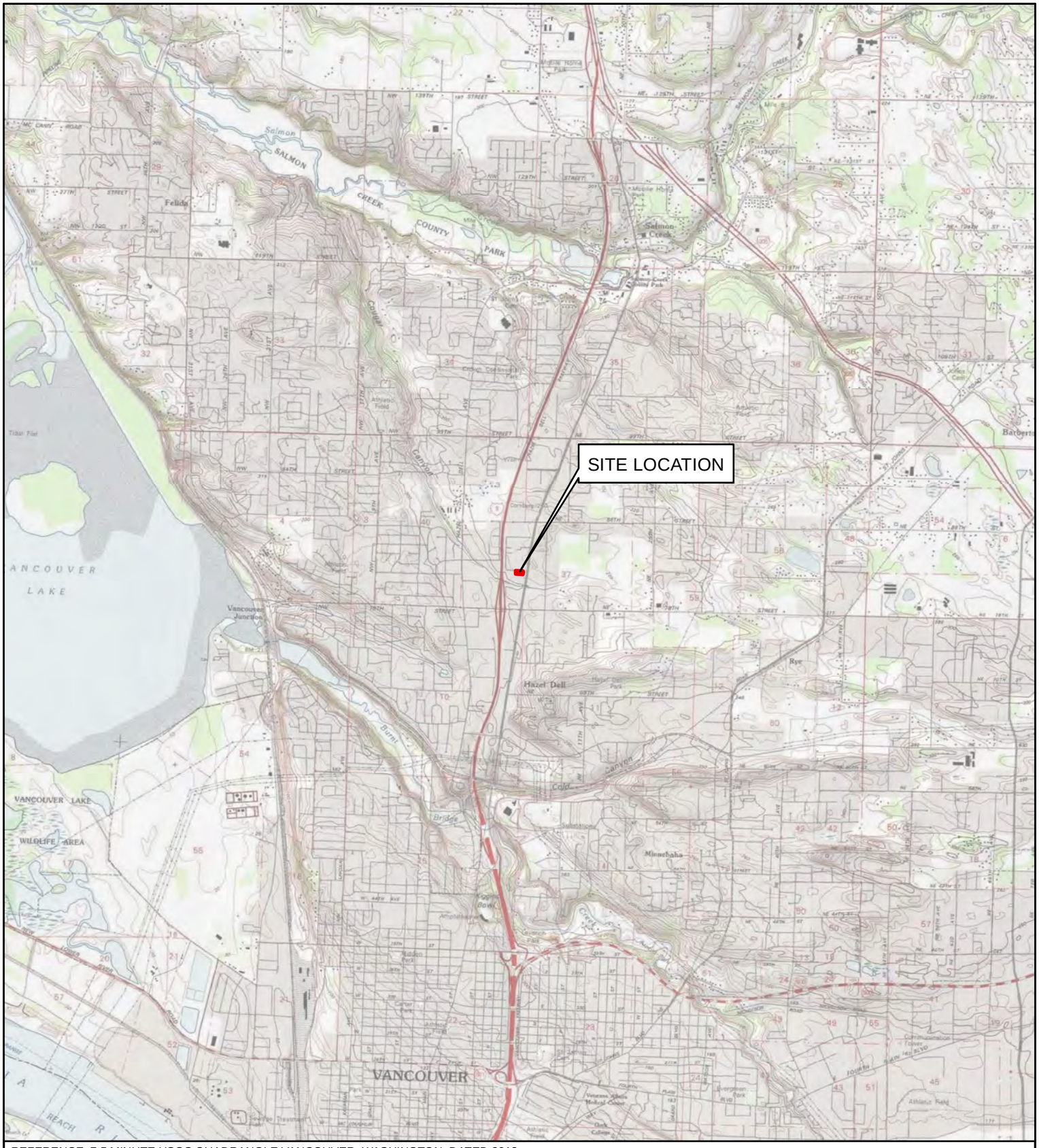
Attachments: Figure 1, *Property Vicinity Map*
Figure 2, *Site Plan*
Figure 3, *Site Plan with Proposed Borings*

GF/CP:bjj

FIGURES

SUBSURFACE INVESTIGATION WORK PLAN
U-Haul Center of Hazel Dell
8250 Northeast Highway 99
Vancouver, Washington

Farallon PN: 1419-006



REFERENCE: 7.5 MINUTE USGS QUADRANGLE VANCOUVER, WASHINGTON, DATED 2013

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FIGURE 1

PROPERTY VICINITY MAP
U-HAUL CENTER OF HAZEL DELL
8250 NORTHEAST HIGHWAY 99
VANCOUVER, WASHINGTON

FARALLON PN: 1419-006

Drawn By: vpehlivan | Checked By: GF | Date: 11/22/2021 | Disc Reference:

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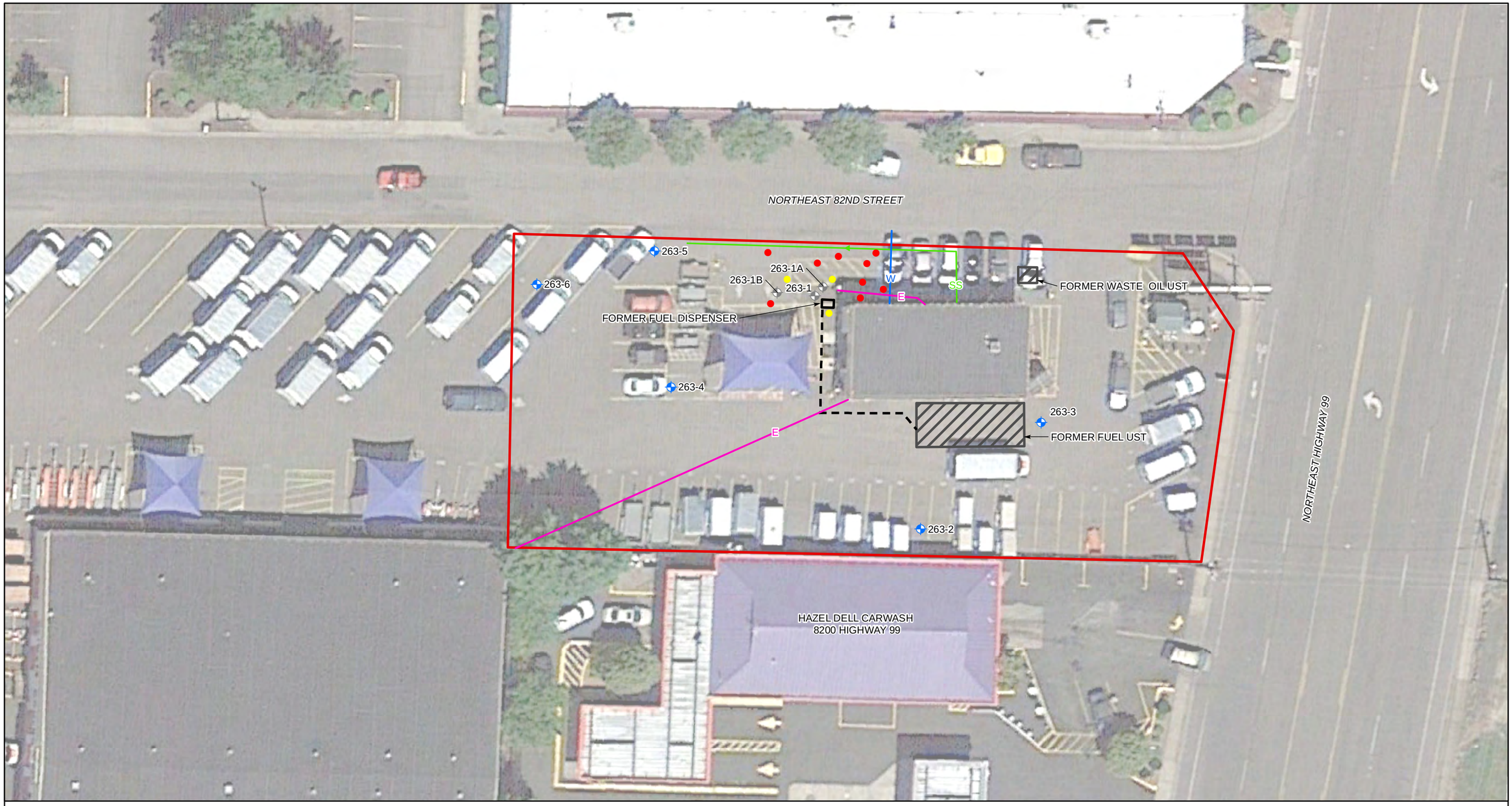

LEGEND

- 2018 INJECTION BOREHOLE
- 2019 INJECTION BOREHOLE
- DECOMMISSIONED WELL
- MONITORING WELL
- FORMER PRODUCT LINE
- E — ELECTRICAL LINE
- SS — SANITARY SEWER LINE
- W — WATER LINE
- FORMER FUEL DISPENSER
- FORMER UST LOCATION
- APPROXIMATE SITE BOUNDARY
- UST = UNDERGROUND STORAGE TANK

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NOTES:
1. ALL LOCATIONS ARE APPROXIMATE.
2. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.

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FIGURE 2

SITE PLAN
U-HAUL CENTER OF HAZEL DELL
8250 NORTHEAST HIGHWAY 99
VANCOUVER, WASHINGTON

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Document Path: Q:\Projects\1419_VerisLawGroup\006 U-Haul Center of Hazel Dell\Mapfiles\009\Figure-02_SitePlan.mxd

NORTHEAST 82ND STREET

263-5

263-6

263-1B

263-1A

263-1

B-4

W

SS

E

FORMER WASTE OIL UST

FORMER FUEL DISPENSER

263-4

E

263-3

FORMER FUEL UST

NORTHEAST HIGHWAY 99

263-2

HAZEL DELL CARWASH
8200 HIGHWAY 99

LEGEND

- FORMER TEMPORARY BORING (2017)
- PROPOSED SOIL AND GROUNDWATER BOREHOLE
- PROPOSED SOIL BOREHOLE
- PROPOSED SOIL GAS BOREHOLE
- DECOMMISSIONED WELL
- MONITORING WELL
- FORMER PRODUCT LINE
- E — ELECTRICAL LINE
- SS — SANITARY SEWER LINE
- W — WATER LINE
- FORMER FUEL DISPENSER
- FORMER UST LOCATION
- APPROXIMATE SITE BOUNDARY
- UST = UNDERGROUND STORAGE TANK

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SCALE IN FEET

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FIGURE 3

SITE PLAN WITH PROPORSED BORINGS
U-HAUL CENTER OF HAZEL DELL
8250 NORTHEAST HIGHWAY 99
VANCOUVER, WASHINGTON

FARALLON PN: 1419-006

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Document Path: Q:\Projects\1419_VerisLawGroup\006 U-Haul Center of Hazel Dell\Mapfiles\009\Figure-03_SitePlan_Proposed_Borings.mxd