FARALLON CONSULTING

January 8, 2025

Jing Song
Washington State Department of Ecology
15700 Dayton Avenue North
Seattle, Washington 98133

RE: VAPOR INTRUSION ASSESSMENT
PERINE PROPERTY
812 AND 820 SOUTH ADAMS STREET
SEATTLE, WASHINGTON
FARALLON PN: 2032-004

Dear Jing Song:

Farallon Consulting, L.L.C. (Farallon) has prepared this letter on behalf of Lift Real Estate Partners, LLC to provide a summary of vapor intrusion assessment activities for the property at 812 and 820 South Adams Street in Seattle, Washington (herein referred to as the Perine Property) (Figure 1).

Known release(s) of hazardous substances from historical industrial operations on the north-adjacent property at 825 South Dakota Street in Seattle, Washington (Northwest Plating Property) have impacted soil gas, soil, and groundwater at the Perine Property. The Site is defined under the Washington State Model Toxics Control Act Cleanup Regulation (MTCA) and its implementing regulations as established in Chapter 173-340 of the Washington Administrative Code (WAC 173-340) as comprising the area where hazardous substances have come to be located at concentrations exceeding applicable cleanup levels. The Site consists of portions of the north-adjacent Northwest Plating Property and the Perine Property. The Site is enrolled in the Washington State Department of Ecology (Ecology) Voluntary Cleanup Program (VCP) and assigned VCP Project No. NW2769.

Multiple interim actions have been conducted at the Site, including:

- 1990: Equipment and "grossly impacted" soil beneath equipment at the Northwest Plating Property were removed.
- 1993: Equipment and hazardous materials were removed from the Northwest Plating Property.
- 2005: Approximately 150 cubic yards of soil was excavated proximate to the former dip tanks, processing areas, and floor trenches at the Northwest Plating Property.

- 2011: A 1,000-gallon gasoline underground storage tank (UST) on the northeastern corner of the Perine Property was closed in-place. Total petroleum hydrocarbons were detected at concentrations less than MTCA cleanup levels in confirmation soil samples collected proximate to the UST.
- 2012 to Present: Positive-pressure heating, ventilation, and air conditioning (HVAC) systems designed to operate continuously were installed in the buildings at the Perine Property to prevent halogenated volatile organic compounds (HVOCs) in soil gas, soil, and groundwater from entering indoor air. The HVAC systems remain in operation at the Perine Property.
- 2016 to 2019: In-situ injection events were conducted at the Northwest Plating Property in December 2016, August 2017, and May 2019 to promote enhanced reductive dichlorination of HVOCs in groundwater.
- 2017 to Present: Two soil vapor extraction (SVE) systems were installed at the Northwest Plating Property. The SVE systems continue to operate at the Northwest Plating Property.

In December 2023, Ecology issued an opinion[1] indicating that the interim actions listed above effectively cleaned up a majority of the contamination of the Perine Property and no further action will likely be necessary to clean up contamination at the Perine Property. Specifically, the opinion stated that 1) only two shallow monitoring wells located immediately proximate to the northern Perine Property boundary contained vinyl chloride concentrations exceeding MTCA cleanup levels and other contaminants of concern (COCs) in these two wells and all COCs in other wells on the Perine Property are less than the MTCA cleanup levels; and 2) HVOC concentrations in soil have been remediated below the MTCA cleanup levels and residual soil contamination is likely present in limited areas on the northern portion of the Perine Property beneath existing buildings. However, the opinion stipulated that issuance of a No Further Action determination would be dependent on post-cleanup monitoring to ensure compliance with cleanup standards. The opinion requested institutional controls in the form of an environmental covenant to prevent exposure to residual impacted soil and groundwater, engineered controls to mitigate the vapor intrusion pathway, and long-term monitoring to ensure compliance with cleanup standards.

[1]Ecology. 2023. Letter Regarding Opinion on Proposed Cleanup of a Property Associated with the following Site: Northwest Plating – Perine Property, 812 and 820 South Adams Street, Seattle, King County, Washington 98101 Jing Song. To John Drake, Washington Industries, Inc. December 29.

Between 2022 and 2024, Farallon conducted a vapor intrusion assessment to evaluate whether the positive-pressure HVAC systems are necessary to mitigate the vapor intrusion exposure pathway.

VAPOR INTRUSION ASSESSMENT

Positive-pressure HVAC systems have operated in the buildings at the Perine Property to prevent HVOCs in soil gas, soil, and groundwater from entering indoor air. The HVAC systems remain in operation at the Perine Property. However, following significant cleanup of the Site, the ongoing operation of the HVAC systems may not be warranted.

Farallon conducted indoor air sampling events to evaluate whether the HVAC systems are required to operate in the buildings at the Perine Property in order to mitigate the potential vapor intrusion pathway and protect human health of building occupants. The indoor air sampling events were conducted in December 2022, February 2024, and September 2024 in accordance with the Ecology VI Guidance.[2] Prior to conducting the indoor air sampling events, the positive-pressure HVAC systems at the Perine Property and the SVE systems at the Northwest Plating Property were shut down. Soil gas and indoor air samples were collected on the northern portion of the Perine Property in the areas formerly with the highest concentrations of HVOCs in soil, groundwater, and soil gas. Soil gas samples were collected from existing soil gas probes VS-4 and VS-5, indoor air samples were collected proximate to borings B-56 and soil gas probes VS-4 and VS-5, and an outdoor air sample was collected upwind of the Perine Property buildings. Sample locations are shown on Figure 2.

The results of the indoor air sampling events indicated that concentrations of trichloroethene (TCE) slightly exceeded the screening level for commercial worker in soil gas samples collected. In addition, concentrations of TCE exceeded the short-term TCE exposure limit in the soil gas samples collected in September 2024. However, concentrations of TCE either were reported non-detect at the laboratory practical quantitation limit or were significantly less than the MTCA indoor air cleanup levels for a commercial worker during all sampling events conducted between 2022 and 2024 (Table 1). T

[2] Ecology. 2009. *Guidance for Evaluating Vapor Intrusion in Washington State: Investigation and Remedial Action.* Publication No. 09-09-047. Revised March 2022. January (Ecology VI Guidance).

CONCLUSIONS

The results from the vapor intrusion assessment demonstrate that the vapor intrusion pathway is incomplete for the Perine Property and the continued operation of the positive pressure HVAC systems is no longer necessary to mitigate the exposure pathway. The positive pressure HVAC systems will be shutdown.

A Confirmational Monitoring Plan will be prepared and included as part of an environmental covenant recorded on the Perine Property. The Confirmational Monitoring Plan will include details on long-term confirmational monitoring for indoor air and groundwater that will be conducted at the Perine Property to confirm the long-term effectiveness of the cleanup action. In addition, the Confirmational Monitoring Plan will include discussion of contingency measures that will be implemented if confirmational monitoring demonstrates that there are exceedances of MTCA cleanup levels that pose a threat to human health and the environment at the Perine Property.

CLOSING

Please contact Pete Kingston at (206) 200-2346 if you have questions or need additional information.

Sincerely,

Farallon Consulting, L.L.C.

Glenn McKenney, L.G.
Project Geologist

Pete Kingston, L.G.
Principal Geologist

Attachments: Figure 1, *Property Vicinity Plan*
Figure 2, *Site Plan*
Table 1, *Soil Gas Analytical Results for VOCs*

cc: Michael Murray, Lift Real Estate Partners, LLC
Colby Schaefer, Lift Real Estate Partners, LLC

GRM/PJK:cm

LIMITATIONS

The conclusions contained in this report/assessment are based on professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted hydrogeologic and engineering standards and practices applicable to this location. The conclusions contained herein are subject to the following inherent limitations:

- Accuracy of Information. Farallon reviewed certain information used in this report/assessment from sources that were believed to be reliable. Farallon's conclusions, opinions, and recommendations are based in part on such information. Farallon's services did not include verification of its accuracy. Should the information upon which Farallon relied prove to be inaccurate, Farallon may revise its conclusions, opinions, and/or recommendations.
- Reconnaissance and/or Characterization. Farallon performed a reconnaissance and/or characterization of the Site that is the subject of this report/assessment to document current conditions. Farallon focused on areas deemed more likely to exhibit hazardous materials conditions. Contamination may exist in other areas of the Site that were not investigated or were inaccessible. Site activities beyond Farallon's control could change at any time after the completion of this report/assessment.

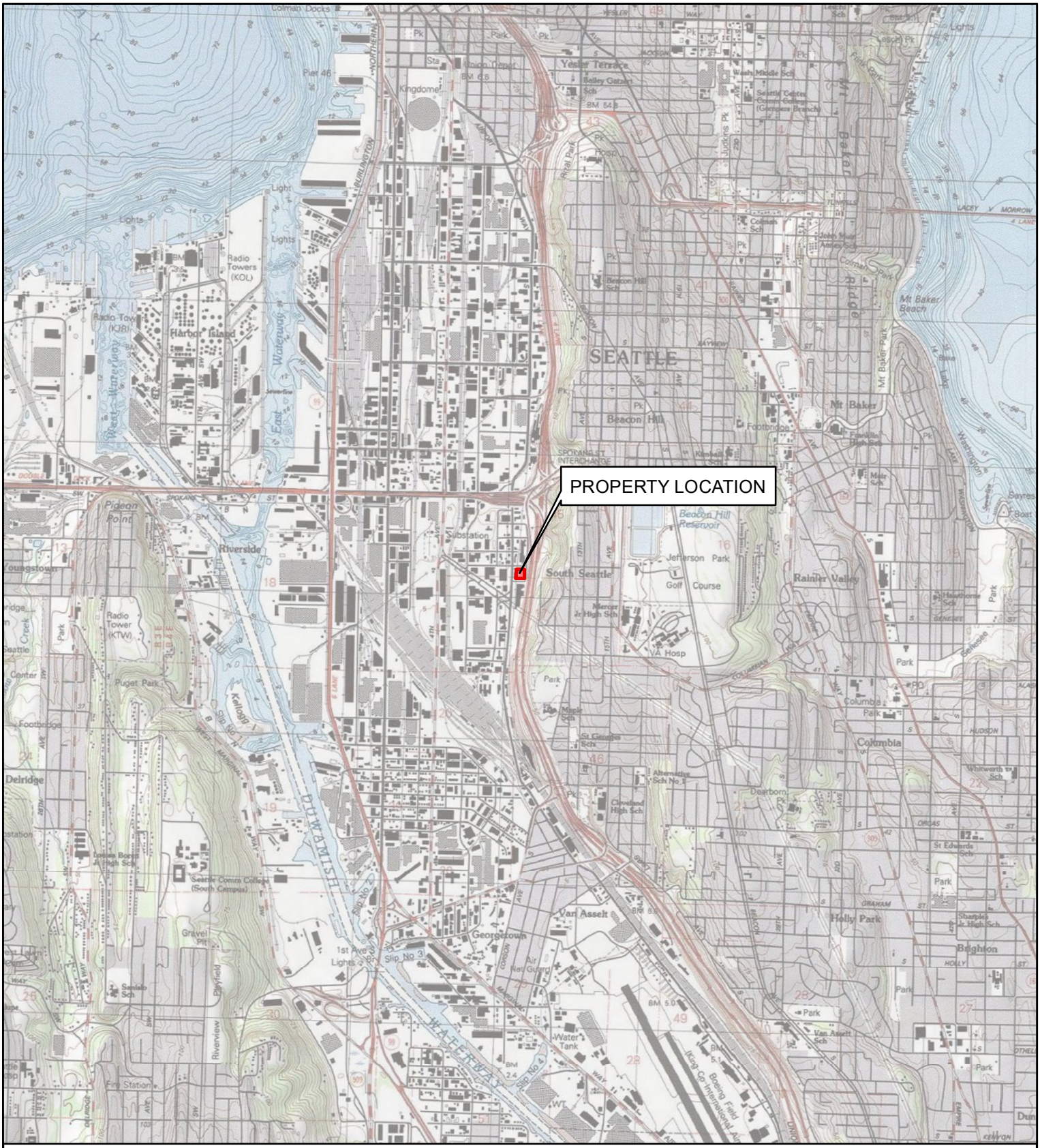
Farallon does not guarantee that the Site is free of hazardous or potentially hazardous substances or conditions, or that latent or undiscovered conditions will not become evident in the future. Farallon's observations, findings, and opinions are as of the date of the report.

This report/assessment has been prepared in accordance with the contract for services between Farallon and Lift Real Estate Partners, LLC. No other warranties, representations, or certifications are made.

FIGURES

VAPOR INTRUSION ASSESSMENT
Perine Property
812 and 820 South Adams Street
Seattle, Washington

Farallon PN: 2032-004



REFERENCE: 7.5 MINUTE USGS QUADRANGLE BELLINGHAM NORTH, WASHINGTON, DATED 2013

0 3,000
SCALE IN FEET

N

FARALLON CONSULTING

Your Challenges. Our Priority. | farallonconsulting.com

Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Baker City

California
Oakland | Irvine

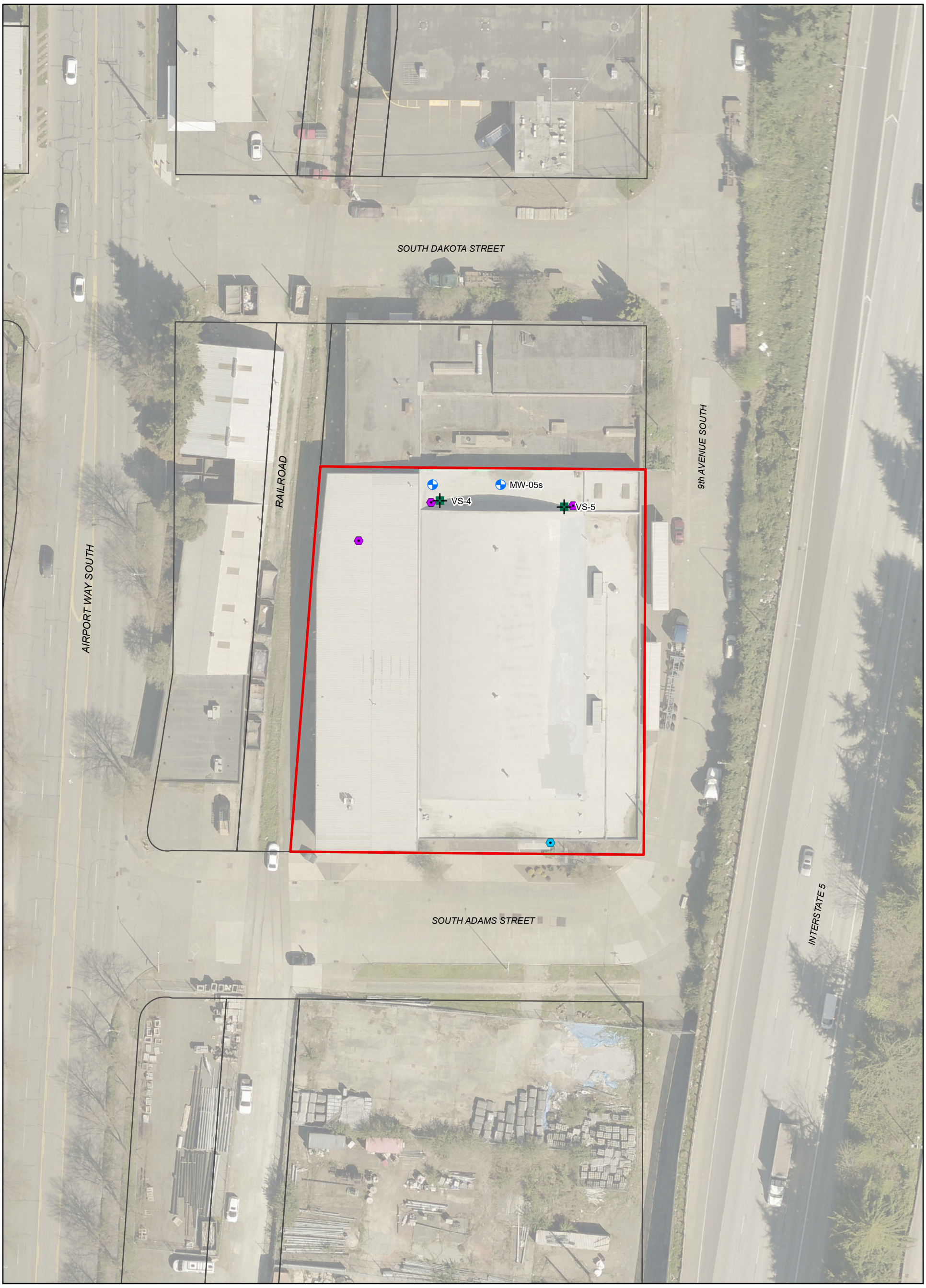
FIGURE 1

PROPERTY VICINITY PLAN
PERINE PROPERTY
812 AND 820 SOUTH ADAMS STREET
SEATTLE, WASHINGTON

FARALLON PN: 2032-004

Drawn By: chartman Checked By: GM Date: 5/9/2024 Disc Reference:

Path: \\192.168.0.248\gis\Projects\2032 Lift Partners\004 Unknown\Mapfiles\007\2024 CMP\Figure-01_PropertyVicinityPlan.mxd



LEGEND

- INDOOR AIR SAMPLE
- MONITORING WELL
- OUTDOOR AIR SAMPLE
- SOIL GAS SAMPLE
- PERINE PROPERTY BOUNDARY
- KING COUNTY PARCEL BOUNDARY

N

0 50

SCALE IN FEET

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

FARALLON CONSULTING

Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Baker City

California
Oakland | Irvine

Your Challenges. Our Priority. | farallonconsulting.com

FIGURE 2

SITE PLAN
PERINE PROPERTY
812 AND 820 SOUTH ADAMS STREET
SEATTLE, WASHINGTON

FARALLON PN: 2032-004

Drawn By: chartman | Checked By: GM | Date: 5/9/2024 | Disc Reference:

Path: \\192.168.0.248\gis\Projects\2032 Lift Partners\004 Unknown\Mapfiles\007\2024 CMP\Figure-02_SitePlan.mxd

TABLE

VAPOR INTRUSION ASSESSMENT
Perine Property
812 and 820 South Adams Street
Seattle, Washington

Farallon PN: 2032-004

Table 1
Soil Gas Analytical Results for Volatile Organic Compounds
Perine Property
820 South Adams Street
Seattle, Washington
Farallon PN: 2032-004

Sample Location	Sample Date	Sample Type	Sample Identification	Sample Height or Depth (feet)[1]	Analytical Results (micrograms per cubic meter)[2]										
					Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Chloroethane
Air Samples															
IA-1	12/11/2022	Indoor Air	IA-1-121122	4.0	< 6.8	< 0.11	< 0.4	< 0.4	< 0.26	< 0.55	< 0.055	< 0.4	< 0.4	0.069	< 2.6
	2/1/2024	Indoor Air	IA-1-020124	4.0	< 6.8	< 0.11	< 0.4	< 0.4	< 0.26	< 0.55	< 0.055	< 0.4	< 0.4	0.089	< 2.6
	9/12/2024	Indoor Air	IA-1-091224	5.0	< 6.8	0.43	< 0.4	< 0.4	< 0.26	< 0.55	< 0.055	< 0.4	< 0.4	0.081	< 2.6
IA-2	12/11/2022	Indoor Air	IA-2-121122	4.0	< 6.8	< 0.11	< 0.4	< 0.4	< 0.26	< 0.55	< 0.055	< 0.4	< 0.4	0.065	< 2.6
	2/1/2024	Indoor Air	IA-2-020124	4.0	< 6.8	< 0.11	< 0.4	< 0.4	< 0.26	< 0.55	< 0.055	< 0.4	< 0.4	0.12	< 2.6
	9/12/2024	Indoor Air	IA-2-091224	5.0	< 6.8	0.23	< 0.4	< 0.4	< 0.26	< 0.55	< 0.055	< 0.4	< 0.4	0.17	< 2.6
IA-3	12/11/2022	Indoor Air	IA-3-121122	4.0	< 6.8	0.20	< 0.4	< 0.4	< 0.26	< 0.55	< 0.055	< 0.4	< 0.4	0.057	< 2.6
	2/1/2024	Indoor Air	IA-3-020124	4.0	< 6.8	< 0.11	< 0.4	< 0.4	< 0.26	< 0.55	< 0.055	< 0.4	< 0.4	0.11	< 2.6
	9/12/2024	Indoor Air	IA-3-091224	5.0	< 6.8	0.21	< 0.4	< 0.4	< 0.26	< 0.55	< 0.055	< 0.4	< 0.4	0.15	< 2.6
AA-1	12/11/2022	Outdoor Air	AA-1-121122	12.0	< 6.8	< 0.11	< 0.4	< 0.4	< 0.26	< 0.55	< 0.055	< 0.4	< 0.4	0.049	< 2.6
	2/1/2024	Outdoor Air	AA-1-020124	12.0	< 6.8	< 0.11	< 0.4	< 0.4	< 0.26	< 0.55	< 0.055	< 0.4	< 0.4	0.069	< 2.6
	9/12/2024	Outdoor Air	AA-1-091224	12.0	< 6.8	< 0.11	< 0.4	< 0.4	< 0.26	< 0.55	< 0.055	< 0.4	< 0.4	0.057	< 2.6
MTCA Method B Indoor Air Screening Level for a Commercial Worker[3]					**44.9**	**2.85**	**156**	**156**	**1.33**	**19,500**	**0.73**	**7.3**	**779**	**0.449**	**38,900**
Workplace TCE Indoor Air Short-term Action Level[4]					**NE**	**7.5**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
Soil Gas Samples															
VS-4	12/11/2022	Subslab	VS-4-121122	Subslab	< 54	**96**	< 3.1	< 3.1	< 2	< 4.3	< 0.43	< 3.2	< 3.1	< 0.32	< 21
	2/1/2024	Subslab	VS-4-020124	Subslab	< 54	59	< 3.1	< 3.1	< 2	< 4.3	< 0.43	< 3.2	< 3.1	< 0.32	< 21
	9/12/2024	Subslab	VS-4-091224	Subslab	< 60	**480**	4.4	< 3.5	< 2.3	< 4.9	< 0.49	< 3.6	< 3.5	< 0.36	< 23
VS-5	12/11/2022	Subslab	VS-5-121122	Subslab	< 37	**110**	< 2.2	< 2.2	< 1.4	< 3	< 0.3	< 2.2	< 2.2	< 0.22	< 15
	2/1/2024	Subslab	VS-5-020124	Subslab	< 37	**100**	< 2.1	< 2.1	< 1.4	< 2.9	< 0.29	< 2.2	< 2.1	< 0.22	< 14
	9/12/2024	Subslab	VS-5-091224	Subslab	< 59	**490**	< 3.4	< 3.4	< 2.2	< 4.7	< 0.47	< 3.5	< 3.4	< 0.35	< 23
MTCA Method B Soil Gas Screening Level for a Commercial Worker[3]					**1,500**	**95**	**5,200**	**5,200**	**44**	**650,000**	**24**	**240**	**26,000**	**15**	**1,300,000**
Non-Residential Short-term VI Screening Level for Subslab Soil Gas[4]					**NE**	**250**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**

NOTES:
Results in **bold** and highlighted yellow denote concentrations exceeding applicable screening levels.
< denotes analyte not detected at or exceeding the reporting limit listed.
NE = not established
TCE = trichloroethene
[1]Air sample height or soil gas sample depth in feet below ground surface.
[2]Analyzed by U.S. Environmental Protection Agency Method TO-15.
[3]Washington State Model Toxics Control Act Cleanup Regulation Cleanup Levels and Risk Calculations, Standard Method B Screening Level for Commercial Worker, https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC
[4]Vapor Intrusion (VI) Investigation and Short-term Trichloroethene (TCE) Toxicity Washington State Department of Ecology Implementation Memorandum No. 22, dated October 1, 2019.