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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Region Office
PO Box 330316, Shoreline, WA 98133-9716 • 206-594-0000

October 23, 2023

Michael Merlone
Merlone Geier Management, LLC
425 California Street, 10th Floor
San Francisco, California 94104
(mmerlone@merlonegeier.com)

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

- **Site Name:** Town and Country Cleaners Bellingham
- **Site Address:** 2814 Meridian Street, Bellingham, Washington 98225
- **Facility/Site No.:** 62351534
- **Cleanup Site ID No.:** 2265
- **VCP Project No.:** NW3255

Dear Michael Merlone:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your cleanup work completed at the Town and Country Cleaners Bellingham 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 and cleanup work described in *Cleanup Action Closure Report (CACR)*, dated July 18, 2023, is additional work necessary to resolve data gaps?

YES. Ecology has determined that additional soil and groundwater characterization is needed to demonstrate compliance with MTCA, before a No Further Action (NFA) determination can be issued.

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 releases:

- Tetrachloroethene (PCE), trichloroethene (TCE), and cis-1,2-dichloroethene (cis-1,2-DCE) into the Soil.
- PCE, TCE, cis-1,2-DCE, and vinyl chloride (VC) into the Groundwater.

Enclosure A includes a detailed description and diagram 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 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 2023 *CACR*, Ecology has determined:

1. Interim Actions were effective in removing a majority of the contamination mass.

Soil and groundwater at the Site were contaminated with halogenated volatile organic compounds (HVOCs), including PCE, TCE, cis-1,2-DCE, and VC. To address the HVOC contamination, interim cleanup actions were conducted at the Site from 1997 to 2021. Interim cleanup actions conducted to date included:

- Operating a soil vapor extraction (SVE) system from 1997 to 2000.
- Excavating HVOC-contaminated soil to approximately 6 to 8 feet below ground surface (bgs) in 2017.
- Applying chemical-reducing amendment to soil and groundwater from 6 to 12 feet bgs in the excavation in 2017.
- Injecting reductive agents to groundwater in 2017, 2019, and 2021, to enhance groundwater remediation.

These interim actions effectively removed a majority of the contamination mass from the Site. Ecology appreciates your efforts of conducting the interim actions.

2. Further soil sampling is needed to determine the northern extent of residual soil contamination.

HVOC-contaminated soil was present from approximately 2 to 9 feet bgs, within and near the former Town and Country cleaners. The vertical extent of the contaminated soil is likely bounded by a bluish-gray silt layer present across the Site from approximately 10 to 15 feet bgs, acting as a confining layer.

After the 2017 soil excavation, multiple sidewall samples collected from the northern boundary of the final excavation limits contained HVOC concentrations above the MTCA cleanup levels. The lateral extent of the residual soil contamination is not fully defined to the north.

[1] https://apps.ecology.wa.gov/cleanupsearch/site/2265
[2] https://ecology.wa.gov/footer-pages/public-records-requests

Therefore, Ecology recommends the following:

- Additional soil sampling is needed north and northeast of the soil excavation to determine the north/northeastern extent of the residual soil contamination. Well MW-6 defined the northwestern extent.

- Depending on the soil sampling results, additional soil remediation may be needed in this area.

- A groundwater monitoring well may be needed in this area to assess the groundwater conditions.

3. Further groundwater monitoring is needed to demonstrate compliance with MTCA cleanup standards.

Historically, all monitoring wells contained HVOC concentrations above the MTCA cleanup levels, except the two up-gradient wells MW-2 and MW-3. HVOC concentrations in groundwater declined after interim actions. After the latest reductive agent injection in October 2021, all HVOC concentrations in wells MW-1, MW-8, and MW-9 were below the MTCA cleanup levels for four consecutive quarters in 2022. However, VC concentrations in wells MW-4, MW-6, and MW-7 were still above the MTCA Method A cleanup level. In addition, a rebound of VC concentration was observed in wells MW-6 and MW-7.

Ecology recommends the following regarding groundwater monitoring:

- Complete additional groundwater sampling of all monitoring wells except upgradient wells MW-2 and MW-3. To observe potential rebound and demonstrate compliance with MTCA cleanup levels, eight consecutive quarters of HVOC concentrations below the MTCA Method A cleanup levels are needed for all monitoring wells. Please refer to Section 10.3.1 of Ecology's *Guidance for Remediation of Petroleum Contaminated Sites*[3] for detailed requirements of Stage 3 groundwater monitoring.

- Piezometer B-5 appears to be still active (**Enclosure A, Figure 2**). Historically groundwater in this piezometer was above MTCA cleanup levels for HVOCs. Please include B-5 in groundwater monitoring network.

- If an additional monitoring well is installed northeast of the soil excavation, that well also needs to be included in the monitoring network.

- The absence of a potential vapor intrusion (VI) exposure pathway for future buildings that could be located on the Site needs to be confirmed by documenting that VC concentrations in groundwater are below the MTCA Method B VI screening level of 0.33 micrograms per liter (µg/L).

- Please modify future time-series plots of VC for monitoring wells MW-4, MW-6, and MW-7:

    - Show injection events completed in 2017, 2019, and 2021 as vertical lines.

    - Show the VC Method A cleanup level (0.2 µg/L) as a horizontal line.

    - Create a separate plot for each well for March 2022 through the present, with a vertical scale adjusted to clearly show data points versus the VC Method A cleanup level. Include a second horizontal line for

[3] https://apps.ecology.wa.gov/publications/documents/1009057.pdf

the VC Method B VI screening level (0.33 µg/L).

4. Next Steps.

- Ecology encourages submittal of a work plan for further soil and groundwater characterization. Ecology will collaborate with you to ensure additional Site characterization can meet the MTCA requirements.

- Depending on the additional characterization results, Ecology is happy to discuss with you the feasible approaches to obtain a Site NFA determination. Potential approaches may include application of empirical demonstration, negotiation of institutional controls, and update or release of the existing Environmental covenant (recording number 2020300193) established for the Site in 2001.

- This Site is currently listed in Ecology's Hazardous Sites List (HSL) with a hazard ranking of 2 (Moderate to High Risk). A NFA determination for the Site needs to go through a 30-day public notice and comment period per MTCA Requirement 173-340-330-(7) and (10) in order to remove the Site from the HSL.

- Electronic submittal of post-2010 sampling data into Ecology's Electronic Environmental Information Management (EIM) database is a requirement to receive a final Ecology opinion for this Site. Our records indicate that no Site data have been uploaded to EIM. Molly Ware (via email Molly.Ware@ecy.wa.gov, or via telephone at 360-280-7712) is Ecology's contact and resource on entering data into EIM.

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.

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 425-229-2565 or e-mail at jing.song@ecy.wa.gov.

Sincerely,

Jing Song
Site Manager
Toxics Cleanup Program, NWRO

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

cc: Greg Peters, Farallon Consulting, (gpeters@farallonconsulting.com)
Jeff Kaspar, Farallon Consulting, (jkaspar@farallonconsulting.com)
Jenette S. O'Brien, Property owner contact, (jobrien@apollo.com)
Sonia Fernandez, VCP Coordinator, NWRO, (Sonia.fernandez@ecy.wa.gov)

Enclosure A

Site Description and Diagrams

Enclosure A: Figure 1

REFERENCE: 7.5 MINUTE USGS QUADRANGLE BELLINGHAM NORTH, WASHINGTON. DATED 2020

FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION

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FIGURE 1

SITE VICINITY MAP
MERIDIAN HAGGEN
2814 MERIDIAN STREET
BELLINGHAM, WASHINGTON

FARALLON PN: 1993-010

Drawn By: NM | Checked By: GP | Date: 6/14/2023 | Disk Reference: 1993-010

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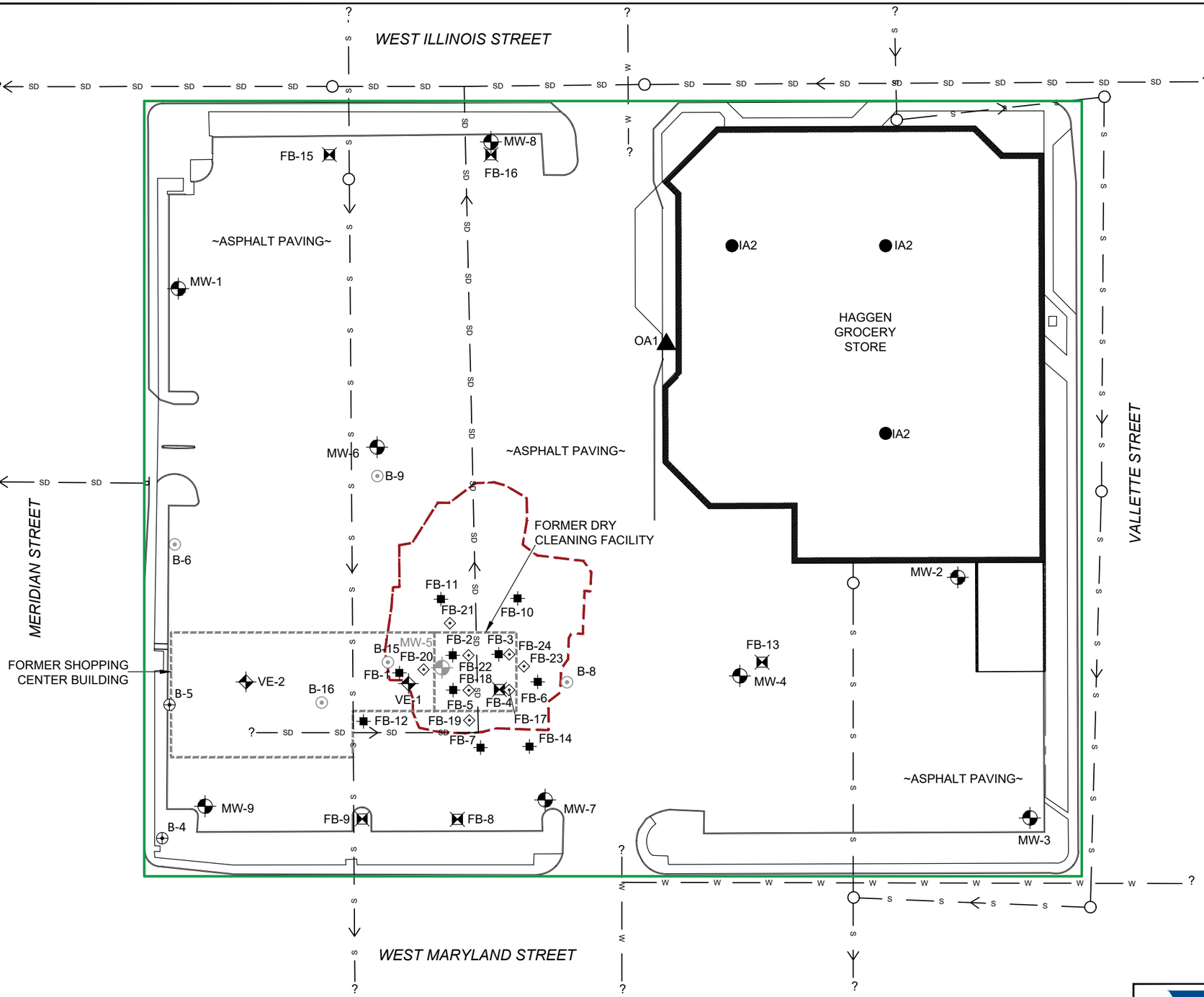
Enclosure A: Figure 2



LEGEND:

- LANDAU ASSOCIATES, INC. SOIL VAPOR EXTRACTION WELL - 1997 (DECOMMISSIONED)
- LANDAU ASSOCIATES, INC.- PIEZOMETER - 1997
- LANDAU ASSOCIATES, INC.- PIEZOMETER - 1997 (DECOMMISSIONED)
- FARALLON GEOPROBE BORING - MAY 2016
- FARALLON GEOPROBE BORING AND RECONNAISSANCE GROUNDWATER SAMPLE - MAY 2016
- FARALLON GROUNDWATER MONITORING WELL LOCATION - AUGUST 2016
- DECOMMISSIONED FARALLON GROUNDWATER MONITORING WELL LOCATION - MARCH 2017
- FARALLON GEOPROBE BORING - MARCH 2017
- INDOOR AIR SAMPLE (LANDAU)
- OUTDOOR AIR SAMPLE (LANDAU)
- SITE BOUNDARY
- FORMER BUILDING LOCATION
- EXCAVATION EXTENT - SEPTEMBER 2017
- S — 8-INCH VITRIFIED CLAY SANITARY SEWER
- SD — 18-INCH POLYVINYL CHLORIDE STORM SEWER
- W — WATER LINE
- UTILITY MANHOLE
- ? — LIMIT OF KNOWN UTILITY LOCATION

NOTES

1. FIGURE ADAPTED FROM A.L.T.A./A.C.S.M. LAND TITLE SURVEY MAP PROVIDED BY GEODIMENSIONS DATED JUNE 2012.
2. ALL LOCATIONS APPROXIMATE.
3. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.

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FIGURE 2

SITE PLAN
MERIDIAN HAGGEN
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BELLINGHAM, WASHINGTON

FARALLON PN: 1993-010

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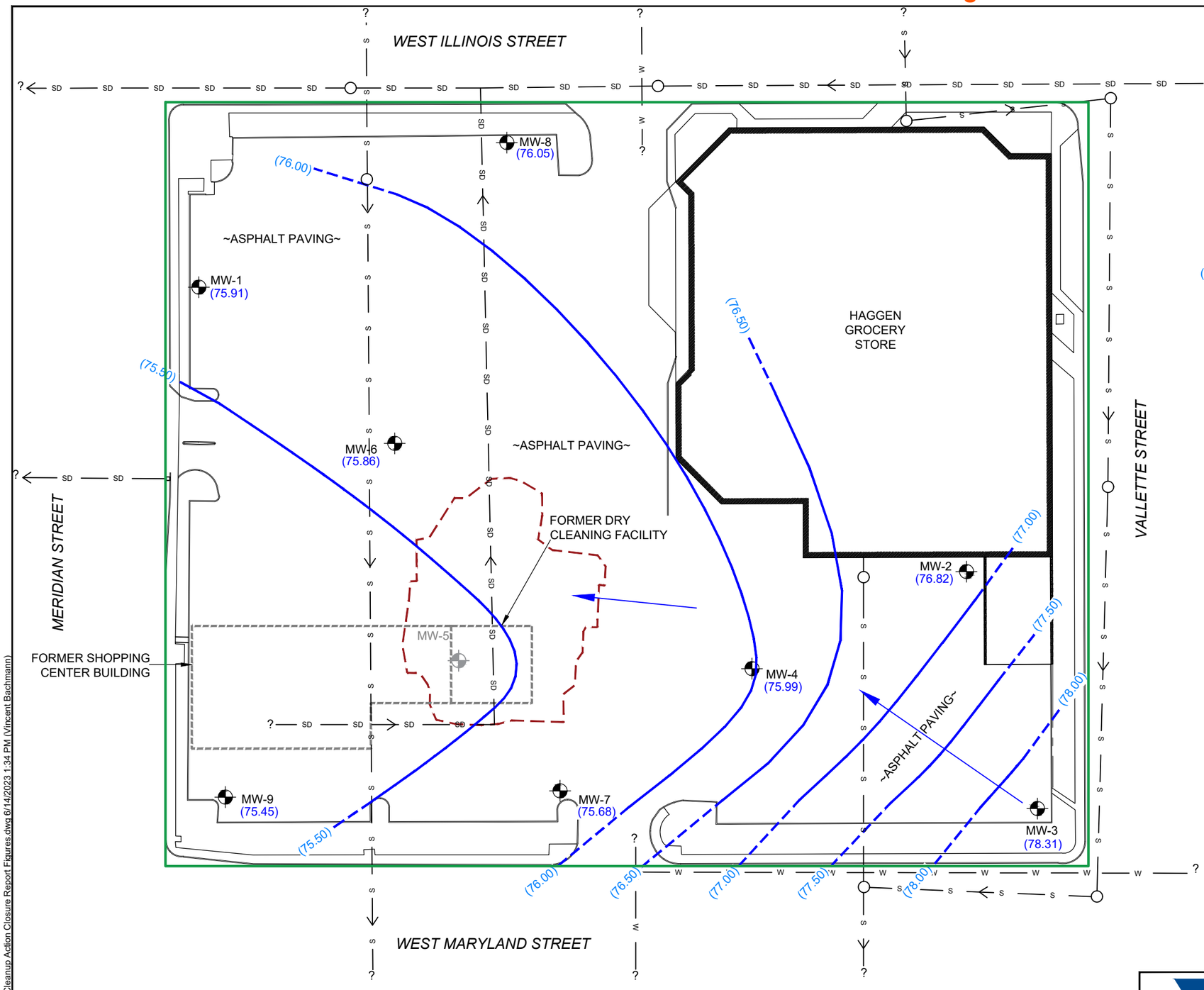
Enclosure A: Figure 3



LEGEND:

- FARALLON GROUNDWATER MONITORING WELL LOCATION - AUGUST 2016
- DECOMMISSIONED FARALLON GROUNDWATER MONITORING WELL LOCATION - MARCH 2017
- FORMER BUILDING LOCATION
- EXCAVATION EXTENT - SEPTEMBER 2017
- S — 8-INCH VITRIFIED CLAY SANITARY SEWER
- SD — 18-INCH POLYVINYL CHLORIDE STORM SEWER
- ? — LIMIT OF KNOWN UTILITY LOCATION
- (76.82) — GROUNDWATER ELEVATION IN FEET
- (76.00) — GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- SITE BOUNDARY

NOTES

1. FIGURE ADAPTED FROM A.L.T.A./A.C.S.M. LAND TITLE SURVEY MAP PROVIDED BY GEODIMENSIONS DATED JUNE 2012.
2. ALL LOCATIONS APPROXIMATE.
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FIGURE 3

GROUNDWATER ELEVATION CONTOUR MAP
DECEMBER, 2022
MERIDIAN HAGGEN
2814 MERIDIAN STREET
BELLINGHAM, WASHINGTON

FARALLON PN: 1993-010

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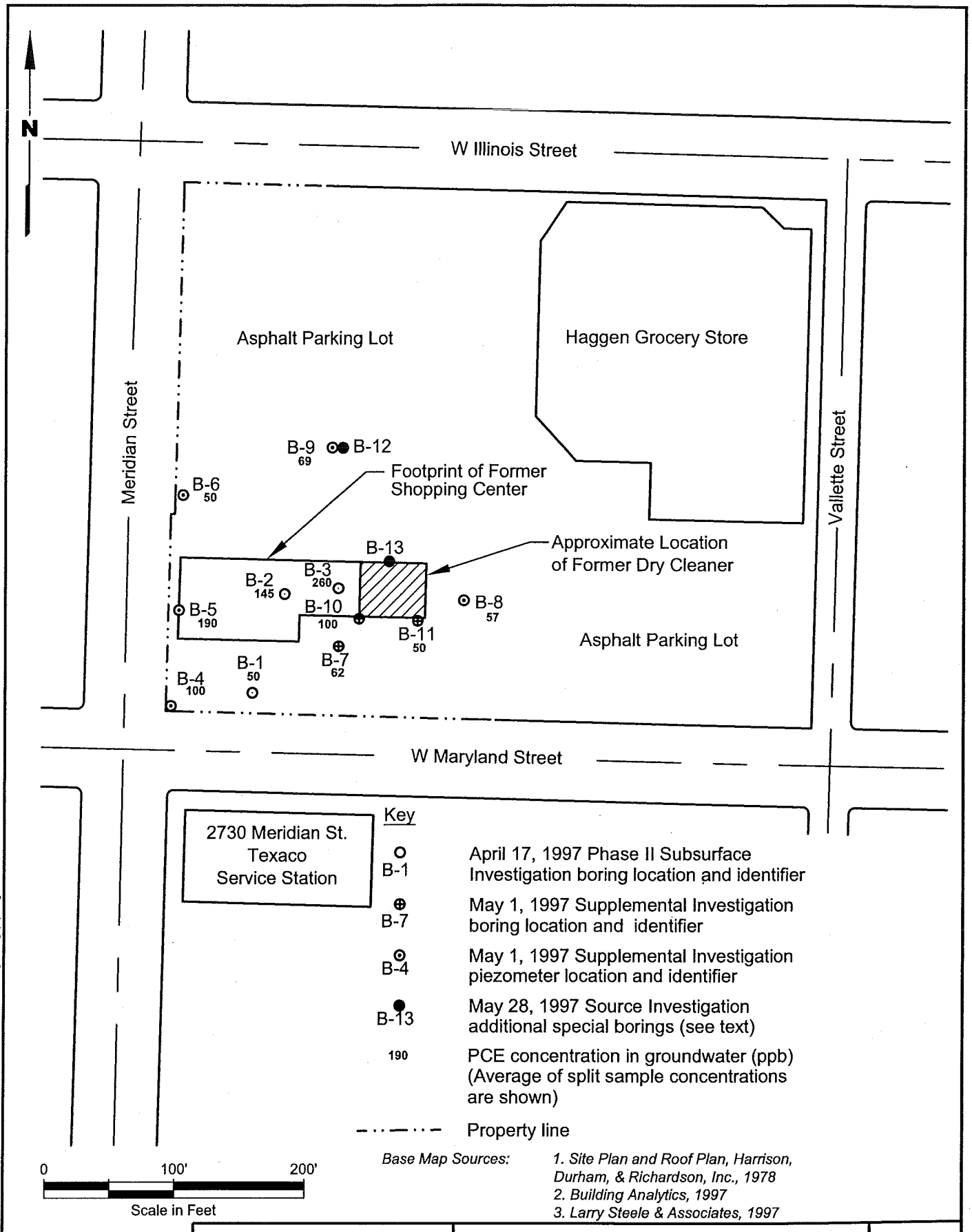
Enclosure A: Figure 4



Haggen #11 RAR | T:\1790\011\010\Remedial Action\Fig4.dwg (A) "Figure 4" 8/16/2001

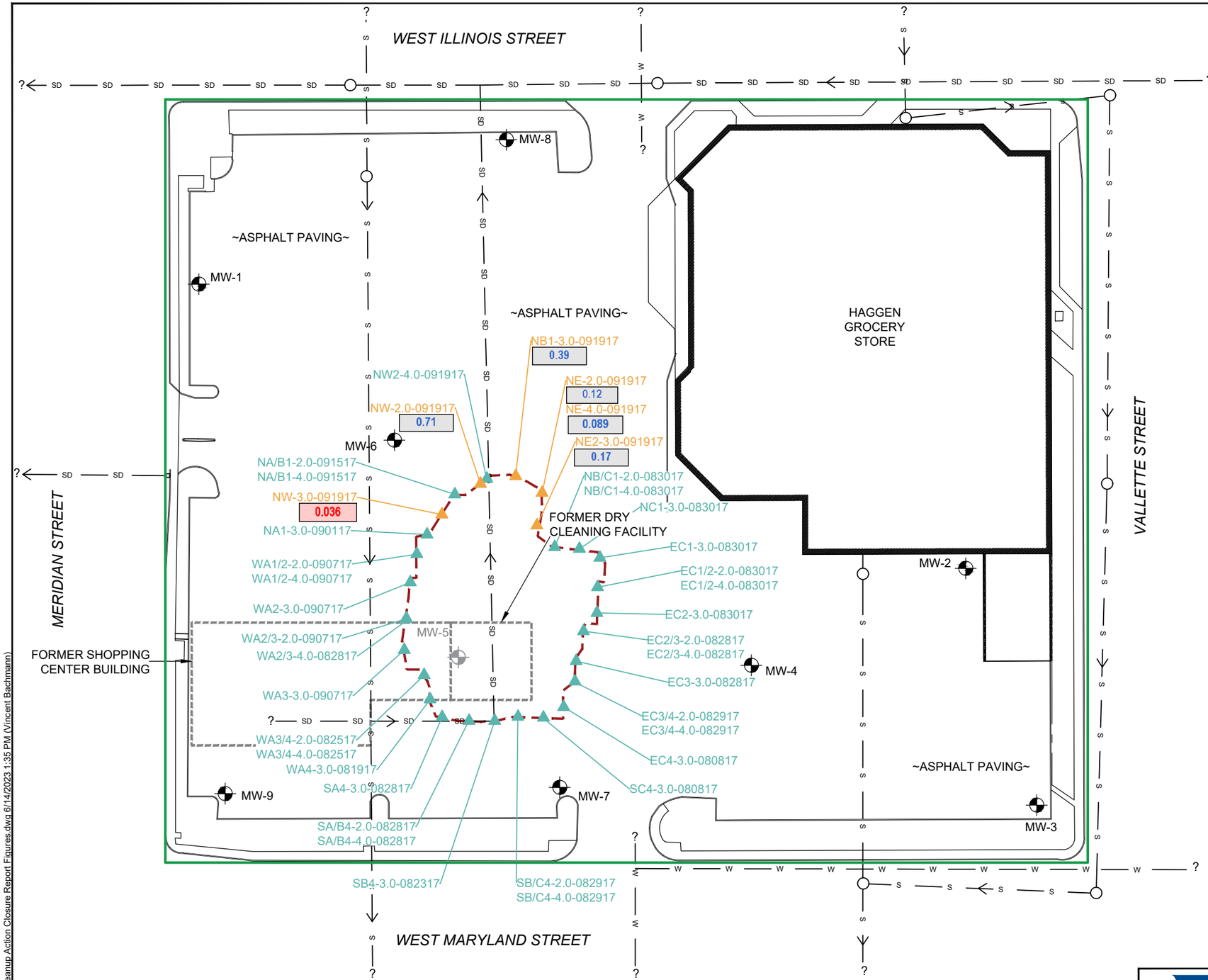
Landau Associates

Haggen Store No. 11
Bellingham, Washington

PCE Concentrations in Groundwater
Combined Phase II Investigations

Figure 4

Enclosure A: Figure 5



LEGEND:

- FARALLON GROUNDWATER MONITORING WELL LOCATION - AUGUST 2016
- DECOMMISSIONED FARALLON GROUNDWATER MONITORING WELL LOCATION - MARCH 2017
- CONFIRMATION SOIL SAMPLE WITH COCs NOT DETECTED AT CONCENTRATIONS EXCEEDING MTCA METHOD A CLEANUP LEVELS
- CONFIRMATION SOIL SAMPLE WITH COCs DETECTED AT CONCENTRATIONS EXCEEDING MTCA METHOD A CLEANUP LEVELS
- DATA STRINGS REPRESENTED AS: SAMPLE NAME - DEPTH IN FEET BELOW GROUND SURFACE - SAMPLE DATE
- FORMER BUILDING LOCATION
- EXCAVATION EXTENT - SEPTEMBER 2017
- S — 8-INCH VITRIFIED CLAY SANITARY SEWER
- SD — 18-INCH POLYVINYL CHLORIDE STORM SEWER
- W — WATER LINE
- UTILITY MANHOLE
- ? — LIMIT OF KNOWN UTILITY LOCATION
- SITE BOUNDARY

BOLD RED — DENOTES TRICHLOROETHENE (TCE) CONCENTRATIONS IN SOIL THAT EXCEED THE WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION (MTCA) CLEANUP LEVEL (RESULTS IN MILLIGRAMS PER KILOGRAM)

BOLD BLUE — DENOTES TETRACHLOROETHENE (PCE) CONCENTRATIONS IN SOIL THAT EXCEED THE WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION (MTCA) CLEANUP LEVEL (RESULTS IN MILLIGRAMS PER KILOGRAM)

NOTES

1. FIGURE ADAPTED FROM A.L.T.A./A.C.S.M. LAND TITLE SURVEY MAP PROVIDED BY GEODIMENSIONS DATED JUNE 2012.
2. ALL LOCATIONS APPROXIMATE.
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FIGURE 4B

SITE PLAN SHOWING SIDEWALL CONFIRMATION SOIL SAMPLE LOCATIONS
MERIDIAN HAGGEN
2814 MERIDIAN STREET
BELLINGHAM, WASHINGTON

FARALLON PN: 1993-010

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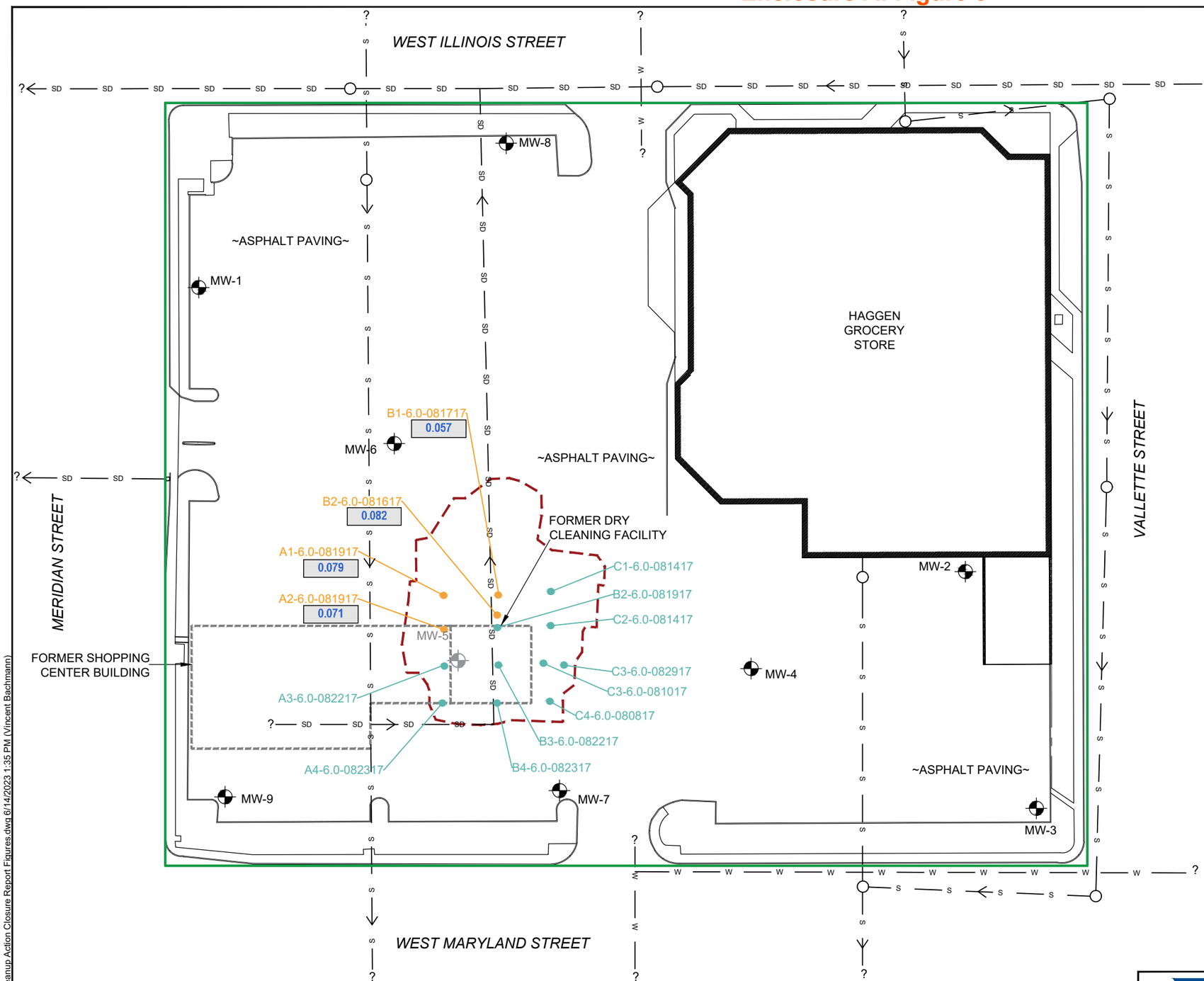
Enclosure A: Figure 6



LEGEND:

- FARALLON GROUNDWATER MONITORING WELL LOCATION - AUGUST 2016
- DECOMMISSIONED FARALLON GROUNDWATER MONITORING WELL LOCATION - MARCH 2017
- CONFIRMATION SOIL SAMPLE WITH COCs NOT DETECTED AT CONCENTRATIONS EXCEEDING MTCA METHOD A CLEANUP LEVELS
- CONFIRMATION SOIL SAMPLE WITH COCs DETECTED AT CONCENTRATIONS EXCEEDING MTCA METHOD A CLEANUP LEVELS
- DATA STRINGS REPRESENTED AS: SAMPLE NAME - DEPTH IN FEET BELOW GROUND SURFACE - SAMPLE DATE
- FORMER BUILDING LOCATION
- EXCAVATION EXTENT - SEPTEMBER 2017
- S — 8-INCH VITRIFIED CLAY SANITARY SEWER
- SD — 18-INCH POLYVINYL CHLORIDE STORM SEWER
- W — WATER LINE
- UTILITY MANHOLE
- ? — LIMIT OF KNOWN UTILITY LOCATION
- SITE BOUNDARY
- BOLD BLUE — DENOTES TETRACHLOROETHENE (PCE) CONCENTRATIONS IN SOIL THAT EXCEED THE WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION (MTCA) CLEANUP LEVEL (RESULTS IN MILLIGRAMS PER KILOGRAM)

NOTES

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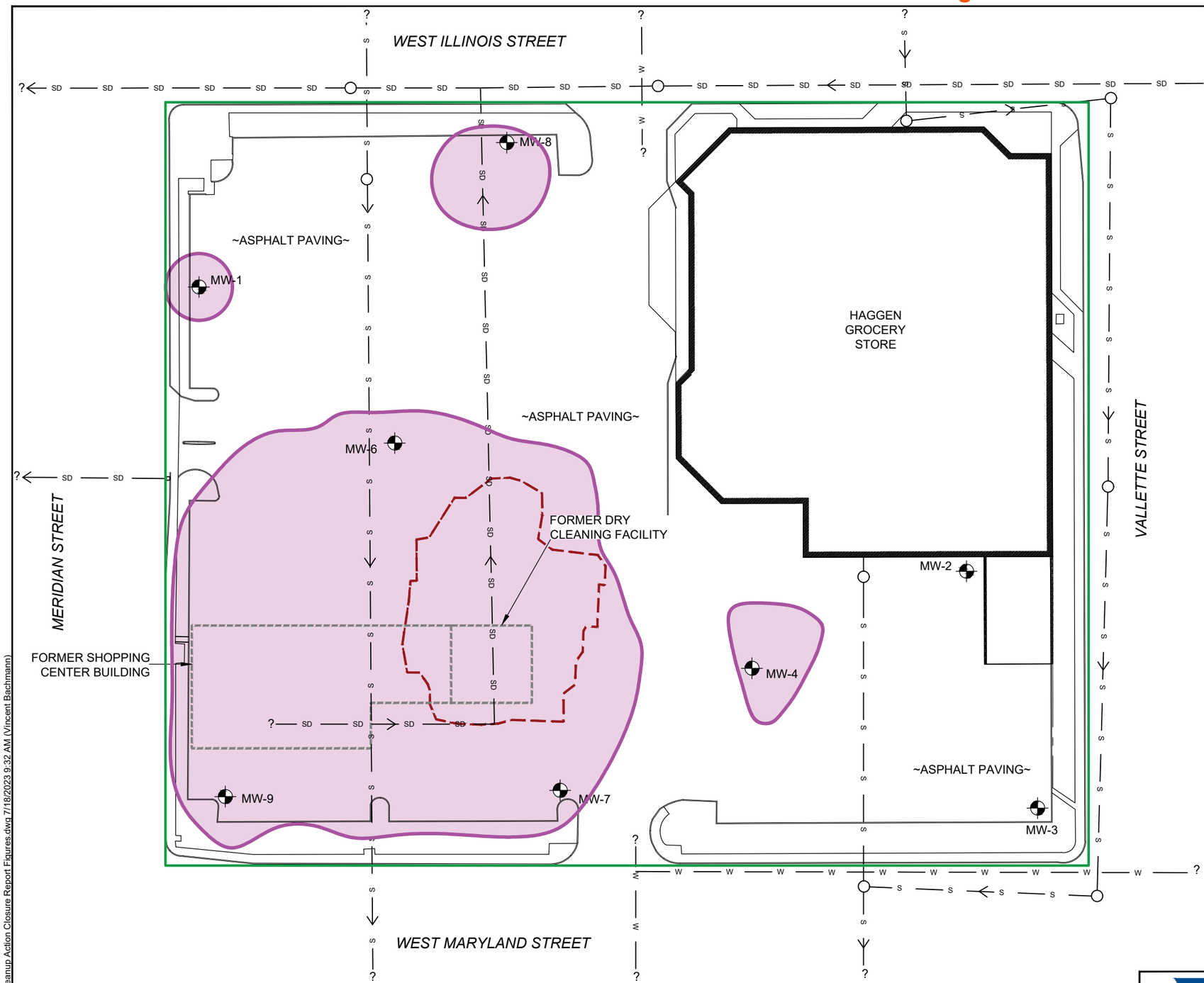
FIGURE 4C

SITE PLAN SHOWING BOTTOM CONFIRMATION SOIL SAMPLE LOCATIONS
MERIDIAN HAGGEN
2814 MERIDIAN STREET
BELLINGHAM, WASHINGTON

FARALLON PN: 1993-010

Enclosure A: Figure 7



LEGEND:

- FARALLON GROUNDWATER MONITORING WELL LOCATION - AUGUST 2016
- FORMER BUILDING LOCATION
- EXCAVATION EXTENT - SEPTEMBER 2017
- S — 8-INCH VITRIFIED CLAY SANITARY SEWER
- SD — 18-INCH POLYVINYL CHLORIDE STORM SEWER
- W — WATER LINE
- UTILITY MANHOLE
- ? — LIMIT OF KNOWN UTILITY LOCATION
- APPROXIMATE AREAS SUBJECT TO CLEANUP ACTION INJECTION WORK (INCLUDES 2017, 2019, AND 2021 EVENT AREAS)
- SITE BOUNDARY

NOTES

1. FIGURE ADAPTED FROM A.L.T.A./A.C.S.M. LAND TITLE SURVEY MAP PROVIDED BY GEODIMENSIONS DATED JUNE 2012.
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FIGURE 5

AREAS OF REMEDIATION WORK
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FARALLON PN: 1993-010

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Site Description

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

Site

The Site is defined by the nature and extent of PCE, TCE, cis-1,2-DCE, and VC released to soil and groundwater at 2814 Meridian Street in Bellingham, WA (Property, **Figure 1**). The Property is a 4.64-acre rectangular-shaped Whatcom County parcel 3803190272500000.

Area and Property Description

The Property is located in a mixed residential and commercial area in Bellingham. The Property, as well as the adjacent properties to the west and south, are zoned for Urban Village, which allows mixed residential and commercial uses. Adjacent properties to the east and north are zoned for single family residential use.

The Property is bounded by the following commercial or residential properties:

- ***North***: West Illinois Street, followed by single-family residences and a Property Management business.
- ***East***: Vallette Street followed by single-family residences.
- ***South***: West Maryland Street, followed by a gas station and single-family residences.
- ***West***: Meridian Street followed by commercial businesses.

Property History and Current Use

The Property was used from 1930 until 1959 as single-family residential, with two retail uses. In 1959, the Property was developed into two retail buildings. The first building was constructed as a retail grocery store on the northeastern portion of the Property, which was replaced as a Haggen grocery store in 1979. The second retail building was constructed as a small shopping center (strip mall) on the southwestern portion of the Property. A former dry-cleaning facility (Town and Country Dry Cleaners) operated on the eastern portion of the shopping center building from 1959 until 1988, when the building was demolished (**Figure 2**).

Currently, the Property is occupied by the Haggen grocery store on the northeastern portion of the Property. The remaining portion of the Property is a paved parking lot, including the former dry cleaning facility location.

Sources of Contamination

The halogenated volatile organic compound (HVOC) contamination at the Site is associated with the historic dry cleaning operations at the former Town and Country dry cleaners, located as part of the former shopping center building on the southwestern portion of the Property. The HVOC contamination to soil and groundwater was initially discovered during a Phase II Site assessment in April 1997. The exact timing of release is unknown.

Physiographic Setting

The Property is situated at an elevation of approximately 80 feet above mean seal level. Land surface on Property and vicinity is generally flat, with gentle slopes to the southwest toward Bellingham Bay.

Surface/Storm Water System

The nearest surface water is Squalicum Creek, located approximately 0.5 miles north of the Property. Squalicum Creek flows southeast and discharges to Bellingham Bay that is located approximately 0.8 miles southwest of the Property.

Storm water on the Property flows toward City of Bellingham stormwater mains located in the rights of way to the north (West Illinois Street), west (Meridian Street), and east (Vallette Street). An 18-inch-diameter storm water line drains to the north from the eastern portion of the former shopping center building, underneath the former dry cleaner (**Figure 2**).

Ecological Setting

Land surfaces on the Property and adjacent properties are primarily covered by buildings and asphalt or concrete pavement. Cornwall Park, a 70-acre City park, featuring hiking trails, multiple sports fields and courts, playgrounds, and Squalicum Creek, is located approximately 600 feet northeast of the Property. The Site qualifies for an exclusion from the Terrestrial Ecological Evaluation process, per WAC 173-340-7491, as documented in the *CACR*.

Geology

Based on borings advanced at the Site, subsurface soils consist of a mixture of silt, sand, and gravel to depths ranging from 10 to 15 feet below ground surface (bgs). An underlying bluish-gray silt layer was encountered at depths ranging from 10 to 15 feet bgs. The bottom of the bluish-gray silt layer was not encountered to the total explored depth of 20 feet bgs.

Groundwater

A total of nine monitoring wells (MW-1 through MW-9) were installed at the Site in 2016 (**Figure 2**). All wells were screened from 5 to 15 feet bgs. Well MW-5 was decommissioned and removed in 2017 prior to remedial excavation. All other monitoring wells are still active.

Shallow groundwater was measured from Site monitoring wells at depths ranging from approximately 3 to 10 feet bgs. This shallow groundwater appears to be perched on top of the bluish-gray silt layer. The direction of groundwater flow based on the December 2022 monitoring event was to the northwest in the southeastern portion of the Site and to the west-southwest in the central portion of the Site (**Figure 3**).

Water Supply

Potable water to the Property is provided by City of Bellingham, which is sourced from Lake Whatcom. Lake Whatcom is located approximately 3 miles east of the Property. The Property is located outside of the 10-year time of travel wellhead protection zone of all water supply wells.

Release and Extent of Contamination

Subsurface investigations and interim actions were conducted on the Property from 1997 to 2022. Below is a summary of Site investigations and interim actions, in chronological order.

- In 1997 to 2003, soil and groundwater samples were collected from borings B-1 through B-16 (no B-14), which were advanced to depths of 11 to 18.5 feet bgs (**Figure 2, Figure 4**). PCE concentrations exceeded MTCA Method A soil cleanup level from 5 to 9 feet bgs at boring B-10, just west of the former dry cleaner. PCE, TCE, and/or cis-1,2-DCE concentrations exceeded MTCA Method A groundwater levels in groundwater samples collected from all soil borings.
- A soil vapor extraction (SVE) system was installed in the immediate vicinity of the former dry cleaners in 1997, which consisted of two vapor extraction wells VE-1 and VE-2 (**Figure 2**). The SVE system operated during dry seasons from late 1997 to 2000, and reportedly removed approximately 40.7 pounds of PCE from the subsurface.
- In 2016 and 2017, soil borings FB-1 through FB-24 were installed to depths of 13 to 20 feet bgs (**Figure 2**). Soil samples collected between 2 and 7 feet bgs within or immediately near the former dry cleaner (FB-2 through FB-5, FB-11, FB-17, FB-18, FB-20 through FB-22, and FB-24) contained PCE and TCE concentrations above the MTCA Method A soil cleanup levels.
- Groundwater monitoring was conducted in selected soil borings in 2012 and 2016. HVOC exceedances were detected in groundwater throughout the Site. Nine groundwater monitoring wells (MW-1 through MW-9) were subsequently installed (**Figure 2, Figure 3**).

Soil samples collected during well installation contained HVOC concentrations below the MTCA Cleanup levels.

- In 2017, HVOC-contaminated soil was excavated to total depths of 6 to 8 feet bgs in the vicinity of the former dry cleaner (**Figure 2**). Approximately 3,700 tons of HVOC-contaminated soil was removed from the Site. Groundwater was encountered at approximately 7 feet (southern) to 9 feet (northern) bgs in the excavation. Prior to backfilling, chemical-reducing amendment was applied to soil and groundwater from 6 to 12 feet bgs to facilitate in-situ treatment.
- A total of 53 confirmation soil samples were collected from the final limits of the excavation (**Figure 5, Figure 6**). Among them, four bottom samples (6 feet bgs) and seven sidewall samples (2 to 4 feet bgs) contained HVOC concentrations above the MTCA Cleanup levels. These sidewall samples are located along the northern boundary of the excavation.
- In 2017, 2019, and 2021, reductive agents were injected through direct-push borings to enhance reductive and biotic dechlorinated of HVOCs in groundwater (**Figure 7**).
- Groundwater samples were collected from all Site monitoring wells (except MW-5 that was decommissioned in 2017) from 2016 to 2022. PCE breakdown and declining HVOC concentrations were observed in groundwater. Until 2022, VC concentrations are still above the MTCA Method A groundwater cleanup level in wells MW-4, MW-6, and MW-7.
- In 2022, three indoor air samples (IA-1 through IA-3) were collected within the Haggen grocery store, along with an outdoor air sample as an ambient background (**Figure 2**). All HVOC concentrations were below the MTCA Method B air cleanup levels.

Site Diagrams

Enclosure B

Basis for the Opinion: List of Documents

1. Landau Associates, *Remedial Action, Haggen Meridian Store #11, Bellingham, Washington*, August 16, 2001.

2. Department of Ecology (Ecology), *Re: Independent Remedial Action, Haggen Meridian Store #11, 2814 Meridian Street, Bellingham, Washington*, March 25, 2002.

3. Restrictive Covenant, Tax Parcel 3803190272500000, Recorded March 1, 2002.

4. Landau Associates, *Results of Post-Remediation Groundwater Monitoring, Haggen Store #11, Bellingham, Washington*, May 22, 2003.

5. Ecology, *Periodic Review, Haggen, Inc., Meridian Storee #11, formerly Town and Country Cleaners, 2814 Meridian Street, Bellingham, Washington*, June 2011.

6. G-logic, *Groundwater Sampling Memo, Haggen Meridian Store #11 Parking Area, 2814 Meridian Street, Bellingham, WA*, June 5, 2012.

7. Ecology, *Re: Notice of Rescission "No Further Action" (NFA) Determination at the following Hazardous Waste Site: Haggen Meridian Store #11 (former Town and Country Cleaners Bellingham), 2814 Meridian Street, Bellingham, WA*, July 11, 2012.

8. Farallon Consulting, *Supplemental Site Characterization Report, Meridian Haggen, 2814 Meridian Street, Bellingham, Washington*, June 17, 2016.

9. Farallon Consulting, *Monitoring Well installation Report, Meridian Haggen, 2814 Meridian Street, Bellingham, Washington*, November 11, 2016.

10. Ecology, *Periodic Review, Haggen, Inc., Meridian Storee #11, formerly Town and Country Cleaners, 2814 Meridian Street, Bellingham, Washington*, November 2016.

11. Farallon Consulting, *Interim Remedial Action Notice, 2814 Meridian Street Bellingham, Washington*, April 27, 2017.

12. Farallon Consulting, *Remedial Action Report, Meridian Haggen, 2814 Meridian Street, Bellingham, Washington*, April 6, 2018.

13. Farallon Consulting, *March 2018 Groundwater Monitoring Results, Meridian Haggen, 2814 Meridian Street, Bellingham, Washington*, June 18, 2018.

14. Farallon Consulting, *June 2018 Groundwater Monitoring Results, Meridian Haggen, 2814 Meridian Street, Bellingham, Washington*, September 27, 2018.

15. Farallon Consulting, *September 2018 Groundwater Monitoring Results, Meridian Haggen, 2814 Meridian Street, Bellingham, Washington*, October 31, 2018.

16. Farallon Consulting, *March 2019 Groundwater Monitoring Results, Meridian Haggen, 2814 Meridian Street, Bellingham, Washington*, May 17, 2019.

17. Farallon Consulting, *June 2019 Groundwater Monitoring Results, Meridian Haggen, 2814 Meridian Street, Bellingham, Washington*, August 27, 2019.

18. Farallon Consulting, *Proposed Construction Activities Notification Meridian Haggen 2814 Meridian Street, Bellingham, Washington*, October 1, 2019.

19. Ecology, Site Hazard Assessment, January 6, 2020.

20. Farallon Consulting, *September 2019 Groundwater Monitoring Results, Meridian Haggen, 2814 Meridian Street, Bellingham, Washington*, January 8, 2020.

21. Farallon Consulting, *Site Status Update, Meridian Haggen, 2814 Meridian Street, Bellingham, Washington*, February 20, 2023.

22. Farallon Consulting, *Cleanup Action Closure Report, Meridian Haggen, 2814 Meridian Street, Bellingham, Washington*, July 18, 2023.