STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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March 26, 2020

Laura Skow
Montrose Environmental
1631 East Saint Andrew Place
Santa Ana, CA 92705

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

- **Site Name:** Jackpot Station 352
- **Site Address:** 4200 Wheaton Way, Bremerton, Washington 98310
- **Facility/Site No.:** 86856327
- **Cleanup Site No.:** 10880
- **VCP Project No.:** NW2340

Dear Laura Skow:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your *Remediation System Status Report, Well Installation, Soil Sampling and Ground Water Monitoring Reports* for the **Jackpot Station 352** facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Pursuant to implementation of the activities specified in the listed reports, will the collected information assist in resolving Site characterization data gaps?

YES. Ecology has determined that continued soil and soil vapor sampling and evaluation, and additional ground water characterization, is necessary to ultimately determine that an effective, final remedial action is being conducted 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 releases:

- Gasoline-Range Total Petroleum Hydrocarbons (TPH-G), benzene, toluene, ethylbenzene and xylenes (BTEX) and naphthalene into the Soil.

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

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Environ Strategy Consultants (Environ), *Site Closure Plan, Jackpot Station 352, 4200 Wheaton Way, Bremerton, Washington, Washington,* dated June 7, 2010.

2. Environ Strategy Consultants (Environ), *Soil Vapor Extraction Well Installation and Pilot Text Report, Jackpot Station 352, 4200 Wheaton Way, Bremerton, Washington, Washington,* dated June 21, 2011.

3. Environ Strategy Consultants (Environ), *Second Quarter Groundwater Monitoring Report, Jackpot Station 352, 4200 Wheaton Way, Bremerton, Washington, Washington,* dated August 15, 2012.

4. Environ Strategy Consultants (Environ), *Cleanup Status Report, Jackpot Station 352, 4200 Wheaton Way, Bremerton, Washington, Washington,* dated August 22, 2012.

5. Environ Strategy Consultants (Environ), Remediation *Status Report, Jackpot Station 352, 4200 Wheaton Way, Bremerton, Washington, Washington,* dated October 15, 2012.

6. Environ Strategy Consultants (Environ), *Second Quarter2013 Groundwater Monitoring Report, Report, Jackpot Station 352, 4200 Wheaton Way, Bremerton, Washington, Washington,* dated July 30, 2013.

7. ES Engineering Services LLC (ES), *Cleanup Status Report, Jackpot Station 352, 4200 Wheaton Way, Bremerton, Washington,* dated August 11, 2014.

8. ES Engineering Services LLC (ES), *Confirmation Soil Sampling Report, Jackpot Station 352, 4200 Wheaton Way, Bremerton, Washington,* dated March 30, 2017.

9. ES Engineering Services LLC (ES), *Well Installation Report, Jackpot Station 352, 4200 Wheaton Way, Bremerton, Washington,* dated March 9, 2018.

10. Montrose Environmental, *Third Quarter 2019 Remediation System Status Report, Jackpot Station 352, 4200 Wheaton Way, Bremerton, WA,* dated October 22, 2019.

11. Montrose Environmental, *Fourth Quarter 2019 Remediation System Status Report, Jackpot Station 352, 4200 Wheaton Way, Bremerton, WA,* dated January 23, 2020

Those documents are kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. You can make an appointment by completing a Request for Public Record form (https://www.ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests) and emailing it to PublicRecordsOfficer@ecy.wa.gov, or contacting the Public Records Officer at 360-407-6040. A number of these documents are accessible in electronic form from the Site web page (https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=10880).

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 supporting documentation listed above, **Ecology has determined that continued soil and soil vapor sampling and evaluation is necessary to ultimately determine that an effective, final remedial action is being conducted at the Site. Pursuant to implementation of the activities specified in the listed reports, the collected information is expected to assist in resolving Site characterization data gaps.**

Site Characterization

History of Site use prior to the development of the retail gas station and convenience store needs to be provided, as well as the dates of the development of the Site for the current use. Installation dates for the Underground Storage Tanks (USTs) and fuel distribution system, as well as system/tanks upgrade dates need to be provided.

Your characterization of the Site documented impacts to soil beneath the Site from releases from underground storage tanks (USTs) and associated piping on the southeastern portion of the Property, associated with an active retail fueling station located on the Site. TPH-G and

BTEX contamination is present in the soil above MTCA Method A cleanup levels. Excavation and off-Site disposal of petroleum-contaminated soil was conducted. A remedial cleanup strategy and ongoing assessment for the Site was developed and implemented with the installation of extraction wells for soil vapor contaminant extraction (SVE).

A Terrestrial Ecological Evaluation (TEE) has not been completed for this Site. The TEE is necessary to meet substantive requirements of MTCA, to set cleanup levels that are protective of terrestrial species, and to determine an appropriate cleanup action. Additional information on satisfying this requirement can be found at the following link: https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation

Soil

- The collection and analysis of soil samples in the vicinity of the UST cavity and beneath the product lines and pump islands was first conducted in 1997. Contaminated soil removal activities (450 tons) was also conducted at that time. These data indicated that concentrations of TPH-G and BTEX above MTCA Method A cleanup levels were present in the soil. In 2010, six additional soil borings were advanced to further evaluate subsurface conditions in the vicinity of the fuel distribution system (USTs and pump islands).

- The results identified a larger extent of contamination at concentrations above MTCA Method A cleanup levels for TPH-G and BTEX. As a result, an SVE system was designed and vapor extraction wells VE-1 through VE-4 (**See Enclosure A, Figure 2**) were installed to remediate the remaining soil contamination. In 2018, three additional SVE remediation wells (RW-1 through RW-3) were installed as soil sample analytical results indicated that petroleum impacts exceeding MTCA Method A cleanup levels continued to be present at the Site.

- Remediation monitoring data has been used to evaluate the effectiveness of the SVE remediation system at the Site. The intent of the twice weekly monitoring and sampling activities is evaluation of vapor flow rates, etc. during the SVE remediation to determine the effectiveness in the remedial strategy and system adjustments, as needed.

- Soil petroleum impacts exceeding TPH-G and BTEX MTCA Method A cleanup levels continue. The concentrations are decreasing.

Ground Water

Additional characterization of ground water is necessary for the following reasons:

- Benzene was detected in soil above the Method A cleanup level of 0.03 mg/kg to a depth of 55 feet below ground surface (bgs).

- Perched ground water was encountered in remediation wells installed at the Site, as depths ranging from 22 to 30 feet bgs. Samples of this ground water were not collected.

The additional ground water characterization should include:

- Check on-Site remediation wells for the presence of ground water. If ground water is found, collect samples of the ground water and analyze the samples for Site chemicals of concern (COCs).

- A borehole should be drilled in the area of the deepest detection of benzene in soil above the Method A cleanup level (boring CB-1). Collect soil samples at 5-foot depth intervals below 50 feet bgs. Extend the borehole into the regional water table and complete a monitoring well screened in the top of this aquifer. Protect boring to ensure that contamination is not moved down the installation.

- Develop the monitoring well and collect a representative ground water sample using low flow purge techniques. Analyze the sample for Site COCs.

Assessment of the Vapor Intrusion Pathway

- Based on a review of the supporting documentation listed above, Ecology has determined further evaluation is necessary to assess the petroleum vapor intrusion (PVI) pathway potential to the convenience store building on the Property and commercial buildings in the vicinity of the Property. The reports submitted to date do not include a PVI evaluation.

- Please provide additional report text and discussion regarding how VI will be evaluated in accordance with Ecology's ***Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action***, revised April 2018, for assessing and addressing soil vapor issues.

- The following are actions Ecology has taken to supplement portions of the Ecology draft Vapor Intrusion (VI) guidance. The major changes include:

  - The cleanup and screening levels in Appendix B in the 2009 guidance were outdated and have been replaced by Ecology's Cleanup Levels and Risk Calculation (CLARC) VI data tables. The CLARC VI table values are based on toxicity data that were

current as of April 2015 and also use attenuation factors for determining sub-slab soil gas and ground water screening levels that are consistent with EPA's recommendations.

- Ecology issued new guidance related to petroleum VI (PVI) screening. Implementation Memorandum No. 14, entitled *Updated Process for Initially Assessing the Potential for Petroleum Vapor Intrusion*, incorporates a majority of EPA's recommendations for assessing sites where the only volatile subsurface contaminants of concern are petroleum hydrocarbons associated with a fuel release. Most petroleum-only sites should complete an initial VI assessment using the process contained in Ecology Implementation Memo No. 14.

- Ecology issued new guidance related to PVI evaluation. Implementation Memorandum No. 18, entitled *Petroleum Vapor Intrusion (PVI) Updated Screening Levels, Cleanup Levels and Sampling Considerations*. The memo proposes a generic Method B TPH indoor air cleanup level, addresses the requirement to account for the additive effects of the compounds present in petroleum mixtures, and provides recommendations for assessing the potential threat of petroleum VI on future buildings.

- Ecology issued Implementation Memorandum No. 21, entitled *Frequently Asked Questions (FAQs) Regarding Vapor Intrusion (VI) and Ecology's 2009 Draft VI Guidance*. This implementation memo answers a number of questions on whether specific portions of Ecology's 2009 Draft Vapor Intrusion (VI) Guidance are still applicable. Most of these questions address technical or policy changes that have occurred since the draft guidance was issued.

Other requirements

- Prior to implementation of the additional Site characterization work, please submit a work plan to Ecology for our review, and to provide our opinion.

- Once cleanup has been completed, the project will need completion of a final Cleanup Action Report (CAR), which summarizes all work conducted at the Site as well as results, interpretations, and conclusions. If additional remedial actions need to be considered, a Feasibility Study (FS) describing the cleanup alternatives considered and a Disproportionate Cost Analysis (DCA) will be necessary. Once the CAR has been reviewed and concurred by Ecology, a final opinion can then be issued concerning the Site.

- The selected cleanup action must meet applicable minimum requirements for cleanup

actions stipulated in WAC 173-340-360: protect human health and the environment, comply with cleanup standards, use permanent solutions, and provide for reasonable restoration time frames.

- Electronic submittal of all sampling data into Ecology's electronic *Environmental Information Management* (EIM) database is a requirement in order to receive a final Ecology opinion for this Site. Note that all data must be uploaded into the Ecology EIM system upon submission of each report to Ecology. This allows the Ecology Site Manager to access data to check results or perform additional analyses with those data. Gaylen Sinclair (email gsin461@ecy.wa.gov, or via telephone at 360-407-6496) 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 70.105D.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 70.105D.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 70.105D.030(1)(i).

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 consultative services as your cleanup progresses. We look forward to continuing to work with you.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions regarding this opinion, please feel free to contact me at (425) 649-4422, or email me at gcar461@ecy.wa.gov.

Sincerely,

Glynis A. Carrosino, Project Manager
Toxics Cleanup Program

Enclosure: A – Description and Diagrams of the Site

cc: Hamid Adib, Eagle Canyon Capital LLC
Jong Sub Lee, 2020 IJ Corporation
Sonia Fernandez, NWRO VCP Coordinator Ecology (via email)

Enclosure A
Description and Diagrams of the Site

Site Description

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

Site Definition: The Site is defined by the extent of releases to soil of gasoline range petroleum hydrocarbons (TPH-G), naphthalene and benzene, toluene, ethylbenzene, and xylenes (BTEX) associated with the Property at 4200 Wheaton Way in Bremerton, Washington. The Property is approximately 0.49 acre in size. The Property and the Site are shown on the attached Site Diagrams. **(Figure 1 and 2).**

Area Description: The Site is located on a rectangular-shaped parcel of commercial land located on the northeast corner of the intersection of Wheaton Way (State Route 303) and Hollis Street. The Site is covered with asphalt and concrete, and is part of a larger retail shopping center. The surrounding area is occupied by commercial businesses which include retail shops and restaurants. Site features are shown on **Figure 2.**

Property History and Current Use: The site is an active fuel retail station with four underground storage tanks (USTs), three pump islands and two dispensers that are located near (west of) a single-story convenience store. The USTs include one 6,000-gallon tank (diesel), two 12,000-gallon tanks (regular gasoline) and one 12,000-gallon tank (premium gasoline). Surrounding land use includes commercial properties, retail shops, and restaurants. Details of the property history prior to and use as a gasoline station and convenience store have not yet been provided, including the installation dates of the on-Site fueling systems.

Contaminant Sources and History of Releases: The potential contaminant source for this Site was the result of releases from underground storage tanks (USTs) and associated piping – all encountered in the tank cavity (located on the southeastern portion of the Property) in 1997.

Physiographic Setting: The topography of the Site area is moderately level. The approximate elevation of the Site is 300 feet above mean sea level, (ft amsl) on a small peninsula within Puget Sound. It is located approximately 2 miles from Port Orchard Bay, Dyes Inlet, and Port Washington Narrows, which surround the peninsula to the east, west and south, respectively. No streams are present within a half mile of the Site.

Ecological Setting: There is little terrestrial habitat in the immediate vicinity of the Property. Most of the Site and surrounding area is covered by buildings or paved with asphalt and concrete. The area is heavily developed with commercial properties.

Geology: The soils beneath the Site consists predominantly of silty sand, poorly-graded sand, and well-graded sand with silt to approximately 55 feet below the ground surface (bgs), the maximum depth explored at the Site. The gravel content increases with depth. During the 2018 well installations, soils encountered were grey to brown, non-plastic silty sand to approximately 25 feet bgs and very dense gravelly sands from 30 feet to 40 feet bgs.

The geology is generally consistent throughout the Site. The type and composition of this sediment is consistent with glacial till and alluvial floodplain deposits typical of the Puget Lowland. Puget Sound Lowland is filled with glacial and non-glacial sediments consisting of interbedded gravel, sand, silt and clay.

Ground Water: Ground water has been investigated via geotechnical borings and remediation wells. The occurrence of perched ground water, as indicated on well logs provided in the *Well Installation Report* (March 9, 2018) is summarized as follows:

Well Number	Depth to Ground Water (ft below ground surface)	Well Screen Interval (ft below ground surface)
RW-1	22	25 - 40
RW-2	29	25 - 40
RW-3	30	40 - 55

Ground water samples were not collected from these wells. However, the potential for impacts to perched ground water and the regional water table exists due to the following detections of benzene in the silty sand and gravely sand strata that underlie the Site:

Sample Depth (ft below ground surface)	Maximum Benzene Concentration, mg/kg
18	27.6
20	0.12
35	0.47
50	0.11
55	0.84
Method A Cleanup Level	0.03

Release and Extent of Contamination - Soil: Petroleum hydrocarbons in the form of TPH-G, BTEX are the known contaminants present in soil at the Site. Investigations have been conducted at the Site since 1996, and remedial system evaluations since 2012. Contamination above MTCA Method A cleanup levels was found to still be present, although at levels lower than pre-remediation levels.

Summary of Interim Actions:

In 1996, the fuel distribution system at the Site, was upgraded and petroleum-contaminated soil was discovered in the tank cavity. 450 tons of impacted soil was excavated and removed off-site.

In 1997 and 2010, additional subsurface assessment was conducted, and confirmed soil contaminated with TPH-G and BTEX above MTCA Method A cleanup levels

In 2011, an SVE system was designed and vapor extraction wells installed.

In 2012, the SVE system began continuous operation for the remediation of petroleum hydrocarbons in the subsurface soil. Bi-monthly site visits for operation and maintenance (O&M) of the system were also conducted. Vapor flow rates, vacuum, system temperatures, and concentrations of hydrocarbons in vapor in system influent, effluent, and individual wells were recorded at each visit. Vapor samples were collected monthly from system influent and effluent sample ports and submitted for laboratory analysis.

In 2013, the thermal oxidizer system was replaced with a carbon adsorption abatement system. Confirmation sampling confirmed the effectiveness of the system.
In 2016, confirmation sampling and analysis was conducted to evaluate remedial progress. Analytical results indicated contaminant concentrations in soil continued to exceed MTCA Method A cleanup levels. Installation of additional extraction wells and reinstatement of SVE remediation was the remedial strategy.

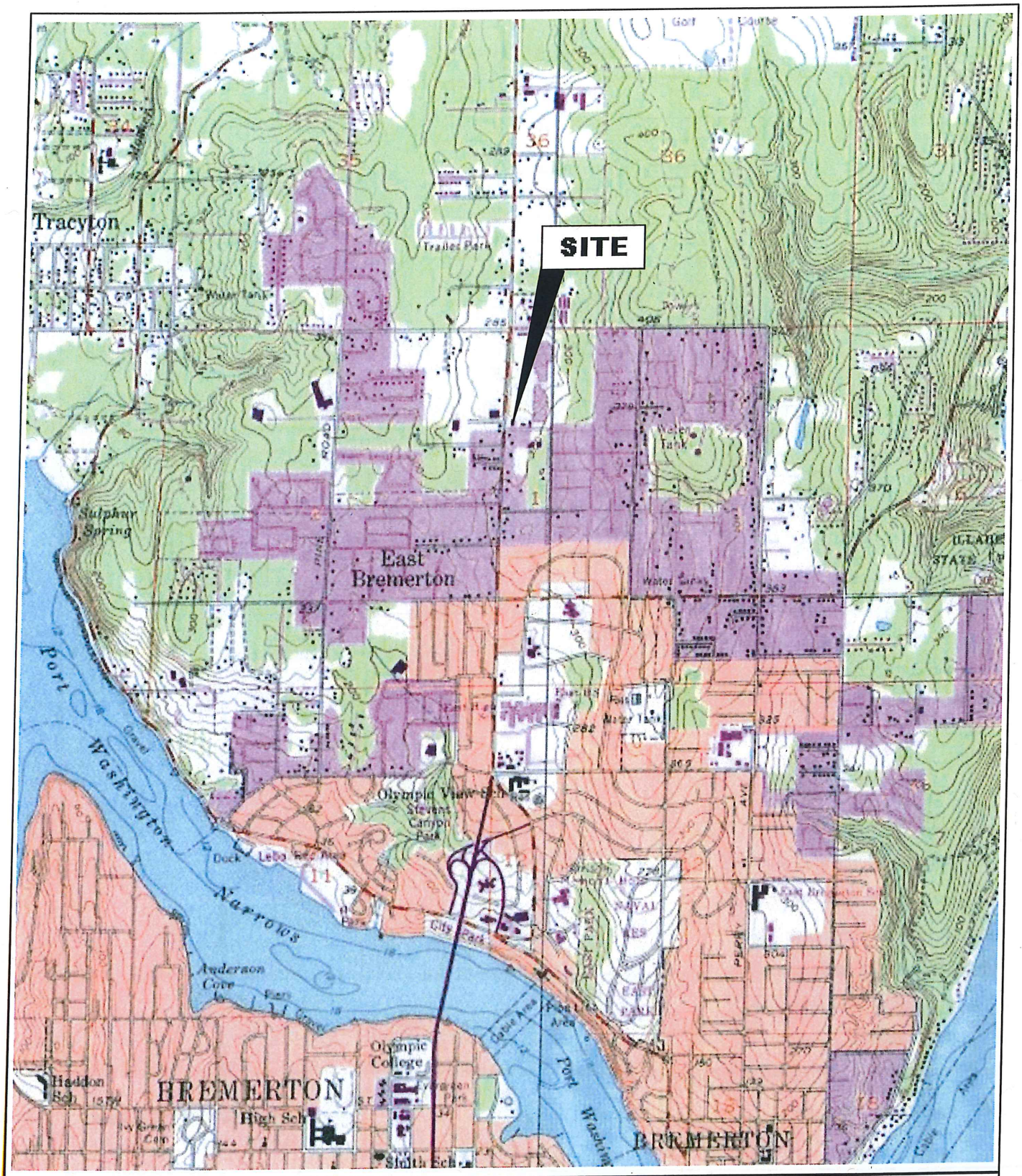
In 2018, three additional SVE remediation wells (RW-1 through RW-3) were installed at the Site and connected to the remediation system.

In 2019, twice weekly O&M visits were conducted to monitor the remediation system in accordance with the Puget Sound Clean Air Agency (PSCAA) permit. Vapor flow rates, vacuum, system temperatures, and concentrations of hydrocarbons in vapor in system influent, midpoint, effluent and individual wells are recorded.

In late 2019, PSCAA approved requested reduction in the system monitoring frequency to weekly.

Quarterly remediation system status reports continue to be submitted to Ecology.

Site Diagrams/Figures



Map Information: Maptech Terrain Navigator—2nd Ed.—San Juan Island Olympic Peninsula/Sea—Tac (WA) 42°36'10"N 122°37'42"W	N 0 2000 APPROX. SCALE: 1" = 2000'	FIGURE 1 SITE LOCATION MAP Site No. 3520 4200 Wheaton Way Bremerton, Washington	DATE DRAWN 10/15/2019 PROJECT NO. 123155 FILE NO. 123155F1—SLM

MONTROSE ENVIRONMENTAL
1631 E. Saint Andrew Place, Santa Ana, CA 92705 | t 714.919.6500

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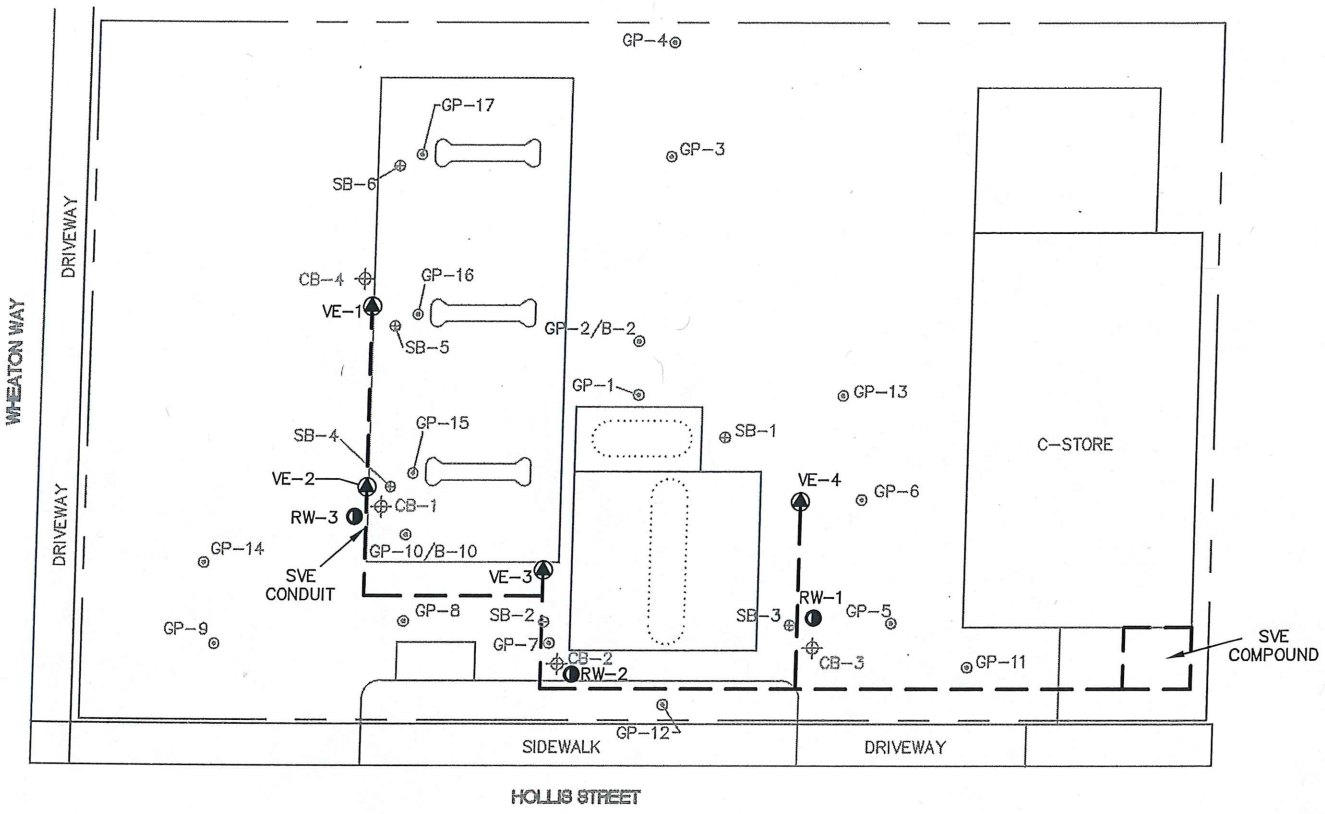

LEGEND

SB-1 ⊕ Soil Boring (Environ Strategy, 2010)

GP-1 ◎ Soil Boring (Clearwater, 1997)

▲ Soil Vapor Extraction Well

◐ Remediation Well

⬭ Underground Storage Tank

▭ Pump Island

⌖ Confirmation Soil Boring (ES Engineering, 2016)

SVE Soil Vapor Extraction

N

30 0 30

APPROXIMATE SCALE: 1" = 30'

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FIGURE 2

SITE PLAN PLAN SHOWING SOIL BORING AND WELL LOCATIONS

Site No. 3520
4200 Wheaton Way
Bremerton, Washington

DATE DRAWN 12/18/2019

PROJECT NO. 123155

FILE NO. 123155F2-SP

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