



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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June 23, 2020

Scott Lathen
GeoEngineers
523 E 2nd Ave.
Spokane, WA 99202
slathen@geoengineers.com

Re: Further Action at the following Site:

- **Site Name:** Alpine Realty Jiffy Cleaners Safeway
- **Site Address:** 312 S. Lincoln St., Port Angeles, Clallam County, WA 98362
- **Facility/Site ID:** 391383
- **Cleanup Site ID:** 3209
- **VCP Project ID:** SW1642

Dear Scott Lathen:

On January 7, 2020, the Washington State Department of Ecology (Ecology) received your request for an opinion on the Remedial Investigation (RI) and Feasibility Study (FS) for the Alpine Realty Jiffy Cleaners Safeway (Site). Due to temporary Ecology staffing issues, the Site's electronic data have not yet been reviewed or accepted to Ecology's Environmental Information Management (EIM) database. To provide a more timely response, Ecology is issuing this opinion prior to EIM data review.

Please continue to work with Ecology's EIM data coordinator to have the Site data accepted to the database. Ecology will review the sufficiency of the Site's EIM data set in our next opinion for the Site. We are providing this opinion under the authority of the [Model Toxics Control Act \(MTCA\)](#),¹ chapter 70.105D Revised Code of Washington (RCW).

Issues Presented and Opinion

Ecology has determined that further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, chapter 70.105D RCW, and its implementing regulations, Washington Administrative Code (WAC) chapter 173-340 (collectively "substantive requirements of MTCA"). The analysis is provided below.

¹ <https://fortress.wa.gov/ecy/publications/SummaryPages/9406.html>.

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 petroleum hydrocarbons (TPH-G) into the soil and groundwater.
- Diesel and oil range petroleum hydrocarbons (TPH-D, TPH-O, collectively TPH-D/O) into the soil and groundwater.
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) constituents into the soil and groundwater.
- Tetrachloroethylene (PCE) into soil and groundwater.
- Trichloroethylene (TCE) into soil and groundwater.
- 1,2-dichloroethene (DCE) into the soil and groundwater.
- Vinyl chloride (VC) into the groundwater.

A detailed description of the Site and history of activities can be found in the Remedial Investigation Addendum/Focused Feasibility Study Report (the Report). Enclosure A includes a brief description of the Site, and a diagram of the Site, as currently known to Ecology. Site location information can be found on Ecology's [What's In My Neighborhood](https://apps.ecology.wa.gov/neighborhood/?lat=48.11627&lon=-123.43385)² website.

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. Rossi Hamerslough Reischl & Chuck, Remedial Investigation Addendum/Focused Feasibility Study Report Alpine Realty and Jiffy Cleaners Safeway, letter, addressed to, Washington State Department of Ecology (Attention: Aaren Fiedler), April 28, 2020.
2. GeoEngineers, Inc. (GeoEngineers), *Remedial Investigation Addendum/Focused Feasibility Study Report*, December 20, 2019.
3. Ecology, Further Action at the following Site, letter, addressed to Jane Anderson, P.G. (Albertsons LLC), May 10, 2019.

² <https://apps.ecology.wa.gov/neighborhood/?lat=48.11627&lon=-123.43385>.

4. GeoEngineers, *Remedial Investigation Report; Former Alpine Realty and Jiffy Cleaners Safeway Fuel Center Property; Port Angeles, Washington*, February 11, 2019.
5. GeoEngineers, *Groundwater Monitoring Report – December 2018; Safeway Fuel Center and Adjacent Store No. 1492; Port Angeles, Washington*, February 6, 2019.
6. GeoEngineers, *Groundwater Monitoring Report – September 2018; Safeway Fuel Center and Adjacent Store No. 1492; Port Angeles, Washington*, November 14, 2018.
7. GeoEngineers, *Groundwater Monitoring Report – June 2018; Safeway Fuel Center and Adjacent Store No. 1492; Port Angeles, Washington*, July 27, 2018.
8. GeoEngineers, *Groundwater Monitoring Report; Safeway Fuel Center and Adjacent Store No. 1492; Port Angeles, Washington*, June 8, 2018.
9. Kane Environmental, Inc. (Kane), *UST Removal and Independent Remedial Action; Alpine Realty/Jiffy Cleaners Property; 312 South Lincoln Street; Port Angeles, Washington*, November 5, 2003.
10. Kane, Contained-Out Request; 312 South Lincoln Street; Port Angeles, Washington, letter, addressed to Ms. K Seiler; Section Supervisor; Hazardous Waste and Toxics Reduction Program, September 12, 2002.
11. ADaPT Engineering, Inc. (ADaPT), Limited Phase II Environmental Site Assessment; 312 Lincoln Street; Port Angeles, Washington, letter, addressed to Johnson, Miller, Shefler, November 30, 2001.

Those documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. Information on obtaining those records can be found on [Ecology's public records requests web page](#).³ Some site documents may be available on [Ecology's Cleanup Site Search web page](#).⁴

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

Analysis of the Cleanup

Ecology has concluded that **further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of the Site is not sufficient to establish cleanup standards and select a cleanup action.

³ <https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests>.

⁴ <https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=3209>.

The Report details the additional Remedial Investigation (RI) activities performed following Ecology's May 2019 opinion letter and includes a Feasibility Study (FS) that evaluates potential cleanup alternatives.

The RI activities indicate that cleanup level (CUL) exceedances of PCE in soil and TPH-D/O in groundwater likely extend to the north-east of MW-9 and into the S. Lincoln St. right of way (ROW) towards the Clallam County Courthouse. There is also PCE present south of the fuel center building (samples GP-12 and GP-13) that has not been fully defined and may pose a vapor intrusion (VI) issue for the building.

Three cleanup alternatives are presented under the FS portion of the Report. Alternative 1 is excavation and off-Site disposal of contaminated soils. Alternative 2 is installation of an air sparge and soil vapor extraction (AS/SVE) system. Alternative 3 is natural attenuation with an Environmental Covenant. Alternative 3 was proposed as Albertsons LLC's preferred cleanup action alternative. However, the property owners sent a letter to Ecology via their representative, (Rossi Hamerslough Reischl & Chuck, April 2020), disagreeing with the assessment that natural attenuation with an Environmental Covenant is an acceptable option.

The exposure pathways for the Site as Ecology currently understands them are:

Soil-Direct Contact: Complete. PCE is still present in excess of the MTCA Method A soil CUL between the ground surface and 15 feet below ground surface (bgs) near sample points GP-01/MW-1 and MW-9.

Soil-Leaching: Complete. PCE and its degradation daughter products (TCE, DCE, and VC) are present in groundwater at monitoring wells MW-1, MW-3, and MW-6 and temporary well GP-09. These wells are located in the area surrounding the PCE screening level exceedances still present in soil. TPH-D/O is present in groundwater at monitoring wells MW-6 through MW-9.

Soil-Vapor: Potentially complete. A Tier I/Tier II VI study should be completed.

Groundwater: Complete. PCE and its degradation daughter products (TCE, DCE, and VC) and TPH-D/O are present in groundwater in excess of the groundwater screening levels.

Ecological: Potentially complete. An "undeveloped land" exclusion is currently being claimed under [WAC 173-340-7491\(1\)\(c\)](https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-7491).⁵ The lateral extent of contaminants will need to be fully defined before the extents of contiguous undeveloped land within 500 feet of the site can be determined.

⁵ <https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-7491>.

Based on a review of the available information, Ecology has the following comments:

- (a) The concentrations of diesel and oil range by NWTPH-Dx analysis should not be compared to the MTCA Method A CUL separately. The total NWTPH-Dx (sum of diesel range, oil range, and heavy oil range) should be compared to the most appropriate CUL based on identification of the product present or the lowest CULs for unknown mixtures.⁶
- (b) The presence of wood debris in the Site soils does not automatically justify the use of silica gel cleanup (SGC) for groundwater samples.⁷ Because polar organics are not typically present in groundwater, a demonstration that a background polar organics concentration is present should be conducted to justify the use of SGC.⁸

Until a background assessment is completed, Ecology is not able to concur that the use of SGC is warranted.

- (c) Ecology concurs that data gaps exist for the Site regarding determining the horizontal and vertical extents of hazardous substances for the Site.⁹ Cleanup actions conducted prior to defining the horizontal and vertical extents of hazardous substances for the Site in accordance with [WAC 173-340-200](#)¹⁰ and [WAC 173-340-350](#)¹¹ will be considered interim cleanup actions until the Site has been fully defined.

Ecology recommends identifying all remaining data gaps and developing a work plan to complete the Remedial Investigation and define the full extent of the Site including, but not limited to the extent of PCE, TCE, and petroleum beyond the eastern Property boundary. A work plan may be submitted to Ecology for review prior to conducting additional cleanup actions.

- (d) Ecology does not concur with your assessment that, "HVOCs in soil on the Fuel Center Property appear to have been adequately removed and/or remediated during the 2003 excavation."¹² The Report (4.4.2.1. HVOCs) contradicts this statement and identifies all the data gaps where the Fuel Center Property portion of the Site has not been adequately remediated or defined.

⁶ Ecology, *Determining Compliance with Method A Cleanup Levels for Diesel and Heavy Oil*; Implementation Memorandum #4, Publication No. 04-09-086, June 17, 2004, <https://fortress.wa.gov/ecy/publications/SummaryPages/0409086.html>, and Washington State Department of Ecology Toxics Cleanup Program, *Guidance for Remediation of Petroleum Contaminated Sites*, Publication No. 10-09-057, Revised June 2016. (Tables 8.4 and 8.10), <https://fortress.wa.gov/ecy/publications/SummaryPages/1009057.html>.

⁷ Report, page 7 and page 9.

⁸ Washington State Department of Ecology Toxics Cleanup Program, *Guidance for Remediation of Petroleum Contaminated Sites*, Publication No. 10-09-057, Revised June 2016. <https://fortress.wa.gov/ecy/publications/SummaryPages/1009057.html>.

⁹ Report, page 8.

¹⁰ <https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-200>; "Site" or "Facility." and <https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-350>.

¹¹ <https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-350>.

¹² Report, Page 10.

Additionally, a Site as defined in MTCA,¹³ does not rely on property boundaries, but can be generally thought of as the lateral and vertical extents of hazardous substances released to the environment, irrespective of property boundaries or eventual cleanup levels.

The PCE detected in excess of the proposed CULs at boring GP-13 will need to be addressed for Ecology to consider a Site no further action determination (NFA). There are also PCE exceedances that likely extend into the S. Lincoln St. ROW that will also need to be addressed.

- (e) Ecology does not concur that the vapor intrusion (VI) pathway does not need to be further evaluated or that all halogenated volatile organic compounds (HVOCs) are greater than 100 feet from the building.¹⁴ Sample point GP-13 showed PCE at a depth of 6 and 10 feet bgs and is approximately 15 feet from the Fuel Center Retail Building. The PCE near GP-13 has not been fully defined, specifically in the down-gradient direction to the east which is toward the fuel center building.
- (f) Evaluate and report on the *acute* (short-term) risks of TCE as part of the overall Site risk according to Ecology guidance.¹⁵ Evaluate if pregnant women are at risk to TCE short-term exposure from indoor air.

2. Establishment of Cleanup Standards.

Ecology has determined the cleanup levels and points of compliance you established for the Site do not meet the substantive requirements of MTCA.

Cleanup Standards: Under MTCA, cleanup standards consist of three primary components; (a) Points of Compliance,¹⁶ (b) Cleanup Levels,¹⁷ and (c) Applicable State and Federal Laws.¹⁸

- (a) **Points of Compliance.** Points of compliance, that you need to propose, are the specific locations at the Site where cleanup levels must be attained. For clarity, Ecology provides the table of standard points of compliance below. For groundwater at the Site, it may be necessary to establish a conditional point of compliance under [WAC 173-340-720\(c\)](#)¹⁹ or [WAC 173-340-720\(d\)](#).²⁰

¹³ WAC 173-340-200.

¹⁴ See note 8.

¹⁵ Ibid.

¹⁶ WAC 173-340-200; "Point of Compliance."

¹⁷ WAC 173-340-200; "Cleanup Level."

¹⁸ WAC 173-340-200; "Applicable state and federal laws," WAC 173-340-700(3)(c).

¹⁹ <https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-720>.

²⁰ Ibid.

Media	Points of Compliance
Soil-Direct Contact	Based on human exposure via direct contact, the standard point of compliance is throughout the Site from ground surface to fifteen feet below the ground surface. ²¹
Soil- Protection of Groundwater	Based on the protection of groundwater, the standard point of compliance is throughout the Site. ²²
Soil-Protection of Plants, Animals, and Soil Biota	Based on ecological protection, the standard point of compliance is throughout the Site from ground surface to fifteen feet below the ground surface. ²³
Groundwater	Based on the protection of groundwater quality, the standard point of compliance is throughout the site from the uppermost level of the saturated zone extending vertically to the lowest most depth which could potentially be affected by the site. ²⁴
Groundwater-Surface Water Protection	Based on the protection of surface water, the standard point of compliance is all locations where hazardous substances are released to surface water. ²⁵
Air Quality	Based on the protection of air quality, the point of compliance is indoor and ambient air throughout the Site. ²⁶
Sediment	Based on the protection of sediment quality, compliance with the requirements of 173-204 WAC. ²⁷

- (b) **Cleanup Levels.** Cleanup levels are the concentrations of a hazardous substance in soil, water, air, or sediment that are determined to be protective of human health and the environment. At this Site, MTCA Method A unrestricted cleanup screening levels were used to evaluate contamination detected at the Site with MTCA Method B CULs used under [WAC 173-340-700\(8\)\(b\)\(i\)](#)²⁸ for those hazardous substances that do not have a Method A CUL established. MTCA Method A cleanup levels may be appropriate for the hazardous substances associated with this Site, depending on the results of the needed terrestrial ecological evaluation and the completion of the remedial investigation.
- (c) **Applicable Laws and Regulations.** In addition to establishing minimum requirements for cleanup standards, applicable local, state, and federal laws may also impose certain technical and procedural requirements for performing cleanup actions. These requirements are described in WAC 173-340-710. An [online tool](#)²⁹ is currently available to help you evaluate the local requirements that may be necessary.

All cleanup actions conducted under MTCA shall comply with applicable state and federal laws.³⁰ The person conducting a cleanup action shall identify all applicable local, state, and federal laws.

²¹ WAC 173-340-740(6)(d).

²² WAC 173-340-747.

²³ WAC 173-340-7490(4)(b).

²⁴ WAC 173-340-720(8)(b).

²⁵ WAC 173-340-730(6).

²⁶ WAC 173-340-750(6).

²⁷ WAC 173-340-760.

²⁸ <https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-700>.

²⁹ <https://apps.oria.wa.gov/opas/index.asp>.

³⁰ WAC 173-340-710(1).

The department shall make the final interpretation on whether these requirements have been correctly identified and are legally applicable or relevant and appropriate.³¹

There are three general groups of applicable local, state, and federal laws that need to be included:

- i. **Chemical-Specific:** Examples of chemical-specific laws include promulgated concentrations from another rule that result in adjusting proposed cleanup levels. Method A is inclusive of these laws. For Methods B or C, additional evaluation of chemical-specific applicable state and federal laws is required.
- ii. **Action-Specific:** Examples of action-specific laws include requirements for obtaining local permits to excavate and/or dispose of contaminated soil, stormwater construction permits, or the requirement to notify local law enforcement in case human remains are discovered during excavation. All MTCA cleanups require evaluation of action-specific applicable state and federal laws.
- iii. **Location-Specific:** Examples of location-specific laws include specific requirements for working near wetlands or archeologically important areas. All MTCA cleanups require evaluation of location-specific applicable state and federal laws.

After you have identified appropriate applicable local, state, and federal laws, report to Ecology the applicable local, state, and federal laws applicable to this cleanup, and how those laws and regulations specifically effect the proposed cleanup.

3. Selection of Cleanup Action.

Ecology has determined the cleanup action you selected for the Site does not meet the substantive requirements of MTCA.

The FS included in the Report appears to only address the HVOC contamination associated with the Safeway Grocery Store property (Clallam County Parcel ID 063099006910) and not the contamination on the former Shell branded gas station property (Clallam County Parcel ID 063000006900). As the FS does not address the entire Site, Ecology considers it to be incomplete.

The remedial alternatives presented, specifically the designated preferred remedial alternative (Alternative 3), only address contamination in the driveway area of the grocery store property and not contamination on the current gas station property or in the ROW. Exceedances of the selected CULs associated with the gas station property would also need to be addressed.

³¹ WAC 173-340-710(2). Note – MTCA Method A includes ARARs and concentration-based tables (WAC 173-340-700(5)(a)) If MTCA Method A remains in use as proposed Site cleanup levels, identify non-concentration based technical and procedural requirements. If Method B or C cleanup levels are proposed, also include concentration-based requirements.

Furthermore, for Ecology to evaluate a proposed remedial alternative, any property owner affected by the releases would need to concur with the potential recording of an environmental covenant and agree to all requirements and restrictions to their property.

Ecology does not concur that a Disproportionate Cost Analysis (DCA) is not required under [WAC 173-340-360\(3\)\(d\)](#)³² as Ecology did not generate a Cleanup Action Plan (CAP) for this Site.³³ A DCA is required³⁴ and should be completed to clearly demonstrate how other proposed permanent cleanup alternatives are disproportionately costly, compared to the net environmental benefits of the proposed preferred remedial alternative.

The proposed preferred remedial cleanup alternative included use of an institutional control with an environmental covenant and engineering controls.

Ecology suggests that you reevaluate the proposed remedial alternatives and the need for institutional controls after you complete the additional investigation and analyses suggested in this opinion. If institutional or engineered controls remain an appropriate part of the preferred remedial alternative determined through the FS and DCA, update the draft environmental covenant to manage implementation of needed institutional or engineered controls with consideration to the requirements of [WAC 173-340-440](#).³⁵

For guidance on drafting the Environmental Covenant for this Site, Ecology recommends using Toxics Cleanup Program's Procedure 440A: Establishing Environmental Covenants under the [Model Toxics Control Act](#).³⁶

In establishing an Environmental Covenant for this Site, it will be necessary to demonstrate that the groundwater contaminate plume is stable or receding to support the use of natural attenuation, and establish a long term groundwater monitoring plan with contingencies to support the use of monitored natural attenuation. Financial assurances would be required under [WAC 173-340-440\(11\)](#).³⁷

Please note: Until you demonstrate otherwise, Ecology assumes that properties extend out to the center line of adjacent rights of way (ROWs). This demonstration is done by supplying Ecology with a survey plat that includes dedications and plating of the affected properties. This document would also need to be included as part of the Environmental Covenant.

Because contamination appears to extend into the adjacent Lincoln St. ROW, the full extent in the ROW would need to be defined or a worst case scenario would need to be assumed, and local governments with interest in the ROW (City of Port Angeles, County of Clallam) and utilities would need to subordinate their interests.

³² <https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-360>.

³³ WAC 173-340-200, "Cleanup Action Plan," and WAC 173-340-340-380(1).

³⁴ WAC 173-340-360(3)(e).

³⁵ <https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-440>.

³⁶ Ecology Toxics Cleanup Program, *Procedure 440A: Establishing Environmental Covenants under the Model Toxics Control Act*, memo, addressed to Interested Persons, Publication No. 15-09-054, August 20, 2015.
<https://fortress.wa.gov/ecy/publications/SummaryPages/1509054.html>.

³⁷ <https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-440>

Ecology recommends identifying these interested parties and communicating to them your intents to use an Environmental Covenant as soon as possible in order to avoid any potential issues later on.

Ecology recommends reviewing [WAC 173-340-440](https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-440)³⁸ and [Ecology's Environmental Covenant Guidance Document](https://fortress.wa.gov/ecy/publications/SummaryPages/1509054.html)³⁹ for details on establishing an Environmental Covenant under MTCA, and submitting a draft Environmental Covenant to Ecology for review.

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.180.

³⁸ <https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-440>.

³⁹ <https://fortress.wa.gov/ecy/publications/SummaryPages/1509054.html>.

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 [Voluntary Cleanup Program web site](#).⁴⁰ If you have any questions about this opinion, please contact me at (360) 407-6437 or aaren.fiedler@ecy.wa.gov.

Sincerely,



Aaren Fiedler
Toxics Cleanup Program
Southwest Regional Office

AF/tm

Enclosures: A – Description and Diagrams of the Site

cc: Albertsons LLC
 Cris Watkins, GeoEngineers, cwatkins@geoengineers.com
 Nicholas Acklam, Ecology, nicholas.acklam@ecy.wa.gov
 Ecology Site File

⁴⁰ <https://www.ecy.wa.gov/vcp>.

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Enclosure A

Description and Diagrams of the Site

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Site Description

The Site known as Alpine Reality Jiffy Cleaners Safeway is located west of the intersection of S Lincoln St. and E 3rd St. Clallam County parcel 063099006910 is the source property. Contamination is also present on the adjacent parcel number 063000006900. The Property is currently a Safeway branded fueling station associated with a Safeway grocery store. The area is a mix of commercial and residential properties.

Contaminants present on the Site include tetrachloroethylene (PCE) and its degradation daughter products, trichloroethylene (TCE), 1,2-dichloroethene (DCE) and vinyl chloride (VC), and petroleum related substances including gasoline (TPH-G), diesel (TPH-D), and oil (TPH-O) range hydrocarbons, as well as benzene, toluene, ethylbenzene, and xylene (BTEX).

The PCE contamination is from a dry cleaner (Jiffy Cleaners) that operated on the property, and the petroleum related substances are from a former gasoline and service station (not the current Safeway branded gasoline station) that operated on the Property. The full extent of the hazardous substances for soil, groundwater, and soil vapor has not been defined.

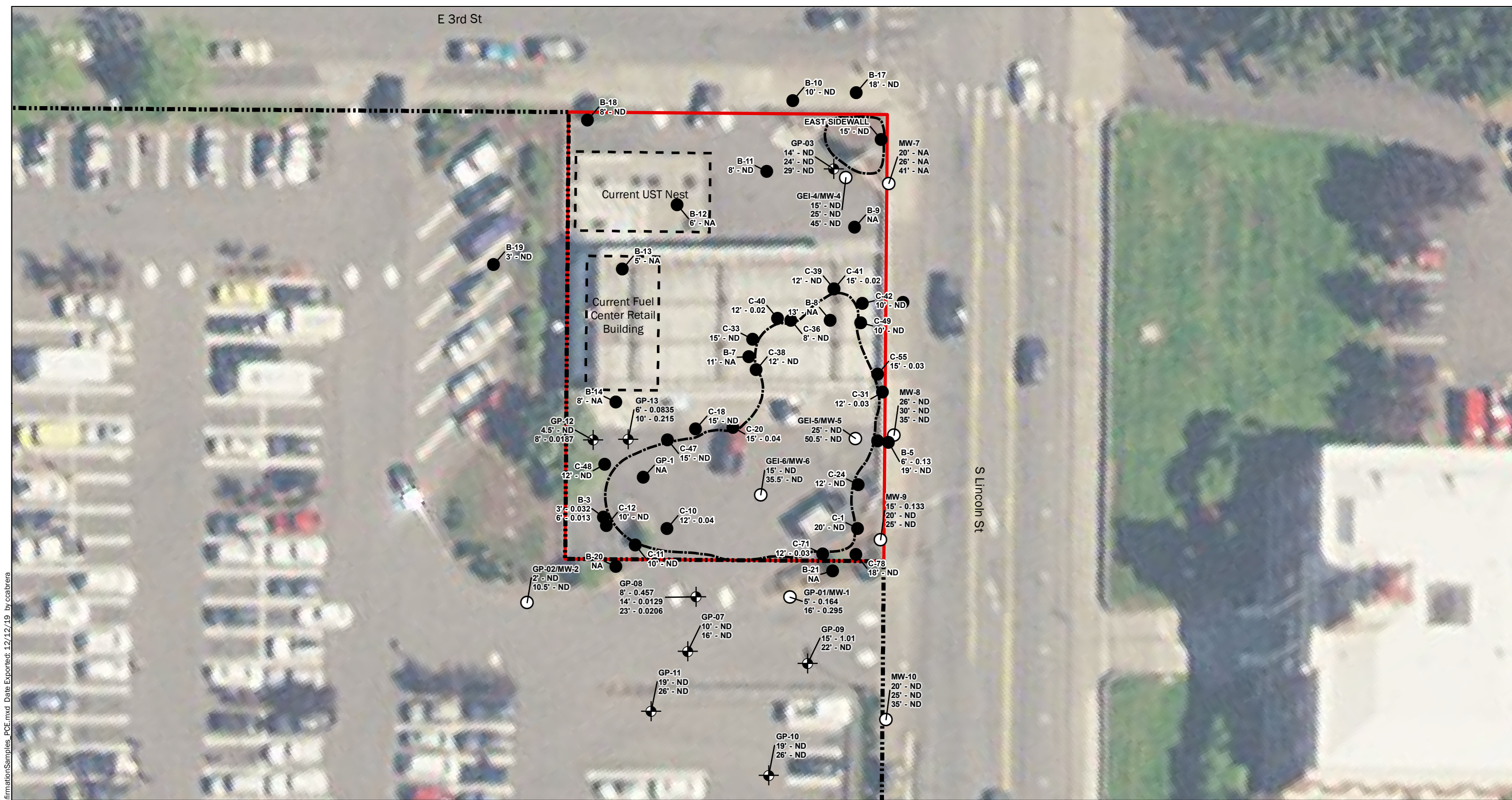
Reportedly, the Site consists of fill material down to depths ranging from 10 feet to 45 feet below ground surface (bgs). A native silt and clay material underlies the Site down to the maximum depths explored of approximately 50 feet bgs, and a small area of native gravels and sands was seen in one boring. Peabody Creek is approximately 600 feet to the east, the Port Angeles Harbor is located approximately 0.3 miles to the northeast, and Valley Creek is approximately 0.4 miles to the west.

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Site Diagrams

GeoEngineers Figure 8..... Confirmation Samples for Tetrachloroethylene (PCE)

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Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. ND = PCE not detected at concentrations greater than laboratory reported detection limit.
4. NA - Sample not analyzed for PCE

Legend

- Previous Sample Depth and Concentration (Kane, 2001-2003)
- GeoEngineers Monitoring Well
- ⊕ GeoEngineers Soil Boring
- Fuel Center Property Boundary
- ▤ Safeway Store Property Boundary
- ▭ Excavation Area (Kane, 2003)

Data Source: Imagery (2017) from Clallam County.
Previous explorations from Kane Environmental.
Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

30 0 30
Feet

Confirmation Samples for Tetrachloroethylene(PCE)	
Port Angeles Safeway Port Angeles, Washington	
	Figure 8

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