STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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November 30, 2017

Mr. John Waters
Lake Stevens GRF2, LLC
C/O: Gerrity Group, LLC
973 Lomas Santa Fe Drive
Solana Beach, CA 92075

**Re: Further Action at the following Site:**

- **Site Name:** Lake Stevens Cleaners
- **Site Address:** 303 91st Avenue NE, C302, Lake Stevens, Washington
- **Facility/Site No.:** 11757
- **VCP Project No.:** NW3116
- **Cleanup Site ID:** 13076

Dear Mr. Waters:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Lake Stevens Cleaners 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

Is further remedial action necessary to clean up contamination at the Site?

**YES. 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, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

## 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) into the Soil.
- PCE into the Ground Water.

**Enclosure A** includes a detailed description and diagram of the Site, as currently known to Ecology.

Please note that a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcels 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. ADR Environmental Group, Inc., *Preliminary Subsurface Investigation Report*, December 6, 2013.
2. Galloway Environmental, Inc., *Focused Phase II Environmental Site Assessment,* November 11, 2014.
3. Galloway Environmental, Inc., *Remedial Investigation/Feasibility Study,* March 23, 2015.
4. Galloway Environmental, Inc., *Environmental Cleanup Report,* May 27, 2015.
5. PES Environmental, Inc., *Summary of Limited Phase II Investigation Results,* March 29, 2016.
6. PES Environmental, Inc., *Summary of Phase II Investigation Results,* August 16. 2016.
7. PES Environmental, Inc., *Summary of Groundwater Sampling Results – October 2016,* October 28, 2016.
8. PES Environmental, Inc., *Summary of Groundwater Sampling Results – January 2017,* February 14, 2017.
9. PES Environmental, Inc., *Cleanup Action Plan,* February 14, 2017.
10. PES Environmental, Inc., *Cleanup Action Plan,* November 14, 2017.

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 calling the NWRO resource contact at 425-649-7235 or sending an email to: nwro_public_request@ecy.wa.gov.

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. The Site is described above and in **Enclosure A.**

- PCE concentrations exceeded the MTCA Method A soil cleanup level in the soil samples collected at 8 feet below ground surface (bgs) from boring TW-7 located east of the Lake Stevens Cleaners suite building, and at 7.5 feet bgs from the monitoring well MW-5 located north of the building. Additional evaluation is needed east and north of the building to determine and delineate the extent of PCE contamination in soil.

- PCE concentrations consistently exceeded the MTCA Method A ground water cleanup level in the ground water samples collected from monitoring wells MW-2 and MW-7 located north of the Lake Stevens Cleaners suite building. The lateral extent of the PCE-contaminated ground water plume is not fully defined at the Site. Additional monitoring wells down-gradient of monitoring well MW-7 to the northwest, northeast, and/or north are needed to fully define the ground water plume.

- The Terrestrial Ecological Evaluation (TEE) needs to be revised. A TEE form located at http://www.ecy.wa.gov/programs/tcp/vcp/vcp2008/vcpForms.html needs to be completed and submitted to Ecology. The 2017 *Cleanup Action Report* indicated the Site has less than 350 square feet of the total soil contamination area so no further TEE is needed. However, the incomplete Site characterization does not allow for appropriate calculation of the total soil contamination area. In addition, the Site appears to qualify for the exclusion criteria per WAC 173-340-7942(2)(a)(ii), which uses Table 749-1 to determine if the land use at the Site and surrounding area makes substantial wildlife exposure unlikely. Therefore, the TEE can be revised based on either the recalculated total area of soil contamination after complete Site

characterization, or the exclusion criteria per WAC 173-340-7942(2)(a)(ii).

- A revised figure of Site boundary is needed after the Site is completely characterized.
- A Rose diagram is needed to present all historic ground water flow directions and gradients.
- Revised cross-sections are needed to provide geologic and hydrogeologic information across the Site, including vertical extents of the ground water layers and possible impermeable layers between multiple ground water layers. Revised cross-sections should also include the most recent ground water analytical results (color coding can be used to indicate soil and ground water analytical results that are above cleanup levels).

**2. Establishment of cleanup standards.**

**Soil**

**Cleanup levels.** The Site does not meet the MTCA definition of an industrial property; therefore, soil cleanup levels suitable for unrestricted land use are appropriate. Because the Site has relatively few contaminants of concern (COCs), the MTCA Method A cleanup levels are appropriate for soil at the Site. These Method A soil cleanup levels are based on protection of ground water, per WAC 173-340-900, Table 740-1.

Soil cleanup levels protective of terrestrial ecological receptors appear to be not necessary because the Site appear to meet one or more of the simplified TEE exclusion criteria (WAC 173-340-7492). However, the soil cleanup levels need to be re-evaluated after the TEE is revised.

**Points of compliance.** For soil cleanup levels based on the protection of ground water, the point of compliance is defined as Site-wide throughout the soil profile and may extend below the water table. This is the appropriate point of compliance for the Site.

**Ground Water**

**Cleanup levels.** Cleanup levels were set for ground water based on its potential use as a drinking water source. The MTCA Method A cleanup levels are appropriate for this purpose, and were selected as the cleanup levels for ground water at the Site. These Method A ground water cleanup levels are available in WAC 173-340-900, Table 720-1.

**Points of compliance.** The standard point of compliance for ground water is throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest depth which could potentially be affected. This is the appropriate point of compliance for the Site.

**Air**

**Cleanup levels.** The MTCA Method B air cleanup levels can be used at any site and are appropriate for the air at the Site, per WAC 173-340-750(3). The MTCA Method B sub-slab soil gas screening levels are appropriate for the sub-slab soil gas samples collected at the Site during the vapor intrusion assessment. The standard MTCA Method B indoor air cleanup levels are appropriate for the indoor air samples collected at the Site. These Method B levels are available in an Excel spreadsheet at: http://www.ecy.wa.gov/programs/tcp/policies/VaporIntrusion/2015-changes.html.

**Points of compliance.** The standard point of compliance for air is in the ambient air throughout the Site. This is the appropriate point of compliance for the Site.

**3. Selection of cleanup action.**

The 2017 *Cleanup Action Report* selected quarterly ground water monitoring as the cleanup action for the Site. The proposed quarterly monitoring includes shallow monitoring wells MW-2, MW-6, and MW-7, as well as deep monitoring well MW-5. However, Ecology does not recognize ground water monitoring as a cleanup action. Furthermore, Ecology has determined that the incomplete Site characterization does not allow a determination whether the cleanup action you selected for the Site meets the substantive requirements of MTCA.

An appropriate cleanup action can be selected only after the Site is fully characterized and cleanup levels have been developed. The cleanup action selected must meet the minimum requirements in WAC 173-340-360(2). An active cleanup action is needed especially when contaminants remain on Site. A feasibility study and a disproportionate cost analysis are needed during the selection of cleanup actions. Quarterly ground water monitoring may be used to verify the effectiveness of the cleanup and confirm compliance in ground water.

**4. Cleanup.**

Cleanup actions conducted at the Site consisted of in-situ treatment of PCE-contaminated soil inside the Lake Stevens Cleaners suite and remedial excavations both inside and east of the Lake Stevens Cleaners suite. Approximately 63 tons of PCE-contaminated soils

were excavated from the Site. These cleanup actions were a good start to remove source material and are considered an interim action. However, the incomplete Site characterization does not allow a determination whether the cleanup action you selected for the Site meets MTCA cleanup standards. Before future work is completed, Ecology encourages the development of a work plan to ensure that sufficient soil and ground water data is collected for selection of a cleanup action to avoid unnecessary expenditure of time and money. Please let me know if you'd like Ecology to review a work plan.

## 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 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/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me at 425-649-7109 or jing.song@ecy.wa.gov.

Sincerely,

Jing Song
Site Manager
NWRO Toxics Cleanup Program

Enclosures (1): A – Description of the Site

cc: Brian O'Neal, PES Environmental, Inc.
Sonia Fernandez, VCP Coordinator, Ecology

# Enclosure A

# Description and Diagram of the Site

# Site Description

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

**Site:** The Site is defined by PCE releases to soil and ground water. The Site is located within Lake Stevens Marketplace Shopping Center, which has a street address of 303 91st Avenue NE in Lake Stevens, Washington (Figure 1).

The Lake Stevens Marketplace Shopping Center is located west of State Highway 9, east of 91st Avenue NE, and approximately 430 feet south of State Highway 204. The shopping center includes 5 parcels: Parcel 1 (0.75 acres), Parcel 2 (3.91 acres), Parcel 3 (8.37 acres), Parcel 4 (0.32 acres), and Parcel 5 (0.34 acres). Among them, Parcel 2 is currently owned by Saar Properties VIII LLC, and Parcel 4 is currently owned by Wells Fargo Bank. The other three parcels (Parcels 1, 3, and 5) are currently owned by Lake Stevens GRF2, LLC and consist of a total of 9.46 acres of land. These three parcels are affected or potentially affected by the Site and thus constitute the Property as referred to in this letter. The Property boundaries are depicted on Figure 2 of the Site Diagrams. The Property is occupied by a variety of commercial businesses including retail stores, restaurants, and professional businesses. The following table lists the current businesses on each parcel of the Property:

| Parcel (Tax Parcel Number) | Suite Number | Business Name |
|---|---|---|
| Parcel 1 (00804000000100) | G701 | Vaporland Lake Stevens (Baja Vapor LLC) |
| | G702 | Payless ShoeSource #5451 |
| Parcel 3 (00804000000102; 00804000000105; 00804000000106; 00804000000107) | A101 | Domino's Pizza #7055 (N F G Seattle LLC) |
| | A102 | Teriyaki Diner |
| | A103 | Hawaiian Shaved Ice |
| | A104 | MOB Games |
| | A105 | Subway |
| | A106 | Lake Stevens Animal Hospital |
| | A109 | Sherwin-Williams Paint Store # 708662 |
| | A111 | Cigar Land of Lake Stevens |
| | B200 | Dollar Tree Inc # 2415 |
| | B201 | Ixtapa Restaurant (Ixtapa Barajas Inc) |
| | B202 | Ace Hardware (Egelstad Inc) |
| | C301 | Boeing Employee Credit Union |
| | D401 | Rite Aid Store #5232 |
| | E501 | HairMasters #6805 |
| | E502 | PostNet |
| | E503A | Pho Lucky Dragon Restaurant |
| | E503B | Bella Nails & Spa |
| Parcel 5 (00804000000104) | H801 | Taco Bell Corp #22605 |

A former dry cleaners (Lake Stevens Cleaners) occupied Suite C302 at the Property from 1993 to 2015. Suite C302 is located in Parcel 5 between Suite C301 and Suite D401. Suite C301 is currently occupied by a Boeing Employee Credit Union (BECU). Suite D401 is currently occupied by a Rite Aid Store. PCE released to soil and ground water occurred in and near the former dry cleaners suite and migrated to nearby areas. The Site includes the former dry cleaners suite (Suite C302) and nearby areas which have been impacted. Currently, the Site boundary is not fully defined.

**Area and Property Description:** The Property is located in a mixed commercial and residential area in west Lake Stevens on the southwestern portion of Snohomish County. The Property is bounded to the north by three commercial buildings, which are currently occupied by an auto repair and auto parts store, an auto maintenance garage, and a convenience store. State Highway 204 is located further north. The Property is bounded to the south by Market Place with a multi-family residential area beyond. The Property is bounded to the east by State Highway 9. Frontier Village Shopping Center is located further east across State Highway 9, which includes a mixture of restaurants, retail stores, and other commercial businesses. The Property is bounded by a restaurant to the northwest and 91st Avenue NE to the west. A mixture of multi-family residential buildings and strip malls with commercial buildings is located further west across 91th Avenue NE. Lake Stevens's Central Business District is approximately 0.4 miles northeast of the Property.

Three commercial structures are currently present on the Property. Current uses of these structures include restaurants, a hardware store, an animal hospital, a paint store, financial services, and general retail stores.

**Site History and Current Use:** The Property was partially developed as rural residential properties from the 1940s to the early 1970s. During the 1970s, a septic tank service business (Tandem Service Corporation) operated at the northeast corner of the Property in the general vicinity of the northern portion of the current north multi-tenant building. The Property was bisected by 4th Street Northeast until the Lake Stevens Marketplace Shopping Center was constructed in 1993. No significant changes have occurred to the buildings at the Property since 1993.

Lake Stevens Cleaners operated from 1993 to 2015 in Suite C302 in Parcel 5 of the Property. Suite C302 is bounded to the north by a BECU, to the south by a Rite Aid store, to the east by a paved access road with State Highway 9 beyond, and to the west by the shopping center's asphalt parking lot. The suite is currently vacant. The former dry cleaners reportedly had been using chlorinated solvent-based cleaning solutions throughout the operation.

**Sources of Contamination:** PCE released to soil was initially discovered in October 2013 during a preliminary Site assessment. PCE released to ground water was initially discovered in October 2014 during a Phase II Site assessment. The source of the contamination appeared to be associated with the operation of the former dry cleaners in Suite C302. Based on the available data, two contaminant source areas appear to be on Site: (1) chlorinated solvents appear to have

leaked from the dry cleaning machines to the soils beneath the concrete slab on the eastern portion of the former dry cleaners suite; (2) chlorinated solvents appear to have been spilled or dumped onto the soils exposed in the landscaped area east of the former dry cleaners suite.

**Physiographic Setting:** The Site is located on the southwestern portion of the Getchell plateau, a narrow upland area in Snohomish County. The Site is situated at an elevation of approximately 375 feet above mean sea level. The topography at the Property slopes gently to the west across the Property's parking lot toward 91st Avenue NE, and slopes slightly to the north of the Property. The area topography in the vicinity of the Property slopes gently to the northeast toward Lake Stevens.

**Surface/Storm Water System:** The nearest surface water body is Lake Stevens, located approximately 0.5 miles northeast of the Site. Sewer and storm water from the Site flows to the City of Lake Stevens sanitary sewer lines and storm drains located north of the former dry cleaners suite.

**Ecological Setting:** Land surfaces on the Property and adjacent properties are primarily covered by buildings and asphalt or concrete pavement. An approximately 4.4 acres of undeveloped land is located approximately 215 feet east of the Site.

**Geology:** The Site is located within the Getchell Plateau. The plateau is located on the north-central portion of the Puget Sound Lowland, a topographic low between the Cascade Range and the Olympic Mountains. The plateau and adjacent lowlands are thought to have been formed during the last glacial advance of the Puget Lobe of the Cordilleran ice sheet, which advanced from and retreated to British Columbia between approximately 18,000 and 13,000 years ago. Five main types of unconsolidated geologic deposits associated with the advancing and retreating glaciers have been identified and mapped on the Getchell Plateau. The youngest are alluvium (Qal) deposits which consist primarily of stream-laid stratified silt, sand, and gravel with lesser amount of floodplain fine sand, silt, and clay. Recessional outwash (Qvr) deposits represent aerially small deposits within the plateau, mostly consisting of well-drained, stratified outwash sand and gravel. Glacial till (Qvt) deposits mantle much of the upland areas of the plateau, consisting of very dense, compact, non-sorted mixtures of clay, silt, sand, pebbles, cobbles and boulders. Underlying the till is advance outwash (Qva), consisting primarily of fine to coarse sand and gravel, with localized silt and fine sand lenses. The oldest deposits underlying the advance outwash deposits are transitional beds (Qtb, also referred to as interglacial floodplain deposits), consisting of thin-bedded clay and silt and fine-grained sand.

Soil borings and monitoring wells advanced at the Site indicate the Site is underlain by one to three feet of fill material comprised of sand and silty sand with gravels and angular rocks. A brown to orange-brown silty sand layer was found beneath the fill material in the upper five feet which is interpreted to be alluvium deposits. Glacial till was found underlying the alluvium deposits to the total explored depth of 40.5 feet bgs, which consists of dense to very dense silty sand with varying amount of gravels. Less dense sand lenses were found around 35 feet.

**Ground Water:** Between 2015 and 2016, six shallow ground water monitoring wells (MW-1 through MW-4, MW-6, and MW-7) as well as one deep ground water monitoring well (MW-5) have been installed at the Site. The shallow monitoring wells are screened between 5 and 15 feet bgs, and the deep monitoring well is screened between 30 and 40 feet bgs. The shallow ground water is present at depths ranging from approximately 2 to 10 feet bgs. The deep ground water is present at depths ranging from 18 to 21 feet bgs indicating confined or semi-confined conditions. Ground water monitoring data indicates that shallow ground water generally flows to the northwest, with some measurements suggesting a potentially northerly or even northeasterly localized flow direction in the vicinity of the former dry cleaners suite. Additional analysis may be needed regarding the variation of the shallow ground water flow directions and how Site contaminant migration may have been impacted.

**Water Supply:** Drinking water at the Property is provided by Snohomish County which obtains water from Spada Reservoir located approximately 21 miles east of the Site. According to Ecology's *Well Report* database, six water wells are located within a 1-mile radius of the Property. None of the wells are identified as public drinking supply wells, and none of the wells are located within or adjacent to the Property. One well is located less than 0.25 miles southwest of the Property. The well was reported with a depth of 66 feet bgs, and a 1992 water level measurement of 59 feet bgs.

**Site Investigations and Cleanup Actions:** Environmental Investigations and Cleanup Actions were conducted at the Site since October 2013. All of the soil, ground water, soil gas, and indoor air sampling locations are depicted on Figure 3 and Figure 4 of the Site Diagrams. Soil excavation limits are also depicted on Figure 3 and Figure 4 of the Site Diagrams.

In October 2013, four shallow direct-push soil borings (B-1 through B-4) were advanced to a total depth of 5 feet bgs at the Site. Soil borings B-1 through B-3 were advanced inside the former dry cleaner suite near the existing dry cleaning machine at the time, near the boiler room drain, and near a former dry cleaning machine. Soil boring B-4 was advanced immediately east of the former dry cleaners suite. One soil sample and one soil gas sample were collected from each boring. PCE was detected above the MTCA Method A soil cleanup level in the soil samples from borings B-1, B-2, and B-4. PCE was also detected above the MTCA Method B sub-slab soil gas screening level in soil gas samples from borings B-3 and B-4.

In October 2014, four direct-push soil borings (P-1 through P-4) were advanced at the Site. Soil borings P-1 and P-2 were advanced to a total depth of 20 feet bgs west and north of the former dry cleaners suite. Soil boring P-3 was advanced to a total depth of 10 feet bgs east of the former dry cleaners suite. Soil boring P-4 was advanced to a total depth of 12 feet bgs south of the adjacent Rite Aid store to the south. One soil sample was collected from each soil boring at depths between 4 and 20 feet bgs. Ground water samples were collected from soil borings P-1 through P-3. PCE was detected above the MTCA Method A ground water cleanup level in the ground water samples collected from borings P-2 and P-3.

In January 2015, four shallow ground water monitoring wells (MW-1 to MW-4) were installed at the Site to total depths ranging from 13 to 15 feet bgs and screened from 5 to 15 feet bgs. One

soil sample was collected from each boring at depths between 7 and 8 feet bgs, and one ground water sample was collected from each boring. PCE was detected above the MTCA Method A ground water cleanup level in the ground water sample from well MW-2, which is located north of the former dry cleaners suite.

In March 2015, an in-situ treatment of PCE-contaminated soil was conducted at the Site. A total of 10 pounds of "CL-Out" (a freeze-dried microbial culture) and chemical oxidation products (potassium permanganate) were injected into four temporary direct push borings near the dry cleaning machines inside the former dry cleaners suite at depths ranging from 3 to 7 feet bgs. In April 2015, remedial excavations were conducted at the two contaminated areas inside and outside of the former dry cleaners suite. Approximately 20 tons of PCE-contaminated soils were excavated from inside the former dry cleaners suite on the eastern portion of the building. Approximately 43 tons of PCE-contaminated soils were excavated from the landscaped area east of the former dry cleaners suite. Confirmation soil samples collected at the limits of the excavations contained concentrations of PCE and trichloroethene (TCE) below the MTCA Method A soil cleanup levels. Two soil gas samples were collected from the excavation area beneath the slab inside the former dry cleaners suite. PCE and TCE concentrations in the two soil gas samples were below the MTCA Method B sub-slab soil gas screening levels; but dichlorodifluoromethane was detected in the two soil gas samples at concentrations above the MTCA Method B sub-slab soil gas screening levels.

In March 2016, a limited Phase II investigation was conducted at the Site. Three shallow hand-auger borings (SV-1 through SV-3) were advanced inside the former dry cleaners suite to total depths ranging from 2 to 2.5 feet bgs. One soil sample and one soil gas sample was collected from each of the soil borings. Two direct push soil borings (TW-1 and TW-2) were also advanced northeast of the former dry cleaners suite to total depths of 9 and 6 feet bgs, respectively. Temporary wells were installed in the two borings. One soil and one ground water sample was collected from TW-1 and TW-2. The soil and ground water samples collected from these borings did not contain concentrations of volatile organic compounds (VOCs) above the MTCA Method A cleanup levels. The soil gas samples collected from borings SV-2 and SV-3 contained PCE concentrations above the MTCA Method B sub-slab soil gas screening levels. In addition, one indoor air sample was collected inside the former dry cleaners suite and one ambient air sample was collected at an upwind location on the northeast corner of the BECU suite. The PCE concentration in the indoor air sample was well below the MTCA Method B indoor air cleanup level. After correction with ambient air concentrations, all VOC concentrations were either below the detection limits, or below the MTCA Method B indoor air cleanup levels.

In July 2016, a Phase II investigation was conducted at the Site. Five soil borings (TW-3a, TW-4 through TW-7) were advanced north and east of the former dry cleaners suite to total depths ranging from 10 to 15 feet bgs. Temporary wells were installed in borings TW-3a, TW-5, TW-6, and TW-7 for collection of ground water samples. Three monitoring wells MW-5 through MW-7 were also installed north of the former dry cleaners suite. Among them, deep well MW-5 was installed to a total depth of 40.5 feet and screened between 30 and 40 feet bgs. Shallow wells MW-6 and MW-7 were installed to a total depth of 15.5 feet bgs and screened between 5 and 15

feet bgs. The soil samples collected at 8 feet bgs from boring TW-7 and at 7.5 feet bgs from well MW-5 contained PCE concentrations above the MTCA Method A soil cleanup level. The ground water samples collected from wells MW-2 and MW-7 contained PCE concentrations above the MTCA Method A ground water cleanup level. Other soil and ground water samples did not contain VOC concentrations above the MTCA Method A cleanup levels. In addition, one indoor air sample was collected inside the BECU suite immediately north of the former dry cleaners suite, and one ambient air sample was collected at an upwind location on the northeast corner of the BECU suite. After correction with ambient air concentrations, all VOC concentrations were well below the MTCA Method B indoor air cleanup levels, including PCE.

Ground water monitoring was conducted on all Site monitoring wells in October 2016 and January 2017. The monitoring data indicated PCE concentrations were above the MTCA Method A ground water cleanup level in monitoring wells MW-2 and MW-7.

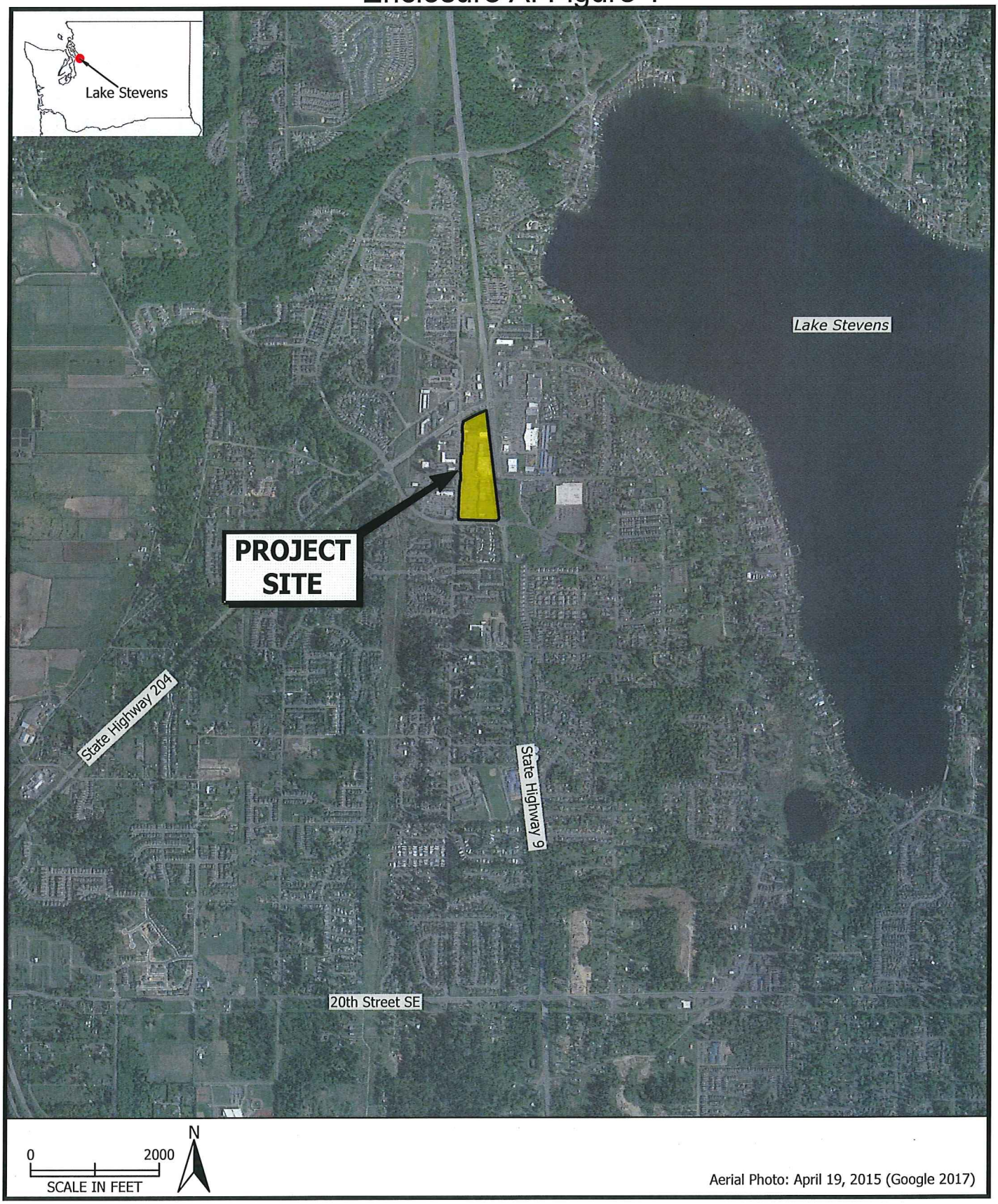
**Release and Extent of Soil and Ground Water Contamination:** As stated above, two areas of PCE releases were identified, including inside the former dry cleaners suite and the landscaped area east of the former dry cleaners suite. In-situ soil treatment and remedial excavations were conducted, and the majority of the PCE-contaminated soils (approximately 63 tons) were removed from the two source areas. However, PCE concentrations above the MTCA Method A soil cleanup level remained in soils at boring TW-7 and well MW-5 located east and north of the former dry cleaners suite, respectively. Because the soil sample from well MW-5 was collected below the seasonal high water table and the ground water in this area is impacted, the detected PCE concentration in MW-5 may be due to the presence of contaminated ground water. However, further evaluation is needed in both areas to determine and/or delineate the remaining soil contamination.

PCE concentrations above the MTCA Method A ground water cleanup level are currently present in the ground water in monitoring wells MW-2 and MW-7 located north of the former dry cleaners suite. The vertical extent of the ground water plume is defined by the clean ground water data from deep monitoring well MW-5. The lateral extent of the ground water plume is partially defined by monitoring well MW-6 and temporary well TW-3 to the northwest, and temporary wells TW-1 and TW-2 to the northeast. However, the lateral extent of the ground water plume is not fully defined. Based on the variation of the ground water flow directions, additional monitoring wells may be needed northwest, northeast, and north of monitoring well MW-7.

After correction with ambient air concentrations, the indoor air samples collected from the former dry cleaners suite and the BECU suite contained VOC concentrations below the MTCA Method B indoor air cleanup levels. The indoor air sampling results indicated the PCE concentrations in the sub-slab soil gas did not result in an exceedance of the indoor air cleanup levels. Therefore, the risk of vapor intrusion in the former dry cleaner suite and the BECU suite is considered unlikely.

# Site Diagrams

# Enclosure A: Figure 1



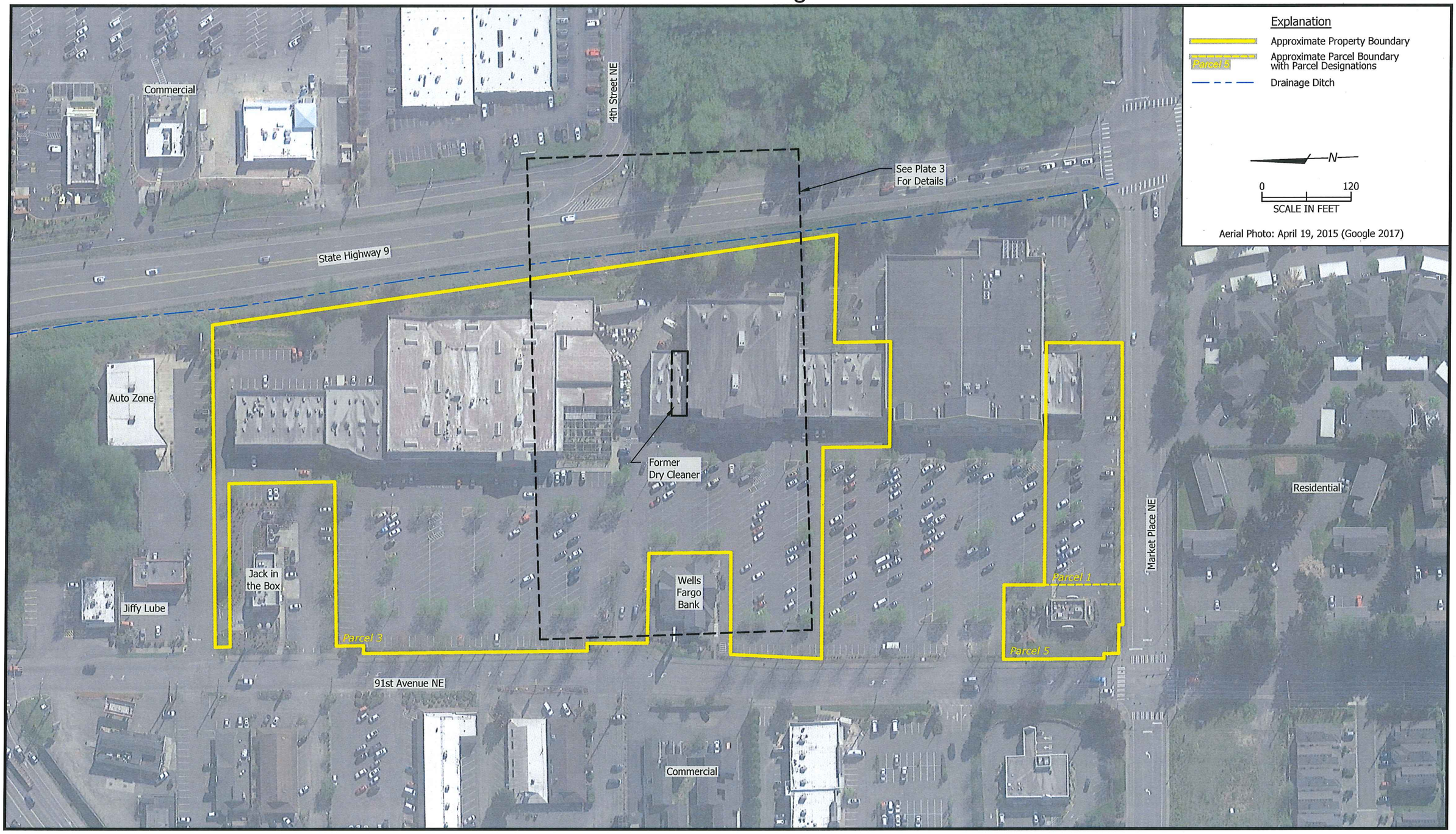

**PES Environmental, Inc.**
Engineering & Environmental Services

**Site Location**
Lake Stevens Marketplace Shopping Center
Lake Stevens, Washington

PLATE
1

| 1246.038.03.002 | 124603803002_RAP17_1 | KLR | 11/17 |
|---|---|---|---|
| JOB NUMBER | DRAWING NUMBER | REVIEWED BY | DATE |

# Enclosure A: Figure 2




**PES Environmental, Inc.**
Engineering & Environmental Services

**Site Vicinity**
Lake Stevens Marketplace Shopping Center
Lake Stevens, Washington

PLATE 2

| 1246.038.03.002 | 124603803002_RAP17_2 | KLR | 11/17 |
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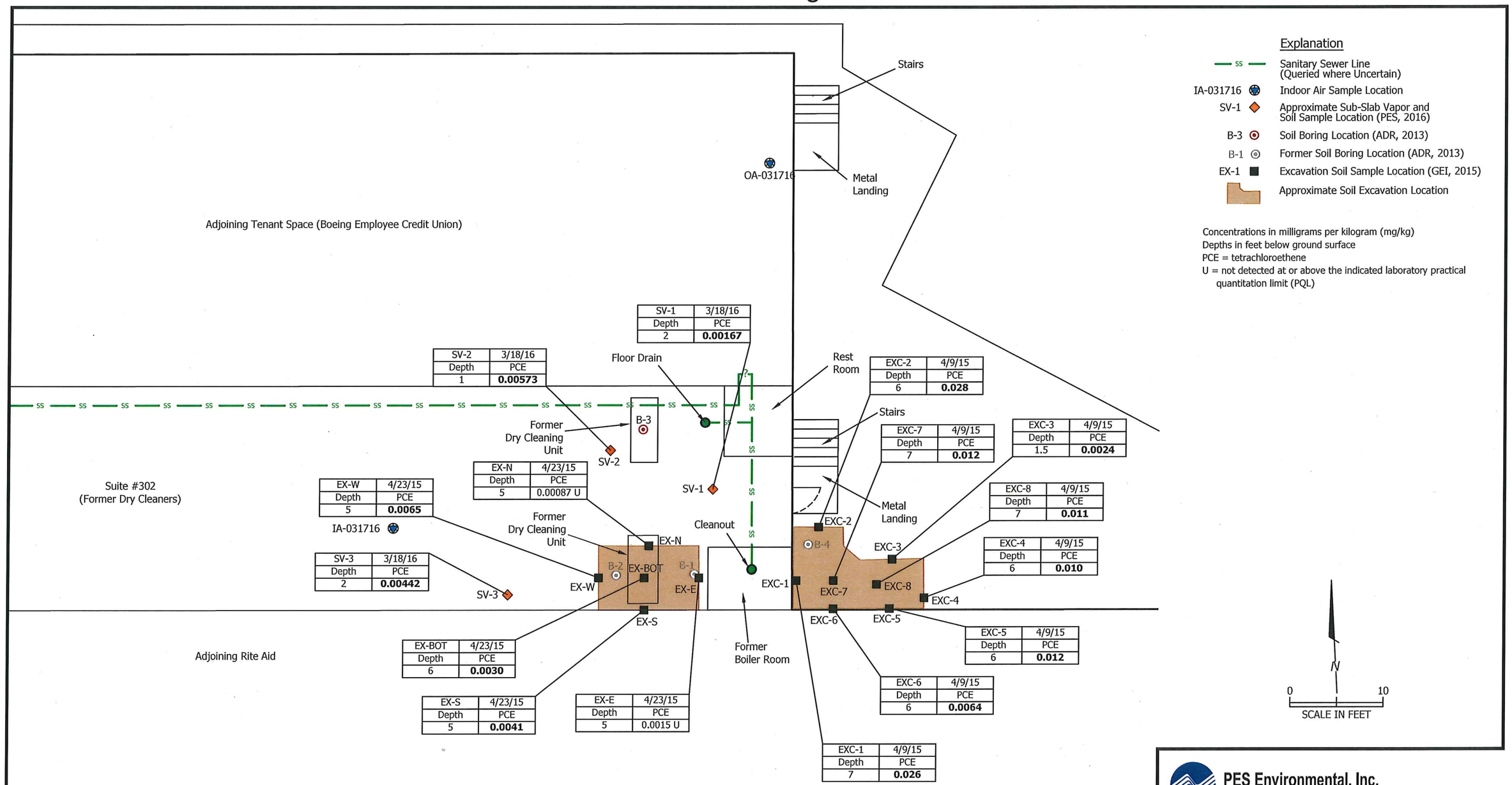
# Enclosure A: Figure 3




**PES Environmental, Inc.**
Engineering & Environmental Services

**Former Dry Cleaners Interior Details and Soil Excavation Sample Locations with PCE Results**
Lake Stevens Marketplace Shopping Center
Lake Stevens, Washington

PLATE 4

| 1246.038.03.002 | 124603803002_RAP17_4 | KLR | 11/17 |
|---|---|---|---|
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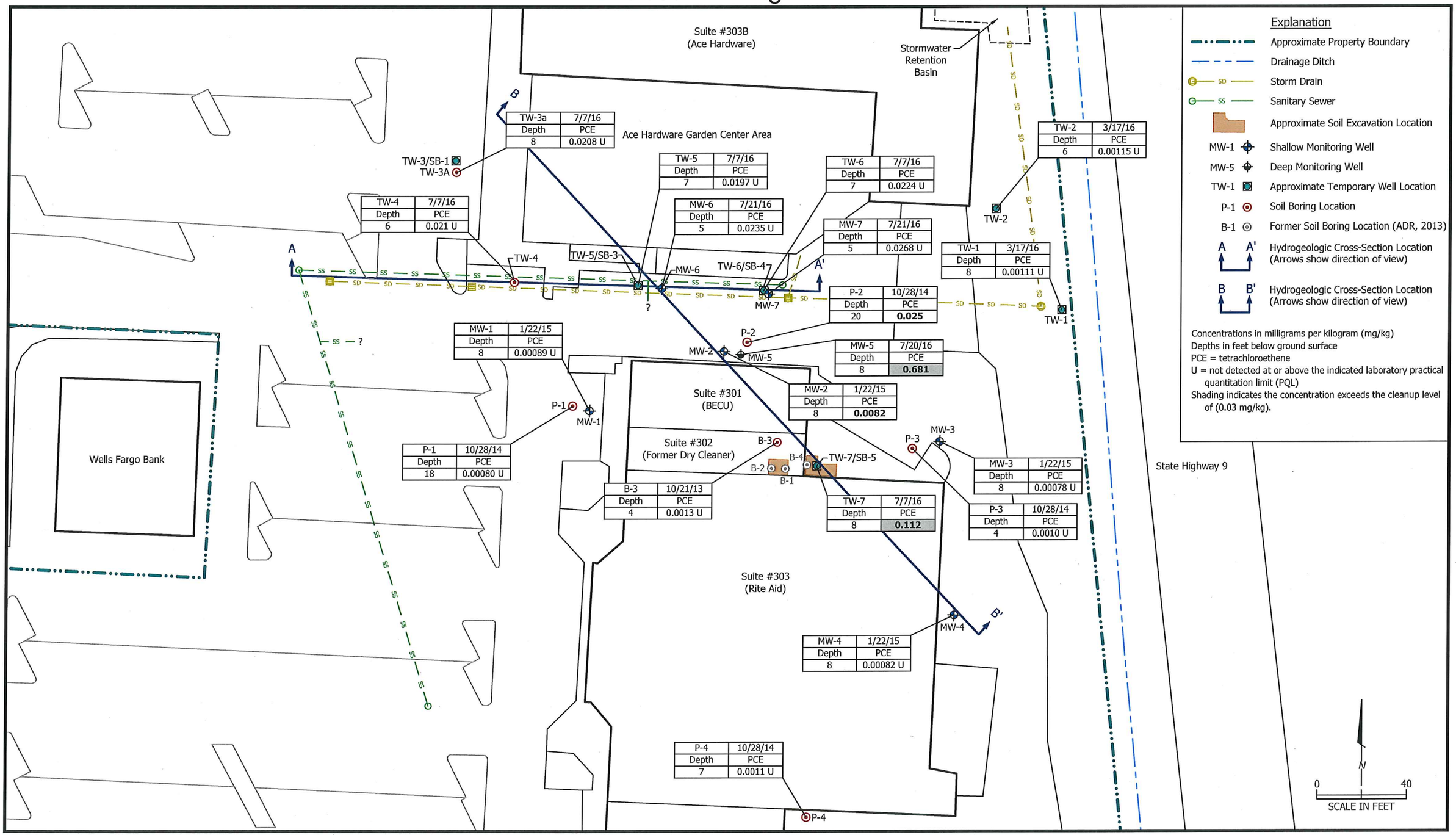
# Enclosure A: Figure 4




**PES Environmental, Inc.**
Engineering & Environmental Services

**Boring and Well Location Map and Soil PCE Results**
Lake Stevens Marketplace Shopping Center
Lake Stevens, Washington

PLATE 5

| 1246.038.03.002 | 124603803002_RAP17_5 | KLR | 11/17 |
|---|---|---|---|
| JOB NUMBER | DRAWING NUMBER | REVIEWED BY | DATE |