



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY  
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May 9, 2018

Mr. Gordon Ferrell  
Lakeway Investments Corporation  
P.O. Box 2789  
Longview, WA 98632-8770

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

- **Site Name:** Former Norge Laundry & Cleaning Village
- **Site Address:** 869 Commerce Ave., Longview, Cowlitz County, WA 98632
- **Facility/Site No.:** 6101
- **Cleanup/Site No.:** 258
- **VCP Project No.:** SW1065

Dear Gordon Ferrell:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Norge Laundry and Cleaning Village facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Revised Code of Washington (RCW) Chapter 70.105D.

## **Issue Presented and Opinion**

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**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.

## Description of the Site

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This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release:

- Halogenated Volatile Organic Compounds (HVOCs; specifically tetrachloroethylene [PCE] and its degradation products) into the Soil, Groundwater, and/or Air.

These are considered the Site contaminants of concern (COCs). 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. PBS Engineering and Environmental, Inc. (PBS) suggests in its most recent report submittals<sup>1</sup> that a second historical dry cleaner, Tip Top Cleaners, might be a contributor to the solvent contamination present to the west of the Peace Health building and beneath Delaware Street. At this time, no determination has been made regarding if an additional contributor is responsible for a portion of the contamination associated with the Site.

## Basis for the Opinion

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

1. PBS Engineering and Environmental, Inc. (PBS), *Semiannual Groundwater Monitoring and Analysis – September 2017*, dated November 17, 2017.
2. PBS, *Focused Groundwater Investigation*, dated October 2017.
3. PBS, *Summary of Recent Environmental Assessment Activities*, dated October 2017.
4. PBS, *Work Plan for Final Site Characterization*, dated August 2017.
5. PBS, *First Quarter 2015 Groundwater Monitoring and Analysis*, dated June 30, 2015.
6. Ecology, *Re: Opinion on Proposed Cleanup of the Following Site* (further action), dated August 15, 2013.
7. Ecology, *Re: Opinion on Proposed Cleanup of the Following Site* (further action), dated July 9, 2012.
8. Ecology, *Re: Opinion on Proposed Cleanup of the Following Site*, dated December 17, 2009.

Those documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. You can make an appointment by calling the SWRO resource contact at (360) 407-6365.

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

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<sup>1</sup> p. 8 in PBS, *Focused Groundwater Investigation*, dated October 2017.

## **Analysis of the Cleanup**

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The purpose of this opinion letter is to provide Ecology's comments regarding PBS' *Work Plan for Final Site Characterization*. As the SW1065 cleanup is currently being completed under WAC 173-340-515, this cleanup is being conducted without Ecology oversight or approval. However, Ecology can determine whether the remedial actions meet the substantive requirements of MTCA and/or whether further remedial action is necessary at the Site. Additionally, Ecology can also provide concurrence or comments regarding work plans, proposed remedial actions, sufficiency of the remedial investigation, feasibility study, or proposed cleanup action.

**Ecology concurs with the proposed groundwater investigation.** The comments below do not need to be addressed as a revision to the *Work Plan for Final Site Characterization*, but can be addressed in future documents.

### **1. Characterization of the Site.**

A Site description is available in opinion letters dated December 17, 2009, July 9, 2012, and August 15, 2013, and is not included as part of this letter.

#### **Ecology's comments:**

1. **Though the proposed work will likely result in areal and vertical delineation of Site COCs in groundwater as required under WAC 173-340-350(7), the data from the proposed investigation will have to be evaluated prior to determining if additional assessment will be required to fully delineate and characterize the Site.**
  - a. **Ecology plans to draft a second opinion after this one to address proposed Site-specific cleanup levels for soil, groundwater, and air. Additional activities may need to be completed to evaluate the air (vapor) pathway and groundwater discharge concerns.**
2. The proposed green hydraulic profiling tool (HPT) boring located to the northeast of boring B-18 will be useful to determine if the Peace Health Building sump is pulling the groundwater plume towards this location. If the foundation sump is pulling the groundwater plume towards it (and between historical sampling locations B-18 and B-62), the building sump might be transferring the plume via discharge from the sump to the storm water system on the western side of the Peace Health Building. This might explain why Site COCs are in groundwater in the vicinity of the intersection of the alley way and Delaware Street and identified in the storm water outfall sampling. The proposed location would likely close any data gap in this area.
3. It appears that the blue proposed non HPT boring locations<sup>2</sup> are likely necessary to define vinyl chloride contamination in shallow groundwater to the northwest (downgradient). Additional locations to the north may be required if the groundwater

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<sup>2</sup> Sheet 7, Site Plan: Proposed Boring Locations, PBS, *Work Plan for Final Site Characterization*, dated August 2017.

plume is more extensive than expected. Vinyl chloride at grab groundwater boring locations B-57, B-58, and B-59 appear to require further vertical delineation. Permanent monitoring wells are recommended to define the downgradient portion of any plume in groundwater.

4. PBS indicated that groundwater beneath the Site was not potable<sup>3</sup>. Site-specific cleanup levels are proposed for groundwater. Please clarify how a determination of Site groundwater potability was made consistent with WAC 173-340-720(2).
5. Groundwater flow direction in the intermediate or deep water bearing zones may not flow to the northwest as is the calculated direction for the shallow water bearing zone. The deeper water bearing zones may potentially have a variable direction from the southwest to the north<sup>4</sup>.
  - a. Ecology suggests generating rose diagrams for all water bearing zones to evaluate groundwater flow direction variability.
  - b. If groundwater flow direction is determined to flow in a different direction than generally northwest, please clarify how deeper aquifer contamination has been areally delineated. In order to delineate intermediate and potentially deep groundwater contamination, it may be appropriate to complete HPT borings and sampling along the northern Property boundary and to the south and southwest of MW-4. Alternatively, analysis of flow directions may demonstrate that any area southwest of a potential intermediate groundwater plume may be covered by an additional point to the south in the “red line” of proposed HPT boring locations.
6. If not already planned, please capture pressure logs with the conductivity logs as the additional information may help provide fine resolution of subsurface lithology where solvents might be trapped.
7. Consider advancing one or two HPT borings in an east-west orientation along the northern Property boundary to refine the extent of the shallow groundwater plume (currently delineated to the north by groundwater results for B-15, B-16, and B-17). The value of refining the northern extent is to determine if the plume actually extends onto the parcel to the north, as the road centerline may be the extent of the Property<sup>5</sup>.
8. Please clarify how the on-Property sewer line<sup>6</sup> has been evaluated. Groundwater sampling locations such as B-7 and B-43 appear to be approximately 30 feet away from where the sewer lateral would exit the building. Grab groundwater sample results at B-7 (PCE and TCE) and B-43 (PCE and vinyl chloride) exceeded the MTCA Method A cleanup screening levels. Ecology suggests at least a couple of HPT borings along the sewer line completed within the shallow groundwater bearing zone.

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<sup>3</sup> p. 4 in PBS, *Semiannual Groundwater Monitoring and Analysis – September 2017*, dated November 17, 2017.

<sup>4</sup> p. 3 in PBS, *First Quarter 2015 Groundwater Monitoring and Analysis*, dated June 30, 2015.

<sup>5</sup> See p. 8 in Ecology, *Re: Opinion at the Following Site (further action)*, dated December 17, 2009.

<sup>6</sup> Constructed in 1961, the sewer lateral runs east out of former dry cleaner space and turns north. See PBS, *Phase I ESA*, dated February 2009, p. 10.

9. Please clarify how vertical delineation of vinyl chloride contamination in groundwater at monitoring well MW-5I will be completed.
10. Please clarify if any refinement of the vertical delineation of contamination between MW-4 (screened 5-15 feet below ground surface [bgs]) and MW4I (screened 64-74 feet bgs) is proposed. It appears that PCE and TCE were present at concentrations exceeding the MTCA Method A cleanup levels based on temporary monitoring well groundwater sampling results from 30-35 feet bgs, completed in June 2011. Based on the most recent sampling results, Site COCs persist at MW-4 in the shallow groundwater zone, but not in groundwater at well MW-4I.
11. Ecology recognizes that concentrations of Site COCs in groundwater from properly constructed monitoring wells have typically been less than at the grab groundwater sample locations. However, there are some grab groundwater where Site COCs have been detected.
  - a. Examples of these locations where concentrations may be elevated because they were grab groundwater sampling locations, but are still part of the MTCA Site, are: B-12 and B-22.
  - b. While concentration contours may cover a more limited area, the MTCA Site boundary should include all areas where contamination associated with the release has been deposited, stored, disposed of, or placed, or otherwise come to be located<sup>7</sup>.
12. **Regarding the request to reduce monitoring at MW-3I, MW-4I, and MW-4D to annual sampling<sup>8</sup>:**
  - a. Ecology concurs that these three monitoring wells could be sampled on an annual basis at this time. Site COCs to be analyzed are anticipated to stay the same.
  - b. Sampling frequency may need to be modified as Site conditions change.
13. Ecology concurs with the continued use of low flow groundwater sampling methodology for the Site.
14. Once the data from this investigation are processed, Ecology recommends drafting cross sections and perhaps three dimensional groundwater plume diagrams to determine the extent of Site contamination. Other types of figures to confirm the extent of the MTCA Site boundary and areal and vertical distribution of Site COCs in soil, groundwater, and air may also be necessary.
15. Please note that though PBS may establish its own records retention schedule as a company<sup>9</sup>, WAC 173-340-850(2) requires that you must retain records for at least 10 years from the date of completion of compliance monitoring or as long as any institutional controls remain in effect, whichever is longer. If not already being done, Ecology encourages you to maintain copies of all project records.

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<sup>7</sup> See definition of “facility” under WAC 173-340-200.

<sup>8</sup> p. 6 in PBS, *Semiannual Groundwater Monitoring and Analysis – September 2017*, dated November 17, 2017.

<sup>9</sup> p. 9 in PBS, *Work Plan for Final Site Characterization*, dated August 1, 2017.

16. It is Ecology's current understanding that PBS has proposed not to obtain access or complete source assessment within the property boundaries of the former Tip Top Cleaners.
17. Please upload data acquired during this investigation to Ecology's EIM database, as required by WAC 173-340-840(5) and Ecology Policy 840.

## **2. Establishment of cleanup standards.**

### **a. Substance-specific standards.**

Ecology recognizes that PBS submitted a 2014 report proposing cleanup levels for Site COCs in air based on various Site-specific exposure parameters, and followed up with a letter (dated March 11, 2015) requesting an opinion regarding the proposed CULs. Ecology has not yet provided a response to PBS' request. PBS has also proposed Site-specific cleanup levels for ingestion of groundwater. Some discussion regarding cleanup levels and additive risk at the Site was presented in Ecology's December 17, 2009, opinion letter.<sup>10</sup>

Ecology plans to address these requests in a second opinion letter. Once these requests are evaluated and the proposed Site characterization investigation results are known, it would be appropriate to discuss whether or not additional delineation is required to meet the remedial investigation requirements under WAC 173-340-350(7) or if the project should proceed into the feasibility study phase under WAC 173-340-350(8).

## **3. Selection of cleanup action.**

Selection of a cleanup action is pending the results of finalizing Site characterization (remedial investigation) and completion of the feasibility study.

## **4. Cleanup.**

Ecology has determined the cleanup you performed does not meet any cleanup standards at the Site. Cleanup standards are still under evaluation at this time.

## **Limitations of the Opinion**

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### **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.

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<sup>10</sup> See p. 8-12, in Ecology, *Re: Opinion at the Following Site (further action)*, dated December 17, 2009.

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**

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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: <https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Cleanup-process/Cleanup-options/Voluntary-cleanup-program>. If you have any questions about this opinion, please contact me by phone at 360-407-6265 or e-mail at [tim.mullin@ecy.wa.gov](mailto:tim.mullin@ecy.wa.gov).

Sincerely,



Tim Mullin, LHG  
Toxics Cleanup Program  
Southwest Regional Office

TCM: tam

Enclosure: A – Diagrams of the Site

By certified mail: 91 7199 9991 7037 0238 2770

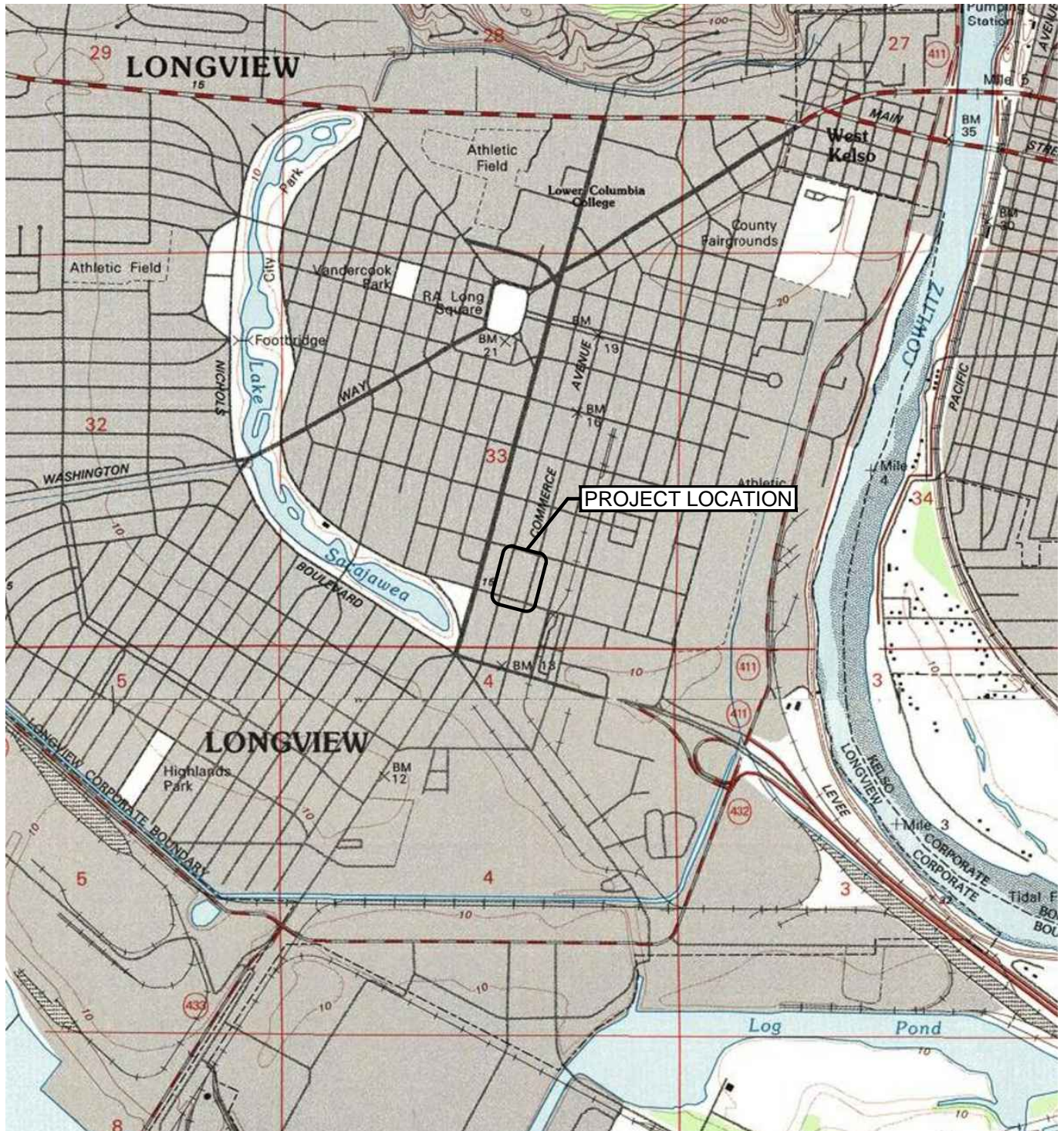
cc: Mike Golden, PBS  
Heidi Yantz, PBS  
Nick Acklam, Ecology  
Stephanie Bussell, Ecology  
Ecology Site File

## **Enclosure A**

### **Diagrams of the Site**

1. Figure 1 – Vicinity Map
2. Figure 2 – Proposed Boring Locations





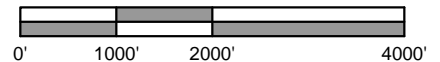
SOURCE: USGS KELSO QUADRANGLE, WA 1990.



WASHINGTON



Scale 1" = 2000'



PREPARED FOR: LAKEWAY INVESTMENT CORPORATION



## SITE VICINITY MAP

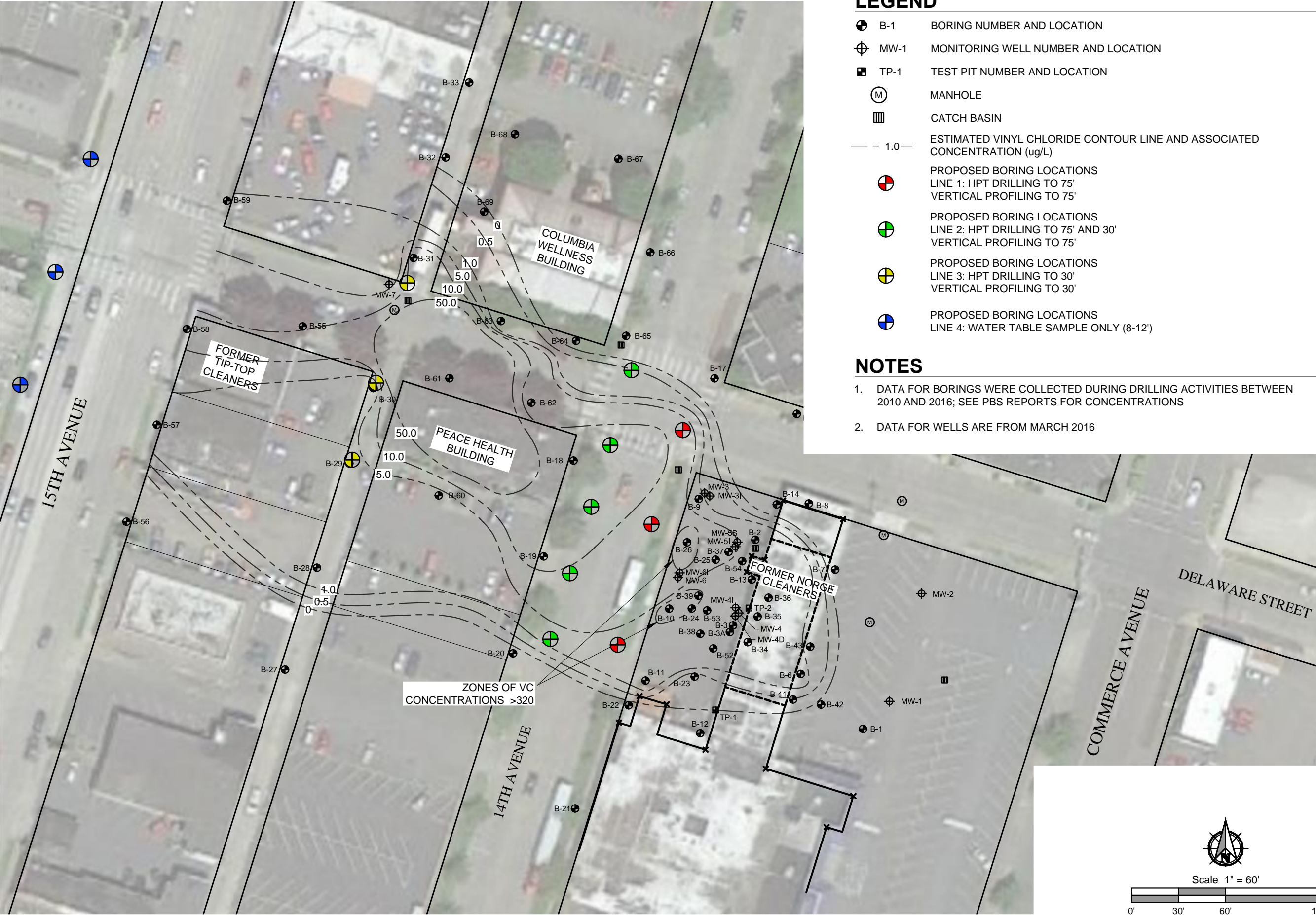
869 COMMERCE AVENUE  
LONGVIEW, WASHINGTON

JUNE 2017  
20275.003

FIGURE

1





LEGEND

- B-1 BORING NUMBER AND LOCATION
- MW-1 MONITORING WELL NUMBER AND LOCATION
- TP-1 TEST PIT NUMBER AND LOCATION
- M MANHOLE
- CB CATCH BASIN
- 1.0 ESTIMATED VINYL CHLORIDE CONTOUR LINE AND ASSOCIATED CONCENTRATION (ug/L)
- PROPOSED BORING LOCATIONS LINE 1: HPT DRILLING TO 75' VERTICAL PROFILING TO 75'
- PROPOSED BORING LOCATIONS LINE 2: HPT DRILLING TO 75' AND 30' VERTICAL PROFILING TO 75'
- PROPOSED BORING LOCATIONS LINE 3: HPT DRILLING TO 30' VERTICAL PROFILING TO 30'
- PROPOSED BORING LOCATIONS LINE 4: WATER TABLE SAMPLE ONLY (8-12')

NOTES

- DATA FOR BORINGS WERE COLLECTED DURING DRILLING ACTIVITIES BETWEEN 2010 AND 2016; SEE PBS REPORTS FOR CONCENTRATIONS
- DATA FOR WELLS ARE FROM MARCH 2016

SITE PLAN

PROPOSED BORING LOCATIONS

869 COMMERCE AVENUE, LONGVIEW, WASHINGTON

FIGURE

2

PBS Engineering and Environmental Inc.  
4412 SW Corbett Avenue  
Portland, OR 97239  
503.248.1939  
pbsusa.com



Date: May 18, 2018

Dept of Ecology:

The following is in response to your May 18, 2018 request for delivery information on your Certified Mail™ item number 9171999991703702382770. The delivery record shows that this item was delivered on May 14, 2018 at 2:44 pm in LONGVIEW, WA 98632. The scanned image of the recipient information is provided below.

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Conrad Fennell  
Proprietor

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