



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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December 1, 2014

Mr. James Hogan  
ECC Horizon  
8383 Craig Street, Suite 110  
Indianapolis, IN 46250

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

- **Name:** Cherry Street Cleaners
- **Address:** 2510 E. Cherry St., Seattle WA 98122
- **Facility/Site No.:** 4765174
- **VCP No.:** NW2009
- **Cleanup Site No.:** 4175

Dear Mr. Hogan:

Thank you for submitting documents regarding your Remedial Investigation (RI) for the **Cherry Street Cleaners** (Site) for review by the Washington State Department of Ecology (Ecology) under the Voluntary Cleanup Program (VCP). Ecology appreciates your initiative in pursuing this administrative option for cleaning up hazardous waste sites under the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

This letter constitutes an advisory opinion regarding a review of submitted documents/reports pursuant to requirements of MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing the following release at the Site:

- Chlorinated volatile organic compounds (cVOCs), specifically tetrachloroethene (PCE) and related degradation products trichloroethene (TCE), cis-1,2-dichloroethene (c-DCE) and vinyl chloride (VC) into soil and groundwater.

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

Ecology is providing this advisory opinion under the specific authority of RCW 70.105D.030(1)(i) and WAC 173-340-515(5).



This opinion does not resolve a person's liability to the state under MTCA or protect a person from contribution claims by third parties for matters addressed by the opinion. The state does not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). The opinion is advisory only and not binding on Ecology.

Ecology's Toxics Cleanup Program has reviewed the following information regarding your RI:

1. *Remedial Investigation for Former Cherry Custom Cleaners, dated September 2014*, prepared by ECC Horizon.

The report listed above will be kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. Appointments can be made by calling the NWRO resource contact at (425) 649-7235 or sending an email to [nwro\\_public\\_request@ecy.wa.gov](mailto:nwro_public_request@ecy.wa.gov).

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

Based on a review of supporting documentation listed above, pursuant to **requirements contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing Vapor Intrusion at the Site, Ecology has determined:**

#### **Characterization of the Site**

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in **Enclosure A**.

#### **Establishment of cleanup standards and Points of Compliance**

Ecology has determined the cleanup levels (CLs) and points of compliance (POC) you established for the Site meet the substantive requirements of MTCA.

- For soil and ground water, MTCA Method A CLs and MTCA Method B CLs where MTCA Method A CLs are not listed.
- For indoor air Table 6 CLARC Guidance Tetrachloroethylene, September 2012 will be used, and are as follows:
  - Commercial MTCA Method C Carcinogenic Indoor Air Screening Levels  
PCE = 40 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ),

- MTCA Method B Carcinogenic Indoor Air Screening Levels:  
PCE =  $9.6 \mu\text{g}/\text{m}^3$
- MTCA Method B Soil Gas Screening Levels:  
PCE =  $160 \mu\text{g}/\text{m}^3$
- The POC for soil, ground water and air are standard points of compliance and are established as throughout the Site.

### **The Remedial Investigation Report**

Ecology requests the RI be resubmitted along with the Feasibility Study and to include the following information:

- Include in the body of the text a table listing the cleanup standards for all indicator hazardous substances for all media affected.
- In the Vapor Intrusion Assessment, expand the analysis to include the Tier 1 thru Tier 2 analysis and rationale.

### **Interim Actions**

- In July 2010, ECC Horizon began an Emulsified Oil Substrate (EOS) pilot study by injecting EOS in wells IW-1 thru IW-28. Since then EOS Performance Monitoring has been ongoing.
- The results of the EOS study represent a 3-year post-injection performance monitoring window. Based on data, the dissolved-phase cVOC mass in groundwater is relatively unchanged up-gradient of the former Cherry Street Cleaners, but has significantly reduced within the source area and has moderately reduced downgradient of the source area. The data implies that EOS has effectively reduced dissolved-phase cVOC mass within the groundwater.
- The former Cherry Street Cleaners building was demolished in July 2013. The removal of the building and its foundation may have triggered off-gassing of the underlying soil, thereby releasing vapors that were previously entrapped beneath the concrete.

**This opinion does not represent a determination by Ecology that a proposed remedial action will be sufficient to characterize and address the specified contamination at the Site or that no further remedial action will be required at the Site upon completion of the proposed remedial action.** To obtain either of these opinions, you must submit appropriate



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documentation to Ecology and request such an opinion under the VCP. **This letter also does not provide an opinion regarding the sufficiency of any other remedial action proposed for or conducted at the Site.**

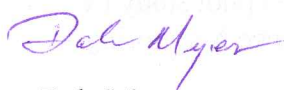
Please note that this opinion is based solely on the information contained in the documents listed above. Therefore, if any of the information contained in those documents is materially false or misleading, then this opinion will automatically be rendered null and void.

The state, Ecology, and its officers and employees make no guarantees or assurances by providing this opinion, and no cause of action against the state, Ecology, its officers or employees may arise from any act or omission in providing this opinion.

Again, Ecology appreciates your initiative in conducting independent remedial action and requesting technical consultation under the VCP. As the cleanup of the Site progresses, you may request additional consultative services under the VCP, including assistance in identifying applicable regulatory requirements and opinions regarding whether remedial actions proposed for or conducted at the Site meet those requirements.

If you have any questions regarding this opinion, please contact me at (425) 649-4446, or email at [damy461@ecy.wa.gov](mailto:damy461@ecy.wa.gov).

Sincerely,



Dale Myers  
Site Manager  
Toxics Cleanup Program

Enclosure: A – Description and Diagrams of the Site

cc: Sonia Fernandez, VCP Coordinator, Ecology

## **Enclosure A**

### **Description and Diagrams of the Site**

The site is located between First Hill and Lake Washington along the East Cherry Street corridor, which is approximately 2 miles east of downtown Seattle, WA. It is bound between 25th Avenue to the west and 27th Avenue to the east. It is also bound to within 150 feet north of and 100 feet south of East Cherry Street. The ground surface elevation in this area is between 280 and 285 feet above mean sea level (msl). The site boundary is reflected by the soil borings, monitoring wells and vapor intrusion assessment locations.

The former Cherry Street Cleaners located at 2510 E. Cherry St., Seattle WA, 98122, has been identified as the source of releases at the Site due to dry cleaning operations from the mid-1960s until 2007. The former Cherry Street Cleaners used PCE from 1968 to June 2007 at its facility. Prior to 1968, the business operated as Accurate Cleaners, during which time petroleum-based dry cleaning solvents were used instead of PCE.

The site was created as a result of tetrachloroethene (PCE) released to the soil and groundwater. The site is thus defined by the presence of chlorinated volatile organic compounds (cVOCs) in soil and groundwater that exceed the Model Toxics Control Act Method A Cleanup Levels (MTCA A CLs).

The constituents of concern at the Site are PCE and its daughter products trichloroethene (TCE), cis-1,2-dichloroethene (c-DCE) and vinyl chloride (VC) in soil, groundwater and air.

Based on a review of The Geologic Map of Seattle (United States Geological Survey Open File Report 2005-1252, April 2005), geology in the region of the site consists of Quaternary pre-Olympian landslide glacial deposits consisting of fine-grained silts and clays with interbedded sands, overlain by very dense fine-grained till deposits. The till generally ranges from gravelly, sandy silt to silty sand with varied quantities of clay and scattered cobbles and boulders (Galster and Laprade, 1991).

Specific to the site, silt is generally encountered from the ground surface to approximately 5 to 10 feet below ground surface (bgs) followed by discontinuous interbedded silt, silty sand and sandy silt lenses within a noncohesive sand unit with some gravel to the total depth drilled of 60 feet bgs.

Lake Washington is the nearest surface water body, located approximately 1 mile to the east of the site.

Shallow and deep groundwater-bearing zones are encountered at the Site under unconfined conditions between 20 and 30 feet bgs within the noncohesive soil beneath the vicinity of the site. Groundwater level measurements indicate that the groundwater flow direction in the shallow monitoring wells located at the site is to the west at a gradient of 0.020 to 0.028 feet per foot. Groundwater level measurements indicate that the groundwater flow direction in the deep monitoring wells installed in the vicinity of the site is to the east-northeast and south-southeast toward Lake Washington at a gradient of 0.001 and 0.002 feet per foot, respectively.





CATCH BASINS  
 PAD MOUNTED TRANSFORMER  
 F-TANK

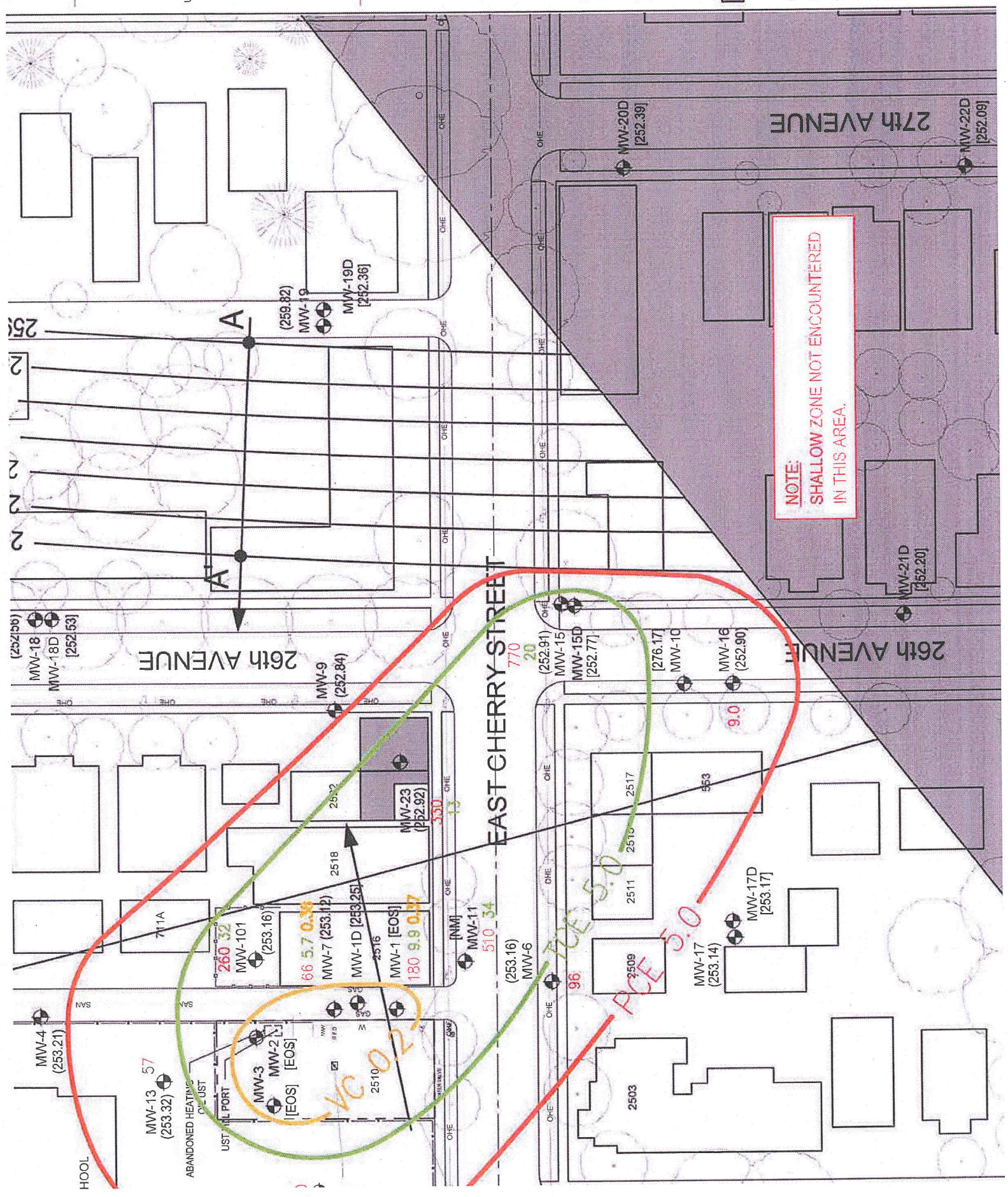
**LINE TYPE**  
 BARBED WIRE FENCE  
 CHAIN LINK FENCE  
 WOOD FENCE  
 WATER LINE  
 STORM SEWER  
 SANITARY SEWER  
 NATURAL GAS  
 UNDERGROUND ELECTRICAL  
 OVERHEAD ELECTRICAL  
 ABOVE GROUND ELECTRICAL  
 COMMUNICATIONS  
 UNDERGROUND TELEPHONE  
 FIBER OPTICS  
 FIRE WATER  
 TRAFFIC SIGNAL  
 EASEMENT  
 SWALE  
 EDGE OF WATER  
 BUILDING SETBACK  
 RIGHT-OF-WAY  
 PROPERTY LINE

MW-1 Monitoring  
 ( )  
 ( )

(200.84) = Groundwater  
 [200.82] = Groundwater used in ink  
 potentiometer  
 NM = not measured  
 Hydraulic Gradient: A-A  
 Contour Interval = 1.00'  
 [EOS] = Adjusted water possible due to  
 Location in operation (building)

Tetrachloroethene (PCE)  
 Trichloroethene (TCE)  
 cis-1,2-Dichloroethene  
 Vinyl Chloride (VC)

Note: Only concentrations shown  
 Cleanup levels are shown



NOTE:  
SHALLOW ZONE NOT ENCOUNTERED  
IN THIS AREA.



