



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY  
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October 25, 2021

Haley Ziesemer  
AERICO Real Estate Company  
2727 N Central Ave  
Phoenix, AZ 85004  
[Haley\\_Ziesemer@uhaul.com](mailto:Haley_Ziesemer@uhaul.com)

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

- **Site Name:** U-Haul Center of Hazel Dell
- **Site Address:** 8250 Northeast Hwy 99, Vancouver, Clark County, WA 98684
- **Facility/Site ID:** 82682784
- **Cleanup Site ID:** 10657
- **VCP Project ID:** SW1618

Dear Haley Ziesemer:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the U-Haul Center of Hazel Dell facility (Site). This letter provides our opinion and analysis. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), chapter [70A.305](#) RCW.<sup>1</sup>

### **Issue Presented and Opinion**

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Ecology appreciates and supports your continued efforts to achieve a No Further Action determination. Ecology needs to review the following additional information and data to concur cleanup actions have achieved the requirements of MTCA.

- Confirmation sample data near 263-1-6.
- Further vapor intrusion assessment.

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

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<sup>1</sup> <https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305>

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, chapter 70A.305 RCW, and its implementing regulations, Washington Administrative Code ([WAC](#)) [chapter 173-340](#)<sup>2</sup> (collectively “substantive requirements of MTCA”). The analysis is provided below.

## Description of the Site

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Ecology’s April 26, 2018, Further Action letter describes the Site, previous remedial investigations, and interim actions completed at the Site.<sup>3</sup> Since that letter, U-Haul has completed a second chemical oxidation injection event. On August 27, 2019, 690 gallons of oxidizing product was injected into four different temporary boreholes at 2 foot intervals between 6 and 12 feet below ground surface (bgs). Confirmation groundwater monitoring data was collected quarterly between October 2019 and July 2020 in monitoring wells 263-4 through 263-6.<sup>4</sup>

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:

- Total Petroleum Hydrocarbons as Gasoline Range Organics (TPH-GRO), Diesel Range Organic (TPH-DRO), and Oil Range Organics (TPH-ORO).
- Benzene.

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

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This opinion is based on the information contained in the documents listed in **Enclosure A**.

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](#).<sup>5</sup> Some site documents may be available on [Ecology’s Cleanup Site Search web page](#).<sup>6</sup>

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

## Analysis of the Cleanup

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

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<sup>2</sup> <https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340>

<sup>3</sup> Ecology, Further Action at the Following Site: U-Haul Center of Hazel Dell, April 26, 2018. Enclosure A.

<sup>4</sup> Farallon, *Cleanup Status Update*, February 8, 2021.

<sup>5</sup> <https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests>

<sup>6</sup> <https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=10657>

## 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.

### a. Performance Sampling

#### ***Groundwater***

Performance groundwater data collected in the source area is needed. The groundwater monitoring wells with previous detections, 263-1A and 263-1B, were decommissioned to facilitate successful injection of the oxidation product. Evaluation of groundwater in this area is needed to determine whether the interim action successfully reduced contaminant concentrations.

#### ***Soil***

Performance soil sampling in the area of sample 263-1-6 is needed. As described in Ecology's May 23, 2019, response letter, soil sampling at a similar location and depth is needed to evaluate the efficacy of the chemical oxidation interim remedial action.<sup>7</sup> Sample 263-1-6, collected at a depth of 6 feet bgs, indicated concentrations of TPH-GRO at 1,010 milligrams per kilogram (mg/kg) and benzene at 0.131 mg/kg in soil. Evaluation of soil in this area at a similar depth would confirm the efficacy of the remedial action and support eliminating the vapor intrusion pathway as a potential pathway of concern.

Ecology agrees that soil sample 263-1A vertically bounds contamination in this area above a depth of 7.5 feet bgs.

### b. Vapor Intrusion Evaluation

Ecology needs to review a Tier 1 or Tier 2 vapor intrusion assessment. Since Ecology's last opinion, U-Haul evaluated the potential of petroleum vapor intrusion at the Site. After reviewing Ecology's, *Implementation Memorandum No. 14*, U-Haul determined there was sufficient vertical separation distance between contaminated soil and the building foundation.

Ecology disagrees that sufficient data exists in the upper 6 feet bgs to determine whether contaminant concentrations are below *Implementation Memorandum No. 14 Appendix B* values for weathered diesel ( $\leq 250$  mg/kg). Samples B-4, at 7 feet bgs, and 263-1B, at 6.5 feet bgs, exhibit TPH-DRO concentrations in excess of the weathered diesel value within the lateral inclusion zone of the U-Haul building.

The following memoranda provide Ecology's most recent guidance for calculating vapor intrusion screening and cleanup levels, and supersede Ecology's [\*2009 Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State\*](#).<sup>8</sup>

<sup>7</sup> Ecology, *Response to Letter Dated September 9, 2018*. May 23, 2019. Groundwater Characterization.

<sup>8</sup> <https://apps.ecology.wa.gov/publications/documents/0909047.pdf>

- [Ecology's Implementation Memorandum No. 14](#)<sup>9</sup> on the updated process for initially assessing the potential for petroleum vapor intrusion.
- [Ecology's Implementation Memorandum No. 18](#)<sup>10</sup> for updated guidance on petroleum vapor intrusion screening and cleanup levels. This guidance should be used to determine whether a Site specific calculated total TPH vapor value is appropriate.
- [Ecology's Implementation Memorandum No. 21](#)<sup>11</sup> answers frequently asked questions regarding vapor intrusion and Ecology's 2009 draft vapor intrusion guidance.

Alternatively, collect sufficient performance soil samples from the 263-1A, 263-1B, and 263-1-6 area to demonstrate the remedial action effectively reduced remnant soil contamination to concentrations that do not pose a vapor intrusion risk.

## 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.

It appears that TPH-GRO in soil has been compared to the higher Method A screening level of 100 mg/kg (soil sample 263-1B).<sup>12</sup> Due to detections of benzene at this Site (soil sample 263-1-6) the lower Method A screening level of 30 mg/kg applies.

Cleanup Standards: Under MTCA, cleanup standards consist of three primary components; points of compliance,<sup>13</sup> cleanup levels,<sup>14</sup> and applicable state and federal laws.<sup>15</sup>

- Points of Compliance.** Points of compliance are the specific locations at the Site where cleanup levels must be attained. U-Haul conducted a Terrestrial Ecological Evaluation (TEE) as part of the 2017 RI/FFS.<sup>16</sup> Ecology concurs the TEE ends based on the total area of contaminated soil is not more than 350 square feet.<sup>17</sup> U-Haul has proposed to use standard points of compliance.

<sup>9</sup> <https://apps.ecology.wa.gov/publications/documents/1609046.pdf>

<sup>10</sup> <https://apps.ecology.wa.gov/publications/documents/1709043.pdf>

<sup>11</sup> <https://apps.ecology.wa.gov/publications/documents/1809046.pdf>

<sup>12</sup> Farallon, *Cleanup Status Update*, February 8, 2021. Table 2.

<sup>13</sup> WAC 173-340-200 "Point of Compliance."

<sup>14</sup> WAC 173-340-200 "Cleanup level."

<sup>15</sup> WAC 173-340-200 "Applicable state and federal laws," WAC 173-340-700(3)(c).

<sup>16</sup> Farallon, Remedial Investigation and Focused Feasibility Study, October 24, 2017. Section 4.6.2.

<sup>17</sup> WAC 173-340-7492(2)(a)(i)

Ecology provides the following table of standard points of compliance:

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. <sup>18</sup>
Soil- Protection of Groundwater	Based on the protection of groundwater, the standard point of compliance is throughout the Site. <sup>19</sup>
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. <sup>20</sup>
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. <sup>21</sup>
Air Quality	Based on the protection of air quality, the point of compliance is indoor and ambient air throughout the Site. <sup>22</sup>

- 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 TPH-GRO, TPH-DRO, TPH-ORO, and benzene contamination detected at the Site.

Ecology suggests providing tables detailing the specific proposed cleanup standards. The table below provides Ecology's understanding of the currently proposed cleanup levels at the standard points of compliance. Cleanup levels for the air pathway are provided pending the forthcoming tier 1 or tier 2 vapor intrusion assessment.

Hazardous Substance	Cleanup Method	Groundwater Concentration <sup>23</sup> (µg/L)	Soil Concentration <sup>24</sup> (mg/kg)	Air Concentration <sup>25</sup> (µg/m <sup>3</sup> )
TPH-GRO	A	800	30	–
TPH-DRO+TPH-ORO (sum)	A	500	2,000	–
TPH – Generic Value	B	–	–	140
Benzene	A & B	5	0.03	0.32

<sup>18</sup> WAC 173-340-740 (6)(d)

<sup>19</sup> WAC 173-340-747

<sup>20</sup> WAC 173-340-7490(4)(b)

<sup>21</sup> WAC 173-340-720(8)(b)

<sup>22</sup> WAC 173-340-750(6)

<sup>23</sup> WAC 173-340-900, Table 720-1, Method A Cleanup Levels for Ground Water.

<sup>24</sup> WAC 173-340-900, Table 740-1, Method A Soil Cleanup Levels for Unrestricted Land Uses.

<sup>25</sup> MTCA Method B cancer CULs for air; <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC/Data-tables>

- 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. Ecology concurs that U-Haul has proposed applicable local, state, and federal laws in the 2017 Remedial Investigation and Focused Feasibility Study Report.<sup>26</sup>

### 3. Selection of Cleanup Action.

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

Cleanup actions completed at the Site include excavation of petroleum contaminated soil and in-situ chemical oxidation near well location 263-1. Performance sampling needs to be completed to ensure the requirements of WAC 173-340-360(2) are achieved.

## 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.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70A.305.040(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 70A.305.080 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 70A.305.170(6).

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<sup>26</sup> Farallon, Remedial Investigation and Focused Feasibility Study, October 24, 2017. Section 4.1.

## 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 [Voluntary Cleanup Program web page](#).<sup>27</sup> If you have any questions about this opinion, please contact me at (360) 407-6266 or [Joseph.Kasperski@ecy.wa.gov](mailto:Joseph.Kasperski@ecy.wa.gov).

Sincerely,



Joe Kasperski, LG  
Toxics Cleanup Program  
Southwest Regional Office

JKK/tm

Enclosure: A – Basis for the Opinion: List of Documents

cc by email: Chris Paulsen, Farallon, [cpaulsen@farallonconsulting.com](mailto:cpaulsen@farallonconsulting.com)  
Nicholas Acklam, Ecology, [nicholas.acklam@ecy.wa.gov](mailto:nicholas.acklam@ecy.wa.gov)  
Ecology Site File

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<sup>27</sup> <https://www.ecy.wa.gov/vcp>

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## Enclosure A

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Basis for the Opinion

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## List of Documents

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1. Pinnacle Environmental Technologies, *Tank Removal Report*, May 7, 1999.
2. Blaes Environmental Management, Inc. (Blaes), *Initial Site Characterization Report*, February 16, 2000.
3. Blaes, Second Quarterly Groundwater Monitoring Report, July 26, 2000.
4. Blaes, *Quarterly Groundwater Monitoring Report*, Third Quarter 2000, October 19, 2000.
5. Blaes, Well Installation and Groundwater Monitoring Report, June 29, 2001.
6. Blaes, Groundwater Monitoring Report, September 21, 2001.
7. Blaes, Groundwater Monitoring Report, January 11, 2002.
8. Blaes, Quarterly Groundwater Monitoring Report, March 12, 2002.
9. Blaes, Quarterly Groundwater Monitoring Report, July 16, 2002.
10. Blaes, Quarterly Groundwater Monitoring Report, November 21, 2004.
11. Blaes, Well Installation, Groundwater Sampling, and Remedial Implementation Report, November 1, 2005.
12. Blaes, Quarterly Groundwater Monitoring & Sampling Report, July 6, 2007.
13. Farallon Consulting (Farallon), *Remedial Investigation and Focused Feasibility Study*, October 24, 2017.
14. Ecology, Further Action at the Following Site: U-Haul Center of Hazel, letter, April 26, 2018.
15. Farallon, *Response to Ecology Comments*, September 19, 2018.
16. Ecology, Response to Letter Dated September 19, 2018, May 23, 2019.
17. Farallon, *Cleanup Status Update*, February 8, 2021.