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December 16, 2020

Bruce Hagensen
PO Box 5349
Vancouver, WA 98668
behagensen@msn.com

Re: Further Action at the following Sites:

- **Site Name:** Vancouver Sign Co Inc.
- **Site Address:** 6615 NE Hwy 99, Vancouver, Clark County, WA 98665
- **Facility/Site ID:** 35998513
- **Cleanup Site ID:** 15218
- **VCP Project ID:** SW1727

And

- **Site Name:** Franz Bakery Warehouse
- **Site Address:** 6701 NE Hwy 99 Vancouver, WA 98665 Clark
- **Facility/Site ID:** 47124354
- **Cleanup Site ID:** 9350
- **LUST ID:** 4253

Dear Bruce Hagensen:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Vancouver Sign Co Inc. facility (6615 Building) and the Franz Bakery Warehouse (6701 Building). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA),[1] chapter 70A.305 Revised Code of Washington (RCW).

[1] https://fortress.wa.gov/ecy/publications/SummaryPages/9406.html

Issue Presented and Opinion

Ecology supports and encourages your decision to independently cleanup these Sites. Previous and recent work completed at these Sites has provided information regarding the nature and extent of contamination across soil, groundwater, and soil gas.

Additional information is needed for Ecology to determine whether all requirements of MTCA have been satisfied. The following list briefly summarizes information Ecology needs to evaluate the sufficiency of the cleanups:

- Additional vapor intrusion assessment.
- Additional contaminant characterization.

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 70A.305 RCW, and its implementing regulations, Washington Administrative Code (WAC) chapter 173-340[2] (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

This opinion applies only to the Sites described below. The Sites are defined by the nature and extent of contamination associated with the following releases:

- Total Petroleum Hydrocarbons as; Gasoline Range Organics (TPH-GRO), Diesel Range Organics (TPH-DRO), and Residual Range Organics (TPH-RRO) into the soil and groundwater.
- Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX) into the soil, groundwater, and air.
- Tetrachloroethylene (PCE) into soil, groundwater, and air.
- Volatile Organic Compounds (VOCs) in soil and groundwater.

A parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with these Sites are affected by other sites.

[2] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340

Basis for the Opinion

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

1. Ecology, *Requirements for Reporting Environmental Conditions at LUST Contaminated Sites,* July 30, 1996.

2. Omega Environmental, Inc, *UST Closure and Site Assessment Report,* April 3, 1997.

3. Ecology, *Early Notice Letter*, February 7, 2013.

4. AEI Consultants (AEI), *Phase I Environmental Site Assessment*, June 27, 2019.

5. AEI, *Limited Phase II Subsurface Investigation & Well Installation Report,* August 19, 2019.

6. Ecology, *Initial Investigation Form,* July 1, 2020.

7. AEI, *Underground Storage Tank Decommissioning Report*, January 16, 2020.

8. AEI, *Groundwater and Sampling Report,* May 28, 2020.

These 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 Sites. That conclusion is based on the following analysis:

1. Characterization of the Site.

In July 1996, a leaking Underground Storage Tank (UST) at the 6701 Building (Clark County tax parcel 147601000) was discovered and reported by Omega Services.[5] Omega Services indicated the UST was a 1,000 gallon tank containing diesel fuel. Approximately 95 gallons of emulsified petroleum was removed from the tank, the tank was rinsed and removed from the 6701 Building property. After excavation and removal, the tank was inspected and numerous corrosion holes were observed.

[3] https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests
[4] https://apps.ecology.wa.gov/gsp/SiteSearchPage.aspx
[5] Ecology, *Requirements for Reporting Environmental Conditions at LUST Contaminated Sites*, July 30, 1996.

Approximately 18 cubic yards of soil was removed from the tank excavation. Performance soil samples were collected from the sidewalls and bottom of the excavation, collection depths were 7.5 feet and 9 feet below ground surface (bgs) respectively. Performance soil samples collected from the excavation were analyzed for TPH-HCID and further evaluated for total TPH. Three samples were also analyzed for TPH-GRO when the HCID analysis indicated a gas-range detection.

Soil samples collected from the bottom and south sidewall indicated total TPH concentrations exceeded the Method A screening level. The highest concentration of total TPH was reported to be 46,600 milligrams per kilogram (mg/kg) collected from the excavation bottom.[6] Concentrations of TPH-GRO exceeded the Method A screening level with a peak concentration of 5,530 mg/kg in a composite sample collected from stockpile 1 (sample ID FB#1)[6]. The remaining three sidewall samples (west, north, and east) indicated non-detection or concentrations less than the Method A screening level.

Three hand auger investigation borings were advanced south of the 6701 Building UST excavation and north of the tax parcel boundary. Discrete samples were collected from each soil boring at depths of 3, 6, 8, and 10 feet bgs. One soil sample from each boring was selected for laboratory analysis by TPH-HCID. Laboratory analytical data did not detect any petroleum constituent in any of the three soil samples.[7] 13 cubic yards of petroleum impacted soil was transported offsite for disposal and the excavation was backfilled with imported fill material.[8]

A Phase I Environmental Site Assessment (ESA) was completed in June 2019 to evaluate environmental conditions at the 6701 Building and 6615 Building properties. Due to a number of recognized environmental conditions noted during the phase I, a limited Phase II ESA commenced in July 2019.

The Phase II ESA included a ground penetrating radar (GPR) survey, soil and groundwater investigation, vapor intrusion assessment, and monitoring well installation. The GPR survey revealed a previously undisclosed UST abutting the 6615 Building (Clark County tax parcel 147632000). In discussions with site personnel, it was determined that the tank was no longer in service but had been used for fuel storage.

Three soil borings and one monitoring well were advanced as part of this investigation, two at the 6615 Building (borings B-1 and B-3) and two at the 6701 Building (boring B-4 and MW-1). Soil samples were collected from depths of 15 feet bgs and deeper, sample depth selection was variable.[9] Soil samples submitted for laboratory analysis indicated concentrations of petroleum products and petroleum byproducts were detected, but below Method A screening levels.

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[6] Omega, *UST Closure and Site Assessment Report*, April 3, 1997. Table 1.
[7] Omega, *UST Closure and Site Assessment Report*, April 3, 1997. Table 1.
[8] Omega, *UST Closure and Site Assessment Report*, April 3, 1997. Section 3.5.
[9] AEI, *Limited Phase II Subsurface Investigation & Well Installation Report,* August 19, 2019. Section 3.4.1.

PCE was detected in soil below Method A screening level at boring B-1. Acetone, 2-butanone (MEK), and methylene chloride were detected in all three soil samples at concentrations less than the Method B screening level.[10]

Groundwater was collected from soil boring locations B-1 and B-3, and from monitoring well MW-1. MW-1 is located approximately 10 feet west of the 6701 Building UST excavation and boring B-4. MW-1 was drilled via hollow stem auger to a terminal depth of 40 feet bgs with a screened interval of 40 feet to 25 feet bgs. Laboratory analysis of groundwater collected during this Phase II ESA detected TPH-RRO concentrations in excess of the Method A screening level at MW-1 and below the Method A screening level at B-1.[11] TPH-DRO and chloroform were detected below the Method A screening level in groundwater collected from MW-1. Acetone was detected below the Method B screening level in all three groundwater samples.

Sub-slab soil gas was also evaluated during the Phase II ESA but was limited to the 6615 Building. Soil gas beneath the 6615 Building was monitored at three locations. Analytical data indicate PCE concentration in sub-slab soil gas at SG-2 was 453 micrograms per cubic meter (µg/m^3), exceeding the Method B cancer screening level of 320 µg/m^3.[12] Numerous VOCs were also detected, but no other constituent exceeded its respective most stringent Method B screening level.

On November 13, 2019, the 6615 Building UST identified during the August 2019 Phase II ESA was decommissioned. The 6615 Building UST was empty upon initial inspection prior to rinsing. The UST was closed in-place due to the proximity to the 6615 Building. Staining was observed in the excavation sidewalls and suspected contamination field confirmed by elevated readings collected via photoionization detector.

Soil samples were collected from the north, east, and west sidewalls and from the bottom of the northern extent of the excavation. Soil analytical data collected from the bottom of the 6615 Building UST excavation, sample ID: Bottom-8.5, indicate TPH-GRO, ethylbenzene, and total xylenes exceeded the Method A screening level. Additionally, concentrations of TPH-GRO and BTEX in soil collected from the east sidewall, sample ID: Sidewall-7.5, exceeded the Method A screening level.[13] Groundwater was not encountered during this investigation. The 6615 UST excavation was backfilled with imported gravel without additional soil removal.

A May 28, 2020, Groundwater Monitoring Report summarized two groundwater sampling events. MW-1 was sampled in January and May 2020. TPH-DRO was detected during the January event and TPH-GRO in the May event showing both detections were below the Method A screening level.

[10] AEI, *Limited Phase II Subsurface Investigation & Well Installation Report,* August 19, 2019.Table 1.
[11] AEI, *Limited Phase II Subsurface Investigation & Well Installation Report,* August 19, 2019.Table 2.
[12] AEI, *Limited Phase II Subsurface Investigation & Well Installation Report,* August 19, 2019. Table 3.
[13] AEI, *Underground Storage Tank Decommissioning Report*, January 16, 2020. Table 1.

Chloroform was detected in groundwater collected from MW-1 in July 2019, January 2020, and May 2020 with concentrations increasing each event. Chloroform was detected in groundwater above the Method B screening level during the January and May events.[14]

Ecology has determined your characterization of the Site **is not** sufficient to establish cleanup standards and select a cleanup action. The following comments describe data gaps in the remedial investigation and provide assistance on how to meet WAC 173-340-350(7) and -450 at your Site:

A. Additional Vapor Intrusion Assessment

Due to the proximity of contaminant sources and remnant impacted soils, the potential for petroleum vapor intrusion should be evaluated. Vapor intrusion needs to be evaluated at both the 6615 Building and the 6701 Building. Data currently available for the 6615 Building evaluated petroleum byproducts such as BTEX but does not appear to provide data on air-phase hydrocarbons.[12]

Sub-slab soil gas data collected from beneath the 6615 Building indicate PCE concentrations above the Method B cancer screening level exist in shallow soil.[12] Evaluation of the indoor air is needed proximal to soil gas monitoring location SG-2. Within the building that SG-2 was advanced, ensure preferential pathways for sub-slab vapor, such as sumps, drains, utility lines, etc., are evaluated. Discussion regarding why data comparison to Method C is likely not appropriate is provided in section 2 of this opinion.

For these Sites, Ecology recommends sampling of indoor ambient air in the 6615 Building, evaluation of petroleum vapor intrusion risk to the 6701 Building, and at least one outdoor ambient air sample collected upwind of the buildings. Ensure sampling occurs when building use is minimized and doors and windows can remain shut for the duration of the sample period. For the most accurate results, vapor/air sampling should occur when indoor heating is on, and when advective vapor transport is expected. Winter months, when indoor heating is occurring and outdoor temperatures are low, provide ideal conditions for monitoring for vapor intrusion. When sampling is occurring, additional ambient Site information should be collected. Ambient Site conditions that may be useful when evaluating vapor intrusion include:

- Indoor and outdoor temperature at the beginning and end of the sample collection period.
- Barometric pressure at the beginning and end of the sample collection period.
- Site weather information preceding and during the sample collection period.
- Operational status of building heating, ventilation, and/or air conditioning systems during the sample collection period.

[14] AEI, *Groundwater and Sampling Report*, May 28, 2020. Table 1

Air sampling should be conducted using a commercial or residential scenario, as appropriate. If a commercial scenario is used, then an environmental covenant will be needed to limit future Site use to commercial, non-residential scenarios.

Samples should be analyzed and reported using EPA Method TO-15. EPA Method TO-17 may also be acceptable if laboratory detection limits are greater than appropriate cleanup levels. Based upon MTCA requirements, air compliance data should be reported as concentrations with the units of micrograms per cubic meter (µg/m3), and compared to proposed cleanup levels.

Future air quality compliance samples for this project should be analyzed by a laboratory accredited in Washington State for the aforementioned analytical methods, and analyzed for the following hazardous substances:

1. Reductive Dechlorination Suite: (6615 Building only)
    - PCE.
    - Trichloroethylene (TCE).
    - 1,1-dichloroethene.
    - Vinyl chloride.
2. Petroleum equivalent carbon fractions: (6615 Building and 6701 Building)
    - EC5-8 (aliphatics).
    - EC9-12 (aliphatics).
    - EC9-10 (aromatics).
3. Petroleum VOCs: (6701 Building)
    - Benzene, toluene, ethylbenzene, and total xylenes.
    - Naphthalenes.
4. Additional VOCs (6701 Building)
    - Chloroform

To help you meet MTCA requirements, Ecology's recent implementation memoranda may be used as guidance to plan and conduct air sampling studies at the Site, and to report and interpret air sampling data results.

These 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.[15]

- Ecology's Implementation Memorandum No. 14[16] on the updated process for initially assessing the potential for petroleum vapor intrusion.

- Ecology's Implementation Memorandum No. 18[17] 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[18] answers frequently asked questions regarding vapor intrusion and Ecology's 2009 draft vapor intrusion guidance.

- Ecology's Implementation Memorandum No. 22[19] discusses vapor intrusion investigations and short-term TCE toxicity. Ecology recognizes that TCE has not been observed in any media at either Site. This resource is provided in case TCE is observed after additional investigation.

B. Additional Contaminant Testing

Based on a review of available analytical data, these Sites have been tested in accordance with Table 830-1 Waste Oils and Unknown Oil.[20] Ecology agrees the 6615 Building and 6701 Building UST releases fit this category best; however it does not appear that total lead has been evaluated at any location, nor have carcinogenic polycyclic aromatic hydrocarbons (cPAHs) been evaluated at the 6615 Building. Ecology needs to evaluate sufficient data to determine whether either contaminant is present at concentrations of concern.

Ecology recommends collecting a groundwater sample from MW-1 and analyzing it for total lead.

Ecology also suggests collecting a soil sample near the 6615 Building UST excavation Sidewall-E-8.5 sample location. The sample collected from the 6615 Building UST area should be analyzed for TPH-Dx, total lead, and cPAHs.

[15] https://fortress.wa.gov/ecy/publications/documents/0909047.pdf
[16] https://fortress.wa.gov/ecy/publications/documents/1609046.pdf.
[17] https://fortress.wa.gov/ecy/publications/documents/1709043.pdf.
[18] https://fortress.wa.gov/ecy/publications/documents/1809046.pdf.
[19] https://fortress.wa.gov/ecy/publications/documents/1809047.pdf.
[20] WAC 173-340-900 Table 830-1.

C. Completion of the Remedial Investigation

Additional soil and groundwater samples are needed to adequately define the Sites. When planning additional remedial investigation activities, please ensure that you are defining the extents of contamination in accordance with WAC 173-340-200[21] and WAC 173-340-350[22]. A MTCA toxic cleanup site 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. Specifically, Ecology needs to review sufficient data from the following areas and media:

- Additional vapor analysis as described in Section 1.A of this letter. Please describe what the large air-handler unit on top of the 6615 Building is used for.

- It is currently unknown whether contamination extends beneath the 6615 Building. Additional soil sampling is necessary to fully evaluate all possible remedial actions. If assuming the worst case scenario that sub-slab soil is contaminated and an environmental covenant will be sought, various long term monitoring[23] will be required to ensure the remedy is effective. Ecology believes that three monitoring wells located about the 6615 Building would provide sufficient data to evaluate the efficacy of the cap. Additional discussion regarding institutional controls are provided in Section 3 of this letter.

- Ecology needs to review additional groundwater data at the Site. Remnant soil at the Site may pose a leaching hazard; groundwater wells constructed around the remnant masses will provide valuable delineation information. Permanent groundwater monitoring wells installed at the 6701 Building and 6615 Building could also serve as long term compliance wells for each Site, if needed. Please see Section 3 for a discussion of institutional controls.

- Further investigation and analysis of soil east of 6615 Building sample Sidewall-E-8.5 as described in Section 1.B of this letter.

- Additional investigations to determine whether PCE or PCB contamination is present in soil at depths less than 22-feet in the area of the 6615 Building UST excavation and B-1.

- Further investigation of increasing concentrations of chloroform in groundwater at MW-1. Ecology understands AEI has proposed a municipal or irrigation water system leak may be a source,[24] but a review of the data suggests that this is a conclusion not yet supported by data. If marked out during the GPR survey, depict water supply and sanitary sewer line paths to and from the buildings. This may assist with evaluating whether external utility lines may be contributing detected contaminants at the Sites.

[21] https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-200&pdf=true
[22] https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-350&pdf=true
[23] WAC 173-340-410
[24] AEI, *Groundwater and Sampling Report*, May 28, 2020. Section 4.

- Once the remedial investigation is complete, develop contaminant concentration isopleth maps in both geologic cross section and plan view for Ecology's next review. Ensure the concentration isopleths are bounded by analytical soil and groundwater data results. Isopleth maps should visually convey the vertical and lateral extent of contamination at the Site and be based on data results. Clearly indicate where isopleths are not bounded by results. For example, using dashed lines or question marks.

- A terrestrial ecological evaluation (TEE) form was not submitted for either Site. Complete a TEE form[25] for each Site to evaluate whether a Site specific TEE is required. Ecology has reviewed the surrounding area and a simplified TEE[26] is likely required. After completion of additional remedial investigation, review WAC 173-340-7492 and utilize Table 749-1[27] to evaluate ecological exposure at the Sites.

D. Work Plan Review

Voluntary Cleanup Program (VCP) customers are able and encouraged to submit work plans for review by Ecology. Though Ecology does not provide oversight or approval of work plans for independent cleanups, we can provide technical support and comment on how your proposed work might best satisfy MTCA requirements. To request review of a work plan, submit a Request for Opinion form[28] along with an electronic copy and one hard copy of the work plan.

E. EIM Data Upload

Ecology has reviewed the data uploaded to the Environmental Information Management (EIM) database. It appears data collected from the 6615 Building UST excavation have not yet been uploaded. Please upload these data along with any additional data generated during the continued remedial investigation to EIM, in accordance with Ecology Policy 840.[29]

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,[30] (b) cleanup levels,[31] and (c) applicable state and federal laws.[32]

[25] https://fortress.wa.gov/ecy/publications/documents/ecy090300.pdf
[26] WAC 173-340-7492
[27] WAC 173-340-900 Table 749-1
[28] https://fortress.wa.gov/ecy/publications/documents/ecy070219.pdf
[29] https://fortress.wa.gov/ecy/publications/SummaryPages/1609050.html
[30] WAC 173-340-200 "Point of Compliance."
[31] WAC 173-340-200 "Cleanup level."
[32] WAC 173-340-200 "Applicable state and federal laws," WAC 173-340-700(3)(c).

(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 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.[33]
Soil- Protection of Groundwater	Based on the protection of groundwater, the standard point of compliance is throughout the Site.[34]
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.[35]
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.[36]
Air Quality	Based on the protection of air quality, the point of compliance is indoor and ambient air throughout the Site.[37]

(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. It appears contaminants at this Site have been compared to MTCA Method A, Method B, and Method C depending on the contaminant and media. Ecology suggests you compile a table of contaminants of concern for each Site, applicable cleanup level value and method, and the applicable points of compliance.

Ecology does not recommend proposing Method C cleanup levels for either Site. Method C cleanup levels can only be used at sites that are used and zoned for heavy industry.[38] Method C requires an environmental covenant to restrict future site use to similar heavy industrial use.[39]

MTCA Method A cleanup levels may be appropriate for the TPH-GRO, TPH-DRO, TPH-RRO BTEX, and PCE 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[40] is currently available to help you evaluate the local requirements that may be necessary.

[33] WAC 173-340-740 (6)(d)
[34] WAC 173-340-747
[35] WAC 173-340-7490(4)(b)
[36] WAC 173-340-720(8)(b)
[37] WAC 173-340-750(6)
[38] WAC 173-340-706(1)(b) and (c)
[39] WAC 173-340-440(4)(b)
[40] https://apps.oria.wa.gov/opas/index.asp

All cleanup actions conducted under MTCA shall comply with applicable state and federal laws.[41] The person conducting a cleanup action shall identify all applicable local, state, and federal laws. The department shall make the final interpretation on whether these requirements have been correctly identified and are legally applicable or relevant and appropriate.[42,43]

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 that additional remedial investigation is necessary at the Sites before selecting a cleanup action. It appears that contaminated soil may remain in-place at one or both of the Sites. Before selecting institutional controls and an environmental covenant as a preferred remedial alternative, a remedial investigation/feasibility study must be completed.[44]

Data collected during the remedial investigation should inform a feasibility study (FS) which will evaluate cleanup action alternatives.[45] Selection of a preferred remedial alternative must adhere to the requirements of WAC 173-340-360. MTCA prefers cleanup actions implement permanent solutions to the maximum extent practicable.

[41] WAC 173-340-710(1)
[42] WAC 173-340-710(2)
[43] 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.
[44] WAC 173-340-350
[45] WAC 173-340-350(8)

To evaluate whether a cleanup action uses permanent solutions to the maximum extent practicable MTCA prescribes the use of a Disproportional Cost Analysis (DCA). Should an environmental covenant be selected as the preferred remedial alternative via the FS/DCA, long term groundwater monitoring will be needed to ensure the remedy remains effective.[46]

Depending on the results of additional remedial investigation, Ecology's Model remedies[47] may apply to one or both of the Sites. Once the remedial investigation is completed, review the model remedies guidance to evaluate whether either of these Sites qualify for a model remedy.

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.

[46] WAC 173-340-410(1)(c)
[47] https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/MTCA-model-remedies

Contact Information

Thank you for choosing to clean up the Site under the 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.[48] If you have any questions about this opinion, please contact me at (360) 407-6266 or joseph.kasperski@ecy.wa.gov.

Sincerely,

Joe Kasperski, LG
Toxics Cleanup Program
Southwest Regional Office

JKK/tam

cc by email: Jacqueline Day, AEI, jday@aeiconsultants.com
Nicholas Acklam, Ecology, nicholas.acklam@ecy.wa.gov
Ecology Site File

[48] https://www.ecy.wa.gov/vcp