Electronic Copy

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47775 • Olympia, Washington 98504-7775 • 360-407-6300
Call 711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

May 7, 2020

Dean Kirkland
Kirkland Central Holdings LLC
2370 E 3rd Loop, Ste. 100
Vancouver, WA 98661
dean@kirklandgloballlc.com

Re: Further Action at the following Site:

- **Site Name:** Fleischer Property
- **Site Address:** 9109 NE 94th Ave, Vancouver, Clark County, WA 98662
- **Facility/Site ID:** 20708
- **Cleanup Site ID:** 2827
- **VCP Project ID:** SW1657

Dear Dean Kirkland:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Fleischer Property facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA),[1] chapter 70.105D Revised Code of Washington (RCW).

Issue Presented and Opinion

Ecology encourages the use of Incremental Sampling Methodology (ISM) for this Site; however 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.

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

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 release:

- Polychlorinated biphenyls (PCBs) into the soil.

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

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

1. PBS Engineering and Environmental, Inc. (PBS), *Remedial Investigation and Interim Action Work Plan*, January 30, 2020.

This document is 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.[2] Some site documents may be available on Ecology's Cleanup Site Search web page.[3]

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 Remedial Investigation and Interim Action Work Plan (the Report) submitted by PBS details a plan to complete characterization of the Site in both soil and groundwater. The Report proposes a two phase remedial investigation (RI).

The first phase will delineate the lateral and vertical extent of PCBs in soils that exceed 50 milligrams per kilograms (mg/kg) and determine baseline groundwater conditions at the Site with the installation of monitoring wells.

[2] https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests.
[3] https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=2827.

The delineation in soils will be accomplished by excavating new test pits around the locations of former test pits that showed PCB concentrations greater than 10 mg/kg. Three monitoring wells will be installed; one upgradient near the east property boundary, one downgradient near the west property boundary, and one centrally located on the Site.

The second phase will use ISM to delineate the remainder of the Site excluding the areas defined in phase one to exceed 10 mg/kg.

After delineation is complete, PBS intends to excavate soils with PCB concentrations greater than 10 mg/kg and have them disposed of off-Site at a permitted disposal facility.

Based on the review of the submitted Report, Ecology has the following comments:

a. Because surface plants and vegetation are not considered permanent impediments to the exposure of contaminated soils in the upper 15 feet, Ecology concurs that the soil-direct contact and soil-inhalation pathways are complete.[4] Ecology will need you to demonstrate a fully defined Site under MTCA, WAC 173-340-200[5] and WAC 173-340-350[6] before making a final determination on any other pathways. The other pathways will generally be considered complete until demonstrated otherwise.

b. PBS proposed that MTCA Method A cleanup levels (CULs) for industrial land use are appropriate for the Site. Unless it can be demonstrated that the intended use of the Site meets the definition of an industrial facility under MTCA, WAC 173-340-200[7] and WAC 173-340-745,[8] Ecology will assume that the intended facility does not meet the definition of an industrial facility under MTCA and that the MTCA Method A industrial CULs are not appropriate for this Site.

Zoning or other county level property designations are not sufficient to classify a Facility as "Industrial" under MTCA. Specifically, Ecology has concerns with the following aspects of the proposed Site use as a Recreational Vehicle (RV) storage lot:

i. The intended use does not fall under "traditional industrial uses such as:

- processing or manufacturing of materials,
- marine terminal and transportation areas and facilities,
- fabrication, assembly, treatment, or distribution of manufactured products,
- or storage of bulk materials…"[7]

[4] The Report, page 7.
[5] https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-200, "Site" or "Facility."
[6] https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-350.
[7] https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-200, "Industrial properties."
[8] https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-745.

ii. The Facility may be open to the general public and may include children, and will not be limited to just employees of the Facility.

iii. The property is adjacent to a residential neighborhood located west of the Site across NE 94th Avenue.

iv. The location does not expressly limit the future existence of schools or childcare facilities in close proximity to the Site.

v. Any use of industrial CULs will require an Environmental Covenant placed on the property under WAC 173-340-745(1)(a)(ii),[9] not just the presence of PCBs between 25 mg/kg and 100 mg/kg.[10] This does include properties that are included as part of this Site, but are not also owned by the same person as the source property.

c. Ecology does not concur with all parts of the proposed screening levels detailed in section 4.3 of the Report.[10] Reuse of contaminated soil is a separate issue from the established cleanup levels and cleanup efforts. After a Site has been fully defined for all media and appropriate CULs have been established, the CULs are used to define the areas of the Site that will need to be remediated and the areas of the Site that can be left in place or left untreated.

If excavation and removal is the preferred remediation option, the CULs should be used to define the extents of the Site that will be excavated and transported off Site to a landfill or treatment facility. Any excavation of soil not included in the remediation area will need to meet the reuse criteria detailed in Section 12.0 of the Guidance for Remediation of Petroleum Contaminated Sites.[11]

For total PCBs, the reuse criteria defined in Table 12.1 for Soil Category's 1, 2, and 3 is <0.04 mg/kg. The proposed unrestricted reuse criteria of <=1 mg/kg is more than twice this established reuse criteria, and the restricted reuse criteria of <10 mg/kg will leave contaminated soil on the Site at concentrations 10 times the MTCA Method A soil CUL for total PCBs. Soil Category 4 of the reuse criteria only applies to Landfills and it is Ecology's understanding that Clark County is not permitting a landfill at this site.

A Site is not defined by the exceedances of a cleanup level. 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 cleanup levels.

Any remaining contaminated soil on the Site in excess of the established CUL will require an Environmental Covenant supported by a Feasibility Study (FS) and Disproportionate Cost Analysis (DCA).

---

[9] https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-745.
[10] The Report, page 8.
[11] Washington State Department of Ecology Toxics Cleanup Program, *Guidance for Remediation of Petroleum Contaminated Sites*, Publication No. 10-09-057, Revised June 2016. https://fortress.wa.gov/ecy/publications/SummaryPages/1009057.html.

Reburial of contaminated soil in excess of the reuse criteria of <0.04 mg/kg will be considered a Landfill by Ecology and would require permits by Ecology's Solid Waste Management Program and Clark County. Under MTCA, you are not required to excavate or otherwise remediate soils with total PCBs at concentrations less than the established CUL, however, if those soils are excavated, they should only be reused if they have a total PCB concentration less than 0.04 mg/kg.

Ecology concurs with separating the excavated soils into separate non-hazardous solid waste landfill and TSCA-permitted facility waste streams.

d. Ecology has concerns with the use of 55-gallon drums to contain investigation-derived waste (IDW) from test pit excavations.[12] With a minimum number of 64 test pits,[13] this has the potential to generate a significant quantity of drums containing IDW. There was also no discussion of filling or covering the test pits excavations. Ecology would like confirmation that the process discussed in the Report is the intended methodology to be used at the Site.

e. PBS stated that the "native gravel material present beneath the fill and silty sand" is to be "mined."[14] Ecology requests an addition to the Work Plan of a sampling methodology to assure that the gravel material is also not contaminated.

For transport purposes it will need to be determined if the gravel material is a hazardous substance.

For remediation and reuse purposes, because removal, transport, and reuse all have the potential to reduce the size of the gravel material to less than two millimeters in size, under WAC 173-340-740(7)(a),[15] it will need to be demonstrated that the gravel material does not exceed the established CULs and reuse criteria.

f. In addition to the use of MTCA Method A Industrial CULs and reuse of soils with PCBs at concentrations of 0.04 mg/kg or greater, Ecology has determined that your remedial excavation plan will not meet the requirements of MTCA. The areas excluded from ISM evaluation will require performance samples collected from the margins of the excavation.

Discrete confirmation samples will still need to be collected from the floor and sidewalls of the excavation to demonstrate that all contamination in excess of the established CULs has been removed. Given the area of contamination, Ecology would expect multiple confirmation samples collected from the floor and sidewalls of the excavation.

[12] The Report, page 10.
[13] Sixteen historical test pits with at least four confirmation test pit locations located 10 feet away from the historical test pits in each of the cardinal directions.
[14] The Report, page 15.
[15] https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-740.

g. Neither the ISM, the test pit remedial investigation, nor the cleanup plan address off property PCB exceedances of either your proposed Method A Industrial CUL or the Method A Unrestricted CUL. If you are able to demonstrate that a Method A Industrial CUL is appropriate for your property, it may not be appropriate for an adjacent property.

Because there are PCB concentrations on the adjacent property to the south that exceed both the Method A Unrestricted and Industrial CULs (Samples TP39, TP42, TP45, and TP51), the cleanup will need to include the adjacent property in order to receive an no further action (NFA) determination for the Site. It may be necessary to apply a different CUL to specific areas of the Site as appropriate.

h. Ecology does not concur that cleanup excavation activities should only extend vertically "to the depth of the uppermost clean sample."[16] This would seem to indicate that there may be deeper samples in other test pits that showed exceedances of a cleanup level, and that those locations will be remaining in place at the Site. Additionally, ISM Decision Units (DU) that need remediation will need to be excavated in their entirety, full lateral extent and depth.

i. Ecology encourages the use of ISM for this Site. Although you are free to implement the Interstate Technology & Regulatory Council (ITRC) ISM method, Ecology prefers the State of Hawai'i Department of Health's ISM methodology published in their *Technical Guidance Manual for the Implementation of the Hawai'i State Contingency Plan* (HEER, 2016)[17] because the ITRC guidance document is currently being revised.

According to the Hawai'i guidance, a DU is considered to be adequately characterized when repeat testing of the same DU with replicate samples yields similar estimates of the average concentration of a contaminant. The representativeness of multi-increment data for a DU is evaluated by a comparison and statistical evaluation of replicate sample data from the subject DU or from DU(s) reasonably considered to have a similar history and distribution of contaminants. HEER (2016) recommends collecting field replicates from a minimum of ten percent of DUs and triplicate samples (original sample plus two replicates) should be collected to evaluate the precision of field sampling methods used. Replicate samples should be collected at different systematic random locations.

j. Ecology needs clarification on whether the DUs you are proposing are going to be 1.0 foot in vertical thickness or 5.0 feet in vertical thickness.[18] Ecology will also need clarification on how it was determined that the Site only extends 5 feet below ground surface (bgs) given that PCBs were present in samples collected at depths deeper than 5 feet. Specifically samples TP15-S-6.0, TP27-S-5.5, TP27-S-8.5, TP29-S-7.5,

[16] Report, page 16.
[17] http://hawaiidoh.org/TGM.aspx?p=0000a.aspx.
[18] The Report, page 13.

k. As recommended by HEER (2016), the mass of soil removed (subsampled) from each individual core increment should be kept constant and adequate so that a consistent mass of soil is collected from each DU layer. Please describe in more detail how sampling will be performed. The work plan simply says that "soil cores will be collected using hand augers" and "approximately 4 ounces of soil will be collected." What is the diameter of the hand auger and how much soil will be collected per sample?

Depending on the size of the sampling tools, there may be more soil collected than is needed by the analytical laboratory and so representative subsampling will be necessary. For example, small diameter (0.75 to 1.5 inch) sampling tubes collect 30- to- 50 gram (1- to- 1.8 ounce) increments from 4- to- 6-inch thick layers. This would result in a total DU sample size for an individual layer of 108 ounces or 3 kilograms. However, larger diameter tools (such as 2-inch diameter and up) will collect a proportionately larger amount of soil from a single location.

Ecology recommends that you talk with your laboratory to find out the maximum amount of bulk multi-increment sample they are willing to accept and process. For example, HEER (2016) states that this volume is typically in the range of 2.0 to 2.5 kilograms.

l. Please describe how the appropriate gridding method will be determined to minimize thermal degradation of PCBs in the sample.

m. Please revise your methodology to indicate that calculation of a 95% Upper Confidence Limit (UCL) of the mean contaminant concentration for a DU is not required if the Relative Standard Deviation (RSD) for replicate data is equal to or less than 35%.[19] Please also revise this section so that the data evaluation and statistical calculations are done as described in HEER (2016).

Ecology is not able to evaluate the overall effectiveness of your ISM implementation plan, given the use of DU decision criteria based on a MTCA Method A Industrial CUL (see above comment) and without knowing where your DUs are located and their relationship to the >10 mg/kg ISM exclusion zone(s), unless Ecology's recommendations for data evaluation are followed.

Ecology recommends that an addendum work plan be submitted for Ecology review once the exclusion zones and DUs have been determined. Please include in the addendum work plan a figure that shows DU locations and their relationship to the exclusion zones.

[19] HEER (2016), Table 4-2, and section 4.2.7.3.

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,[20] b. Cleanup Levels,[21] and c. Applicable State and Federal Laws.[22]

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.[23]
Soil- Protection of Groundwater	Based on the protection of groundwater, the standard point of compliance is throughout the Site.[24]
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.[25]
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.[26]
Groundwater-Surface Water Protection	Based on the protection of surface water, the standard point of compliance is all locations where hazardous substances are released to surface water.[27]
Air Quality	Based on the protection of air quality, the point of compliance is indoor and ambient air throughout the Site.[28]
Sediment	Based on the protection of sediment quality, compliance with the requirements of 173-204 WAC.[29]

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 industrial cleanup screening levels were used to evaluate PCB contamination detected at the Site. MTCA Method A industrial cleanup levels may not be appropriate for the PCB release, depending on the results of the needed terrestrial ecological evaluation, the completion of the remedial investigation, and the demonstration of the Site as an industrial facility.

[20] WAC 173-340-200 "Point of Compliance."
[21] WAC 173-340-200 "Cleanup level."
[22] WAC 173-340-200 "Applicable state and federal laws," WAC 173-340-700(3)(c).
[23] WAC 173-340-740(6)(d).
[24] WAC 173-340-747.
[25] WAC 173-340-7490(4)(b).
[26] WAC 173-340-720(8)(b).
[27] WAC 173-340-730(6).
[28] WAC 173-340-750(6).
[29] WAC 173-340-760.

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.[30] An online tool[31] is currently available to help you evaluate the local requirements that may be necessary.

All cleanup actions conducted under MTCA shall comply with applicable state and federal laws.[32] 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.[33, 34]

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.

The Report identified the Environmental Protection Agency's (EPA) Toxic Substance Control Act (TSCA), specifically the PCB Site Revitalization Guidance, Title 40 of the Code of Federal Regulations part 761 (40 CFR §761), and the Washington State Model Toxics Control Act[35] (MTCA) as the applicable laws and regulations.

---

[30] https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-710.
[31] https://apps.oria.wa.gov/opas/index.asp.
[32] WAC 173-340-710(1).
[33] WAC 173-340-710(2).
[34] 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.
[35] https://apps.leg.wa.gov/wac/default.aspx?cite=173-340.

3. Selection of Cleanup Action.

Ecology has determined that additional remedial investigation is necessary at the Site before selecting a cleanup action.

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 Voluntary Cleanup Program web site.[36] If you have any questions about this opinion, please contact me at (360) 407-6437 or aaren.fiedler@ecy.wa.gov.

Sincerely,

Aaren Fiedler
Toxics Cleanup Program
Southwest Regional Office

AF/tm

Enclosures: A – Description and Diagrams of the Site

cc by email: Dennis Terzian, PBS Engineering & Environmental, dennis.terzian@pbsusa.com
Sean MacDuff, EPA, macduff.sean@epa.gov
Bryan DeDoncker, Clark County Public Health, Bryan.DeDoncker@clark.wa.gov
Brian Schlottmann, Clark County Public Health, brian.schlottmann@clark.wa.gov
Nicholas Acklam, Ecology, nicholas.acklam@ecy.wa.gov
Derek Rockett, Ecology, derek.rockett@ecy.wa.gov
Carol Serdar, Ecology, carol.serdar@ecy.wa.gov
Ecology Site File

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