STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Eastern Region Office
4601 North Monroe St., Spokane, WA 99205-1295 • 509-329-3400

May 31, 2023

Randy Hayden
Port of Pasco
PO Box 769
Pasco, WA 99301

Re: Technical Assistance for the following contaminated Site:

Site Name:	Port of Pasco Big Industrial Park Lagoons
Site Address:	SE Road 36/ E Ainsworth St, Pasco
Cleanup Site ID:	15433
Facility/Site ID:	88749
VCP Project ID:	EA0362

Dear Randy Hayden:

The Washington State Department of Ecology (Ecology) received your request for technical consultation pursuant to WAC 173-340-515(5) on your proposed additional characterization of the Port of Pasco Big Industrial Park Lagoons facility (Site) under the Voluntary Cleanup Program (VCP)[1]. This letter provides our advice and assistance. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70A.305[2] RCW.

Issue Presented and Opinion

Ecology has determined that your proposed work plan meets the stated objectives to resolve data gaps at the Site. There are additional recommendations outlined in the analysis below.

This opinion is based on an analysis of whether the proposed actions meet the substantive requirements of MTCA, Chapter 70A.305 RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided as follows.

[1] https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Voluntary-Cleanup-Program
[2] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305

Site Description

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

- Heavy metals into the soil.
- Dioxins into the soil.
- Furans into the soil.
- Polybrominated diphenyl ethers (PBDEs) into the soil.

Enclosure A includes a detailed description, history, and diagrams of the Site, as currently known to Ecology.

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.

Basis for the Opinion

Ecology bases this opinion on information in the documents listed in **Enclosure B**. You can request these documents by filing a records request.[3] For help making a request, contact the Public Records Officer at publicrecordsofficer@ecy.wa.gov or call (360) 407-6040. Before making a request, check whether the documents are available on the Site webpage[4].

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

Analysis and Opinion

Characterizing the Site

Ecology has concluded that, upon completion of the actions detailed in the Scope of Work for Subsurface Investigation (BMEC, 2023), the Site characterization will be sufficient to determine whether the cleanup actions to date are protective of human health and the environment or whether further remedial action is necessary. The Site is described above and in **Enclosure A.**

The Site consists of two former wastewater treatment lagoons with approximately 1-2 feet of sludge below standing water. The north and south lagoons have an approximate sludge volume of 32,130 cubic feet and 62,400 cubic feet of sludge, respectively. Seven discrete sludge column samples were collected from each of the two lagoons and analyzed for fecal coliform. One composite sample was developed for each lagoon and

[3] https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests
[4] https://apps.ecology.wa.gov/gsp/CleanupSiteDocuments.aspx?csid=15433

analyzed for organochlorine pesticides, RCRA 8 metals, nitrates, nitrogen, ammonia, dioxins, furans, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and polybrominated diphenyl ethers (PBDEs). Cadmium exceeded the MTCA Method A soil cleanup level in the south lagoon sample, while the dioxin and furan toxicity equivalency (TEQ) exceeded the MTCA Method B soil cleanup level. DDE and PBDEs were detected in the south lagoon sample below their respective soil cleanup levels. Soil below the lagoon sludge column has not been characterized. Depth to groundwater below the lagoons has not been determined and groundwater samples have not been collected or analyzed for potential contamination.

Proposed Remedial Actions

The following additional Site characterization actions have been proposed to address data gaps and assess whether further remedial action is necessary:

- Advance nine soil borings within the lateral extent of the south lagoon and collect discrete samples of both the lagoon sludge and underlying native soils, one sample of each medium per boring. The samples will be analyzed for RCRA 8 metals, dioxins, furans, and PDBEs.
- Install four groundwater monitoring wells around the perimeter of the south lagoon, one north and hydraulically upgradient of the lagoon and three south and hydraulically downgradient of the lagoon. Groundwater quality and flow parameters will be determined once the wells have equilibrated. Groundwater samples will be collected and analyzed for RCRA 8 metals, dioxins, furans, and PDBEs.

Further Recommendations

Ecology concurs that the proposed additional Site characterization will address data gaps identified in Ecology's January 6, 2023 opinion letter, with the following comments and recommendations:

- The lagoon sludge sampling in January 2021 indicated that the north lagoon samples did not exceed the cleanup levels established for the Site; however, the samples were composited and potentially not representative of the actual contaminant concentrations. To confirm that the lagoon sludge and underlying soil meets the cleanup levels, a minimum of four additional discrete samples of both media should be collected from within the north lagoon and analyzed for all contaminants of concern (COCs). Please include the percent dry weight of solids for the soil and sludge samples with your results.
- The proposed groundwater monitoring well locations will be sufficient to determine if groundwater exceeds MTCA cleanup levels.
- A minimum of four sludge samples from each lagoon (eight total samples) should also be analyzed for polyfluoroalkyl substances (PFAS) compounds using EPA Method 1633, volatile organic compounds (VOCs) using EPA Method 8260, and

petroleum hydrocarbons using analytical methods NWTPH-Gx for gasoline-range and NWTPH-Dx for diesel- and heavy-oil range petroleum hydrocarbons. These compounds are known to be associated with either biosolids or dioxins and furans.

- If groundwater samples indicate the presence of any COC exceeding cleanup levels, additional groundwater monitoring wells may be necessary to delineate the extent of contaminated groundwater based on the hydraulic gradient.

Limitations of the Opinion

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).

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 proposed will be substantially equivalent. Courts make that determination. *See* RCW 70A.305.080 and WAC 173-340-545.

Opinion is limited to proposed cleanup

This letter does not provide an opinion on whether further remedial action will actually be necessary at the Site upon completion of your proposed cleanup. To obtain such an opinion, you must submit a report to Ecology upon completion of your cleanup and request an opinion under the Voluntary Cleanup Program (VCP).

State is immune from liability

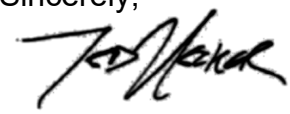
The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70A.305.170.

Contact Information

Thank you for choosing to clean up the Site under the VCP. As you conduct your cleanup, please do not hesitate to request additional services. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our webpage [5]. If you have any questions about this opinion, please contact me by phone at 509-342-5564 or e-mail at ted.uecker@ecy.wa.gov.

Sincerely,



Ted M. Uecker
ERO Toxics Cleanup Program

tmu:hg

Enclosures (2): A – Site Description, History, and Diagrams
B – Basis for Opinion: List of Site Documents

cc: Tracy Friesz, Port of Pasco
Yancy Meyer, BMEC
Brent Bergeron, BMEC
Christer Loftenius, Ecology
Nicholas Acklam, Ecology

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

Enclosure A

Site Description, History, and Diagrams

Site Description

The Site is part of the 370-acre Big Pasco Industrial Center, which is located along the Columbia River in Pasco, WA. The two former sewage lagoons are located at SE Road 36 and E Ainsworth Ave, approximately 650 and 920 feet from the river. The south lagoon has an average sludge depth of two feet, with approximately 62,400 cubic feet of sludge. The north lagoon has an average sludge depth of one foot, with approximately 32,130 cubic feet of sludge. Depth to groundwater at the Site is approximately 9-14 feet below ground surface (bgs). Groundwater flow direction is unknown but is inferred to flow south toward the river. Site soils generally consist of sands and silts to deeper sand and gravel to approximately 50 feet bgs, underlain by the competent silt of the Ringold Formation.

Site History

In January 2021, the two sewage lagoons were sampled to characterize the waste with the intent to decommission and develop the area into a gravel parking lot. Fourteen total sludge samples were collected, seven from each lagoon, and were considered representative of the entire vertical sludge column. The discrete samples were analyzed for fecal coliform, while composite samples were analyzed for organochlorine pesticides, RCRA 8 metals, nitrates, nitrogen, ammonia, dioxins, furans, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and polybrominated diphenyl ethers (PDBEs). Analytical results for the south lagoon samples indicated that the dioxin and furan toxicity equivalency (TEQ) exceeded MTCA Method B cleanup levels for both direct contact and protection of groundwater. Cadmium exceeded the MTCA Method A cleanup level, and PDBEs and DDE were present below regulatory thresholds. Beginning in 2021, both lagoons were filled with clean imported soil and gravel to a minimum of 6 feet above the sludge surface and compacted. An environmental covenant was filed with Franklin County on September 26, 2022 under recording number 1966700. The covenant restricts the site to industrial land use and activities that would compromise the soil cap, and details instructions for operation and maintenance of the engineered controls.

In January 2023, Ecology issued a Further Action opinion requesting additional characterization of the biosolids, soil, and groundwater. In April 2023, Blue Mountain Environmental submitted a Site characterization work plan which included nine geoprobe soil borings within the lateral extent of the south lagoon with discrete samples of both the sludge and underlying native soils below the lagoon and installing four groundwater monitoring wells at approximately 25 feet bgs.

Site Diagrams

Cleanup Site ID: 15433 Facility/Site ID: 88749 VCP Project ID: EA0362	FIGURE 3 – PROPOSED SAMPLE LOCATION MAP	Port of Pasco Big Industrial Park Lagoons SE Road 36/East Ainsworth Avenue Pasco, Washington 99301

Enclosure B

Basis for Opinion: List of Site Documents

- Blue Mountain Environmental and Consulting Co, Inc., Scope of Work for Subsurface Investigation, April 24, 2023.
- Ecology, Further Action Opinion, January 6, 2023.
- Ecology, Environmental Covenant 1966700, September 26, 2022.
- Blue Mountain Environmental and Consulting Co., Inc., CSID No. 15433 Big Pasco Industrial Park Lagoons, Operation and Maintenance Plan, March 15, 2022.
- Coho Environmental, Terrestrial Ecological Evaluation, Port of Pasco, Big Pasco Industrial Center Lagoons, Pasco, WA, June 28, 2021.
- Blue Mountain Environmental and Consulting Co., Inc., Biosolids Sample Analysis Report at Big Pasco Industrial Center, Pasco, Washington, February 25, 2021.
- Blue Mountain Environmental and Consulting Co., Inc., Port of Pasco Big Industrial Park Lagoons, Sampling and Analysis Plan, December 11, 2020.
- GN Northern, Inc., Geotechnical Site Investigation Report, GNN Project No. 219-1119, May 20, 2020.