Coho Environmental

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MEMORANDUM

To: Yancy Meyer (Blue Mountain Environmental Consulting)

From: Tad Deshler

Subject: Terrestrial Ecological Evaluation, Port of Pasco, Big Pasco Industrial Center Lagoons, Pasco, WA

Date: June 28, 2021

Introduction

The Port of Pasco (Port) owns and maintains the 370-acre Big Pasco Industrial Center (BPIC) along the Columbia River in Pasco, Washington (Figure 1). The Port is decommissioning two sewage lagoons located at the eastern edge of the BPIC by filling them with clean soil from a nearby location. Prior to backfilling the lagoons, the biosolids contained within the lagoon were chemically tested (BMEC 2021). The results from this analysis indicated that several contaminants regulated under MTCA were present above the respective cleanup levels in the south lagoon.

The Port has applied to Ecology's Voluntary Cleanup Program and is seeking a No Further Action (NFA) concurrence from Ecology for the decommissioning of the sewage lagoons. One of the necessary steps for receiving the NFA is to conduct a Terrestrial Ecological Evaluation (TEE), per the procedures outlined in MTCA (WAC 173-340-7490 through 173-340-7494). This memo provides the TEE evaluation for this project.

TEE Scoping

The MTCA TEE procedures provide a tiered approach of increasing complexity, depending on the characteristics of the site, resulting in one of three outcomes:

- Document an exclusion from further TEE evaluations (WAC 173-340-7491)
- Conduct a simplified TEE (WAC 173-340-7492)
- Conduct a site-specific TEE (WAC 173-340-7493)

The first step in TEE scoping is to determine whether the site qualifies for an exclusion from TEE requirements, using the following criteria:

- **Point of Compliance** [WAC 173-340-7491(1)(a)]
  - All soil contamination is, or will be, at least 15 feet below the surface.
  - All soil contamination is, or will be, at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.
- **Barriers to Exposure** [WAC 173-340-7491(1)(b)]
  - All contaminated soil, is or will be, covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.
- **Undeveloped Land** [WAC 173-340-7491(1)(c)]
  - There is less than 0.25 acres of contiguous undeveloped land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.
  - For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous undeveloped land on or within 500 feet of any area of the Site.
- **Background Concentrations** [WAC 173-340-7491(1)(d)]
  - Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

As indicated above, the Port is in the process of filling the lagoons with clean soil. Approximately 6-10 feet of fill will be added to each lagoon, creating a relatively uniform grade at the top of the bank. Photo 1 (Appendix A) shows the completed grade for a portion (approximately one-third) of the north lagoon that has been filled. The south lagoon will also be filled with at least 6 feet of fill, but given the contamination that was found in the south lagoon, the Port is waiting for Ecology concurrence before completing the project. Photo 2 (Appendix A) shows the south lagoon, which clearly shows the height of the bank is at least 6 feet above the water level.

The filled lagoons will be used by Port tenants at the BPIC for parking. The surface will be unpaved, but a layer of gravel may be added if needed to provide a stable surface. The Port intends to establish an environmental covenant for this property to prevent future development that may disturb the buried contamination.

The fill added to each lagoon will isolate the soil contamination at least 6 feet below the surface, which meets the Point of Compliance criterion at WAC 173-340-7491(1)(a). Therefore, the site qualifies for an exclusion from any additional TEE requirements. This evaluation is documented on the TEE form contained in Appendix B.

References

BMEC. 2021. Biosolids sample analysis report at Big Pasco Industrial Center, Pasco, Washington. Prepared for Port of Pasco. Blue Mountain Environmental Consulting, Inc., Waitsburg, WA.

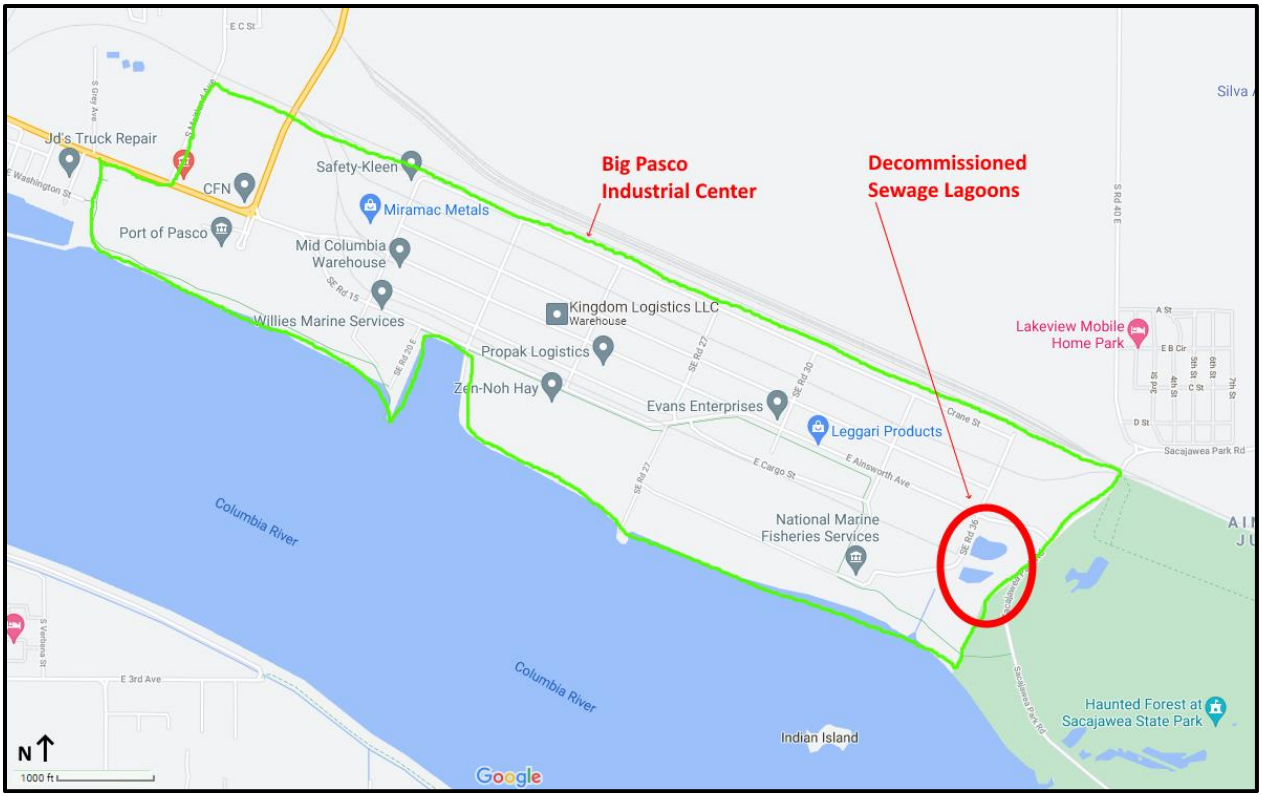


Figure 1. Project vicinity

APPENDIX A – SITE PHOTOGRAPHS

Photo 1. Partially-filled north lagoon

Photo 2. Unfilled south lagoon

APPENDIX B – TEE FORM

Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation.

Step 1: IDENTIFY HAZARDOUS WASTE SITE	
Please identify below the hazardous waste site for which you are documenting an evaluation.	
Facility/Site Name: Big Pasco Industrial Center Sewage Lagoons	
Facility/Site Address: 1110 Osprey Pointe Blvd, Suite 201, Pasco, WA 99301	
Facility/Site No:	VCP Project No.:

Step 2: IDENTIFY EVALUATOR			
Please identify below the person who conducted the evaluation and their contact information.			
Name: Tad Deshler			Title: Owner
Organization: Coho Environmental LLC			
Mailing address: 533 NE 90th St.			
City: Seattle		State: WA	Zip code: 98115
Phone: 206.778.9274	Fax:	E-mail: tad.deshler@cohoenvironmental.com	

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

☒ Yes *If you answered **"YES,"** then answer **Question 2**.*

☐ No or Unknown *If you answered **"NO" or "UNKNOWN,"** then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? *Check all that apply. Then skip to **Step 4** of this form.*

Point of Compliance: WAC 173-340-7491(1)(a)

☐ All soil contamination is, or will be,* at least 15 feet below the surface.

☒ All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

☐ All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

☐ There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.

☐ For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

☐ Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

[±] "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

[#] "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No or Unknown *If you answered **"NO"** or **"UNKNOWN,"** then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 3** below.*

☐ No *If you answered **"NO,"** then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

☐ Yes *If you answered **"YES,"** then answer **Question 4** below.*

☐ No *If you answered **"NO,"** then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

☐ Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*

☐ Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? *Check all that apply. Then skip to **Step 4** of this form.*

Exposure Analysis: WAC 173-340-7492(2)(a)

☐ Area of soil contamination at the Site is not more than 350 square feet.

☐ Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

☐ No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. *See* WAC 173-340-7493(1)(c).

1. Was there a problem? *See* WAC 173-340-7493(2).

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No *If you answered **"NO,"** then identify the reason here and then skip to **Question 5** below:*

- ☐ No issues were identified during the problem formulation step.
- ☐ While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? *See* WAC 173-340-7493(3).

- ☐ Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- ☐ Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use?
Check all that apply. See WAC 173-340-7493(3).

- ☐ Literature surveys.
- ☐ Soil bioassays.
- ☐ Wildlife exposure model.
- ☐ Biomarkers.
- ☐ Site-specific field studies.
- ☐ Weight of evidence.
- ☐ Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

- ☐ Confirmed there was no problem.
- ☐ Confirmed there was a problem and established site-specific cleanup levels.

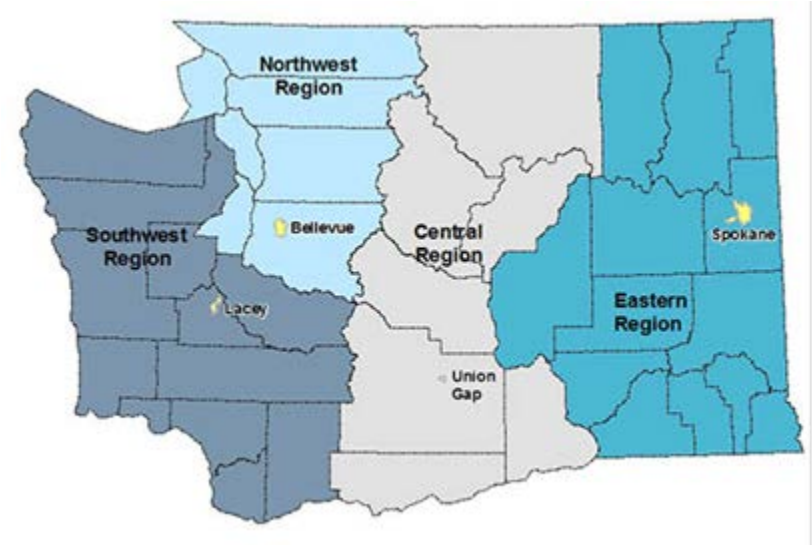
5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?

☐ Yes If so, please identify the Ecology staff who approved those steps:

☐ No

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



Northwest Region: Attn: VCP Coordinator 3190 160th Ave. SE Bellevue, WA 98008-5452	**Central Region:** Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009
Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	**Eastern Region:** Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

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