

January 13, 2023

resourceful. naturally.  
engineering and environmental consultants



***Submitted via email***

John Zinza  
Toxics Cleanup Program – Central Regional Office  
Department of Ecology  
1250 W. Alder Street  
Union Gap, WA 98903  
email: [john.zinza@ecy.wa.gov](mailto:john.zinza@ecy.wa.gov)

**Re: Schedule for Preparation of Draft Feasibility Study  
Yakima Mill Site  
Agreed Order No. DE 13959**

Dear Mr. Zinza:

This letter is submitted in response to the Washington Department of Ecology (Ecology) request for an updated draft feasibility study (FS) schedule provided in the December 6, 2022, letter from John Zinza (Ecology) to Allan Gebhard (Barr Engineering) which Barr Engineering received on December 14, 2022 (included as Attachment A). The FS schedule presented below includes primary tasks of collecting additional data from the existing groundwater monitoring network, conducting treatability studies, and completing geochemical modeling to inform the evaluation of the alternatives in the FS. A general scope of the work is also provided. This scope may be adjusted as more information is collected. We will keep you informed of progress as the work is completed.

We appreciate the collaborative discussion during the January 6, 2023, meeting and will incorporate the feedback provided during the meeting and in the December 6, 2022, letter into the draft FS.

**Draft FS Schedule:**

- First quarter – 2023
  - Install the replacement well for MW-101 (MW-101R)
    - This is a critical path task to meet the proposed schedule
  - Conduct groundwater sampling for semi-volatile organic constituents (SVOCs) at: MW-6, MW-12, MW-20, MW-24, MW-100, and MW-101R
  - Complete preparation of initial PHREEQ geochemical model using historical sampling data
  - Prepare for on-site treatability testing and notify Ecology of the scope and approach for the planned testing
- Second quarter – 2023
  - Conduct groundwater sampling for SVOCs at: MW-6, MW-12, MW-20, MW-24, MW-100, and MW-101R
  - Initiate on-site treatability testing field work; anticipated to include, collecting samples, installing performance monitoring wells, and implementing groundwater treatability testing

- Conduct sub-slab vapor sampling beneath buildings
- Provide documentation on the location of the section of piping near MW-06 requested by Ecology
- Third quarter – 2023
  - Conduct groundwater sampling for SVOCs at MW-101R
  - Continue on-site groundwater treatability testing
- Fourth quarter – 2023
  - Conduct groundwater sampling for SVOCs at MW-101R
  - Compile and analyze results of treatability testing
  - Update PHREEQ geochemical model with additional data gathered from treatability testing
- First and second quarters – 2024
  - Prepare draft FS for submittal to Ecology
    - The draft FS will be provided within 120 days of receipt of the 2023 fourth quarter analytical sampling results from MW-101R

Additional work in support of the draft FS report will occur throughout the schedule presented above. Such work is anticipated to include, compiling background information, establishing applicable or relevant and appropriate requirements (ARARs), evaluating alternatives, and developing cost estimates. The draft FS will combine the information in a holistic manner designed to allow Ecology to evaluate the alternatives and select a cleanup action plan according to WAC 173-340-360. Work will be completed consistent with the Model Toxics Control Act (MTCA) and the guidance provided in your January 6, 2023, letter.

In the event the scope of work is adjusted or other circumstances arise that make it necessary to modify the schedule set out above, we will communicate accordingly with Ecology to request an adjustment(s) to the schedule as Ecology deems appropriate.

Please contact Alec or me with any questions or comments.

Thank you.  
Allan Gebhard  
Project Coordinator

c. Rhonda Luke, Arthur Buchan, Jennifer Lind, Valerie Bound

**Attachments**

Attachment A – December 6, 2022 Letter from John Zinza (Ecology) to Allan Gebhard (Barr Engineering)



STATE OF WASHINGTON  
**DEPARTMENT OF ECOLOGY**

Central Region Office

1250 West Alder St., Union Gap, WA 98903-0009 • 509-575-2490

December 6, 2022

Allan Gebhard  
Barr Engineering  
4300 Market Point Drive, Suite 200  
Minneapolis, MN 55435

**Re: Determination and Comments on Screening of Alternatives:**

- **Site Name:** Boise Cascade Mill
- **Site Address:** 805 N. 7<sup>th</sup> Street, Yakima
- **Facility/Site ID No.:** 450
- **Cleanup Site ID No.:** 12095
- **Agreed Order No.:** DE 13959

Dear Allan Gebhard:

The Washington State Department of Ecology (Ecology) conducted a screening of your submitted pre-Feasibility Study alternatives.

In this letter, we provide our response to your submittal, as well as comments regarding the feasibility study process. We are providing this response and opinions under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.<sup>1</sup>

**BARR Request for Screening of Alternatives (Per WAC 173-340-350(8)(b)).**

"Barr Engineering (BARR) submitted the Technical Memorandum on the Yakima Mill Site – Alternatives for Feasibility Study, dated July 20, 2022" (Tech Memo – 20220720), for cleanup work identified in Agreed Order No. DE 13959<sup>2</sup>, which requested a screening of alternatives in accordance with WAC 173-340-350(8)(b).<sup>3</sup> Discussion on the BARR screening request occurred during the Ecology meeting with Barr on September 8, 2022. Ecology's September 22, 2022,<sup>4</sup> post-meeting response identified that the information submitted, specifically the lack of a Standard Point of Compliance prevented Ecology from making a determination regarding the screening of alternatives. Ecology identified in the September 22, 2022, letter that it would be more productive if Ecology further evaluated the alternatives and provided feedback.

<sup>1</sup> <https://app.leg.wa.gov/rcw/dispo.aspx?cite=70.105D>

<sup>2</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/61332>

<sup>3</sup> <https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-350>

<sup>4</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/118507>

### **Ecology Determination Screening of Alternatives (Per WAC 173-340-350(8)(b)).**

---

Our review of the alternatives presented indicated insufficient information that would allow Ecology to make a final determination regarding which alternatives must be evaluated in the feasibility study. For your consideration, Ecology has prepared the following comments to assist you in understanding our reasoning and to aid you in moving forward with the Feasibility Study. First, we will define when Ecology can make a determination on a screening of alternatives.

#### **When Ecology Can Make a Determination on a Screening of Alternatives.**

---

The purpose of the feasibility study is to develop alternate cleanup actions. The draft Feasibility Study (FS) needs to include completed modeling, restoration timeframes, and treatability studies, which would allow Ecology to predict the feasibility of the proposed cleanup action. As stated in the above determination, specific aspects of the alternatives have not been sufficiently developed due to outstanding work. As a result, Ecology's determination is that it is too early in the process to adequately screen the alternatives. Please note, you may request an additional screening of alternatives in accordance with WAC 173-340-350 (8)<sup>5</sup> after completion of the proposed modeling, identification of restoration timeframes in sufficient detail, and completion of treatability studies.

#### **Ecology Comments on BARR Technical Memorandum.**

---

Our review of the Tech Memo – 20220720 generated comments, which we are including as feedback to help facilitate the FS process. The comments are provided below, and please note that they are not ranked in any particular order of importance.

1. Expectations for cleanup action alternatives. In your Tech Memo - 20220720 you identified that the Log Yard Waste will be removed "as necessary." In your draft FS, you will need to ensure you define "as necessary" in detail. All remedial work shall be consistent with the expectations for cleanup action alternatives as presented in WAC 173-340-370.<sup>6</sup>
2. Point of Compliance. The FS shall include alternatives with the standard point of compliance (refer to WAC 173-340-350 (8)(c)(I)(F)).<sup>7</sup>
3. Point of Compliance – Ground Water. The point of compliance for groundwater shall be consistent with the requirements of WAC 173-340-720 (8).<sup>8</sup>

---

<sup>5</sup> <https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-350>

<sup>6</sup> <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-370>

<sup>7</sup> <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-350&pdf=true>

<sup>8</sup> <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-370>

4. Ranking of alternatives. Your alternatives need to be evaluated and ranked in the feasibility study from most to least permanent (refer to WAC 173-340-360<sup>9</sup> Selection of cleanup actions (3)(A)). The permanent cleanup action alternative (referred to as a bookend in previous correspondence), shall be identified as alternative number 1.
5. Barr alternatives presented in Tech Memo – 20220720. Please consider the following comments on the alternatives listed in your Tech Memo – 20220720. Our comments are provided to assist you in developing your draft FS.
  - a. Alternative 1, Permanent Solution. The “bookend” permanent solution shall (or if noted “may”) include the following.
    - i. Excavation of Soil until preliminary cleanup levels (PCULs) for soil are achieved.
    - ii. Active groundwater (GW) treatment and monitoring until GW and surface water (SW) PCULs are achieved.
    - iii. You may include a Conditional Point of Compliance for the TEE (see WAC 173-340-7490 (4)).<sup>10</sup>
    - iv. Removal of all LYM.
    - v. Installation of GW recovery trenches and water treatment plant.
  - b. Alternative 2 (Barr Alternatives 4A and 4B in the Tech Memo - 20220720). This is the most permanent of the alternatives to the “bookend” permanent solution shall (or if noted “may” or “can”) include the following.
    - i. Combine 4a and 4b
    - ii. Institutional controls will be utilized in GW until cleanup levels (CULs) are achieved. See item 2 Barr alternatives 4A and 4B.
    - iii. All excavation for offsite disposal (please do not include consolidation/capping in this most permanent cleanup alternative). See item 4 in Barr alternatives 4A and 4B.
    - iv. Additional groundwater monitoring should have been completed in the Remedial Investigation. Complete additional GW monitoring prior to proposing in the FS. See item 5 in Barr alternatives 4A and 4B.
    - v. Excavation for offsite disposal (do not include consolidation/capping in this most permanent cleanup alternative). See item 6 in Barr alternatives 4A and 4B.

---

<sup>9</sup> <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-360>

<sup>10</sup> <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-7490>

- vi. The estimated length of time to achieve cleanup levels needs to be completed prior to inclusion as a cleanup option in the FS. See item 7 in Barr alternatives 4A and 4B.
  - vii. Meets CULs at the Standard Point of Compliance. See item 8 in Barr alternatives 4A and 4B.
  - viii. The estimated length of time to achieve cleanup levels needs to be established prior to inclusion as a cleanup option in the FS. See item 9 in Barr alternatives 4A and 4B.
  - ix. Monitoring wells may be established for this alternative. However, there should not be a CPOC for this alternative. See item 10 in Barr alternatives 4A and 4B.
  - x. Evaluating the presence of Methane is required. See item 11 in Barr alternatives 4A and 4B.
  - xi. This alternative shall include off-site disposal only. No capping will occur in this alternative. See item 13 in Barr alternatives 4A and 4B.
  - xii. Eliminate item 14 in Barr alternatives 4A and 4B.
- c. Alternative 3 (Barr Alternatives 3A and 3B in the Tech Memo - 20220720). This alternative is less permanent than Alternative 2 and more permanent than Alternative 4 of the alternatives to the “bookend” permanent solution shall (or if noted “may” or “can”) include the following.
- i. Additional groundwater monitoring should have been completed in the RI, or it can be completed prior to proposing in the FS. See item 5 in Barr alternatives 3A and 3B.
  - ii. Groundwater air sparging system of groundwater ORC development should be included as a treatability study under WAC 173-340-350 (9)(c).<sup>11</sup> See item 7 in Barr alternatives 3A and 3B.
  - iii. Geochemical modeling development shall be included as a treatability study under WAC 173-340-350 (9)(c). See item 8 in Barr alternatives 3A and 3B.
  - iv. The restoration timeframe should be established prior to the proposal as an alternative. See item 9 in Barr alternatives 3A and 3B.
  - v. The evaluation of the presence of methane is required. See item 10 in Barr alternatives 3A and 3B.

---

<sup>11</sup> <https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-350>

- vi. State a specific cleanup procedure for the work at the ditches and ponds to eliminate vagueness and ambiguity. See item 13 in Barr alternatives 3A and 3B.
- d. Alternatives 4, 5, and the do-nothing alternative.
  - i. These alternatives will be in a less permanent order as required by MTCA.
  - ii. Develop these alternatives in accordance with MTCA.

### **Conditional Points of Compliance**

---

Associating a Conditional Point of Compliance (CPOC) with an alternative does not constitute Ecology approval of a CPOC. Ecology must approve the use of CPOCs prior to finalizing the Feasibility Study (FS). The PLP's consultant should be prepared for a Standard Point of Compliance if their proposed CPOC is not approved by Ecology. As a reminder, a CPOC for GW may only be established where it can be demonstrated that it is not practicable (due to technological limitations, environmental conditions, or other factors) to meet the cleanup level throughout the site within a reasonable restoration time frame. The consultant is responsible for providing sufficient information to allow Ecology to evaluate a CPOC request. (Note: In addition to the Conditional POC(s), all institutional controls and deed restrictions must be approved by Ecology prior to finalizing the FS.)

Regarding approval authority for CPOCs, the authority resides with the Ecology Section Manager, which for this site is Valerie Bound. John Zinza, the Cleanup Project Manager for the Boise Cascade Mill site does not have approval authority for a CPOC.

### **Updated schedule for the draft FS**

---

Ecology is requesting an updated schedule for the draft FS delivery be provided within 30 days of receipt of this response and determination.

### **Closing and Contact Information**

---

If you have any questions about this response and these opinions, please contact me by phone at 360-480-1862 or by e-mail at [John.Zinza@ecy.wa.gov](mailto:John.Zinza@ecy.wa.gov).

Sincerely,



John Zinza, PE  
Cleanup Project Manager  
Toxics Cleanup Program  
Central Regional Office

