

## Memorandum

To: Eric Rapp, Jeld-Wen Inc.

From: Frank Winslow, LHG, Department of Ecology, Toxics Cleanup Program

Date: March 4, 2024

Re: **Ecology Comments on Pre-Remedial Design Investigation Work Plan, Marine Areas of Jeld Wen Site dated January 24, 2024**

- Site Name: Jeld Wen
- Site Address: 300 W Marine View Dr, Everett, WA 98201-1030
- Facility/Site No.: 2757
- Cleanup Site No.: 4402
- Agreed Order No.: DE 5095

This memorandum provides Ecology's comments on the above-referenced work plan. Ecology provided initial comments on February 26, 2024. Those initial comments are supplemented with comments based on Ecology's review of supplemental maps received by Ecology on February 23, 2024. The new comments are highlighted for your convenience.

Comments include requested changes to the work plan and advisory comments. Ecology requests that all comments be responded to, although some responses may be appropriately responded to with "Comment acknowledged". For comments that have resulted in edits to the work plan please summarize the change and note the location of the change within the revised work plan document.

### General Comments

#### **General Comment #1: - Rejected Step 1 Data**

Ecology has determined that data collected in the South Shoreline and Logway areas in Step 1 of the PRDI Sampling that did not reach the full target depth of 1.0 feet below ground surface (ft bgs) are considered rejected for use in representing the zero to one foot interval. These data therefore cannot be used in any interpolation figures, or decisions regarding cleanup actions or delineations of the SMA boundaries. Ecology's rationale for rejecting these data have been discussed during previous meetings and within previous correspondence. Note also, Ecology has allowed the use of data in the Knoll Area that did not reach the target depth, since there is an apparent depth versus concentration relationship in this area.

**The rejected data must be removed from the figures presented in the work plan as well as from any future documents for this site.** Any conclusions drawn from datasets including these rejected data must be made without them. Additionally, showing the rejected sample location points must be removed from figures as they may cause confusion. Tables presenting these rejected results should be highlighted in the tables with a footnote label of "Data rejected by Ecology for the use of representing the zero to one foot interval for mapping purposes".

As note above, Ecology anticipates providing additional comments following review of the supplemental figures received February 23, 2024.

## **General Comment #2 – Selection of Depth Samples for Laboratory Analysis**

The Work Plan text states in Section 3.2.2.2:

“If the 3- to 4-foot interval exceeds the 15 ng/kg REL for removal, deeper intervals will be analyzed until a depth interval with a concentration less than the 15 ng/kg REL for removal is identified. Conversely, if the 3- to 4-foot interval is less than the 15 ng/kg REL for removal, the 2- to 3-foot interval will be analyzed for D/F TEQ to evaluate depth of contamination and a 2-foot removal depth, as appropriate.”

This statement relies on the assumption that contamination levels decrease as a function of depth over the 6 ft core interval. However previous cores in the RI data do not support this assumption within the South Shoreline or Logway areas. There is no consistent trend of concentration vs depth in the South Shoreline or Logway areas.

While it is acceptable to assume that intermediate intervals are contaminated when results from 0-1 ft and 3-4 ft above RELs, it is not acceptable to assume that any intermediate 1 ft interval is below the REL based on results below RELs from 0-1 ft and/or 3-4 ft in the South Shoreline and Logway areas. This conclusion would require an assumption of a depth interval trends, which are not apparent. **Therefore, laboratory analysis is needed to define intermediate interval concentrations wherever RELs are not exceeded at 0-1 ft or 3-4 ft (to confirm that cleanup is not needed). Similarly, intervals deeper than 4 ft can't be assumed to be below RELs even if the 3-4 ft interval is.**

This comments also applies to Section 3.2.3.3. Assumptions for depth vs contamination are not acceptable in the South Shoreline and Logway areas unless the assumption is that results are above RELs, and cleanup is required.

## **General Comment #3: - Porewater Samples**

The work plan currently proposes the collection of six porewater samples (ex-situ SPME) at the Site to characterize the sediment porewater contamination to ensure that the proposed remedy is protective for the long term.

**Ecology requests one additional porewater sample for each of the areas** (Logway, South Shoreline, and Knoll) to have a higher confidence in the use of such data to support critical site decisions.

## **General Comment # 4 - Professional License Stamp**

If the work plan includes any Engineering or Geological opinions, this document should include appropriate professional signatures and licensing stamp(s).

## **General Comment #5 - Tribal Consultation**

Amendments to the Model Toxics Control Act (MTCA), effective January 1, 2024, require all Ecology supervised sites to have a Tribal Engagement Plan and to conduct tribal consultation for cultural resource protection purposes. Ecology has initiated this consultation process, but we note that this process must be complete prior to Ecology approving proceeding with field investigation activities. We

will keep the Jeld Wen Team updated regarding any requirements to comply with these MTCA amendments.

**General Comment #6 – Additional sampling locations.**

Ecology requests the addition of four sampling locations in the Southern Shoreline area. The additional sampling locations are shown on the below map, and additional information is provided within PDF comments. These four sampling locations are intended to provide for a higher confidence in the delineation of the SMAs within the Southern Shoreline Area.

**General Comment #7 – Work Plan Figures**

Per general comment #1, above, please removed figures 4a, 5a, 7a, 7d, 7f ,9a, 10a from the work plan and replace them with the appropriate supplemental figures (provided to Ecology on February 23, 2024).

## Specific Comments

### Section 1 - Introduction:

The Work Plan text states:

“This Step 2 Pre-Remedial Design Investigation (PRDI) Work Plan (WP) has been prepared in accordance with Agreed Order (AO) No. DE 5095 for the former E.A. Nord, Inc, door facility (i.e., Former Nord Door Facility) through its successor-in-interest, JELD-WEN, Inc., located at 300 West Marine View Drive, Everett, Washington, 98201 (Jeld Wen Site, or Site). The AO was executed between JELD-WEN and the Washington State Department of Ecology (Ecology).”

Ecology considers this language to be confusing, including with respect to the name of the site. To prevent confusion, **Ecology requests revising this text as follows:**

“This Step 2 Pre-Remedial Design Investigation (PRDI) Work Plan (WP) has been prepared in accordance with Agreed Order (AO) No. DE 5095 for the Jeld Wen site (Site), located at 300 West Marine View Drive, Everett, Washington, 98201. This work plan was prepared by Anchor QEA on behalf of JELD-WEN, Inc. who is a participant in the Agreed Order (Second Amendment effective July 28, 2023) along with the Washington State Department of Ecology (Ecology). JELD-WEN Inc. is the successor-in-interest of E.A. Nord, Inc., which operated a door manufacturing facility at the Site between \_\_\_ and \_\_\_\_.”

### Section 1.2.4

The Work Plan text includes:

“Available data indicate limited presence of wood in marine sediments, characterized as total volatile solids (TVS) and by visual observation of sediment cores. However, because of extensive historical in-water log rafting, log rafting storage on the tide flat, and lumber processing operations in the Logway area at the Site, accumulations of wood waste may be present but not yet identified<sup>3</sup>.”

While this statement was thought to be true when the CAP was written, the high number of Step 1 PRDI samples that failed to reach the target depth (due at least in part to wood debris) was a determining factor in the need to perform the sieving samples. **Please add language that describes the observation data from the Step 1 core refusals that appear to indicate potentially significant wood waste in sediments at the Site.** Ecology is taking a “weight of evidence” approach in assessing wood waste at the Site, include use of evidence such as refusal due to wood waste.

#### **Section 1.2.4**

The Work Plan text states:

“Locations with less than 25% wood debris by volume are unlikely to cause adverse effects to the benthic community and have been selected as an SCL for other remediation sites managed by Ecology (Ecology 2013).”

Ecology does not consider this criteria for wood waste to be a SCL, per se. Ecology 2013 states on page 13:

- “Wood waste surface coverage between 5 percent and 25 percent may need further investigation.”
- “Wood waste surface coverage of 25 percent and greater may adversely impact the benthic community and should be investigated further, depending on habitat, coverage area, and depth.”

Ecology 2013 states on page 34:

“Disposal choices for sediment containing high volumes of wood waste may be limited to land disposal. Sediment with less than 25 percent wood waste may meet requirements for open water disposal. If sediment with greater than 25 percent wood waste does not fail bioassays, open water disposal may be possible.”

In addition, the final CAP dated August 2023 states:

Wood waste exceedances are generally defined as a nominal one foot or greater thickness containing >25% wood waste by volume. (CAP, page 25).

**Please revise the language in this section to be consistent with the language in the final CAP.**

Also, please note that the term “SCL” is used to describe the cleanup level set between the SCO and CSL for chemical contaminants. This term is not applicable to wood waste. Consistent with the CAP, we recommend the use of “remedial level” to refer to wood waste > 25% by volume with a nominal one foot or greater thickness.

#### **Section 1.3, Page 7 – Footnote 4**

The footnote in the work plan states:

Ecology has required removal of additional PCB-impacted sediment in the SMA-2 Knoll Area. This removal area will be determined during design.

**Please revise the footnote to mirror the language in the CAP:**

The Cleanup Action Plan dated August 2023 states:

- Excavate sediments in 3.3 acres (2.9 acres in SMA 3 and 0.4 acres in SMA-2) as follows:
  - Remove up to approximately 21,623 cubic yards of sediments from the top 2 to 4 feet of SMA 3 and a portion of SMA-2 using land-based low ground pressure equipment and placement methods as appropriate.

**Please also elaborate within the work plan on the rationale for the excavation of a portion of SMA-2 and the basis on how such areas will be selected during design.**

**Section 1.3, Page 7 – Bullet 3**

**Ecology request clarifying the definition of “if needed” in bullet 3 by moving sub-bullet #4 to a footnote, as follows:**

- Construct an engineered cap over a portion of SMA-3 if needed<sup>5</sup> (Logway area), following a 2-foot excavation, as follows:

5 – Areas where excavation depths are sufficient to remove sediment with concentrations above 8 ng/kg dw D/F TEQ and 117 µg/kg 7 dw total PCBs will be backfilled and not require an engineered cap.

**Section 1.3, Page 7 – Bullet 3**

The bullet currently states:

- Construct an engineered cap over a portion of SMA-3 if needed (Logway area), following a 2-foot excavation, as follows:
  - Procure clean cap material from a commercial upland source.
  - Construct a 2-foot-thick cap over the excavated area using land-based low ground pressure equipment and placement methods as appropriate.

**Ecology requests inclusion of discussion within the work plan regarding specific objectives of the engineered cap as well as potential alternative components (i.e. conceptual design alternatives) for an engineered cap.** Ecology notes that the Step 2 pre-design data acquisition needs to consider specific types of caps that could be emplaced in order to identify appropriate data needs. This discussion could be included elsewhere within the workplan, but such discussion should be referenced within bullet 3 on page 7.

**Section 1.4, page 8.**

**Please revise the text in Section 1.4 as follows:**

#### 1.4 Pre-Remedial Design Investigation (Step 2) Work Plan Objectives

Following review of the data collected under the Step 1 PRDI WP, the Step 1 results improved the lateral **and vertical** delineation **of contamination and wood waste in sediments at** of the Site. However, additional surface sampling is required to complete the delineation.

#### **Section 1.4, page 9, bullet 2**

**Please revised the bullet as follows:**

Describe the data needs and process for collecting **data, including** marine porewater chemical concentration data, to inform potential capping design in portions of SMA-3 (and a small portion of SMA-2 in the Knoll Area, pending remedial design).

This bullet currently suggests that porewater will be the sole data that informs capping design in this area. Ecology does not concur with that conclusion.

#### **Section 2.2, page 12**

The text states:

To evaluate capping for the Logway and Knoll Area during design, data are needed to confirm that porewater will not contaminate overlying cap material. Ex situ solid phase microextraction (SPME) samples will be taken during the Step 2 PRDI field event to inform capping design and ensure sufficient chemical and physical isolation of contamination remaining under capped areas postremedial action.

**Please elaborate on why chemical isolation would not be of concern in the Southern Shoreline area if the depth of contamination extends beneath a practicable excavation depth.**

#### **Section 2.1.1**

The Work Plan text includes:

“There remains some uncertainty regarding TVS and the presence of wood in locations where Step 1 PRDI TVS could not be advanced to a full 1-foot depth in the field, as depicted in Figure 3. In some of these locations, it is possible that wood caused the refusal.”

Photographs and field observations have shown wood debris causing refusal. **Ecology requests the last sentence be reworded to state:**

“In some of these locations, wood appears to have caused the refusal.”

#### **Section 3.1**

The Work Plan text includes the following bullet:

“Porewater data in SMA-3 (and a small portion of SMA-2 in the Knoll Area, subject to remedial design), to ensure capping will remain protective and will not be subject to recontamination, will also be addressed in the Step 2 PRDI.”

Ecology notes that use of porewater data for design decisions must be approved by Ecology.

### **Section 3.2.1.2**

The Work Plan text includes:

“As such, additional cPAH data collection is not planned for the South Shoreline or Logway.”

**Please change this sentence to:** “As such, additional cPAH data collection is not planned for the South Shoreline or Logway for the Step 2 sampling event.”

### **Section 4.4**

As discussed in a Site meeting, Ecology’s the Amended MTCA effective January 1, 2024 requires development of a Tribal Engagement Plan as well as requirements for tribal consultations for cultural resources protections. Ecology is in the process of requesting a tribal consultation for the proposed work. Other requirements for cultural resource compliance could follow.

### **New Section 5 - Reporting**

As discussed in the Agreed Order, Second Amendment, Task C1 is the preparation and submittal of a draft PRDI data report. **Ecology requests addition of Section 5, Reporting, to the work plan.** We anticipate it may facilitate both preparation and review to separate the uplands from the sediments PRDI work into two separate reports.

The sediments report should include maps showing sampling locations, tables presenting data, and analysis of the data (e.g. updated SMA boundaries, and maps showing the distribution of the contaminants by depth).

Appendices should include, but not be limited to photos, core logs, laboratory analytical reports, data quality review, field data forms, and disposal documentation for IDW.

When presenting tables with results for sediment sampling, please include all historical and current results.

The data quality review appendix should discuss any laboratory qualified data, review field and laboratory quality controls samples (e.g. blanks, duplicates, laboratory control samples [LCS], matrix spikes [MS]), and discuss the overall usability of the acquired data.

## SAP Comments

### Section 3.1.1

The work plan text states:

“Grab samples not meeting these criteria will be rejected and the sample collection steps will be repeated until the acceptance criteria are met, but no more than three attempts will occur at each location, and the attempt with the highest recovery will be retained. Alternatively, short cores may be used as described in Section 3.1.2.”

**Ecology requests this language be changed as follows:**

“Grab samples not meeting these criteria will be rejected and the sample collection steps will be repeated until the acceptance criteria are met, but no more than three attempts will occur at each location, and then short cores will be used as described in Section 3.1.2.”

Ecology also requests the addition of a sentence regarding Ecology being called before moving on if there are issues with the coring in reaching target depths. **Ecology notes that if sediment samples are not collected to sufficiently characterize the lateral and vertical distribution of contamination to support remedial design, then Ecology cannot preclude the possibility of requiring additional sampling work.**

### Section 3.1.2

The work plan text states:

“If site conditions (debris, etc.) make grab sampling untenable, surface samples may also be collected using 3-foot short cores,”

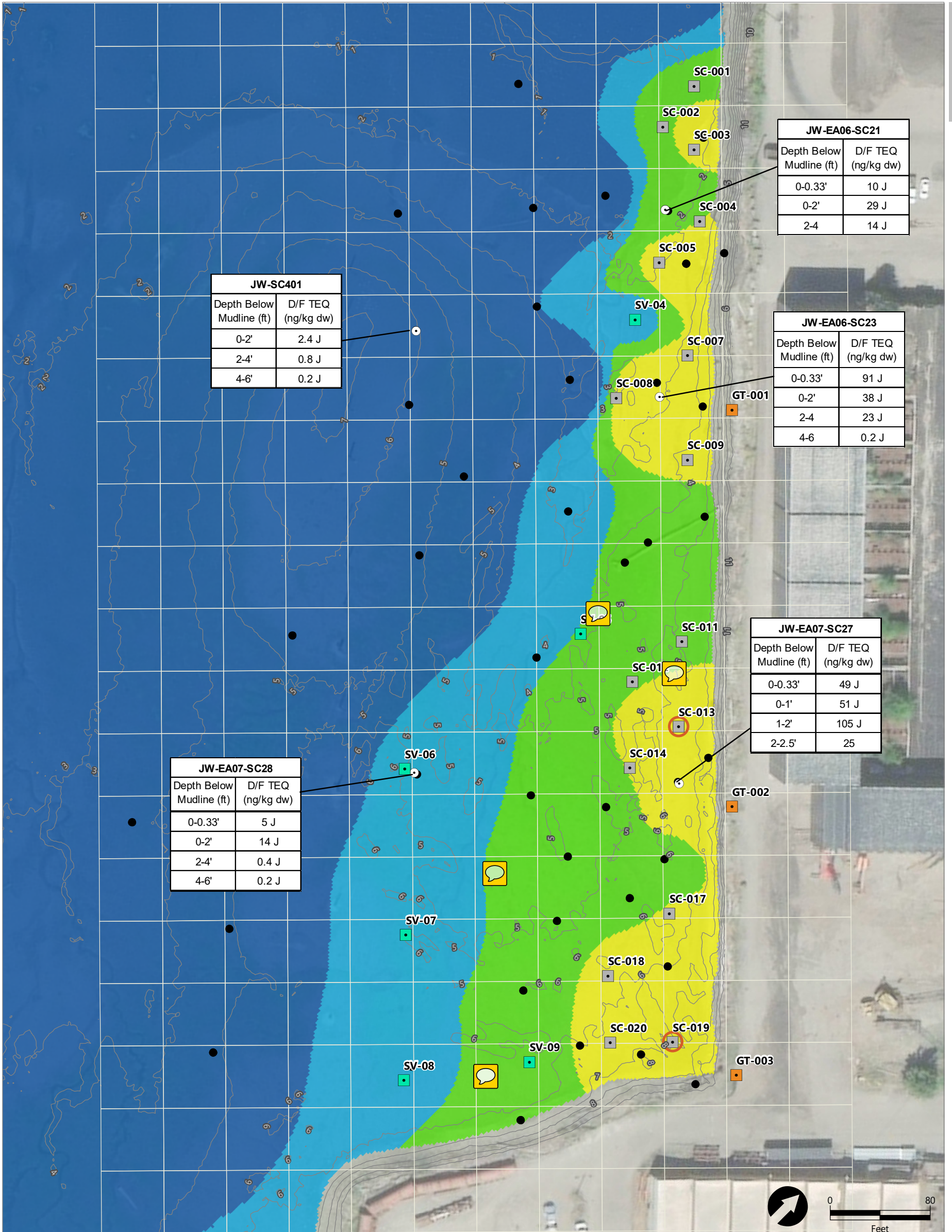
**Ecology requests this language be changed as follows:**

“If site conditions (debris, etc.) make grab sampling untenable, surface samples will be collected using 3-foot short cores,”

### Section 6

**Ecology requests the addition of a sentence** stating: “Ecology will be given at least seven (7) days notice of the date and time of sampling prior to the sampling event.” Ecology intends to have a representative onsite to observe sampling. In addition, as previously discussed, Ecology anticipates providing our input during certain field decisions, such as the selection of core samples for sieving analysis.



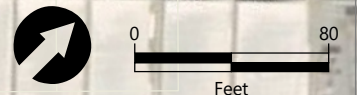


**LEGEND:**

- 50-Foot Sample Grid
- Contour 1-Foot Interval (MLLW)
- Historical Core Sample Location
- Surface Sediment Sample
- Dioxin/Furan TEQ (U=1/2) (ng/kg)
  - 0.5 - 5
  - 5.1 - 8
  - 8.1 - 15
  - 15.1 - 90.6
- Ex Situ Solid Phase Microextraction (SPME) Sample Location
- Proposed Sampling Locations
  - Wood Sieving Sample Location
  - 6-Foot Core (D/F)
  - Shoreline Geotechnical Boring

**NOTES:**

1. Aerial imagery: Esri (2022)
2. Base map: Esri Light Gray Canvas
3. D/F TEQ and Total PCB tables are historical core data from the remedial investigation.



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**Figure 9b**  
 Southern Shoreline Area Dioxin/Furan TEQ Without <1-Foot Refusal Data - Proposed Sample Locations

Step 2 Pre-Remedial Design Investigation Work Plan  
 Jeld Wen Site