



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PO Box 47600 • Olympia, Washington 98504-7600 • 360-407-6000

November 24, 2025

Tom Graham
Director EHS, North America
JELD-WEN, Inc.
2645 Silver Crescent Drive
Charlotte, NC 28273

Re: Jeld Wen – Ecology Comments on Revised Uplands EDR Reports

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

Dear Tom Graham:

Ecology received your revised draft Engineering Design Reports (EDRs) for the Woodlife and Creosote Areas on October 9, 2025. Although Ecology's comments on the draft EDRs were generally addressed to our satisfaction, there are a few comments and clarification provided below. **Please provide comment responses (in memo format) and draft final EDRs incorporating these comments.**

Woodlife Area

1) Figure 7 and Soil Confirmation Samples

The revised draft EDR report included Figure 7, Excavation Plan. Ecology requests that this Figure be revised to include all locations sampled for dioxin furans (DFs) in soils. Ecology notes that the pre-design data acquisition soil sampling supplemented the soil data from the RI report, not replacing that data.

Ecology does not concur that two excavation sidewall confirmation soil samples will be sufficient to document remaining contamination or determine final excavation boundaries. Please revise EDR Figure 7 based on the following discussion.

Attached is a revised version of Figure 7, with suggested confirmation soil sampling locations #1 through #7. The following table summarizes that rationale for those locations and depths:

Confirmation Sample Location	Depth	Offset Direction	Offset From	Offset Concentration
#1	1'	N	WL-P27-1'	29
#2	1'	E	WL-P27-1'	29
#3	1'	E	WL-P4-1'	111
#4	1'	E	506-1'	18
#5	1'	E	WL-P5-1'	29
#6	5'	S	WL-P23-5'	223
#7	5'	S	WL-P24-5'	171

Ecology notes that the locations of #6 and #7 are nearby to the Creosote Area pilot air sparge system locations. If excavation sidewall samples south of WL-P23 and WL-P24 at a depth of 5 feet are still contaminated with DFs at concentrations above the area cleanup level, then a decision will need to be made regarding the remaining DF in soil contamination. For example, if excavation is limited to the south based on the existing monitoring wells in this area, and sidewall samples still have significant DF concentrations, then perhaps the cleanup of the DFs in soils in this area could be deferred until operations of the Creosote Area AS/SVE system have ceased. Hopefully, DF concentrations will be found to be sufficiently low in sidewall confirmation soil samples #6-5' and #7-5'.

Ecology understands that the remedial excavation will be continued to the north and east until either 1) sidewall confirmation samples have achieved the area cleanup level, 2) property boundary has been reached, or 3), further excavation is not practicable due to utilities or other physical conflicts.

2) Soil-to-Groundwater-to-Surface-Water-Pathway

Ecology provided a comment on the Marine EDR report regarding the soil-to-groundwater-to-surface-water-pathway, requesting additional analysis of this pathway, based on a comment from the Tulalip Tribe. Groundwater data from monitoring well MW-7 is an important data for this pathway. Although MW-7 is located distant from marine waters within the logway (approximately 230 feet to the west), it is relatively close (roughly 12 feet south) to a stormwater drainage feature that separates the Jeld Wen and Baywood sites.

Total DFs (based on non-detect values not used) was 12 pg/L in December 2015 in this well, below the preliminary cleanup level of 57 pg/L presented within the RI. However, total DF concentrations in other monitoring wells were generally significantly lower than in MW-7. Subsequent sampling of MW-7 during the RI between December 2015 and January 2019 had DF concentrations more consistent with other monitoring wells (ranging from 0.1 pg/L to 1.59 pg/L).

Ecology suggests sampling of monitoring well MW-7 one time following completion of the excavation work to demonstrate that this work did not result in any mobilization of DFs in groundwater. Ecology notes that the monitoring well should be as free of turbidity as possible prior to sampling, and field turbidity should be reported along with sampling results.

No revision of the EDR is requested for this comment; but rather should be incorporated within next steps.

3) Backfill Materials and Grade

The report states in Section 4.8 *“Clean, structural fill will be profiled via analytical testing of dioxins prior to being imported to be used as backfill material.”* Ecology notes that a source of fill that is not a clean quarry should be characterized for potential contamination other than DFs (due diligence characterization of the fill source area would identify appropriate analytical characterization). Ecology notes that fill materials should be generally acquired from a clean quarry.

The report also states: *“As noted in the PRDI report, understanding of surface topography in the Woodlife Area near the main entrance is an essential design element due to the presence of stormwater surface flow that enters the property from the adjacent public roadway; however, the requirements of MTCA do not extend beyond restoration of the property to its initial condition [emphasis added]. It is expected that final construction grades and/or controls will prohibit the run-on of stormwater from offsite sources.”* If DFs in soil remain at suggested confirmation soil sampling locations #6 and #7, then returning the grade to as is (with the truck dock pit) may be problematic since this would result in ponding that could result in potential migration of such remaining contamination. In addition, such ponding could potentially have an adverse effect on the Creosote Area contamination and/or remediation system. Ecology strongly suggests that no truck dock pit remain following excavation backfill.

No revision of the EDR is requested for this comment; but rather should be incorporated within next steps.

4) Section 4.3 Utility Protection Plan

Thank you for providing this plan. It appears that power, fiber optics, sanitary sewer, and one water line cross the excavation three-foot-deep area, and another water line crosses the excavation five-foot-deep area. Ecology recommends that depth information be requested in particular for the fiber optics and power lines, and excavation maintain a reasonable lateral and vertical setback from those lines. If the target excavation depth is not achieved due to presence of the subsurface utilities, please call Ecology from the field. Collection of confirmation soil samples in such an area would be needed to delineate remaining contamination. We anticipate 3-4 soil samples would likely be sufficient to characterize such remaining contamination.

If water or other service to the Heidelberg facility could be temporarily interrupted during excavation, we recommend that the Heidelberg be informed prior to and during such work.

No revision of the EDR is requested for this comment; but rather should be incorporated within next steps.

Creosote Area

5) Table of Contents

Please note that a difference in section numbers was noted between the Table of Contents and the Report Sections (e.g. TOC Section 4.7 is report Section 4.8).

6) Ecology's Comment #5 re SVE and AS Design Elements

Ecology's comments were as follows:

Please add the following subsections to Section 4.8:

4.8.1 SVE System Design Elements

Please list (table or bullet list) and discuss the components of the SVE system. This should include the number of piping runs, lengths, diameters, slot size and filter pack specification (including sizing methods), vacuum blower or pump, and activated carbon effluent treatment vessels.

4.8.2 AS System Design Elements

Please list (table or bullet list) and discuss the components of the AS system. Include the numbers of shallow and deep wells, well screened intervals, slot size and gravel filter pack specification (including sizing methods based on grain size distribution data). Drilling methods should be discussed including procedures to ensure a consistent placement of filter pack gravel.

The response to this comment stated:

General information related to details of the design system components are now discussed in Section 4.8; and further details will be provided in the Construction Plans & Specifications (CPS).

Ecology does not concur with the adequacy of this response. These are basis design elements and in our opinion should be included within an EDR. **Please revise and include the requested table or bullet list.**

7) SVE and AS Radius of Influence Values

A critical component of the success of an AS/SVE systems is the radius of influence that is applied in the design. No mention of radius of influence (ROI) was included in this section. **Please add discussion of the proposed ROI used to generate the layouts in Figures 5, 6, and 7, within the EDR.** Inclusion and reference to PRDI report Figures 13, 14, and 15 would be appropriate (note that those figures within the PRDI were missing a scale, so scales should be added and these figures attached).

An in-text table or bullets summarizing the basis of the radius of influence values used should be included like the following:

Component	Proposed Radius	Basis
SVE	60 feet	Measured vacuum in vapor pins 60 feet from the pilot SVE well (see Figure 13 and Table 13).
Shallow AS	40 feet	2.45 ft mounding and roaring bubbles in MW-31S @ 40 feet from AS-S.
Deep AS	60 feet	2.2 ft mounding and minor bubbling in MW-26D @ 60 feet from AS-D.
Deep AS	80 feet	Not available*

*A ROI of 80 feet was proposed within the PRDI report; however, Ecology has seen no data supporting that ROI.

Groundwater mounding at MW-28D and MW-32D was discussed in the PRDI in Section 4.4.6.4; however, those monitoring wells are located only about 20 feet away from AS-D. Based on a Google search, applying a ROI of 80 feet for air sparging appears to be a significantly greater radius than typically applied.

Unless a rationale is provided to Ecology to support the ROI of 80 feet that Ecology concurs with, modification of Figure 7 with a ROI of 60 feet (consistent with pilot test data from MW-26D) may be appropriate.

Please note that Ecology's PRDI comment #10 included:

Ecology recommends the preparation and submittal to Ecology of preliminary AS and SVE layouts, along with the NAP isoconcentration areas, prior to submittal of the Engineering Design Report (EDR).

SLR's reply stated:

Preliminary AS and SVE layouts aligned with the extent of naphthalene in groundwater above the cleanup level will be submitted to Ecology in advance of the EDR.

To our knowledge, Ecology did not receive these preliminary layouts. Hence, these comments are being provided now.

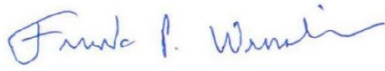
8) AS/SVE System Protection

Ecology notes that with the buildings currently being demolished, security measures may be needed for the long-term protection of the AS/SVE system. No revision of the EDR is requested for this comment.

Tom Graham
November 24, 2025
Page 6

Please let me know if you have any questions regarding this letter by contacting me at frank.winslow@ecy.wa.gov or at (509) 424-0543.

Sincerely,

A handwritten signature in blue ink that reads "Frank P. Winslow". The signature is fluid and cursive, with the first name "Frank" being more prominent.

Frank P. Winslow, LHG
Toxics Cleanup Program
Headquarters Section

Enclosure: Figure 7 Excavation Plan

cc: Scott Miller, SLR
Chris Kramer, SLR
Josh Morman, Ecology

Enclosure

Figure 7 Excavation Plan

