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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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August 25, 2021

Rob Healy
Port of Tacoma
1 Sitcum Way
Tacoma, WA 98421

Re: Ecology Review Feasibility Study, Arkema Site, FSID# 1220

Dear Rob Healy:

The Washington State Department of Ecology (Ecology) has been working with the Port of Tacoma (Port) to investigate and clean up the Arkema Site located in Tacoma, Washington. This work is being done under Agreed Order No. DE 5668 between Ecology and the Port and in compliance with the Model Toxics Control Act, chapter 70.105D Revised Code of Washington (RCW).¹

Ecology has reviewed the draft Feasibility Study for the Arkema Site and is attaching the following overarching comments. I am also sending the feasibility study and appendices with more detailed comments to you electronically. As indicated in my comments, the feasibility study still needs some work. Look through my comments and call me with any questions. Ecology looks forward to finalizing the feasibility study so an effective remedy can be chosen in the draft cleanup action plan.

If you have any questions regarding Ecology's comments, please call me at (360) 485-3987.

Sincerely,

Andrew Smith, P.E., LHG
Unit Supervisor, UST/Technical Support Unit
Southwest Regional Office
Toxics Cleanup Program

By certified mail: 9489 0090 0027 6093 5057 56

Attachments: Ecology Comments for the Feasibility Study, Arkema Site, dated April 20, 2021
Arkema Feasibility Study Report, dated April 20, 2021 (electronically)
Arkema Feasibility Study Appendices, dated April 20, 2021 (electronically)

cc: Ecology Site File

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

Ecology Comments for the Feasibility Study, Arkema Site, dated April 20, 2021

General

Consider these comments in conjunction with comments provided within the draft feasibility and appendices, dated April 20, 2021, provided under separate cover.

1. The FS incorporates in its selection analysis the remedial actions completed under previous agreed orders or other independent actions, which is inappropriate. It is ok to describe that these actions were conducted at the site under past remedial activities. Just don't include these remedial actions in the analysis and determination of the selected alternative for this FS.
2. Section 3.2 and other areas in the FS describe that the CERCLA CB/NT site have been achieved and therefore the main arsenic plume on the Arkema site does not pose an unacceptable risk of hazard to human or ecological receptors. Ecology considers this site to be regulated under MTCA, not CERCLA and the use of CERCLA cleanup standards for this site is inappropriate. Please remove all references to CERCLA to demonstrate compliance at the site.
3. Section 1.2. Please remove statements that the NBA contamination is from USG operations. The NBA is being cleaned up simultaneous with the USG site due to convenience of remediation for both sites. Based on the available data, it is not clear to Ecology the origin of the contamination in the NBA.
4. The wedge of arsenic contaminated soil located seaward of the sheet pile wall needs to be included in the areas to be considered for remedial analysis.
5. Throughout the FS, there is discussion that the site meets the surface water cleanup levels based on limited number of surface water samples. I don't think it is appropriate to make the claim that the site is in compliance with surface water standards based on this limited data.
6. There should be more discussion about where the arsenic contaminated soil mass is located beneath the site as the potential source for the groundwater plume. Specifically, most of the soil mass is located within the first foot of the first aquitard and there is the wedge located outside of the wall that may be contributing to the high concentrations in the groundwater.
7. Provide a soil cleanup level for the leaching of arsenic from soil to groundwater. This is a pathway that needs to be considered under MTCA.
8. Are there contaminants in the soil or groundwater that are co-located? Did you consider additive risk when determining CULs for the contaminants of concern?
9. We anticipate that the site will be developed in the future. Therefore, since the site is not anticipated to be cleaned up to 88 mg/kg, provide remediation levels for chronic and acute concentrations for utility and construction workers at the anticipated depths they will be working on the site.

10. I'm not sure I understand the use for Table 3-1. I can guess it is showing that Ecology has approved the use of pore water and surface water as the measuring point for compliance monitoring. Each site is unique and a direct comparison between cleanup sites is not recommended. In looking at several of the sites on the table, I found that the information provided may be misrepresenting what is actually happening at the site or not considering that significant soil and groundwater remediation is included in the remedial alternatives at each of these sites. In looking at the Arkema site, consider WAC 173-340-360 (2)(c) (ii)(A) when evaluating remedial alternatives.
11. When evaluating the different alternatives in meeting the threshold requirements (Table 6-1) and the disproportionate cost analysis (Table 6-3), all of the alternatives appear to be the same or have similar language, which I would claim the alternatives have differences. Consider removing the similarities in the DCA since that work was done prior to this agreed order. Evaluation of the alternatives is about the work that will occur under this agreed order and comparisons should be about what each alternative does and doesn't do.
12. We think that there needs to be an alternative that removes more soil mass in an effort that removes sources to groundwater and surface water. In looking at the boring logs and Figures 5-21 and 5-24 of the FS Data Gaps Report, there may be thresholds for contaminant concentration or TCLP concentrations where impact to groundwater could be considerably less if soil mass was removed.