



February 12, 2021

Comments Submitted Electronically at: <http://nw.ecology.commentinput.com/?id=69PsZ>

Washington State Department of Ecology  
3100 Port of Benton Boulevard  
Richland, Washington 99354

To Whom It May Concern,

Thank you for the opportunity to submit comments on the *Class 2 Permit Modification to the Dangerous Waste Permit, "Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility"* chapter. Thank you, also, for holding a virtual public meeting on this comment period on January 21, 2021.

Hanford Challenge is a non-profit, public interest, environmental and worker advocacy organization located at 2719 East Madison Street, Suite 304, Seattle, WA 98112. Hanford Challenge is an independent 501(c)(3) membership organization incorporated in the State of Washington with a mission to create a future for the Hanford Nuclear Site that secures human health and safety, advances accountability, and promotes a sustainable environmental legacy. Hanford Challenge has members who work at the Hanford Site. Other members of Hanford Challenge work and/or recreate near Hanford, where they may also be affected by hazardous materials emitted into the environment by Hanford. All members have a strong interest in ensuring the safe and effective cleanup of the nation's most toxic nuclear site for themselves and for current and future generations, and who are therefore affected by conditions that endanger human health and the environment.

The safe and effective treatment of Hanford's high-level tank waste is essential to the protection of human health and the environment. All facilities that are a part of managing, storing, and treating this waste are a top concern of Hanford Challenge.

Hanford Challenge would like a transparent process that clearly documents in one place the mass balance flow; what happens to Hanford's tank waste once it starts treatment, and where contaminants end up and in what quantity.

It is important to our organization that the assumptions used in DOE and its contractors mass balance flow are clear and publicly accessible. The mass balance is needed to predict the types and quantities of contaminants in different waste streams during the treatment of Hanford's tank waste. It is very important that the tank waste treatment system is prepared for the different waste streams that will be generated during treatment and that there are no "orphaned waste streams" – waste that has no pathway for further treatment or disposal.

The Liquid Effluent Retention Facility (LERF) and Effluent Treatment Facility (ETF) will be accepting some of the least contaminated liquids from the tank waste treatment process, however it is important that we know what is in these “least contaminated liquids.” The concentrations of contamination may be lower, but the liquids could contain things like technicium-99 or ammonia. We won’t know the concentrations or types of contaminants DOE and its contractors are predicting will be in these liquids without the mass balance and the assumptions they used to produce that document.

**Specific Comments include:**

- **Require Submittal of Integrated Mass Balance Flow as a Single Secondary Document:** Please ensure that the U.S. Department of Energy meets its requirement to submit a Mass Balance Flow as a single secondary document, as part of the milestone M-62-46, that states: *Submit to Ecology as a secondary document a Mass Balance Flow from Tank Farms to Low Activity Waste Pretreatment Capability to Low Activity Waste to Effluent Management Facility to Recycle to Tank Farms and to ETF/LERF.* (Note that this milestone number was changed to M-62-50).
- **More Information Needed re: Addition of “WTP Aqueous Waste” (Addendum C-1, pdf p. 34 of 3641).**: DOE should provide RPP-RPT-62679 to Ecology, so that Ecology has the necessary information to track down the source of the composition inputs to make sure they are reliable and complete. Please include the composition ranges for WTP Aqueous Waste in the permit, similar to tank waste compositions listed for the Hose in Hose Transfer line specifications in the LERF/ETF permit.
- **Ensure Addition of Brine Will Not Create Orphaned Waste Stream:** Brine has been added as an ETF waste product in addition to powder on Addendum B-8 (pdf p. 19 of 3641). Where will this brine be sent for treatment? Hanford Challenge has documented concerns with treating Hanford waste at Perma-Fix Northwest.<sup>1</sup>
- **Double-Shell Tank Waste Space Concerns:** Please check the assertion made to the DOE OIG (DOE-OIG-20-57) claiming that tank waste operations will “eliminate” the concern regarding sufficient DST space availability. Is this conclusion supported in the mass balance, or will volumes of DST waste “pile up” during Direct Feed Low Activity Waste operations?
- **Build New Tanks – Contingency Planning for Tank Leaks and Backup Storage During DFLAW:** Though not the topic of this comment period, Hanford Challenge believes that

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<sup>1</sup> Risky Business at Perma-Fix Northwest: The Inside Story on Hanford’s Off-Site Radioactive Treatment Facility, Hanford Challenge, available at <https://www.hanfordchallenge.org/pfnw> (last accessed, February 12, 2021).

the agencies should initiate the appropriate actions to build new tanks to ensure that sufficient space is available during tank waste treatment.

- **Make Reference Materials Accessible to the Public:** Please make all reference material cited by DOE in letter 20-ECD-0057, including “Powerpoint” presentations, available to the public for review in the TPA administrative record, as a single secondary document.
- **Information Before Approval:** Ensure that additional information is provided to Ecology and shared with the public prior to approving these permit modifications.

Thank you for considering our comments.

A handwritten signature in blue ink that reads "Tom Carpenter". The signature is written in a cursive, flowing style.

Tom Carpenter, Executive Director