February 8, 2020

Washington State Department of Ecology
Attn: Ms. Daina McFadden
3100 Port of Benton Blvd
Richland WA 99354

Dear Ms. McFadden:

The following observations are in response to the February 3rd to March 19, 2020 public comment period for the proposed modifications to the Hanford Dangerous Waste Permit for the Liquid Effluent Retention Facility (LERF) and 200 Area Effluent Treatment Facility (ETF).

Among other changes, modifications to the permit addenda include facility improvements to accommodate *increased wastewater volume* in support of the Direct Feed Low-Activity Waste (DFLAW) project. These improvements include Installing *a brine waste load-out system inside the 200 Area ETF*. The brine load-out system will be located within building 2025E. Brine waste from the brine load-out system will be transferred into containers called totes [but have no disposal pathway].

Comments are below.

1. There are a number of drawings showing significant design and facility changes to support the brine loadout system. This indicates considerable expense and effort that do NOT result in a disposed waste form, and are NOT consistent with the Tank Closure and Waste Management EIS. The effort creates yet another intermediate Hanford waste, which increases the exposure to personnel (every time you handle it), and could take waste "off the Hanford books" so that the increased exposures during brine treatment are not tracked. In the response to comments (R2C) Ecology noted that "*Ecology does not enforce the requirements of DOE Order 413.3B, so any requirements referenced in this comment wouldn't be a basis for Ecology to request that the project be put on hold.*" DOE's established DOE Orders, such as DOE O 413.3B, are intended to protect the public, the environment, and the taxpayers' check books. Ecology's indifference to DOE mismanagement is therefore disappointing. I believe that ETF grouting capability (for brine or powder), per the on-hold DOE project ORP-0014.C1, should be the preferred pathway, instead of spending money to physically implement a NEPA decision that has not been analyzed or made.

2. According to the response to comments (R2C), Ecology states: *As part of this permit modification and in response to public comments, Ecology added permit conditions to restrict the operation of the brine loadout system until a disposal and treatment pathway for the liquid brine waste is identified by DOE.* Despite this restriction, Ecology established in Addendum C, (page Addendum C.15), that the existing thin film dryer is "an alternative to the brine loadout system." This creates the impression that Ecology

and DOE actually consider the *unknown* disposal path brine loadout flow sheet to be the primary waste pathway, and not the other way around.

3. I appreciate Ecology's restrictions on operating the brine loadout system, because DOE's ORP mission flowsheet is out of control since the rush began to implement DFLAW. As Ecology noted, a DOE Environmental Assessment has NOT been written for processing, storage, shipping, and disposal of ETF Brine, beyond the original project that would have installed grouting capability at the ETF (Project ORP-0014.C1). Project ORP-0014.C1 was selected and approved by DOE, then put, for years, "on hold."

   As a precedent, Ecology should be aware that DOE is writing an Environmental Assessment (currently in review) for offsite treatment and disposal of Savannah River DWPF wastewater effluent. The Draft SRS DWPF Recycle Wastewater EA evaluates potential impacts from a proposed action to retrieve, stabilize, and dispose of up to 10,000 gallons of Defense Waste Processing Facility (DWPF) recycle wastewater from Savannah River Site (SRS) at a commercial low-level radioactive waste disposal facility located outside of South Carolina… [Federal Register /Vol 84, No. 249/ Monday, December 30, 2019.] The assessment comes BEFORE any construction is implemented.

   According to the EPA's "Citizen's Guide to NEPA[1]," an Environmental Assessment is intended to determine the significance of environmental effects and ALSO to look at alternative means to achieve the agency's objectives. DOE has leapt to a construction decision for brine loadout without the requisite analysis.

4. According to addendum C, the 2025-E Truck Bay will store aqueous wastes, brine, and dry powder. What design features segregate the liquids from contact with the solids in the storage area? Are the features active during truck liquid load in and during treatment steps?

5. I did not see a revised flow sheet or material balance to show the flows and chemical compositions including the new flows from the DFLAW project at WTP to ETF. How can equipment be designed if there is no flow sheet or understanding of the chemistry? I noticed that the recent semi-annual project compliance report for the Tri-Party Agreement (letter 20-ECD-0002) includes a milestone for a flow sheet. **M-062-50,** due on January 30, 2021 is for ORP to 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 LERF/ETF**. This is from tank farms to LAWPS to WTP LAW/EMF to ETF. It appears the brine loadout may have been designed without a flow sheet. Ecology should consider whether this permit modification is premature.

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[1] https://ceq.doe.gov/docs/get-involved/Citizens_Guide_Dec07.pdf