

November 1, 2020

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

Dear Ms. McFadden:

Below are comments regarding the re-opened public comment period for the Low-Activity Waste Pretreatment System (LAWPS), OUG 1 permit modification, as described on Ecology's web page. This comment period, reopened in light of Ecology's SEPA determination of significance and Notice of Adoption, is from September 28, 2020 to November 12, 2020.

1. Ecology's August 24, 2020 SEPA Extrapolation<sup>1</sup> to adopt LAWPS with Cs Ion Exchange and eventual ion exchange media vitrification is too much of a stretch, and is based on Department of Energy abuse of discretion. The SEPA determination notes that the Tank Closure and Waste Management EIS allowed for a "sequenced" startup of the WTP that allowed WTP facilities such as pretreatment, Low Activity Vitrification, and HLW vitrification startup operations to be staggered.

I believe the original analyses in the TC&WM EIS envisioned and analyzed a startup that was staggered by months or a year, **not decades**. The sequenced startup in the EIS was not so exaggerated that a whole bunch of new facilities (such as the EMF and the LAWPS) would be needed. The abuse here is that the original scope has been stretched into a completely different flow sheet, including un-analyzed risks.

The TC&WM EIS has not evaluated the construction or operation of an imaginary loaded ion exchange column demolition and vitrification facility at WTP. The risks have not been analyzed.

The NEPA Review Process described by EPA at <https://www.epa.gov/nepa/national-environmental-policy-act-review-process> requires an EIS to describe a reasonable range of alternatives. Leaving the new path to ion exchange column disposal out of the scope of alternatives is an egregious omission. EPA states that a **Supplement to the EIS** is required when an agency makes substantial changes to the proposed action that are **relevant to its environmental concerns**. Chopping up IX columns in an un-designed/unfunded WTP facility is certainly relevant to environmental concerns. A supplement to the EIS is not the same thing as the cursory and inaccurate "supplement analysis" DOE prepared for DFLAW. A formal Supplement to the EIS would require the same rigor as the original EIS. A "supplement analysis" is not the same thing.

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<sup>1</sup> SEPA Determination Located at <https://apps.ecology.wa.gov/separ/Main/SEPA/Record.aspx?SEPANumber=202004362>.

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2. Comment 1, above, will have no impact on your decisions, given that DOE and Ecology have put all eggs in the DFLAW low activity vitrification basket, “no matter what.”

I would ask, however, that you carefully consider the consequences of the LAWPS/DFLAW/WTP integrated flowsheet. Permitting decisions have been made piecemeal, without regard to unintended consequences.

My main concern is that this approach could cause the tank farms and secondary waste facilities to become awash in liquids, resulting in another panic type approach to disposal.

In a recent OIG<sup>2</sup> report on DST tank space: “According to a Department official, *once the WTP’s direct feed low-activity waste approach is operational, it will eliminate the concern regarding sufficient DST space availability.*” Contrary to the Department Official’s confidence in future performance, it is much more likely that DSTs will receive off-spec condensate from the EMF evaporator and/or off-spec EMF evaporator feed.

The EMF evaporator is a product of the DFLAW/LAWPS decision. DFLAW and LAWPS could combine to add excessive liquid back to the tank farms. One solution proposed by DOE is to ship all that nuisance liquid to Perma-Fix in Richland as a convenient way to keep it out of the tank farms.

According to the Savannah River National Laboratory<sup>3</sup>: “*The current ILAW flowsheet is calculated to produce ~1.5 gallons of offgas effluent for each gallon of waste in the [WTP] CRV, not including flushes in the WTP system. For comparison, the SRS Defense Waste Processing Facility (DWPF) returns **5 gallons of liquid to the tank farm for each gallon of sludge vitrified.** Therefore, there is a risk that the current ILAW flowsheet underestimates the volume of liquid secondary waste that will be produced. Both DOE and the contractor are aware of this risk, and further discussion is outside the scope of this task.*”

I believe the time for “further discussion” is now. Liquids, condensates, or brines, produced by WTP, or any other tank waste facilities, should not be shipped for treatment at the Perma-Fix Northwest Facility (PFNW) in Richland, Washington. The PFNW Mixed Waste EIS did not even analyze liquid spills. The PFNW facility is less than 20 feet above the water table, and it is adjacent to a growing area of local businesses and homes. DOE should not transfer WTP’s operational risk to the citizens of Richland.

I hope you will consider this comment in the future as you receive the inevitable requests to process more DOE liquids and other hazardous materials at PFNW. **Thank you.**

<sup>2</sup> DOE-OIG-20-57, Department of Energy Office of Inspector General Audit Report on “**Tank Waste Management at the Hanford Site,**” September 30, 2020.

<sup>3</sup> SRNL-RP-2018-00687, *Report of Analysis of Approaches to Supplemental Treatment of Low-Activity Waste at the Hanford Nuclear Reservation,* October 18, 2019, page 100.