August 12, 2025

Daina McFadden
Washington State Department of Ecology
Nuclear Waste Program
3100 Port of Benton Blvd
Richland, WA 99354

Dear Ms. McFadden:

Following are comments on proposed Renewal 4 of the Hanford Site Air Operating Permit (AOP), No. 00-05-006. This comment period ends August 29, 2025.

1. It would be much more helpful if the draft renewal could be provided to the public with red line/ strike out changes. Without them it is hard to see what was changed and whether there might be omissions.

2. Page 8 of the draft renewal asserts that PermaFix Northwest (PFNW) in Richland, WA, does not meet the criteria for inclusion in a major source subject to the AOP Regulation [i.e., WAC 173-401-200(19)]. Per the draft renewal the exclusion criteria are described in the Statement of Basis.

   2.1. The Statement of Basis (SOB), Section 2.0, asserts that PermaFix is not under the "common control" of DOE Hanford Operations and therefore not part of the Hanford Site due to a long list of criteria, provided on page 8. Page 9 of the Statement of Basis refers to *"following paragraphs"* provided to support the determination of this exclusion. However, there are no "following paragraphs" with any justifications at all. The text omits any supporting material and moves on right to Section 3. I would appreciate if Ecology can add "Following Paragraphs" to describe and support each excluded facility.

   2.2. I believe PermaFix must be added to the AOP now, as shown by quantitative review of the exclusion criteria given in the SOB Page 8. For example, criteria include:

   Is the percentage of the entity's output provided to DOE Hanford Site operations offices greater than 50%? is an exclusion criterion. No answer is

provided in the Statement, but a review of the recent "Draft Supplemental Environmental Impact Statement" for Perma-Fix Northwest Mixed Waste Facility shows (page 13) that the "the largest percentage of this waste [low level radioactive waste] has come from USDOE's Hanford site and other USDOE sites." This implies more than 50%. Further, the draft SEIS on page 15 shows the largest percentage of "MLLW has come from USDOE's Hanford site, as shown in parenthesis in Table 3." Table 3 shows that in 2019, Hanford provided 76.4 of 85.3 metric tons total of MLLW processed at Perma-Fix. **That is 90% from Hanford, far exceeding 50%.**

In the future, Perma-Fix anticipates receiving even more waste from Hanford and even adding capacity, as the WTP ramps up. Perma-Fix conducts quarterly earnings calls as required by the Securities and Exchange Commission. Transcripts of these calls are available to the public. In the transcript of the 1st Quarter 2025 Perma-Fix SEC Earnings Investors Call, PFNW stated "we're seeing a **significant increase** in Hanford to this point of about $2,000,000 to $3,000,000 a month in waste coming from Hanford, which is dramatically more than we've seen in the past..." The increase in waste from Hanford means an even higher percentage above 50%. In addition, the Contact Handled Waste Processing Permitting Plan (25-ECD-0086, May 2025) states "Significant volumes of TRUM waste that is subject to treatment in accordance with M-091 milestones are in storage at Hanford and must be treated prior to shipment to WIPP." These TRUM wastes are shipped to PFNW. HNF-19169, Rev 25 states "Perma-Fix Northwest is the only currently utilized capability for repackaging TRUM waste." In addition, HNF-19169 Figure 4-4 calls for at least 3,000 cubic meters per year of TRUM to be processed for the foreseeable future. PFNW is awash in Hanford waste, source of far more than 50% of PFNW output.

DOE Site Operations "non-Control" of Perma-Fix is also a criterion for exclusion. Recently, DOE has taken responsibility for Perma-Fix operations by sending Hanford Contractor Staff to Perma-Fix to ensure packages shipped from PFNW to Hanford are not externally contaminated. This is because recently, 11 of 12 containers shipped by PFNW to DOE were externally contaminated. CPCC-01382, page 3 states "during the next shipment from PFNW, CPCCo RCTs will be on hand to observe PFNWs process during loading, unloading, and packaging. CPCCo **RCTs will perform whole-body surveys** of the Teamsters [at PFNW] involved in the loading. **If nothing is detected, the shipment will proceed**. CPCCo Radiological Control will continue to discuss and educate the PFNW crew to develop and improve their process. CPCCo will continue the observations for a few shipments."

As you can see, DOE controls whether shipments occur and is performing real time, in-person evaluations of PFNW performance. Shipments are not allowed without DOE approval – so DOE has control of PFNW operations. The Defense Nuclear Facilities Safety Board has similarly noted that DOE Contractor CPCCo management is "working with the vendor" to identify the cause and prevent future occurrences. DOE is immersed in PFNW operating procedures, which affect public health. DOE can shut PFNW down any time just by stopping shipping. There is no DOE "non-control." When DOE controls the use of more than half of PFNW capacity, as a certainty they indirectly control the whole of PFNW economic and operating life.

3. **In the Statement of Basis, Ecology concludes PermaFix Northwest's Richland Facility is "not part of the Hanford Site" based on reference to WAC 173-401-200(17).** The AOP regulation WAC 173-401-200(17) defines exempt activities as "insignificant" per WAC-173-401-530. WAC-173-401-530 defines "insignificant" in terms of emission thresholds. WAC-173-401-530(4) says a facility is "significant" if its emissions are above 2 tons per year for volatile organic compounds (VOCs). This category applies to acetonitrile, which is planned to be shipped to PFNW from the ETF Facility due to WTP operations. Further, the "threshold level" specific to Acetonitrile (Methyl Cyanide) is 0.5 tons per year, per WAC-173-401-531. Doesn't this mean a new source review is needed if the potential to emit from PFNW is above 0.5 tons?

   Looking at related data, the recent NOC for Hanford's ETF facility (25-ECD-0097, Notice of Construction Application Form), shows the expected annual emission of acetonitrile at ETF is 2.53 tons/year. Since ETF is shipping acetonitrile concentrate to PFNW from ETF, it would help if you can evaluate the PFNW potential to emit this and other VOCs, since PFNW may no longer be exempt from a new source review. Lastly, the PFNW anticipated waste input increase from Hanford from about $10million/year to $30 million/yr will necessarily increase the amount of hazardous chemicals that create an air emissions risk.

4. PermaFix is still a major risk, yet there is little public oversight of events and ongoing "problems with production," [described by PFNW in the 2nd Qtr SEC Earnings Call transcript.] PFNW production difficulties have recently included an overexposed worker per NRC event report No. 57762, June 23-24, 2025, and recent transport of multiple externally contaminated containers over public roads documented at

https://pdw.hanford.gov/document/AR-35999. Washington DOH does not publish the PFNW annual environmental reports for public access. There is no transparency, and transparency would be helped by adding PFNW to the Hanford AOP. Residents in Richland (like me) are affected and need to know more.

5. Looking at **WAC 173-401-200(19),** PFNW is under the common control of DOE/DOE contractors, belonging to the same industrial grouping, all the pollutants have the same two-digit codes (same waste), and as a minimum, the PFNW acetonitrile Potential to Emit may not be exempted per WAC 173-400-530. And it's only going to get worse.

6. As an additional example, the Defense Nuclear Facilities Safety Board Resident Inspectors Weekly Report of July 25, 2025, shows that "While overpacking selected drums with external corrosion/damage, workers discovered a separate drum that appeared to have internally developed corrosion that penetrated the drum wall. Radiological surveys identified ***high alpha contamination levels on the drum and pallet.*** ... The discovery of a significant number of failed drums during recent movements to improve the fire protection posture of the waste storage facilities continues to raise questions regarding the adequacy of the container surveillance process for ensuring operability of the safety-significant containers, and the need for more rigorous radiological controls during drum movement (see 5/23/2025 report)."

   Overpacked, corroded, TRUM drums, which have high external alpha contamination (such as plutonium) are an increasing risk to the public if shipments are allowed to continue to PFNW. DOE's decisions to ship all this waste to PFNW is an export of risk to Richland that takes DOE emissions "off the books."

Please add PermaFix Northwest to the Hanford Air Operating Permit.

Thank you for considering these comments.