

March 29, 2021

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Washington State Department of Ecology
3100 Port of Benton Blvd
Richland WA 99354

RECEIVED

APR 2 2021

Department of Ecology
NWP - Richland

Dear Ms. McFadden:

Subject: Comments on the proposed 242-A Evaporator Permit Modification to connect 242-A and WTP effluent piping to new LERF Basin 42.

This Comment Period is from February 22, 2021 to April 8, 2021.

According to the fact sheet, the proposed modification will enable 242-A Evaporator Process Line PC-5000 to connect to a new LERF Basin 41. The LERF basin will feed the tank farms Effluent Treatment facility (ETF). Ecology's fact sheet also points out that pipeline PC-5000 is already interconnected with WTP's effluent exit piping from the Effluent Management Facility (EMF). As a result, this change will allow WTP effluent and 242-A Evaporator effluent to be treated at ETF, and received at Basin 41. These wastes are **secondary wastes**.

Of note is the July 25, 2019 Federal Facility Agreement and Consent Order Change Control Form for Change Number M-62-19-02, *Direct Feed Low Activity Waste (DFLAW) Support Activities*¹. This change was aimed directly at supporting actions for DFLAW, **including managing secondary waste**. Therefore the proposed modifications under current public review are clearly affected by the supporting information identified in Change Number M-62-19-02. The first change on this form was 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,”*** due by January 30, 2021. The work product was identified as Milestone M-062-50. The required document was not produced per the description in the change form, but Ecology accepted “completion” of the milestone anyway.

1. Recent public comments objected to Ecology's acceptance of DOE's piecemeal, out of date, informal, mass balance information² that was *referenced* by DOE (not even submitted in a package) in fulfillment of TPA Milestone M-052-50. Ecology in response to comments³ noted that *“while Ecology accepted the milestone as complete [even though it was not complete], it is important to acknowledge that DOE's letter **committed to continued work** on the mass balance...”* This answer points out that Ecology was aware that the work was not really completed, and that the milestone submittal was accepted by Ecology based on “promises” of future work. This violates quality assurance requirements, for which a completed document is the only satisfactory work product.

¹ Located at <https://pdw.hanford.gov/download/74b94ba1-ffd1-47e8-be1c-e2537d159826>.

² See 20-ECD-0057, COMPLETION OF TRI-PARTY AGREEMENT MILESTONE M-062-50, December 4, 2020.

³ Response to Comments LERF/ETF Load-In Station Expansion/Backup Facility – Class 2 Permit Modification Dec. 15, 2020 to Feb. 13, 2021, Ecology Nuclear Waste Program Publication 21-05-009.

Ecology's acceptance of DOE's deception [it was a "bait and switch" that was called out as on-schedule for many months until the very end] is disappointing. The decision to move on without demanding completed work will likely adversely affect safety and cost effectiveness. It's very hard to know if the fluids planned to flow through the piping to Basin 41 will meet criteria, or will result in a new "crisis" orphan waste.

2. Ecology further noted that "*Ecology's permitting decision is not dependent on acceptance of the milestone [M-062-50] as complete. Therefore, Ecology is not including the requested documents as part of this permit modification's administrative record.*" Ecology has declined to use what could have been relevant mass balance data, despite the clear indication in the Change Control Form that the purpose of the milestone was to describe supporting actions for managing secondary waste. This is directly applicable to the current proposed permit modifications. DOE's "bait and switch" approach indicates an intent to deceive, especially as the scope was changed at the last minute. Ecology's acceptance of unacceptable work indicates complicity. The loss is to workers, local residents, and taxpayers.
3. The missing mass balance data has value as a source of information that could be used to inform public comment, even if Ecology chooses to ignore it. The TPA administrative record is not restricted to items associated with specific permit modifications, but is intended to support permit review. I thought all TPA milestone work products were supposed to be provided in the TPA Administrative Record (AR). If this is not so, then why did Ecology establish a milestone with no relevance to permitting?
4. I would appreciate if you would add Milestone M-062-50 cited records (even the out of date ones and the informal presentations by ORP management) to the AR as one file so that the public can see them. In particular, the M-062-50 record document should contain or provide links in the Administrative Record for the following:
 - Waste Treatment and Immobilization Plant (WTP) Direct Feed Low-Activity Waste and Effluent Management Facility (EMF) mass balance information submitted by ORP in April 2017.
 - Tank Side Cesium Removal mass balance information submitted by ORP in May 2019.
 - Information provided by ORP employee Erik Olds, including revised information for EMF mass balance to the Liquid Effluent Retention Facility/Effluent Treatment Facility to Washington State Department of Ecology (Ecology) on March 25, 2020.

Also the briefing that was provided on April 13, 2020, and the subsequent briefing that was provided on October 27, 2020.

These are not in the administrative record as far as I can tell.

5. I looked at the items in the proposed permit change package and was unable to find specific process flow diagrams with chemical concentrations and mass flow rates. It is hard to find a complete basis to underpin decisions. For example, RPP-IQRPE-50063, *IQRPE Design Assessment Report for LERF Basin 41*, has a corrosion assessment that relies on the “waste compatibility” section. The waste compatibility section refers to RPP-RPT-62215, 2020, *LERF Basin 41 Material Compatibility with Wastewater*. But RPP-RPT-62215 says the criterion is that the wastewater will meet acceptance criteria in HNF-3172. Nowhere does the documentation show the expected composition of effluent versus the HNF-3172 criteria. In addition, HNF-3172 only addresses two materials in the basin 41 system. Further, the recipe used in laboratory testing was based on out-of-date data. If Ecology had insisted that DOE correctly complete milestone M-062-50, we might have a better idea if the new wastewater recipes (including from the EMF) actually meet the corrosion criteria – or if the constituents were ever even addressed by those criteria. This is just one example. It appears the IQRPE omits EMF/SBS condensate information on corrosion. RPP-IQRPE-50063 also makes assumptions based on “anticipated” chemistry that includes past processing experience – but the effluents from WTP and the EMF and WTP scrubbers will be new, with some novel components.
6. The omission of a genuine, updated, integrated, process mass balance contributes to project risk and creates a risk to the future safety of Richland residents. “Breaking the WTP recycle loop” or disposing of difficult effluents off-site at Perma-Fix Northwest, in order to maintain WTP operations, is a likely scenario, given the lack of good planning information afforded by a genuine mass balance. When effluent can’t be sent to LERF/ETF, the result will be an attempt to push risks and wastes into the Richland Perma-Fix Northwest (PFNW) facility, which is hundreds of feet closer to the water table than the Hanford 200 Areas. See the link below for recently documented safety and regulatory problems at PFNW⁴. DOE should be required to treat all tank related waste on-site at Hanford, far from the public, where it belongs.
7. I wanted to research prior Ecology responses to comments in support of this comment period, but found that the Nuclear Waste Program Publications Web Page⁵ no longer includes links to documents dated 2018 or earlier. These documents, while not that old, are marked as **“This publication is historical. It is unavailable on our website.”** I would appreciate if you would please put all of the publications back on this web page – there are only 217 of them, so it is not difficult to keep them there.

Thank you for considering these comments.

⁴<https://static1.squarespace.com/static/568adf4125981deb769d96b2/t/5fbde47518e72e5fdb9a8298/1606280319740/FINAL+PermaFix+Report.pdf>

⁵<https://apps.ecology.wa.gov/publications/UIPages/PublicationList.aspx?IndexTypeName=Program&NameValue=Nuclear+Waste&DocumentTypeName=Publication&yearDate=2018>.