



August 24, 2022

Comment submitted electronically

<https://nw.ecology.commentinput.com/?id=aStNs>

Washington State Department of Ecology
ATTN: Daina McFadden
3100 Port of Benton Blvd
Richland WA 99354

RE: Public Comment on the ETF Notice of Construction DE07NWP-003, Rev 2

Washington State Department of Ecology,

Thank you for the opportunity to comment on the ETF Notice of Construction DE07NWP-003, Rev 2.

Hanford Challenge is a non-profit, public interest, environmental, and worker advocacy organization located in Seattle, WA.¹ 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.

Hanford Challenge remains concerned that potentially hazardous working conditions at the waste treatment facility were overlooked by the contractor and the regulators. Secondly, Hanford challenge is concerned that the treatment plan calls for sending ETF waste to an offsite facility (assumption is Perma-Fix Northwest?) to be treated when that waste form will apparently contain very high levels of acetonitrile. Third, we are concerned about the disposal path for this waste. Fourth, Hanford Challenge is concerned that USDOE knew about the acetonitrile issue since at least 2004, but apparently waited until the very last minute to address it with inadequate solutions.

¹ Hanford Challenge mailing address: P.O. Box 28989 Seattle, WA 98118.

Hanford Challenge's comments and questions:

- 1. Why did the U.S. Department of Energy (“USDOE”) and regulators wait so long to address this acetonitrile issue?** It appears that these issues surrounding acetonitrile were known to USDOE since at least 2004.² It is unfortunate that USDOE waited until the last minute to create workarounds like the steam stripper that appear to be insufficient at best and potentially creates a more hazardous working condition. Is there a justification for this delay?
- 2. How will DOE Ensure Workers are Protected from Acetonitrile?:** The USDOE surveillance report, "Surveillance of the Washington River Protection Solutions LLC Process Hazard Analysis for Effluent Treatment Facility Acetonitrile Treatment Project, DOE-ASMT-2021-3251, August 27, 2021"³, highlighted the need for a solution to potential worker exposures to acetonitrile. We appreciate that this surveillance took place and that efforts were made to investigate this worker health and safety hazard after it was identified that it had not been properly evaluated. However, Hanford Challenge believes this surveillance should have had findings and not "opportunities for improvement," because of the omission of significant vapor hazards from acetonitrile that rendered the hazards analysis inadequate to support design. The Permit Modification for ETF should take these opportunities for improvement to heart and ensure that workers are protected.
- 3. Why Not Destroy the Acetonitrile?:** It is still unclear to Hanford Challenge why the steam stripper project was selected instead of a treatment technology that oxidatively or catalytically destroys the acetonitrile. We would still like this explained and reconsidered, especially the rationale to concentrate the waste for treatment at Perma-Fix Northwest when acetonitrile is so dangerous in concentrations far smaller than the 23,000 ppm acetonitrile distillate concentration proposed here for treatment.
- 4. Do Not Dispose of Acetonitrile at the Integrated Disposal Facility:** We have major concerns with disposing of a concentrated acetonitrile waste form at IDF, due to its explosive and flammable nature. It does not seem worth the risk of starting an underground fire in this landfill, when there are technologies that could destroy the acetonitrile.

² See Waste Treatment Plant Effluent Treatability Evaluation, HNF-8306, September 2004.

³ This report is submitted as part of these comments as additional concerns with acetonitrile as stated by USDOE.

Could you please explain how the steam stripper process was selected when there is no disposal pathway for the concentrated acetonitrile? How could that happen if USDOE needs to get a DOE Order 435.1 exemption before sending off-site? What alternatives are being considered for disposal? Where is the preferred onsite treatment?

5. **What is the Treatment Plan for Acetonitrile?:** It appears that there is still no selected offsite treatment facility, however, other documents indicate that Perma-Fix Northwest is the assumed treatment facility. Could you please explain where you imagine the acetonitrile distillate being treated and how long it would sit in storage while awaiting treatment? Just to note, Hanford Challenge does not believe the acetonitrile distillate should be sent to PFNW for treatment. It poses too great a threat to workers, the public, and the environment.

6. **Better Worker Protections Are Needed:** Please explain what is being done to protect workers from the contents of the process and tanks? Are there design changes planned for the ETF ventilation system? We believe real-time monitoring is necessary to detect dangerous working conditions (i.e. not modeling) and that workers should be required to wear respirators if they are in a work area where there is the potential to be exposed to acetonitrile vapors. Not only should workers have access to respirators, but these respirators should be in good working order and maintained properly. The "improper use of respirators is dangerous. Respirators should only be used if the employer has implemented a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing, and medical exams, as described in the OSHA Respiratory Protection Standard (29 CFR 1910.134)." It is important that rigorous protocols are in place to ensure that all PPE is clean and in good working order, including any respiratory protection equipment. There have been [worker exposures at ETF](#) in the recent past that add weight to the recommendations below for respiratory protection (2018).

Additionally, the [NJ Right to Know Hazardous Substance Fact Sheet](#) recommends: "Where the potential exists for exposure over 13 ppm, use a NIOSH approved full facepiece respirator with an organic vapor cartridge. Increased protection is obtained from full facepiece powered-air purifying respirators." "Where the potential exists for exposure over 200 ppm, use a NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive pressure mode. For increased protection use in combination with an auxiliary self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode."

- 7. Offsite Impacts:** Where will offsite environmental impacts be evaluated for acetonitrile treatment? There is an incomplete analysis of the plan to concentrate acetonitrile distillate and treat it offsite, without information, such as groundwater impacts, worker health and safety threats, and transportation risks resulting from treating waste at Perma-Fix Northwest in Richland or another offsite treatment facility. Is it possible to treat acetonitrile onsite?

Thank you again for considering our comments.

Sincerely,

A handwritten signature in black ink that reads "Nikolas F. Peterson". The signature is written in a cursive, slightly slanted style.

Nikolas Peterson, Executive Director