



High-Level Radioactive & Toxic Waste at Hanford: Changing the Label is Not Cleanup

**Comment
Deadline:
September 7,
2018**

Hanford is the most contaminated site in the Western Hemisphere—and you can help hold our government accountable for Hanford’s toxic and radioactive pollution legacy. Right now, the federal government wants your input on a critical cleanup decision.

The U.S. Department of Energy (Energy) proposes to reclassify high-level waste at the Hanford Nuclear Site in southeastern Washington. Energy’s proposal to re-label waste has real-world impacts: with a new label, Energy can leave dangerous waste in Hanford’s tanks, soils, and groundwater, threatening the Columbia River for generations to come.

Learn why this cleanup decision matters and how you can weigh-in and make a difference.

What Is Energy Proposing?

- ▶ Energy wants public input on the “Draft Waste Incidental to Reprocessing Evaluation for Closure of Waste Management Area C at the Hanford Site” (Draft WIR Evaluation).¹ Comments are due by September 7, 2018.
- ▶ Energy proposes to reclassify high-level radioactive waste as low-level radioactive waste in the C Farm, one of Hanford’s tank farms holding high-level nuclear waste.
- ▶ Energy’s draft proposal asserts that the agency can manage waste in the C Farm as low-level waste, setting the stage for Energy to fill the tanks with grout (a form of cement). The result: Energy would leave the waste in the ground rather than actively clean up and treat the waste.
- ▶ Toxic and radioactive waste has already leaked. Under Energy’s proposal, polluted soils around and beneath the tanks would likely remain in place.
- ▶ The reclassification approach could have broad implications throughout the Hanford Site, setting a precedent for renaming high-level waste to short-cut active cleanup. Energy’s proposal contradicts concerns raised by tribal nations, Washington Senator Maria Cantwell, and many public interest organizations.



Historic photo of Hanford’s Tank Farm.

Columbia Riverkeeper’s mission is to protect and restore the water quality of the Columbia River and all life connected to it, from the headwaters to the Pacific Ocean.

**Clean Water
Healthy Rivers
Our Future**

C Farm Radioactive Waste Storage Area Background

► **The government used Hanford's underground tanks to store hazardous chemical and radioactive byproducts of plutonium production.**

- After irradiated fuel rods were removed from the nuclear reactors, the government exposed the rods to intense chemical processing to extract plutonium from the fuel rods for nuclear weapons.
- The government used powerful and hazardous chemicals in the plutonium extraction process. The resulting waste was radioactive, extremely hot, caustic, and hazardous to people.²
- At least 67 underground tanks have leaked liquid waste into the ground. Some waste has already reached groundwater. And polluted groundwater from Hanford's 200 Area—where the tanks are located—has already reached the Columbia River.
- For years, Energy worked to remove liquid from the single-shelled tanks and transferred it into double-shelled tanks. Some of the remaining waste is both dangerous and hard to retrieve from the tanks.
- C Farm waste likely includes transuranic waste. Transuranic waste has a high concentration of long-lived, heavy radionuclides, and is not suitable for shallow disposal at Hanford.
- Waste in the C Farm contains technecium-99, plutonium-239, strontium-90, cesium-137, iodine-129, multiple uranium isotopes, and many other toxic and radioactive contaminants.
- Energy claims to have removed "96 percent of the volume and key radionuclides" from C Farm tanks. Now, Energy wants to reclassify the remaining waste—potentially more than 70,000³ gallons of the 1.77 million gallons once stored in the tanks—as low-level waste.

Protect the Columbia River. Clean Up Hanford's Tank Waste.

Speak up for clean water. Join thousands of people across the Pacific Northwest and urge Energy to abandon its plans to re-label dangerous radioactive and toxic pollution. Suggested talking points include:

- **Energy should hold public hearings throughout the Pacific Northwest. Holding only one public meeting in Richland, WA, undercuts robust public involvement in a critical government decision.**
- **Energy must label waste based on its dangerous nature, not on whether Energy has plans to dispose the waste.**
 - Reclassifying waste is not cleanup. Instead, Energy's proposal would create health and safety risks for future generations.
 - Energy must address risks from long-lived contaminants.
- **Energy fails to demonstrate that the agency has removed the "maximum technically achievable" amount of waste.**
 - In 2012, the Washington Department of Ecology (Ecology) wrote in its forward to the Tank Closure Waste Management Environmental Impact Statement (EIS) that Washington state prefers "retrieval of at least 99 percent of the waste from each tank."⁴ Energy failed to meet this expectation and proposes to leave four percent of the waste in the C Farm.

► **Energy should not leave long-lived, highly radioactive contamination in Hanford's soils.**

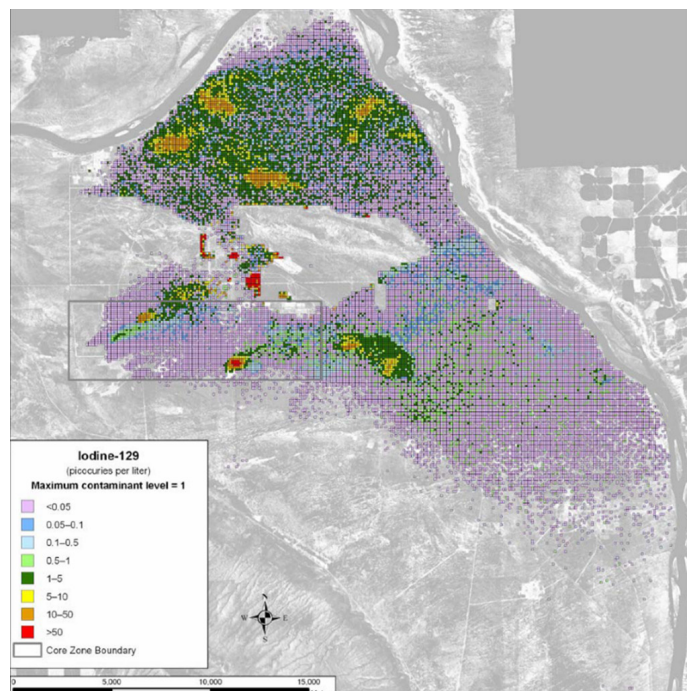
- Energy should not proceed with reclassifying waste, a pretext to grouting tanks, without further study and a clear explanation of long-term impacts to soils and groundwater. Some waste has already leaked into soils and groundwater beneath the tanks. The WIR Evaluation must take a hard look at this problem and how filling tanks with grout could prevent future soil remediation.
- Contaminants such as technecium-99 and iodine-129 are long-lived, mobile, and could present a long-term risk if not addressed in the C Farm's tanks and soils.
- Grout lacks durability for immobilizing long-lived and mobile waste. Because Energy will use the Draft WIR Evaluation to justify leaving up to four percent of C Farm's tank waste cement, Energy's proposal will ultimately lead to greater soil and groundwater pollution when the grout fails in hundreds or thousands of years.

► **Energy must conduct a robust environmental review process for this proposal.**

- The cumulative impacts analysis from Energy's Tank Closure Waste Management Environmental Impact Statement suggests that leaving long-lived, mobile waste in grouted tanks, soils, and groundwater will pose a long-term risk to the Columbia River.⁵
- Ecology has questioned Energy's inventory of waste remaining in the C Farm tanks and raised concerns about how future waste may move through soils and groundwater.⁶ Energy cannot justify the proposed waste reclassification without a clear analysis of the long-term risks to soils and groundwater.
- Energy must present a comprehensive, cumulative risk analysis. Ecology raised this issue in its forward for the Tank Closure Waste Management EIS in 2012, highlighting "the need to make cleanup and mitigation decisions with the cumulative impacts in mind and not in isolation" for waste in Hanford's Central Plateau.⁷

► **Energy's proposal contradicts court decisions that do not allow reclassification of high-level waste at Hanford.** Energy should follow the law and address high-level waste through cleanup rather than reclassification.

- Energy attempted to reclassify waste more than a decade ago. In a 2002 case, Yakama Nation, along with two environmental organizations, sued Energy to prevent the agency from leaving the waste in storage tanks. Both Oregon and Washington filed "friend of the court" petitions to participate in the suit.⁸
- In 2003, a federal judge overturned the Energy Order⁹ that would have allowed Energy to reclassify high-level radioactive waste and leave it at Hanford. The judge ruled that the Order conflicted with the 1982 Nuclear Waste Policy Act.¹⁰
- In November of 2004, a federal appellate court reversed the 2003 federal district court ruling because the issue wasn't timely—Energy had not yet actually reclassified the waste. However, the appeals court did not rule on the merits of the case.¹¹
- This history suggests that Energy's WIR Determination violates the Nuclear Waste Policy Act, yet Energy proposes to reclassify waste despite clear signs that this approach is flawed.



The figure above from the Tank Closure Waste Management EIS shows that iodine-129 will reach the Columbia River in calendar year 3890 if waste in Hanford's Central Plateau leaches into soils and groundwater.

Take Action >>>

Submit comments on Energy's proposed changes by September 7, 2018.

- Via Columbia Riverkeeper's website: <http://bit.ly/HanfordpetitionWIRpetition>
- Via email to: WMACDRAFTWIR@rl.gov
- Via mail to:

Mr. Jan Bovier
U.S. Department of Energy, Office of River Protection
P.O. Box 450
MSIN H6-60
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Get involved at www.columbiariverkeeper.org
Contact us at simone@columbiariverkeeper.org

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Credit from top left to bottom right: Matt McCormick, Sara Quinn, U.S. FWS

1. U.S. Dep't of Energy, Notice of Upcoming Public Comment Period (2018). <http://listserv.ecology.wa.gov/scripts/wa-ECOLOGY.exe?A2=HANFORD-INFO:5e671eb9.1805>
2. Hanford Site, <https://www.hanford.gov/page.cfm/tankfarms> (last visited June 5, 2018).
3. Energy's Fact Sheet states, "more than 1.7 million gallons of waste from the C Farm tanks has been successfully retrieved (approximately 96 percent of the waste volume and key radionuclides)." If 1.7 million gallons represents 96 percent of the total waste volume, then 100 percent of the waste volume was roughly 1.77 million gallons. This means Energy seeks to reclassify approximately 70,000 gallons.
4. Ecology Forward to Tank Closure Waste Management EIS. 2012.
5. Tank Closure Waste Management EIS. 2012. Appendix U. Figure shows I-129 approaching Columbia River in year 3890.
6. Department of Ecology Comment. June 2017. Groundwater and Vadose Zone Modeling Issues Related to Performance Assessment (PA) and RCRA Closure for Waste Management Areas (WMAs) C and A-AX Tank Farms. <https://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=0069668H>
7. Ecology Forward to Tank Closure Waste Management EIS. 2012. https://www.energy.gov/sites/prod/files/Final_TCWM_EIS_Cover%20Sheet_Forewords_Guide_TOC_Commentors.pdf p. 15.
8. Ken Niles, Hanford Cleanup: The First 25 Years, Oregon Dep't of Energy 100 (2014) available at <http://www.oregon.gov/energy/facilities-safety/safety/Documents/Hanford%2025%20Year%20Report.pdf> p. 100
9. DOE Order 435.1
10. Ken Niles, Hanford Cleanup: The First 25 Years, Oregon Dep't of Energy 115 (2014) available at <http://www.oregon.gov/energy/facilities-safety/safety/Documents/Hanford%2025%20Year%20Report>. See also Nuclear Waste Policy Act 42 U.S.C. §§ 10101-10108 (1982).
11. Id. at 121.