

## Heart of America Northwest's Vision and Comments on Hanford's Five Year Cleanup Plan 2022-27 comments Nov 22, 2021



As the largest Hanford Cleanup-focused public interest advocacy group with members across the region, our vision for Hanford Clean-Up is based on what we believe are important public interest values. **Here is our vision, with examples and contrasts with USDOE's:**

- **Eliminate major threats of catastrophic radiation and chemical releases within five years:**

Example: Accelerate the removal of all Cesium and Strontium capsules out of the B-Plant WESF water pool which is likely to fail in an earthquake causing massive releases of radiation and a potential meltdown of the extremely radioactive capsules (which are the highest concentration of radiation on site).



For over a decade, we have been urging that the wastes be removed to "dry cask storage" before 2021. USDOE's plan would take until 2026,<sup>i</sup> which would not even meet the August 2025 TPA milestone. **We believe that the risk requires acceleration of the work. An earthquake may happen at any time:**

About one-third of all radioactivity at Hanford is in WESF's old, at-risk water pools.<sup>ii</sup> An analysis (which USDOE sought to prevent public release of in 2011)<sup>iii</sup> found that a foreseeable earthquake would result in loss of the water covering capsules in Pool A and collapse of walls leading to a massive release of radiation. (Photo to right is one of the pools glowing from radiation)



"The loss of water in a single pool cell creates fatal dose fields within the Pool Cell Area and a field of approximately 120R/hr immediately outside the 225-B structure. (120 R is about 30% of the radiation level that will result in death in half of adults in 30 days). Currently there is no control that could be relied upon to terminate this event once capsules have been uncovered... This event is a potential initiator to the more severe consequences of loss of water from all pool cells."<sup>iv</sup>

- **Do no further harm to environment, the Columbia River, worker health – our vision:**



- **Remove waste promptly from leaking High-Level Nuclear Waste Tanks** to prevent further contamination and as required by federal and state hazardous waste laws. Act immediately to remove waste from leaking High-Level Waste tanks B-109 & T-111. Adopt a publicly reviewed compliant plan with equipment to promptly monitor and remove waste as additional tanks leak.
- **USDOE’s Plan:** has **nothing in it** to be prepared to remove wastes from leaking Single Shell High Level Nuclear Waste tanks. It is widely anticipated that more tanks will leak.
- **Our Plan:** Move forward with demonstration by end of 2022 of the “SAFE” or Test Bed Initiative (TBI) Under SAFE / TBI, tank waste from leaking tanks, such as B-109, would be treated and disposed offsite meeting all applicable standards. USDOE has equipment on hand fabricated for TBI which can be utilized to remove liquid from B-109 with minor modifications. Demonstration of enhanced salt-well pumping (as recommended by USDOE’s own study on responding to SST leaks) with In-Tank Pretreatment and mobile tole frr the liquid would mitigate harm from leaks, meet legal requirements to remove waste from leaking tanks, and remove waste from tanks decades ahead of schedule. TBI and SAFE offers the opportunity to remove waste from the total contamination burden / risk to Hanford groundwater. The disposal site would be in either West Texas or the Utah Salt Basin where there is no groundwater that would be at risk from the treated waste.
- **Five Year Plan missing measurable worker health and safety goals and commitments.** USDOE should be committing to install readily available volatile, metal (e.g., mercury) and other vapor space contaminant emission monitoring and controls at every tank farm, not just demonstrate them as budget allows at a few tanks. For any tank that USDOE attempts to ventilate to reduce leakable liquids via evaporation, USDOE should procure equipment for monitoring and controlling emissions in advance and deploy it simultaneously with active ventilation. USDDOE should revise its “scoring” of ventilation in its tank leak response proposal to reflect the failure to have considered effects of ventilation on human health and compliance with air standards.

- **Complete remediation of all River Corridor areas and ensure safe access to resources along the River by the end of 2025 – our vision:**

- **Honor Treaty rights of Native American nations enabling them to safely utilize River Corridor resources within five years rather than waiting hundreds of years.**

Cleanup to provide Native Americans the same level of protection as planned for non-Native future users of the River Corridor. Cleanup of the Central Plateau must also recognize Treaty rights to utilize resources of the Plateau.



- ***Commit to a major environmental justice goal to ensure that remediation of the River Corridor’s contaminated soil and groundwater sites will be safe for Tribal members’ use by 2025*** when considering Tribal Exposure Scenarios. Tribal members will have far greater exposures to contaminants and far higher risks than the general public under the scenarios currently being used to demonstrate that cleanup plans will meet health and risk based standards (e.g., cancer risk under MTCA and CERCLA). Further, current decisions and proposals would not even allow for safe non-tribal public use of significant areas and groundwater for two hundred or more years (e.g., 100-B Area units along the River). Denial of safe access to live along the River, to fish and to resources as guaranteed by the Treaties of 1855 is a violation of Treaty rights.
- Remove contamination in soil and apply pump and treat remedies for groundwater in all areas along the River where ***USDOE currently plans to leave residual contamination that results in health and aquatic risks over standards for 100 to 200 years***, e.g., F Reactor, N-Reactor, B-C Reactors. Utilize Tribal exposure as the basis for determining what contamination risks remain instead of planning to allow access when Tribal exposures would result in far higher cancer and toxic risks than non-Natives will experience.
- Remove contamination from under the 324 building and stabilize.
- **Comply with federal and state hazardous waste laws designed to prevent releases and protect worker health – our vision:**





- Remove and treat the thousands of containers which EPA and Ecology determined years ago were being stored in violation of these laws and standards in the Central Waste Complex by the end of the five year period. All these wastes should be removed and treated within 24 months.

- USDOE's Plan would take until 2026 just to move wastes indoors – where the waste would still not be safely stored in compliance with hazardous waste standards. These wastes pose potential catastrophic and worker safety risks from being improperly stored without characterization. USDOE has been allowed to let these wastes accumulate in violation of standards for decades, and the removal has been repeatedly delayed.

*Photos from WA Ecology inspection of corroded improperly stored, corroded waste containers at CWC.*

○ **Example of a Wrongheaded USDOE Priority:**



USDOE plans to spend funds to demolish portions of the PUREX plant (in 2022 and 2025), Redox plant (2023), B-Plant (2025) despite there being no risk of release from these facilities. These facilities have not undergone thorough characterization and planning to avoid repeating major releases of Plutonium and worker contamination as occurred during the demolition of the Plutonium Finishing Plant (PFP).

While thousands of waste containers are dangerously stored in violation of standards at CWC (photos above), and Cesium and Strontium capsules continue to sit in pools that would collapse in an earthquake, USDOE would rather spend funds to demolish buildings that USDOE itself says do not pose any threat.

USDOE has not done a Remedial Investigation and Feasibility Study for demolition of these buildings, short-circuiting review (USDOE calls these “removal actions” under CERCLA (the federal Superfund law). CERCLA, however, requires a threat of release to use a removal action, and provides that removal actions are only to be used when time does not allow for complete study with public review. *At the same time, USDOE fails to plan to remove illegally stored wastes from the Central Waste Complex (CWC) that do pose significant threats of release and worker hazard pleading a lack of funding.*

- Startup Direct Feed Low Activity Waste Vitrification (Direct Feed LAW) to begin onsite treatment of waste from High-Level Nuclear Waste Tanks in 2023: a priority we agree on. Our views:
  - USDOE must stop diverting resources and stop engaging in highly divisive and illegal attempts to redefine / reclassify High-Level Waste that remains in the bottom of tanks in order to avoid removal and just pour concrete over the waste.
  - Develop low carbon emission alternative to massive use of CO2 generating diesel generators for the backup power to LAW Vitrification Plant. USDOE is planning to start emitting a massive amount of carbon instead of reducing Hanford’s carbon footprint.
  - Test whether offsite treatment of low activity tank waste from tanks that would not be retrieved can meet RCRA and all other standards at an offsite permitted disposal facility that has no groundwater at risk of being contaminated. (Test Bed Initiative). If demonstrated, begin removal of waste and treatment to make a million gallons of space available in Double Shell Tanks for when SSTs leak as well as speeding tank waste removal and treatment by decades at a cost projected to be 1/50<sup>th</sup> of the cost per gallon of DFLAW.
- **Our Value**, which USDOE has a legal obligation to meet, but which USDOE resists: **Commit to requesting the funding from Congress to meet all Tri-Party Agreement milestones and other legal requirements for safe waste storage and cleanup.** The Five Year Plan is based on a flat funding scenario in which USDOE makes no commitment to honor the legal requirement to request the funding necessary to meet all TPA and other cleanup requirements.<sup>v</sup> The TPA requires USDOE to request full funding, which this plan clearly

indicates that USDOE does not intend to do.<sup>vi</sup> (Source Oct 20, 2022 USDOE briefing says the plan is explicitly based on a level funding scenario despite USDOE's own projections showing that it must request far more funds to meet TPA and other obligations).

- **Our Value: Base the Five Year and Ten-Year Strategic Plan on a process designed with the public, Tribes and Hanford Advisory Board (HAB) rather than unilaterally deciding how to present USDOE's plan and not having any interactive public feedback meetings and processes.** The process to develop a meaningful, publicly supported Hanford Cleanup Strategic Plan needs to include public meetings around the region for input, with independent facilitation, and should be integrated with the TPA required public meetings on Hanford Cleanup budget priorities.
  - We reiterate what we said in regard to the Hanford Ten Year Plan, which USDOE issued with just 8 days for review during October 2020: Any strategic plan for Hanford Cleanup **should start with an honest commitment to include meaningful public and Tribal involvement, detailing commitments to how USDOE will incorporate public and Tribal values in all major decisions.** USDOE's lack of commitment – and the need to have formal commitments in the Plan – was demonstrated by USDOE providing just eight (8) days of notice to some members of the Hanford Advisory Board to review and comment on USDOE's strategic guidance for the next decade (Oct 2020). USDOE made no effort to inform and engage the broader public in the development of a strategic plan for Hanford cleanup.

For this Five Year Plan, USDOE ignores the input from the public and Board and planned NO public forums (only a weekday morning presentation to the HAB with no public comment.).

**The Strategic 10 Year Plan should have a clear commitment to formal consultation with affected Tribal Nations on major decisions from the most senior levels of USDOE.** This should include a measurable goal that remediation will protect Treaty and cultural resources and ensure safe access to all River Corridor NHPA<sup>1</sup> and Treaty resources by 2025.

We urge USDOE to have a mutually agreed facilitator with a record of successful public involvement in major governmental projects work with the Tri-Party Agreement (TPA) agencies, Tribes and region-wide public stakeholders to develop an agreement on measurable public and Tribal involvement commitments, including measurable environmental justice goals.

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<sup>1</sup> NHPA: National Historic Preservation Act which mandates surveying, Tribal consultation regarding, and protection of, Traditional Cultural Properties. There are hundreds of important areas at Hanford that should be protected under NHPA.

Process elements in a strategic plan reflect an agency's guiding values.

Failure to include commitments to meaningful public involvement and Tribal consultation indicates that the most senior management at USDOE fail to understand and commit to these fundamental values for decision making by a government agency.

The Hanford Five Year Plan must integrate with the USDOE's EM Ten Year Plan and Hanford portion of that plan. USDOE falsely claimed that the EM Ten Year Strategic Plan was based on public and advisory board input. (We note that EPA's Hanford office, for example, said it did not even comment on the Ten-year Strategic Plan[10-20-21]).

The two plans must be presented to the public in forums with facilitation for public input and a clear path delineated for how comments will be considered and responded to.

- **Key Objection: There is NO Plan for the public, Tribes, regulators and advisory board to actually review! A “placemat” is not a plan.**

USDOE is inviting comment on its' “Five Year Plan for Hanford Cleanup.” BUT there's nothing to review and comment on but a nicely presented graphic “placemat” saying what work USDOE plans to start in each fiscal year.

It has no explanation of how priorities were set, or how they would be adjusted if more funding is appropriated than USDOE anticipates asking for). There is no presentation of costs or funding required and how funding might be reallocated in event of unforeseen events (or foreseeable events such as leaking tanks). There is no set of principles to review on why USDOE chose the work it has chosen while delaying other work or not planning other work at all that the public or Tribes believe is important. **This is NOT A STRATEGIC PLAN at all!**

**A strategic plan would include how the plan will be revised** – what priorities and process will apply including public, regulator and Tribal input will be obtained and utilized – when unforeseen events occur, if more funding is appropriated (or less), etc.

**If this were a plan, it would include:**

- A set of principles on how priorities will be set and adjusted for the public, Tribes, regulators, Congress to comment on
- A prioritization for funding and how public, Tribal and regulators' views will be considered in annual budget processes, including preparation of requests two years out, and review of appropriations.
- Principles and concrete processes to adjust priorities in the face of foreseeable events such as tank leaks, accidents, discovery of higher than anticipated contamination levels. Specific commitments to how the plan will be revised with specific processes for input.

Future iterations of this plan should be based on a formal public process with meetings and an expectation of written and oral comments, not a biased survey that reflects only USDOE's interests and views – and which entirely ignores key principles for strategic planning and public and Tribal values for Hanford Clean-Up:

The Department is soliciting feedback on the 5-Year Plan through a survey that is open through Nov. 22. The Department will share the survey results in the future.

Please complete the survey by Nov. 22 at <https://forms.office.com/g/SCzizF5QwJ>.

More information, including the Hanford 5-Year Plan, is available on the Hanford website at <https://go.usa.gov/xMHkg>.

Questions? Please email [5YearPlan@rl.gov](mailto:5YearPlan@rl.gov)

In response to Heart of America Northwest's objections to USDOE's biased survey as the only way for you to comment, **USDOE says it will accept emailed comments at [5YearPlan@RL.gov](mailto:5YearPlan@RL.gov)**. Please also cc: [director@ecy.wa.gov](mailto:director@ecy.wa.gov) (Ecology Director Laura Watson); [ainan.david@epa.gov](mailto:ainan.david@epa.gov) (US EPA); and Heart of America NW at: [office@hoanw.org](mailto:office@hoanw.org)

### Key summary (details for these point are in comments above):

- USDOE did not present a five year strategic plan for Hanford Cleanup. USDOE's so-called "plan" fails to disclose how USDOE set priorities. USDOE's plan ignores major safety risks and public values. A "placemat" is not a plan! ("Placemat" is USDOE's own term for its only document provided for review of the plan) ***We urge USDOE to develop a meaningful public and Tribal participation process for public input in developing Hanford cleanup strategic plans, including meetings around the region. There is no reason why regulators should not convene such a process if USDOE fails.***

- ***The Hanford Cleanup Five Year Plan needs to prioritize removing waste from leaking High-Level Nuclear Waste tanks.***

The Plan needs to commit to removing waste from leaking Tank B-109 now, as federal and state hazardous waste laws require. It's unacceptable that USDOE is spending billions of dollars on a plant to treat the waste from tanks while allowing leaking tanks to just keep leaking waste to contaminate the soil and groundwater which flows into the Columbia River. Develop the capacity via the "SAFE" and "Test Bed Initiatives" to remove waste from Single Shell Tanks with offsite treatment and disposal to lower overall risks to Hanford's groundwater and health.

- ***Before an earthquake causes a catastrophe, remove all extremely radioactive Cesium and Strontium capsules from the WESF pools by 2025.***
- ***USDOE's Hanford Five Year Plan should commit to removing and treating all wastes in Hanford's Central Waste Complex in the next 24 months.*** Thousands



of drums and containers of waste are dangerously stored in violation of hazardous waste laws. Wastes are even stored outdoors, and many containers are corroding. Laws forbid storing these wastes without treatment for more than a year, but USDOE has stored them for decades. It's time to remove and treat them at a licensed treatment facility.

- Hanford's Five Year Plan should complete remediation of all River Corridor areas and ensure safe access to resources along the River by the end of 2025. ***Honor Treaty rights of Native American nations enabling them to safely utilize River Corridor resources within five years rather than waiting hundreds of years for the areas to be safe and stop spreading contamination into the Columbia River.***



Submitted Nov. 22, 2021 to: [5YearPlan@RL.gov](mailto:5YearPlan@RL.gov). cc: [director@ecy.wa.gov](mailto:director@ecy.wa.gov) (Ecology Director Laura Watson); [ainan.david@epa.gov](mailto:ainan.david@epa.gov) (US EPA);

Respond and send further notices or questions to Heart of America NW at: [gerry@hoanw.org](mailto:gerry@hoanw.org) and [office@hoanw.org](mailto:office@hoanw.org)

Detailed citations – footnotes:

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<sup>i</sup> USDOE, Five Year Plan< USDOE Ben Harp, Ben Stickney presentation, Five Year Plan Placemat page 6, “pace of operations,” October 20, 2021.

<sup>ii</sup> Defense Nuclear Facilities Safety Board, “Waste Encapsulation Storage Facility Staff Report”; T. Hunt, August 12, 2011, Page 1.

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iii Waste Encapsulation and Storage Facility Design Basis Safety Analysis,” August, 2011. HNF-8758-Rev 7.

USDOE improperly designated this report as “Official Use Only,” which is a designation under which USDOE does not release a document to the public and had claimed that the document was not subject to the Freedom Of Information Act. WA Ecology has signed an agreement with Heart of America Northwest recognizing that USDOE may not withhold such records which are not classified and do not fall within an exemption to FOIA.

In the Design Bases Earthquake, the west wall and Pool A would fail. Safety Analysis at 3-54. The DBE would “result in immediate release” of large amounts of radioactivity as well as loss of coolant water in A Cell and loss of coolant in other pools leading to catastrophic radiation releases – unless tanker trucks could bring in water despite the contamination releases and high doses.

iv USDOE, HNF-SD-WM-BIO-002, Revision 1, WESF Basis for Interim Operation, reproduced in Oregon Department of Energy presentation to Hanford Advisory Board, February 13, 2013, at 32.

Source for Lethal Dose 50% 30 Days (LD50): US Nuclear Regulatory Commission. Page updated March 9, 2021. Note this is dose for adult males.

v TPA paragraphs 148 and 149. Ecology has numerous statements and documents reiterating that the obligation of the USDOE is to request that Congress appropriate all funding necessary to meet TPA milestones and other compliance obligations. CERCLA includes an obligation to identify to Congress the funding needed to meet all CERCLA Federal facility Agreement milestones.

vi *Source Oct 20, 2022 USDOE briefing says the plan is explicitly based on a level funding scenario despite USDOE’s own projections showing that it must request far more funds to meet TPA and other obligations*