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November 2, 2022

Jennifer Colborn
U.S. Department of Energy
P.O. Box 450, H5-20
Richland, WA 99352

Submitted via email: 5YearPlan@rl.gov

Re: Proposed Hanford Site 5-Year Plan

Dear U.S. Department of Energy,

Columbia Riverkeeper (Riverkeeper) submits the following comments on the Proposed 5-Year Plan for Hanford Cleanup (Plan). Columbia Riverkeeper and our members—including 588 who signed a comment petition included below—reiterate significant concerns regarding the pace and effectiveness of the U.S. Department of Energy (Energy) cleanup at Hanford. While the Plan outlines significant potential progress, Energy still proposes to delay key cleanup activities beyond Tri-Party Agreement (TPA) milestone due dates and to operate under a budget inadequate to protect groundwater, prevent further tank leaks, and protect against a potential catastrophe at the Waste Encapsulation Storage Facility (WESF).

1. TPA agencies must avert delay as much as possible in removing capsules from WESF.

Removal of 1936 highly radioactive cesium and strontium capsules from WESF should be one of the highest priority actions at the Hanford Nuclear Site and across all of Energy's cleanup sites. We urge Energy to meet its TPA deadline for removing capsules from WESF, one of the highest-risk facilities for which Energy is responsible. The consequences of a basin failure at WESF would be catastrophic for the facility, the Hanford Site, and for people and the environment downwind. WESF stores a dangerous amount of radioactivity. Energy estimated in

2017 that capsules stored in WESF contained 46 million curies of radioactivity.¹ The concrete in WESF's basins is beyond its design life after decades of exposure to intense radiation. These deteriorated basins house the water inside WESF—water critical for cooling and shielding the capsules. In the event of a large earthquake, damage to the basins could cause water to leak. Without the water to cool and shield them, the capsules could become exposed and possibly rupture, increasing the radioactivity to lethal levels at WESF. This could potentially lead to a large airborne release of radioactive contamination, with very harmful consequences for the people nearby and the Columbia River. Ecology has acknowledged the risk, stating

WESF is beyond its 30-year design lifespan, and the concrete pool cell walls show signs of deterioration due to radiation exposure. At WESF, active cooling and water circulation is necessary to dissipate the heat generated by capsules. A spill or release would create a significant volume of contaminated water to clean. If the pools were breached in an event such as an earthquake, it might leave the capsules uncooled and unshielded.²

Energy must move quickly to reduce the risks at WESF by removing capsules to dry casks and moving the casks to the Capsule Storage Area (CSA). Tri-Party Agreement Milestone M-092-021 requires Energy to complete the transfer of the cesium and strontium capsules from WESF to the CSA within three years, by August 31, 2025. Energy has not yet formally requested a change to the TPA milestone or adequately justified potential delays in removing capsules from WESF. We urge Energy to remove capsules to dry storage as quickly and safely as possible.

2. Energy must request a budget adequate to meet its cleanup commitments.

During Energy's public presentation regarding its Plan in October 2022, Energy indicated that it is planning for the same level of funding for the next five years as currently allocated. We urge Energy to consider how the Plan would change if the agency requested and received a budget adequate to meet its responsibilities under the TPA. Delays in completion of the WESF milestone, difficulties responding to tank leaks, and ongoing pollution in the River Corridor all suggest that Energy could make more rapid progress to address Hanford's contamination with an adequate, TPA-compliant budget.

Energy's limited transparency about budget requests and priorities frustrate the public's ability to evaluate cleanup options. To date, Energy has repeatedly failed to release information

¹ Federal Register. 2018. Amended Record of Decision for the Management of Cesium and Strontium Capsules at the Hanford Site. <https://www.federalregister.gov/documents/2018/05/18/2018-10643/amended-record-of-decision-for-the-management-of-cesium-and-strontium-capsules-at-the-hanford-site>

² Washington Department of Ecology. November 2020. Response to Comments Waste Encapsulation and Storage Facility Class 3 permit modification. <https://apps.ecology.wa.gov/publications/documents/2005026.pdf>. p. 7.

demonstrating that it has requested a budget adequate to meet TPA requirements. During its public presentation on the Plan, Energy indicated that it was already looking ahead to its budget requests for FY 2024 and FY 2025, but offered little acknowledgment of widespread concerns about the adequacy of the existing budget. In August of 2022, hundreds of Columbia Riverkeeper members and supporters called on Energy to avert delays and efficiently execute cleanup in Hanford's most polluted area, the Central Plateau. We also joined with the States of Oregon and Washington and community organizations calling on the federal government to fully fund Hanford cleanup. A broad coalition of community groups, watchdogs and state regulators have urged Energy to be more persistent in soliciting adequate funding from Congress.

In order to understand how Energy will meet its commitments, it is essential that the public have access to information about how the budgets are formulated and confidence that Energy is seeking all funds needed to meet urgent cleanup challenges at Hanford. Otherwise, the Plan will have negligible impact on actual cleanup progress and priorities. Furthermore, if priorities for cleanup are determined by budget constraints, the public deserves to understand how Energy makes those decisions.

3. Energy must do more to address leaking tanks.

Energy and Ecology recently entered into an agreement that will guide how the agencies address some aspects of leaking tanks at Hanford. The agreement regarding tanks B-109 and T-111 reflects a commitment by Energy and Ecology to continue working towards tank waste removal, but the agreement also makes clear that tanks will leak for years. The agencies propose to develop a Single-Shell Tank (SSTs) Leak Response Plan, which will address future leaks from SSTs. Additionally, Energy and Ecology plan to develop and implement a temporary surface barrier for the entire B and T tank farm areas by 2028.

The Plan does not appear to prioritize or highlight the commitments made in the agreement between Energy and Ecology, which raises concerns about whether Energy will maintain focus on fulfilling its commitments to addressing tank leaks. Energy's Plan offers tangible goals for tank waste treatment, but relatively few for addressing and mitigating tank leaks. In the agreement, Energy and Ecology agreed to negotiate new deadlines to remove contamination "at the earliest practicable time." The agencies committed to evaluate whether accelerating actual removal of tank waste from these tanks is possible. Energy's Plan highlights construction of an interim barrier in U Farm and retrieval of the A and AX farms, but it offers little indication that the agency is focused on addressing ongoing tank leaks in the T and B Farms. In the meantime, the tanks will continue to release highly radioactive material into Hanford's soil.

Preventing and responding to tank leaks is extremely important work at Hanford because the pollution will ultimately reach the Columbia River in future decades unless it is contained or

removed from soil and/or groundwater. Further, leaking tanks are a symptom of a larger problem: Hanford cleanup is lagging behind the progress needed to avert worsening contamination as structures age and leak. Without adequate funding, tank waste issues and other aging infrastructure problems on site will become more dangerous and difficult as additional tanks fail. The Plan does not demonstrate that Energy will be able to meet its responsibilities for handling tank waste until treatment immobilizes the material in glass. If Energy is as serious about addressing tank leaks as the agencies indicated when their agreement was announced, it should be reflected in the Plan.

4. Energy's Plan should maintain a focus on problem areas in the River Corridor.

Although Energy states its intention to complete cleanup in the River Corridor, close to the Columbia River, the actual cleanup remains far from reaching this goal. While Energy has accomplished significant cleanup milestones, such as removing degrading spent nuclear fuel from the K Basins, major challenges remain in the River Corridor. Contamination in the 100 and 300 areas continues to impact groundwater, with some contamination reaching the Columbia River. Additionally, past cleanup actions have not fully remedied the problems they intended to address, such as persistent uranium contamination in the 300 area and excessive strontium pollution in groundwater in the N Area.

Energy proposes to address some of these challenges in the coming five years, and we urge Energy to clean up the River Corridor to protect future unrestricted use of the areas near the Columbia River, as much as possible. Over-reliance on monitored natural attenuation will undermine the ability of Tribal people and others to use the River Corridor in the future, and we urge Energy to strongly prefer remove-treat-dispose cleanup activities where possible and other strategies—where they are proven effective—that remove contamination from the environment. Energy should actively seek Tribal and public input at early stages of cleanup decisions. Lastly, we support the Plan's focus on addressing highly contaminated soil under the 324 Building, but we remain concerned that the Plan may dispose of potential high-level or transuranic waste improperly at the Environmental Restoration and Waste Disposal Facility (ERDF) and not fully reflect emerging challenges with respect to lethal levels of cesium and strontium contamination in soil.

5. Conclusion

Hanford cleanup is critical for protecting and restoring the Columbia River, the lifeblood of the Northwest. We urge Energy to press harder to obtain adequate funding for Hanford cleanup and to complete cleanup activities as safely, efficiently, and quickly as possible—including the removal of highly radioactive capsules from WESF. Hanford's toxic and

radioactive contamination continues to pose a risk to groundwater and the Columbia River, and the Plan does not go far enough to address the risks.

Please see the attached petition signed by 588 Columbia Riverkeeper members and supporters who urge Energy to fully fund cleanup and accelerate efforts to address tank waste leaks. Thank you for considering these comments.

Sincerely,

Dan Serres, Conservation Director, Columbia Riverkeeper

Comment Petition Text (588 signers listed in table below)

Dear U.S. Department of Energy, Washington Department of Ecology, and U.S. EPA,

The Columbia River is the lifeblood of the Pacific Northwest, and radioactive and toxic pollution at Hanford pose a major long-term threat to the people and environment who will rely on the Columbia River near and downstream for Hanford.

High-level waste tanks at Hanford will continue to release radioactive and toxic pollutants into the soil. This pollution is destined to reach Hanford's groundwater and the Columbia River unless the U.S. Department of Energy accelerates and implements cleanup actions for leaking tanks.

I urge the Department of Energy and Congress to fully fund the cleanup necessary to protect soil, groundwater, and the Columbia River from high-level waste tank leaks. Additionally, I urge Energy, Ecology, and EPA to find ways to accelerate the schedule for addressing tanks B-109 and T-111, as well as other leaking tanks.

Thank you,