



October 14, 2020

Comments submitted via email to [BPlantEECA@rl.gov](mailto:BPlantEECA@rl.gov)

U.S. Department of Energy  
Attn: Dana Gribble  
P.O. Box 450, H6-60  
Richland, WA 99352

RE: Public Comment of Hanford Challenge on the B-Plant Engineering Evaluation Cost Analysis

To Whom It May Concern,

Thank you for the opportunity to submit comments on the B-Plant Engineering Evaluation Cost Analysis (B-Plant EE/CA) which compares three Non-Time Critical Removal Actions for B-Plant under CERCLA, with the goal of stabilizing structures that are degrading until a final Record of Decision is made for B-Plant in the 2032 time-frame. Hanford Challenge appreciates the Department of Energy for extending the comment period and for providing a briefing on the B-Plant EE/CA to the River and Plateau committee of the Hanford Advisory Board in September 2020.

Hanford Challenge is a non-profit, public interest, environmental and worker advocacy organization located at 2719 East Madison Street, Suite 304, Seattle, WA 98112. 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, and who are therefore affected by conditions that endanger human health and the environment.

A key concern of Hanford Challenge with the Non-Time Critical Removal Actions reviewed in the B-Plant EE/CA, is the plan to grout the 291-B ventilation system which includes six vaults containing loaded HEPA filters, containing two-thirds of the total radioactive inventory for B-Plant. This includes an estimated 227,000 curies of radioactive strontium-90 (71,000 curies) and cesium-137 (156,000 curies).

The EE/CA does not provide sufficient rationale for grouting the system vaults. We do not believe the HEPA filter vaults should be grouted. Additionally, we would like to see DOE evaluate other stabilization media that may make it easier to characterize and remove this waste at a later date.

Hanford Challenge believes the HEPA filter waste may be high-level waste or Greater than Class C waste due to the estimated curie content in filters A-E as estimated in *Table 2-3. B Plant Radioactive Material Inventory* p. 2-18. Hanford Challenge echoes concerns stated in Oregon Department of Energy's comment letter on the B-Plant EE/CA about the lack of an identified disposal pathway for this waste if it is found to be high-level waste or Greater than Class C waste during characterization.

Hanford Challenge does not want to see the HEPA filter vaults grouted and abandoned in place. Hanford Challenge supports the Department of Energy in identifying aging Hanford site infrastructure and preventing against contaminant releases at sites that are awaiting final cleanup decisions, however we are troubled by what appears to be increasing trends towards grout now and deal with it later decision making. The concern being that dealing with the grouted waste later will result in leaving it in place instead of removal, treatment, and disposal in an appropriately protective site as required by the waste characteristics.

We are also concerned that the plan to demolish the above ground portion of the 291-B ventilation system may create a pathway for airborne release of contamination. The close proximity of the NTCRA work with the Waste Encapsulation Storage Facility presents an additional concern about impacts to co-located workers and cleanup sites. Hanford Challenge believes DOE should prioritize moving the WESF capsules into dry storage sooner and complete that work prior to commencing NTCRA work on B-Plant. Hanford Challenge would also like to see DOE apply lessons learned from the spread of contamination at the Plutonium Finishing Plant to the work plan/action memorandum for the B-Plant NTCRA demolition to ensure protection of workers and the environment.

The sequencing of stabilization and cleanup work at B-Plant is concerning given that a Record of Decision (ROD) has yet to be made for B-Plant. Additionally, the parallel and potentially overlapping processes of the Non-Time Critical Removal Action for B-Plant and the Remedial Investigation/Feasibility Study in support of the B-Plant ROD is confusing and creates uncertainty about the impacts the proposed NTCRA will have on the RI/FS. As stated above, Hanford Challenge is concerned that by grouting the highly-contaminated HEPA filters in 291-B cell, other alternatives for final remediation may be overlooked, rendered more difficult, or impossible. Hanford Challenge believes that beginning the Remedial Investigation/Feasibility Study for B-Plant in 2021, instead of waiting until 2026, would result in better characterization, would eliminate the confusion resulting from parallel but related processes on B-Plant, more complete information, and greater implementability of cleanup actions with an increased likelihood of community acceptance.

During the presentation and discussion of the B-Plant EE/CA at the Hanford Advisory Board's River and Plateau Committee meeting in September 2020, board members identified that it would be useful to see a timeline of canyon boots-on-the-ground cleanup and cleanup decision making paperwork milestones for PUREX, REDOX and B-Plant to better understand the sequencing of canyon cleanup work.

On page 4-1, the B-Plant EE/CA states that the ongoing remedial action of 221U Canyon is meant to be a pilot project of remediation for other canyon buildings. Hanford Challenge is aware that related cleanup work on the Hanford site often sets precedent for similar work down the line. We would like to better understand how much precedent will be set by grouting the below Canyon Deck level of 221U Canyon and eventually installing an engineered barrier over the remnants of the canyon.

Hanford Challenge echoes concerns brought by the Oregon Department of Energy in its comments on the B-Plant EE/CA about waste disposal pathways and determination for Central Plateau wastes which were produced directly by the reprocessing of spent nuclear fuel. We are also unclear how or whether DOE proposes to make waste classification determinations to ensure that the fraction of waste that qualifies as high-level waste is disposed of appropriately, according to the Nuclear Waste Policy Act. We also believe that a broader conversation about potential Central Plateau end-states following cleanup is warranted and could help build support for a fully-funded and compliant cleanup.

Hanford Challenge comments are summarized below. We echo concerns raised by the Oregon Department of Energy and the Hanford Advisory Board:

1. **Don't Grout HEPA Filter Vaults:** The EE/CA provides insufficient rationale for grouting the 291-B system in place, including the six HEPA filter vaults. It is important to Hanford Challenge that the yet-to-be-determined future remedial action for the HEPA filter vaults can easily be Removal, Treatment, and Disposal. It is unclear if grouting will in fact impact the ability to characterize the HEPA filters to determine if they are HLW or GTCC waste or if grouting will make RTD impossible, more expensive, or more dangerous. Ultimately, Hanford Challenge wants the HEPA filter vaults to be characterized and safely removed, treated, and disposed.
2. **Provide 291-B Stabilization Options Other than Grout to Make Future RTD Easier:** An alternative should be provided that looks at other void space media for the 291-B ventilation system that could provide more flexibility for removal as we await the undecided cleanup plan that will be set in the final B-Plant Record of Decision.

3. **“Grout Now Deal with It Later” Is Concerning Trend**: Hanford Challenge is concerned with a trend towards interim stabilization actions that favor grouting now and dealing with the final remediation later. We do not want these grouted sites to ultimately be abandoned in place instead of removed.
4. **Begin the Remedial Investigation/Feasibility Study in 2021**: Begin the Remedial Investigation/Feasibility Study to support the B-Plant ROD in 2021, instead of waiting until 2026. This would result in better characterization of B-Plant contamination, would eliminate the confusion resulting from parallel but related processes on B-Plant, provide more complete information, and result in greater implementability of cleanup actions with increased community acceptance.
5. **No to 221U Canyon Setting Precedent for B-Plant ROD**: Hanford Challenge is concerned about the ongoing remedial action of 221U Canyon which as we understand it, is meant to be a pilot project of remediation for other canyon buildings. How much precedent will be set by the decision to grout the below Canyon Deck level of 221U Canyon and install an engineered barrier over the remnants of the canyon? We certainly do not want to see over 227,000 curies of radioactivity at B-Plant grouted and left in place with a barrier over top.
6. **Share Canyon Cleanup Work Sequencing**: Hanford Challenge would like to see a timeline of canyon cleanup work and cleanup decision making paperwork milestones for PUREX, REDOX and B-Plant to better understand the sequencing of canyon cleanup work.
7. **Make Sure Waste Is Characterized Before Going to ERDF**: Ensure that waste resulting from the NTCRA is appropriately characterized to ensure that it meets the disposal requirements for the Environmental Restoration Disposal Facility.
8. **Coordinate NTCRA Actions with Soil Remediation Elsewhere at Hanford**: Concerns have been raised by EPA and Ecology through the Hanford Advisory Board about clean fill being used around demolition debris at ERDF, leading to clean soil taking up space unnecessarily at ERDF. Ensure that ERDF space is used efficiently by coordinating REDOX, PUREX, and B-Plant NTCRA demolition with soil remediation elsewhere on the Hanford site.
9. **Protect the Hanford Workforce, Prioritize WESF Before Action at B-Plant**: Hanford Challenge is concerned about the potential for airborne contamination release during the proposed demolition as part of the NTCRA for B-Plant. Hanford Challenge urges DOE to prevent a situation similar to the contamination that spread during the PFP demolition that impacted co-located projects, resulted in preventable worker exposures, and delayed important cleanup work. DOE should move up the timeline to get WESF capsules into dry storage and wait until that work is complete prior to doing

demolition work at B-Plant. Hanford Challenge would also like DOE to publicly share its plan for demolition to ensure protections are in place to prevent airborne release of contamination during the demolition.

10. **Address State and Community Acceptance Criteria**: Hanford Challenge had trouble finding any discussion about State and community acceptance in the EE/CA. We believe this should be addressed.
  
11. **Central Plateau Disposal Principles Need to be Addressed**: Hanford Challenge echoes concerns voiced by the Oregon Department of Energy that there needs to be a discussion about the broader context of disposal of highly-radioactive wastes on the Central Plateau. Questions remain about how/whether DOE proposes to make waste classification determinations to ensure that the fraction that qualifies as high-level wastes is disposed appropriately. For example: residual sludge in the hexone tanks (276-S-141, 246-S-142), vitrified tank waste in PUREX tunnel 2, the "German Logs," Z-9 crib soils (both in-place and mined), soil contaminated with leaked high-level tank waste in the tank farms, and soil contaminated with high-level tank waste under the 324 Building. We believe that this discussion fits within the larger topic of Central Plateau cleanup end-states. It is important to discuss the inventory of Central Plateau wastes, including the tank farms, and how much waste still needs a disposal pathway. This would be a great topic for public engagement and could help build support for a fully-funded and compliant cleanup.

Thank you for considering our comments.

A handwritten signature in blue ink that reads "Tom Carpenter". The signature is fluid and cursive, with the first name "Tom" and last name "Carpenter" clearly distinguishable.

Tom Carpenter, Executive Director