



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 HANFORD/INL PROJECT OFFICE
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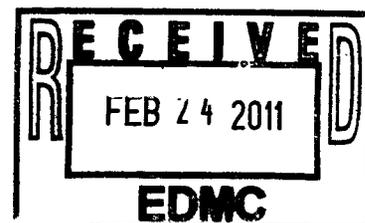
Re: EPA Comments on *Feasibility Study for the Plutonium/Organic-Rich Process Waste Group Operable Unit: Includes 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units, DOE/RL-2007-27, Draft C* 0093674

Dear Mr. Holten:

The U.S. Environmental Protection Agency (EPA) has reviewed the referenced document. In the last version of the document, there was no reference to DOE's *Hanford Site Cleanup Framework* and *Central Plateau Cleanup Strategy*. However, these documents are heavily referenced in this draft. The current language suggests that these documents represent an agreement between the Tri-Party agencies. Since these are DOE documents, their emphasis should be removed. EPA acknowledges that these are tools developed by DOE, but does not accept the content of those tools being discussed in CERCLA documents.

In a letter to DOE dated May 28, 2009, EPA stated that "the process waste pipelines should be included as part of the waste site to which they are attached." This was again emphasized in a letter dated November 10, 2009. The pipelines should not be identified as their own waste group. As EPA has requested over the course of revising this document, the pipelines will be dispositioned during remediation of their associated waste sites. It appears a large amount of time and resources was spent in addressing the pipelines as their own waste group when EPA had not requested this be done.

It is important to EPA that this Feasibility Study for these OUs be issued in a timely fashion in order to facilitate the development of a Record of Decision by the end of the fiscal year. We look forward to working jointly with DOE to achieve this goal.



Enclosed are EPA's comments. If you have any questions, please contact me at 509-376-4919.

Sincerely,



Emerald Laija
200-PW 1,3, and 6 Project Manager

Enclosure

cc: Stuart Harris, CTUIR
Gabriel Bohnee, Nez Perce Tribe
Russell Jim, Yakama Nation
Greg Sinton, DOE
Arlene Tortoso, DOE
Brenda Jentzen, Ecology
John Price, Ecology
Ken Niles, ODOE
Susan Leckband, HAB
Administrative Record

General Comments

- 1) EPA does not expect nitrate and Tc-99 to pose an unacceptable risk based on fate and transport modeling results. There are high levels of uncertainty associated with how well the samples and data represent contaminant conditions in the vadose zone. Issues include limited data and sampling of highly contaminated areas which are not representative of contamination throughout the waste site.

Replace references to "post-ROD sampling" with language stating that sampling will be conducted during remediation to verify contaminant levels and associated risk. This will require edits to Appendix D and I.

- 2) The discussion of common components between alternatives is unclear. Clarify as follows:
Common Elements
 - Institutional controls, long-term monitoring, and maintenance will be required where residual contamination remains above cleanup acceptable risk levels.
 - Soil Vapor Extraction will be required to continue at 216-Z-1A Tile Field, 216-Z-9 Trench, and 216-Z-18 Crib.
 - Waste sites remediated under RTD will be sampled to confirm that cleanup goals have been achieved.
 - Tc-99 and nitrate will require additional sampling to verify contaminant levels and associated risk.
 - Sludge will be removed from the Settling Tanks and then they will be grouted.
 - No action is required at 216-Z-8 French Drain and 216-Z-10 Injection/Reverse well.

Delete bullets five through seven which discuss the 216-Z-9 Trench, pipelines, and well decommissioning.

- 3) RTD is not the correct term for the Settling Tank alternative. Rename the remedy "Sludge Removal and Tank Stabilization." Revise Table ES-2 and any related text to reflect this change.
- 4) The pipelines in these OUs are presented as a separate waste site group (ex. Table 1-1). The pipelines will be dispositioned as part of the remediation of their associated waste sites and should not be called out separately. Additionally, any reference to an RTD depth of 10 feet for pipelines needs to be stricken from the document. EPA had not agreed that the biologically active zone is limited to 10 feet bgs or to an alternate point of compliance for protection of human health and the environment.
- 5) Clarify in the Executive summary that DOE-RL pays for transporting transuranic waste to WIPP, but WIPP disposal costs are paid through a different budget.
- 6) Delete the discussion on DOE's *Hanford Site Cleanup Framework* and *Central Plateau Cleanup Strategy*. The current language suggests that this is an agreement between the Tri-Party agencies.

- 7) SVE is described as lasting for 10 years for costing purposes (ex. Table 6-1). While it is understandable that a period of time had to be selected to determine approximate cost, it is not acceptable to use the assumption that RTD activities would not commence until SVE is concluded. DOE has a deadline (M-16 major milestone) to send transuranic waste to the Waste Isolation Pilot Plant (WIPP) by 2024. Revise the document to clarify RTD activities may occur concurrently with SVE.
- 8) Appendix F discusses future risk reduction for different RTD alternatives. Using the abbreviations of Cwaste, Ccutting, Cgarden, etc., is understandable for equations, but is confusing when used in the main text. Revise the text and figures to replace use of these abbreviations with their actual meaning.

Specific Comments

1. Page x, lines 5-14 and Page xi, lines 1-2: Delete the discussion on DOE's *Hanford Site Cleanup Framework* and *Central Plateau Cleanup Strategy*. The discussion on the TPA change package for the Central Plateau should be retained.
2. Page 1-7, lines 6-22: Revise this section as follows:
"DOE has prepared the *Hanford Site Cleanup Completion framework* (DOE/RL-2009-10) which describes DOE's vision for completion of the Central Plateau cleanup. The 200-PW-1, 200-PW-3, and 200-PW-6 OUs are located within the Inner Area. A Tri-Party Agreement Change Package (**cite change package number and fact sheet**) identifies a total of 12 upcoming cleanup decisions for the Central Plateau."
3. Page 1-11, second bullet: Appendix H needs to be edited to only provide background and historic information on the pipelines. A different set of alternatives for the pipelines is not required since they will be dispositioned as part of the remediation of their associated waste sites.
4. Page 2-1, lines 7-10: See previous general comment on pipelines. Delete these lines.
5. Page 2-2, line 7: Determine if this should say "inline" or "online".
6. Page 2-80, bullets: Provide the titles for PNNL-17839 and SGW-39385.
7. Page 3-1, Figure 3-1: It is difficult to read this figure. Replace with the figure used in the last draft of this document.
8. Pages 3-7 and 3-8, Section 3.2.2.1: See previous comments on discussion of DOE documents. Revise this section as follows and include a figure of the Hanford Site and Central Plateau (such as on page 20 of the draft Proposed Plan associated with these OUs).

“Central Plateau Exposure Scenarios

DOE issued the *Hanford Site Cleanup Framework* and *Central Plateau Cleanup Strategy* (DOE/RL-2009-81) as tools to develop cleanup alternatives. The Central Plateau is divided into three major sections as seen in Figure XX:

1. **Inner Area:** Central portion of the Central Plateau that will be used for waste management and containment of residual contamination. The boundary will be defined by waste disposal decisions already in place and anticipated future decisions. The Inner Area footprint should be as small as practicable.
2. **Outer Area:** Area of the Central Plateau outside the Inner Area and adjacent to the land along the Columbia River known as the River Corridor. The Tri-Parties plan to clean up this area based on criteria comparable to the River Corridor.
3. **Groundwater:** Contaminant plumes underlying the Central Plateau waste sites. The goal will be to contain contaminant plumes to protect the Columbia River and to restore groundwater to beneficial uses, if practicable.

In accordance with CERCLA requirements, cleanup levels will be established commensurate with the potential future use to ensure protection of potential future users and ecological receptors. Cleanup levels for waste sites within the Inner Area will be consistent with the anticipated future land use of “industrial.” Cleanup levels for the Outer Area will be established to enable unrestricted surface uses comparable with the River Corridor and consistent with the anticipated future land use of “conservation-mining.”

9. Page 3-9, lines 4-6: Delete this sentence. This suggests that there is agreement between the agencies on a 10 foot biologically active zone. The 15 ft standard point of compliance is sufficient.
10. Page 3-11, Figure 3-2: Clarify what the “X’s” mean. It is unclear if this means there is a high level of uncertainty or something else.
11. Page 3-13, lines 18-31: See previous comment on this topic. Revise as follows:
“Based on the effect that these uncertainties have on the magnitude and direction of model results used to characterize the risks to groundwater from vadose zone contamination, sampling of nitrate and technetium-99 should be conducted during remediation to verify contaminant levels. This sampling would provide representative data on contaminant plume geometry, concentration gradients, and contaminant mass. Reducing uncertainties associated with contaminant source term release include the addition of new scientific information in revisions to the conceptual models and laboratory evaluations of contaminant release from site-specific contaminated vadose zone soils to corroborate the conceptual model revisions.”
12. Page 3-24, line 11: Revise to state “A screening level for technetium-99 will be established.”

13. Page 3-24, line 19: Revise to state “A screening level for nitrate will be established based on WAC 173-340-747 (3)(a).”
14. Page 3-25, SVE and endpoint discussion and Page 5-5, Section 5.2.1.2: This text describes how the future shutdown criteria for the existing SVE system will be developed. These criteria should be developed and included in this document. The criteria should identify at what carbon tetrachloride levels SVE would demonstrate protectiveness of groundwater and be considered effective and complete. A figure should be created that shows the current distribution and concentrations of carbon tetrachloride in the vadose zone.
15. Page 5-4, lines 8-10: Delete these lines regarding pipelines.
16. Page 5-4, Institutional Controls Section: The ICs are described as a common component for each remedial alternative. However, there is no information on how the ICs will differ for each remedy. Clarify if the ICs are different for each alternative or if they are similar. If the differences in ICs affect cost, then this should also be explained under the cost for each remedial alternative. Table 6-1 on page 6-13 does not specify the different costs associated with differences in ICs.
17. Page 5-5, Section 5.2.1.4: Delete “Post-ROD” from the section title. This section is a new addition from the last draft. Clarify if lines 1-19 on page 5-7 are appropriate for the FS or if they should be discussed in a future RD/RA workplan.
18. Page 5-6, line 9: Change “additional sampling conducted post-ROD” to “additional future sampling.”
19. Page 5-6, Table 5-2: Delete this table.
20. Page 5-7, Section 5.2.1.5: Revise as follows:
“Process waste pipelines typically made of vitrified clay pipe or SST conveyed the liquid wastes to the 200-PW-1, 200-PW-3, and 200-PW-6 OU waste sites. Any process waste pipeline associated with these waste sites will be remediated in conjunction with the associated waste site.”
21. Page 5-20, Figure 5-3: Explain why RTD options A, 3D, and 3E are “NA” for the Cesium-137 waste sites in 200-PW-6.
22. Page 6-13, Table 6-1. Explain whether this sampling cost is the driver behind the increased cost estimates or if it is due to the inclusion of WIPP disposal.
23. Page 8-4, line 40: Replace the term “post-ROD soil sampling” with “sampling during the remedy implementation.” Delete the second use of “post-ROD.”