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10-AMCP-0038

NOV 23 2009

Mr. D. A. Faulk, Program Manager
Office of Environmental Cleanup
Hanford Project Office
U.S. Environmental Protection Agency
309 Bradley Boulevard, Suite 115
Richland, Washington 99352

Dear Mr. Faulk:

BC CRIBS AND TRENCHES EXCAVATION-BASED TREATABILITY TEST REPORT, DOE/RL-2009-36, DRAFT A

This letter provides the U.S. Department of Energy Richland Operations Office's (RL) responses to the U.S. Environmental Protection Agency's October 19, 2009, comments regarding the BC Cribs and Trenches Excavation-Based Treatability Test Report, DOE/RL-2009-36, Draft A. Upon confirmation of agreement on proposed changes to the report, RL will finalize the report as Revision 0.

If you have any questions, please contact me, or your staff may contact Briant Charboneau, of my staff, on (509) 373-6137.

Sincerely,

Matthew S. McCormick, Assistant Manager
for the Central Plateau

AMCP:GLS

Attachment

cc w/attach:
G. Bohnee, NPT
L. Buck, Wanapum
R. H. Engelmann, CHPRC
D. L. Foss, CHPRC
S. Harris, CTUIR
J. A. Hedges, Ecology
M. J. Hickey, FFS
M. N. Jaraysi, CHPRC
R. Jim, YN
S. L. Leckband, HAB
R. A. Lobos, EPA
K. Niles, ODOE
R. E. Piippo, CHPRC
J. B. Price, Ecology
J. G. Vance, FFS
Administrative Record (200-BC-1)
Environmental Portal

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EPA Comments on BC Cribs and Trenches Excavation-Based Treatability Test Report, DOE/RL-2009-36, Draft A		
Number	Comment	Response
1	Page **1-1 1. 1** Issues **EPA/DOE** disagreement over initial FFS/PP was left out. Implementability and short-term effectiveness of the evaluated remedies was a point of contention because of the elevated worker dose estimates.	Accept. The following sentence was added as the first sentence in section 1.1: "The implementability and short-term effectiveness of alternative remedies arose as an issue during regulatory agency review of the FFS because of disagreement on worker dose estimates. "
2	Page **3-19 3.2.3** Lessons Learned and Discussion The addition of using the magnetically adhered lead impregnated silicone rubber shielding on the side of ERDF containers should be added to the recommendations. The use of additional shielding when needed would facilitate filling of the ERDF containers buy making the mixing not so crucial and time consuming as a hot spot just over transportation limits could be remedied by application of the additional shielding.	Accept. The following bullet was added to the "other equipment-related recommendations": • "Consider use, as needed, of magnetically-adhered, lead-impregnated silicone rubber shielding on the side of ERDF containers. For example, additional shielding could be applied to remedy a hot spot just over transportation limits, thereby reducing the requirement to remedy the hot spot through additional down-blending."
3	Page **3-22 3.3.2** Results Please note the top and bottom elevations and depths from ground surface of the crib structure in the narrative.	Accept. The following paragraph was added as the third paragraph in section 3.3.2: "The elevation of the ground surface at the location of the 216-B-14 Crib is 742 ft (227.8 m). The elevations of the top and bottom of the 216-B-14 Crib structure are 736 ft (224.3 m) and 733 ft (223.4 m), respectively. Thus, the depths from ground surface to the top and bottom of the 216-B-14 Crib structure are 6 ft (1.8 m) and 9 ft (2.7 m), respectively."
4	Page **3-22** to **3-29 3.3.2** Results The data from 299-W13-1 is inconsistent with the rest of the boreholes. Potential theories of why this data is so different are not explained (i.e. preferential path, clastic dike, borehole installation technique, etc.). Please explain why this data does not follow the trend of shallow pushes.	Accept in part. The treatability test was designed to determine the extent of the near-surface contamination in the 216-B-14 Crib. Although not required by the treatability test plan, the 299-E13-1 borehole was logged during the treatability test using the total gamma logging tool to collect data for comparison to previous logging using the spectral gamma tool (DOE/RL-2009-36, page 3-21). These logging data were included in the treatability test report for completeness. The depth of the

		inventory estimate was limited to an elevation of 716 ft, or about 26 ft below ground surface. It appears likely that at least part of the contamination observed in 299-E13-1 is the result of migration along the casing. However, the apparent inconsistency between the data from 299-E13-1 and the rest of the boreholes will be addressed in the conceptual model in the revised feasibility study rather than in the treatability test report. The following sentence was added on page 3-21: "The primary purpose was to establish comparability with existing log data."
5	Page 4-1 4.1 Conclusions, first bullet The potential dose to workers was generally "less than half' than was predicted in the FFS.	Accept. The discussion provided in section 3.2.2.5 includes a range of estimates for excavation of the entire trench that is based on assumed fractions of activity excavated during the test. The only "hard" data is that associated with the dosimeters worn by workers; the activity excavated has considerable uncertainty. Considering that the Table 3-6 values for individual operations dose are significantly less than half those predicted by the FFS, the conclusion (in section 4.1 and in the Executive Summary) was changed to "less than half" as recommended: "The actual potential dose to workers generally was less than half that predicted in the FFS (DOE/RL-2004-66)."
6	Page 4-1 4.1 Conclusions, last paragraph Excavation of the remnant crib structure is the only way to completely remove all potential for subsidence as completely removing all voids with controlled density fill for this type of structure would be very difficult. Excavation of the structure should be added to the text.	Accept in part. Introducing control density fill for this type of structure can be difficult. However, CDF was used to alleviate subsidence concerns at the 216-S-13 Crib. Dynamic compaction of areas with potential subsidence concerns is a standard technology to improve soil density and produce acceptable subsidence. The second sentence of the last paragraph on page 4-1 was changed to: "However, field work at other sites determined that the potential for subsidence can be addressed using standard technologies such as dynamic compaction or controlled density fill. Excavation of the structure could also be used as a means to