Comments on DOE/RL-2004-05, Engineering Evaluation/Cost Analysis for the Plutonium Finishing Plant Above-Grade Structures

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General Comments

While this document contains a lot of good descriptive material on the various facilities included in the Plutonium Finishing Plant general area, it fails in its mission as an engineering evaluation and as a cost analysis for the reasons discussed below. One gets the impression that the document was assembled from unrelated spare parts, without a strong effort to assure internal consistency.

The various activities postulated to be performed within each of the proposed alternatives for disposition of PFP are not described and presented in a consistent manner to promote comparison of the alternatives. It would seem that the final end states of Alternatives 2, 3, and 4 would be essentially the same, with the contaminated equipment and materials removed and the structures demolished to grade. However, the descriptions of activities for Alternatives 2 and 3 do not include any discussion of the final clean-out and demolition of the facilities. Thus, it is not possible to determine exactly what activities were costed for each of those alternatives. There is no transparency in the cost estimates, they simply appear in Table 4-2 with no underlying support. There should be appendices that contain the details of the development of the bases for the cost estimates, e.g., the estimated waste volumes, and the staff labor estimates for D&D activities, as well as the buildup of the various cost elements into the categories that are summarized presented in Table 4-2. There are also inconsistencies in Table 4-2, e.g., there are no costs shown for final D&D for Alternative 1 (the executive summary says D&D occurs). Because a similar final D&D activity is postulated to occur for Alternatives 2, 3, and 4, one would expect the waste disposal costs for those alternatives would be very similar, but Alternative 4 costs are about a factor of 3 less.

There is no information included in the report regarding the spatial distributions of residual plutonium throughout the various facilities, nor regarding the anticipated spatial distributions of radiation dose rates throughout the facilities. Does this lack of information imply that none of these facilities have yet been characterized? If so, how can reasonable estimates be made of the volumes of contaminated material to be generated during D&D? In any event, there is no evidence of consideration of the costs associated with work in radiation zones and contaminated areas in the presented cost data. There is also no discussion of the potential consequences of some of the equipment, glove boxes, and ductwork requiring remote-handling during the removal and packaging efforts.

There is no good technical reason to defer clean-out and removal of the plutonium-contaminated facilities in their entirety, including the concrete slabs and below-grade structures, and any sub-grade contaminated piping and soils. It would seem to make better sense to deal with everything within the boundaries of the PFP area in a continuous project, ending with an area that has been cleaned to unrestricted release levels. There is no incentive for attempting use of Monitored Natural Attenuation in an area contaminated with plutonium, considering the 24,000-year half-life of Pu-239.

An approach, that has been appearing in the EE/CAs for the 200 Areas, is to leave slabs on grade and associated below-grade structures in place, along with all of the sub-grade contaminated elements, until some future area-wide final cleanup takes place. This approach makes one suspicious that the intended final action is to simply place caps over everything and forget it. That result is unacceptable. If these facilities were licensed under the USNRC, cleanup to an unrestricted release level of 25 millirem per year would be required, including removal of all contaminated underground systems.

On the report structure: the placement of all tables and figures at the end of their respective chapters is a great convenience for those preparing the document, but is an abomination for the readers of the document. Placing tables and figures as far as 20 pages away from their call-out in the text destroys the continuity of thought of the text. The tables and figures should appear immediately following their call-outs in the text.

Specific Comments

Executive Summary: The costs estimated for each alternative should appear in the ES, perhaps by adding the costs in parentheses in the bulleted list of alternatives, or in a new table.

Page ES-1, next to last ¶,: states that Alternative 1 (No Action) includes a final D&D action. This action is not mentioned in the text and is not costed for that alternative.

Table 1-1: Suggest replacing "(2 sheets)" in the title line with '(page x of y), i.e, 1 of 2, 2 of 2.

Chapter 2: Figure 2-2 is okay to display a general view of 200 West Area, but it is inadequate for illustrating the locations of the various structures in the PFP area within 200 West. A third figure should be added that shows each of the structures under consideration, indicating which have already been removed and which remain to be removed, which are clean and which are contaminated, and where any contaminated piping and surface spills are located relative to the structures.

Table 2-1: Footnote 1 should be added to the name of each applicable component , not the entire column.

Table 2-2: Suggest replacing "(x sheets)" with "(page x of y)" in the title line.

Table 2-3: Suggest inserting "(cubic meters)" in the title line, and delete footnote 2.

Page 4-1, Section 4.1, 1st ¶, 1st line: states that there will be no waste generation in Alternative 1, conflicting with the statement in the executive summary that says final D&D will occur .

Section 4.3: Suggest breaking out the elements of Alternative 2 as bullets, as is done in Sections 4.4, 4.5, 4.6, and 4.7, adding the final D&D step if appropriate.

Page 4-4, Section 4.4, line 6: add 'ed' to "transition", add 'd' to "describe".

Page 4-5: Add the final D&D step to the bulleted list.

Page 4-6: Add the final D&D step to the bulleted list.

Page 4-7: Add the final D&D step to the bulleted list, if appropriate.

Table 4-1: Suggest replacing "(x sheets)" with "(page x of y)" in the title line.

Table 4-2: Separate the costs given for Removal Activity under Alternative 2 into its Removal and S&M components, to be consistent with the breakdown under the other alternatives.

Table 5-1: Suggest replacing "(x sheets)" with "(page x of y)" in the title line.