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**EDMC****Comments on the BC Controlled Area Waste Site EE/CA**February 24, 2008  
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While I generally support the goal and intent of this EE/CA, I found it to be lacking in important information to support the choice. The Executive Summary does not present all of the elements of interest to a decision-maker in a concise format (i.e., a simple table containing the information of interest for each alternative). I have developed an example table for your consideration, attached to this letter. The ES states (as does the rest of the document in many places) that removal to a depth of 6 inches is sufficient to achieve unrestricted use status. However, for purposes of costing Alternative 3, soil removal to a depth of 12 inches of soil was assumed, thereby doubling the volume to be removed and disposed. This discrepancy needs to be resolved in a transparent manner.

The alternatives considered were rather stark, **do nothing, do very little, do everything**. With a little imagination, some additional alternatives could have been developed that combined some elements of RTD and NMA in ways to minimize the size of the areas disturbed and the depth and volume of soil requiring removal and disposal. For example, use the spot cleaning system for all of the hot spots in both Zone A and Zone B. Then, perhaps the simplest solution would be to irrigate the area thoroughly to drive the surface contaminants into the ground sufficiently to eliminate the surface shine dose and to prevent wind-blown dispersion of the surface contaminants, and apply Alternative 2 (MNA) with some on-going annual vegetation control. Were any such possibilities ever considered?

Little information is provided on the magnitude of the risks to human health and the environment arising from the three alternatives in the EE/CA. The reader is referred to WMP-18647 Rev.0, where the measurements of activity as a function of depth are discussed. The data presented are rather minimal, and are even suggested to be somewhat questionable. It would seem that some more recent measurements of activity versus depth at the center of the hottest spots in Zone A would be appropriate, before selecting the depth for removal.

No discussion of the post-closure scenarios that would generate exposure to humans was provided, only a generalized statement that a maximum allowable surface dose rate of 15 mrem/year for unrestricted use was selected, based on EPA guidance. However, the Preliminary Remediation Goals (PRGs) are chosen to be twice that unrestricted use level, with the final remedial action goals yet to be determined. Considering the rather limited amount of data on concentration versus depth for the contaminants, and having no final remediation goal to meet, the selection of a removal depth of 1 foot could be overly conservative.

I could find no description of the types of removal actions proposed in either the EE/CA or in the supporting reference documents. What type and size of equipment would be used to remove the soil, from the total removal area (A), or the spot removal area (B)?

What kinds of occupational exposure would occur during these activities? How would the observational approach be applied to these removal actions? It is difficult to compare alternatives when the processes proposed to be used are not described or discussed. Is there a feasibility study somewhere that discusses this information? If so, that document should be prominently referenced.

The referenced cost document D&D-35703 spent a lot of space talking about using discounted costs. That approach, as derived from EPA/540/R-00/002, which was in turn derived from OMB Circular A-94, Rev. 1, is totally inappropriate for estimating costs of projects at Hanford, because Hanford funding is only available on a year-by-year basis, and no reserve funds are placed into an interest-bearing account to pay for future expenditures, hence no discounting is appropriate. A more appropriate approach would be the addition of future escalation to future constant-dollar expenditures. Thus, future expenditures in constant dollars will increase over time, reflecting the general cost inflation over the delay periods.

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The presentation in D&D-35703 is not clear about what activities would follow the Alternative 3 (RTD) efforts, for purposes of estimating the cost of those future activities. It would seem that only those activities necessary to fulfill the annual CERCLA Five-Year Review would be required. Some clarification on this topic would be helpful.

I have heard that without the soils delivered from this project, ERDF would have to go out and obtain clean fill soil to satisfy the permit conditions for operation. The benefit of avoiding having to go out and excavate clean soil for ERDF should be included explicitly somewhere in the cost estimate. I could find no indication that any consideration of this benefit was included in the development of the disposal costs for Alternative 3.

I observed a major improvement in this document over previous similar documents. As recommended by the HAB (Advice 202), the on-line location of each of the referenced reports was given, when available. This improvement made bringing up a reference document very much easier, and allowed the reader to read the original source documents. This capability was very important in this EE/CA because so much of the detailed information supporting the conclusions was just referenced, but not provided in the report.

**Attachment 1**  
**Suggested Makeup of a Summary Table for the Executive Summary**

	Alternative 1 (No Action)	Alternative 2 (MNA)	Alternative 3 (RTD)
Area Remediated (hectares/acres)			
Soil removal depth (cm/inches)			
Volume of soil removed (m <sup>3</sup> /tons)			
Occupational Dose to Completion (mrem)			
Occupational Man-years to Completion			
Estimated Cost to Completion (millions \$)			

There may be additional information that would be useful to display in such a table, for quick review of the choices. The information presented in the existing ES is too widely scattered throughout the text to be easily scanned.