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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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May 15, 1995

Ms. Arlene Tortoso  
U. S. Department of Energy  
P.O. Box 550, MSIN: A5-15  
Richland, WA 99352

Dear Ms. Tortoso:

Re: Comments on *100-HR-2 Limited Field Investigation Report* for the *100-HR-2 Operable Unit* (DOE/RL-94-53, Draft A) 38651

The following are comments related to the *100-HR-2 Limited Field Investigation Report* for the *100-HR-2 Operable Unit* (DOE/RL-94-53 Draft A).

If you have any questions, please feel free to contact me at (509) 736-3014.

Sincerely,

David Holland  
Unit Manager  
Nuclear Waste Program

DH:skr

cc: Administrative Records: 100-HR-2  
Kevin Oates, EPA



COMMENTS ON THE  
"LFI REPORT FOR THE 100-HR-2 OPERABLE UNIT"  
DOE/RL-94-53 DRAFT A

1. Executive Summary, Page ES-1, paragraph 4, sentence 4:  
Refer to the calculated risk value or the determining risk threshold value and delete the term "medium" in reference to human health risk. The use of qualitative risk characterization values, as shown in 2.10.1.3, are not acceptable.
2. Table ES-1:  
Use calculated values or a value range. Do not use the high, medium, etc., terminology.
3. Section 1.1, paragraph 2:  
Add the following: "These two human health scenarios assume a future restricted use of groundwater and agriculture at these sites. In an expanded frequent use scenario, the percent contribution of the groundwater ingestion and crop ingestion pathways to the incremental cancer risk (ICR) of several COPC's are significant (>90% of total ICR), and have not been included in this QRA." Reference: Process Document Draft B, Appendix B *Sensitivity Analysis Report*.
4. Section 2.1, paragraph 2, first sentence:  
Suggest changing "burial ground" to "Operable Unit" or "burial grounds."
5. Section 2.3.4, paragraph 3, sentence 2:  
Spell out or add "PPE" to the acronym list.
6. Section 2.3.5, paragraph 2:  
How will this area be addressed? Please explain the pathway for addressing this site, will this area be listed as a low priority site and addressed with the others? If included with the low priority sites, it should be listed with the others in Section 1.2.2, paragraph 2.
7. Section 2.6, paragraph 3:  
Replace "impacts" with "conditions" in the first sentence.
8. Section 2.7.2:  
Were tumbleweeds sampled? What were the results of the referenced sitewide surveillance and facility monitoring programs? Please provide this information, if available.

9. Section 2.10:

A discussion is needed on "protection of groundwater," as required by MTCA for contaminants left below 15 feet. Source units remedial action decisions must include consideration of future impact to groundwater from vadose contaminants.
10. Section 2.10.1.1, paragraph 3:

Change sentence three to indicate assumed restrictions; such as, ". . . residential receptor living at each waste site with agricultural and groundwater use restrictions in place."
11. Section 2.10.1.1, paragraph 6:

Delete the current sentence and insert, "Since the groundwater ingestion exposure pathway was not used, no modeling of contaminant transport through the vadose zone to the confined aquifer was considered."
12. Section 2.10.1.1, paragraph 11:

Delete the first sentence. The purpose of the LFI is to characterize, not determine land use. This sentence is redundant.
13. Section 2.10.1.3, paragraph 3, sentence 1:

Change to read, ". . . COPC ICR contributions from the three selected pathways."
14. Section 2.10.1.3, paragraph 4:

Use calculated values or relative values, explaining their qualitative origins and limitations, rather than the terms "high, medium, low, and very low." This applies to Table 2-4.
15. Section 2.10.1.4.1:

In this section or Section 2.10.1.4.3, add a paragraph explaining the uncertainty associated with limited exposure pathways for contaminants whose primary risk pathways were not considered (primarily groundwater and crop ingestion). This results in an underestimation of risk and should be mentioned as an additional perspective to the recurring emphasis this chapter has on overestimation of risk.
16. Section 2.11:

This whole section needs to be rethought and rewritten reflecting current regulatory approach. A description of the MTCA based cleanup standard for nonradionuclide contaminants and the anticipated 15 mRem for radionuclides

should be included. Also, a discussion is needed on the possibility of a negotiated "action level" for sites where cleanup standards are not technically feasible nor economically practical. We need to discuss this section.

18. Table 2-8:  
Suggest adding Toxic Substance Control Act requirements for PCB's.
19. Table 2-9:  
Where are the laws protecting Native American Rights included?
20. Section 3.1.7, paragraph 2:  
Delete qualitative terms, "medium, low, and very low." Please check other site descriptions and make the appropriate changes.
21. Section 3.1.7, paragraph 3:  
The relationship between the nature of the solid waste and relevance to the inhalation and ingestion pathways is helpful. What is the relationship between Ni-63, which is listed at  $2.63E+02$  curies, and the potential for exposure via the groundwater and crop ingestion pathways, which account for 98% of the ICR for this contaminant.
23. Section 4.1.2:  
Add a paragraph or statement including the uncertainty associated with excluding the groundwater ingestion and crop ingestion pathways.
24. Table 4-1:  
Put in calculated values or relative values.
25. Section 5.1.1, paragraph 1, Table 5-1:  
Use calculated values or a value range. Do not use the high, medium, etc., terminology.
26. Table 5-3:  
Check MTCA Method B values against the 1/95 and 8/31/94 updates.