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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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January 21, 1993



Mr. Eric Goller
US Department of Energy
P.O. Box 550 A6-95
Richland, WA 99352-0550

Dear Mr. Goller:

Re: 100 Area Soil Washing Treatability Test

Enclosed are Ecology's comments on the Treatability Test. The comments submitted earlier on the DOW also apply.

If you have any questions, please call me at (206) 493-9367.

Sincerely,

Richard B. Hibbard, P.E.
Hanford Project
Nuclear and Mixed Waste Management Program

RBH:jr
Enclosure

cc: Beckey Austin, WHC
Julie Erickson, USDOE
Dennis Faulk, EPA
Larry Goldstein, Ecology
Jeff Phillips, Ecology



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COMMENTS ON THE 100 AREA SOIL

WASHING TREATABILITY TEST PLAN

DOE/RL-92-51 DRAFT A

1. ES, Page iii & iv, last paragraph and first paragraph respectfully:

Deficiency: As stated in paragraph 1 "The objective of this treatability study is to evaluate the use of physical separation systems . . ." A cost/benefit analysis will help determine the economic viability of the treatment but is outside the scope of this study and should not be used to make decisions regarding the use of technologies in pilot scale applications or at remediations. Cost is one of the nine criteria that remedial actions should be exposed to. But because the benefits of complying with environmental regulations are difficult to quantify, all cost comparisons should be applied to alternatives reaching an equivalent standard of performance or reaching the cleanup level.

Recommendation: Delink this plan with the decisions commonly made in a Feasibility Study. Remove all references to cost/benefit analyses. Comply with the agreement reached between the three parties involving the phase 2 test that the phase 2 would be performed unless the test was technically impossible.

2. ES, Page iv, last paragraph:

Comment: Remedy selection should be performed in the specific operable unit Feasibility Study's. The use of pilot scale treatability tests should not be based on the selected remedy for the site. The selection of the remedy for the site should be based in part by the pilot scale treatability test.

3. Section 1.3.1.1, Page 9:

Comment: The remediation of hazardous and radioactive chemicals on Superfund sites are governed by the excess health risk. When a risk is detected that is greater than 1×10^{-4} to 1×10^{-6} for CERCLA or 1×10^{-5} to 1×10^{-6} for MTCA depending on site specific concerns, action is necessary. It is my understand that the 4 mrem/yr dose is greater than 1×10^{-6} health risk and the 25 mrem/yr dose is much greater than the 1×10^{-6} health risk. Because MTCA has the authority to, but has not yet developed, chemical specific cleanup standards for radionuclides, USDOE should be aware that they are taking some risk in selecting performance goals that may not be selected in the ROD.

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Recommendation: Due to the uncertainty associated with radionuclide cleanup levels, Ecology recommends the most conservative levels be selected for this treatability test performance levels (i.e., 4 mrem/yr).

4. Table 1-1, Page 10:

Comment: The ^3H molecule has been identified as a soil contaminant of concern in the 116-D-1B trench. It is my understanding that ^3H is found in either a liquid or vapor state. If this is true, why is ^3H a soil contaminant of concern?

Recommendation: Clarification of the chemicals of concern would strengthen this section.

5. Table 1-2, Page 12:

Comment: See comment on Table 1-1 above.

6. Section 2.1, Page 13:

Deficiency: The objective of this treatability test is incorrect. Section 5.1.1 of (EPA 1988) states that "Treatability studies are conducted primarily to achieve the following: • Provide sufficient data to allow treatment alternatives to be fully developed and evaluated during the detailed analysis and to support the remedial design of a selected alternative • Reduce cost and performance uncertainties for treatment alternatives to acceptable levels so that a remedy can be selected". A cost-benefit analysis is not necessary to determine the effectiveness of this treatability test.

Recommendation: Revise the objective of this test to be consistent with CERCLA.

7. Section 4.5.2, Page 29:

Deficiency: At what point will the detailed test plan be made available for regulatory review?

Recommendation: State the target date this report including SAP will be made available for regulatory review.

8. Section 7.1.2, Page 32:

Deficiency: Any waste generated outside the Area of Contamination may not be returned to the Area of Contamination and managed in accordance with EII 4.3. All waste generated by leaving the Area of Contamination must be managed in accordance with EII 4.2.

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Recommendation: Revise the text to address the management of waste residuals.

9. Appendix A. Page A-8:

Deficiency: References to the 100-BC-1 and 100-DR-1 Work Plans are not the most current versions.

Recommendation: Replace the references with Draft D the approved the public review draft.

REFERENCES:

(EPA 1988), Environmental Protection Agency, "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" EPA/540/G-89/004, US Environmental Protection Agency, Washington, D.C.

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Subject: 100 AREA SOIL WASHING TREATABILITY TEST

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