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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**REGION 10**
1200 Sixth Avenue
Seattle, Washington 98101

Feb. 6, 2003

Reply To
Attn Of: ECL-113

Kathleen E. Hain, Manager
Environmental Restoration Program
Department of Energy
Idaho Operations Office
850 Energy Drive
Idaho Falls, Idaho 83401-1563

Re: EPA Comments on INEEL Draft Final Waste Area Group 5 Phase II Remedial Design/Remedial Action Work Plan

Dear Ms. Hain:

Attached are the EPA comments on the Draft Final Waste Area Group 5 Phase II Remedial Design/Remedial Action Work Plan. If you have any questions, please contact me at 206-553-8633.

Sincerely,

Richard Poeton,
WAG 5 Manager

cc: T. Livieratos, IDEQ, 1410 N. Hilton, Boise, ID 83706
D. Koch, IDEQ, 1410 N. Hilton, Boise, ID 83706
Carol Hathaway, DOE-ID
W. Pierre, ECL-113

EPA Comments on INEEL Draft Final Waste Area Group 5 Phase II Remedial Design/Remedial Action Work Plan.

1. Section 1.3.1, last 2 paragraphs:
Sites that do not meet unrestricted (1E-4) risk at the present time (but are expected to meet unrestricted risk levels within the 100 year remediation timeframe) need institutional controls until they do. The approach taken (where sites exceeding 1E-6 in 100 years are assumed to exceed 1E-4 now) is an acceptable shorthand that should be conservative. Based on the second to last paragraph, the three landfill sites require institutional controls, but the last paragraph is unclear as to why these three sites require institutional controls.

2. Section 4.1:
I think the ROAs for groundwater should include achieving MCLs.

3. Section 4.1, last paragraph:
If soil is cleaned to basalt, but contamination in excess of risk-based levels is left in the basalt, then institutional controls will be needed in order to meet RAOs.

4. Table 4.2:
I think MCLs should be listed as ARARs for groundwater.

5. Appendix J:
The table J-3 footnotes include a statement about using Cs-137 as a surrogate for Ag-108m in CAP88 runs. A more detailed presentation of the derivation of CAP88 input values is needed for review. For instance, it is unclear whether the 9.4E-7 Ci input includes the Cs-137 from the site (present at 47 pCi/g based on the RI/FS), or whether it only represents the "Cs-137 equivalent" for the Ag-108m.

Cs-137 is a reasonable surrogate (with appropriate corrections) for Ag-108m in CAP88, but deriving an equivalent Cs-137 concentration for CAP88 input based on the total risk estimate (largely due to external exposure) may not be the best approach. This is because of the importance of the inhalation pathway to CAP88.

To convert Ag-108m concentration into equivalent Cs-137, I would use the ratio of HEAST inhalation slope factors for Ag-108m and Cs-137. Since the inhalation slope factor for Ag-108m is 2.24 times that of Cs-137+D, each pCi of Ag-108m is equivalent to 2.24 pCi of Cs-137. Once the Ag-108m is converted to an equivalent Cs-137 concentration, I would add that to the actual measured Cs-137 concentration to get the Cs-137 value that would be used to derive CAP-88 input.

Co-60 was also a contaminant at ARA 12 and should also be included in the CAP88 run.