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STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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Dirk Kempthorne, Governor
C. Stephen Allred, Director

November 22, 2002

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

RE: **Technical Review Comments for the Waste Area Group 4 Remedial Design/Remedial Action Work Plan, CFA-04 Pond Mercury Contaminated Soil, Operable Unit 4-13 (DRAFT), DOE/ID-11028, Rev. B, September 2002**

Dear Ms. Hain:

The Idaho Department of Environmental Quality (IDEQ) has completed its review of the above referenced document, and provides the enclosed comments. IDEQ received the draft on September 30, 2002, and the document was scheduled for a 45-day review. Comments were submitted electronically to the DOE on November 14, 2002.

If you have any questions regarding these comments, please contact me at (208) 373-0556.

Sincerely,

A handwritten signature in cursive script that reads "Clyde Cody".

Clyde Cody
INEEL WAG 4 Manager
IDEQ Technical Services Group

cc/jc

cc: Carol Hathaway, USDOE-ID
Kathy Ivy, USEPA
Daryl Koch, IDEQ-WMRD

Enclosure

General Comments

1. Please briefly discuss the basis for the additional volume of soil requiring excavation and removal under the revised FRG of 8.4 mg/kg. The original FRG as stated in the OU 4-13 ROD, 0.50 mg/kg, resulted in a conservative estimate of 6,338 m³ mercury contaminated soils that would have to be removed. The revised FRG, and the results of the pre-remediation sampling, now indicate that as much as 8,032 m³ may have to be removed, 1,694 m³ more than originally estimated. It is assumed that the pre-remediation sampling revealed substantially more contaminated soils, a surprise in light of a higher FRG. Therefore, a more concise discussion is requested as to the basis, or location in the pond, for this additional volume of soil.
2. There are several references to backfilling all excavations to pre-construction grade and contouring and revegetating to match the surrounding terrain. The terrain surrounding the pond is essentially flat but the ESD is eliminating the need to backfill the pond to "surrounding grade", which would also seem to be the same as "surrounding terrain". These remarks appear somewhat contradictory and confusing. An additional discussion would be helpful in terms of describing the final post-remediation appearance of the pond.
3. Please discuss the reason(s) why the pre-remediation sampling (Appendix D) did not duplicate the higher levels of mercury (as high as 439 mg/kg, 1992) found in previous sampling events, and almost no samples appear to have exceeded even 100 mg/kg (Table 6-1, Appendix D). Is confidence increased, as a result of the pre-remediation sampling, that there will be no need to address soils exceeding the 260 mg/kg regulatory limit?

Specific Comments

1. **Section 2.6, Page 2-5, second bullet**

Please discuss the storage options being considered if ICDF is unavailable for disposal of the mercury-contaminated soils.

2. **Ibid., last paragraph**

Please name the source of the "EPA information" cited in the fifth sentence.

3. **Appendix C, Air Emissions Calculations, Section 2.1, Table 2, Page 4**

The values in the "Soil Volume" column cannot be cross-checked with the data presented elsewhere in the document. The soil concentrations can be checked in Appendix D, which should be footnoted, but the applicable sections of the document with volumes should also be noted so that the volumes can be checked independently.

4. **Appendix D, Pre-Remediation Sampling Summary Report, Section 5.7, Page D-27**

The discussion states that Nb-95 was identified in one depth interval but that this result is questionable because Cs-137 was not detected in the same interval. Please clarify the rationale if any for discounting Nb-95 in this sample, other than its association with Cs-137.

5. **Ibid., Section 5.9, Bullets 1 & 2, Page D-30**

These bullets show more recovery from the cored interval than would be expected based on the length of the interval cored. Please provide a short footnote to inform the reader of how more sample was recovered than is expected from the drilled depth.

6. **Ibid., Section 5.14, Pages D-34 & -35**

The description of the analytical results states the FRG is exceeded in the first two intervals down to 2 ft. What is not stated is that the FRG also is exceeded in the depth interval of 4.0 to 5.0 ft. Please correct the text.

7. **Appendix E, Waste Management Plan, Section E3, Table E-1, Page E-9**

The footnote at the bottom of the table states "If the waste does not meet the WAC, and alternative on-Site treatment and disposal locations are not available, then off-Site waste management options may be pursued." Please change "may" to 'will'.

8. **Ibid., Section E4, Bullet 3, Page E-10**

It does not appear that there will be any liquid waste from this action so it is recommended that this bullet be deleted.