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APPROVAL OF THE FINAL OU 4 FEASIBILITY STUDY REPORT AND PROPOSED PLAN (CONDITIONAL APPROVAL)

05/09/94

USEPA DOE-FN
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COMMENTS

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

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REPLY TO THE ATTENTION OF:

HRE-8J

Mr. Jack R. Craig
United States Department of Energy
Feed Materials Production Center
P.O. Box 398705
Cincinnati, Ohio 45239-8705

RE: Approval of the Final OU 4 Feasibility Study Report and Proposed Plan

Dear Mr. Craig:

The United States Environmental Protection Agency (U.S. EPA) has completed its review of the Final Operable Unit (OU) 4 Feasibility Study (FS) Report and the Proposed Plan (PP) and Responses to Comments (RTC). The RTC have adequately addressed the majority of U.S. EPA's previous comments. However, there are a few risk assessment comments that must be addressed.

In future FS/PP documents the discussion of threshold criterion of overall protection of human health and the environment should be limited to whether or not protectiveness is achieved and how, rather than discussing degrees of protectiveness.

Therefore, U.S. EPA approves Final OU 4 FS and the PP reports pending incorporation of responses to the attached comments into the documents. U.S. DOE must incorporate these responses and submit changed pages within thirty (30) days receipt of this letter.

Please contact me at (312) 886-0992 if you have any questions.

Sincerely,

James A. Saric
Remedial Project Manager
Technical Enforcement Section #1
RCRA Enforcement Branch

Enclosures

cc: Tom Schneider, OEPA-SWDO
Pat Whitfield, U.S. DOE-HDQ
Don Ofte, FERMCO
Jim Theising, FERMCO
Paul Clay, FERMCO

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: May 4, 1994

SUBJECT: Review of the Response to Comments for the Final FS Report, Operable Unit 4, Fernald Environmental Management Project (FEMP), Fernald, OH, December 1993

FROM: Pat Van Leeuwen, Toxicologist PVL
Technical Support Unit

TO: Jim Saric
Project Manager

I have reviewed the responses to my comments on sections of the Feasibility Study that address risk assessment issues for Operable Unit 4 of the Fernald Environmental Management Project (FEMP), dated February 1994. My evaluation of the responses follows.

The review of Appendix K, Comprehensive Response Action Risk Evaluation (CRARE), will be presented separately.

If you have any questions on these comments or any section of the risk assessment, please contact me at 886-4904.

1) Page 2-4, lines 16 and 27/Page 2-14. line 15/Appendix D.2.0
The response to this comment is acceptable.

2) Page 2-10, line 27
The response to this comment is acceptable.

3) Page 2-13, lines 1-7
The response to this comment is acceptable.

4) Page 2-14, line 6
The response to this comment is acceptable.

5) Page 2-10, line 1/page 2-14, line 13
The response to this comment is acceptable.

6) Page 2-16, lines 15-17 and throughout FS

The response to this comment is acceptable.

7) Table 2-5, page 2-19
The response to this comment is acceptable for this Operable Unit.

8) Page 2-22 through 2-23; calculations
The response to this comment is acceptable.

9) Page 2-23, lines 24-27
The discussion in Section 2.2.3.1 and Table 2-12 are sufficient. The response to this comment is acceptable.

10) Page 2-23, lines 28...
The response to this comment is acceptable.

11) Page 2-23, lines 11-15
The response to this comment is acceptable.

12) Table 2-6, pp 2-26 thru 2-30
a) The response to this comment is acceptable.
b) The response to this comment is acceptable.
c) The response to this comment is acceptable.

13) Page 2-31, lines 10, 11
The comment is no longer applicable; the calculation section was removed.

14) Page 2-31, lines 12-17
The response to this comment is acceptable.

15) Appendix D, Table D.3-4, page 3-13
a) The response to this comment is acceptable.
b) The response to this comment is acceptable.

16) Page D-3-19, section D.3.2.2.3
The The response to this comment is acceptable.

17) Original Table D.3-6
Although the past two "Actions" indicate a change in the SA values presented for the Dermal Contact While Bathing pathway in Table D.3-5, I still do not see this change reflected in the report. The CT values are still listed for the RME exposures. Perhaps these corrections had not yet been made in the RI Final Baseline Risk Assessment tables which were used here. Also,

footnote "h" is incorrect (this was also reported in the RI review); the references to p 8-17, p 8-7, Table 10-1, etc. are not consistent with the document listed as EPA 1992 (a?). Correct reference also.

The Dermal Contact with Soil/Sediment parameter values presented in the same table are acceptable.

18) Table D.3-9, page D-3-35

a) The response to this comment is acceptable.

b) The response to this comment is acceptable.

c) The response requires some further explanation. If a chemical is retained as a COC in one medium, it should be retained in all media if multiple pathway exposures to the same chemical by any receptor are likely. Explain how the multiple pathway exposure assessment was affected in this Operable Unit assessment.

d) The RfD for thallium appears plausible.

e) The response to this comment is acceptable.

19) Page D-3-34, lines 14-17

The response to this comment is acceptable. However, please note that the Exposure Assessment Group (EAG) will be issuing additional RfC values; many of these will not convert to a RfD value using this generic equation. The issue should be revisited in future OU reports.

Additional A) Page 2-26, line 27

The need for a correction was circumvented by a text change.

Additional b) Page D-3-12, line 10

The response to this comment is acceptable.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: May 5, 1994

SUBJECT: Review of Response to Comments, Final Feasibility Study Report for Operable Unit 4, Appendix K, Comphrensive Response Action Risk Evaluation (CRARE), Fernald Environmental Management Project (FEMP), Fernald, OH, February 1994.

FROM: Pat Van Leeuwen, Toxicologist
Technical Support Unit

TO: Jim Saric
Project Manager

I have reviewed the response to comments for Appendix K of the Feasibility Report for Operable Unit 4, which constitutes the Operable Unit CRARE.

If you have any questions on these comments, please contact me at (312) 886-4904.

1) Land Use Scenarios
The response to this comment is acceptable.

2) Other Consistency Issues
I did not see any revision of the text in Section K.4, but feel it is not worth the effort to belabor the issue.

3) Population Demographics
The response to the comment is acceptable.

4) Use of MCLGs to eliminate COCs
The response to U.S. EPA (Saric) CRARE comment # 8 is acceptable.

5) HI Benchmark Value
The response to this comment is acceptable.

6) Farmer Soil Ingestion Rate
The response to the comment is acceptable.

7) Selection of PRG for U-238
The response to the comment is acceptable.

8) Recreational User Definition
How will the information in the position paper "Expanded Trespasser Receptor Scenario", included as Attachment A be included in this report?

9) Tables, Section K.4.0
a) The response is acceptable.
b) The response is acceptable.
c) The response is acceptable.

10) Discussion of the RME
The response to this comment is acceptable.

11) "Home-builder" Receptor
The response to this comment is acceptable.

12) Toxicity Values
The response to this comment is acceptable.

13) Toxicological Profiles
The inclusion to the Lead Tox Profile is acceptable.

Regarding the elimination of PAHs in the final screening, based on degradation, the April 11, 1994 Memorandum from ECAO and Attachment: "Risk Assessment Issue Paper: Review of Degradation of PAHs in Soil", raise serious questions about the validity of this elimination. The use of degradation half-lifes obtained under laboratory conditions to eliminate other chemicals using this screening process is likewise subject to the same criticism. It is very disconcerning to me that the only chemicals retained in the CRARE as COCs are those for which there is no degradation data! Surely there is something wrong with the process.

I also detected some concern from ECAO over whether a 100-year degradation period was reasonable for the site, and suggest that perhaps this issue needs to be revisited. Since carcinogens are considered to have no threshold, a 70 year exposure is not necessary to produce an adverse effect; a short exposure to residual levels of some site carcinogens might be all that is needed to produce the response. Noncarcinogens might also produce adverse health effects from short term exposures. Perhaps the effect of exposure to average concentrations of residual chemicals over successive future time periods would provide a better evaluation.