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CONDITIONAL APPROVAL OF THE OU 4 REMEDIAL INVESTIGATION FINAL REPORT

01/06/94

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

JAN 06 1994

REPLY TO THE ATTENTION OF:

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

HRE-8J

RE: Conditional Approval of the OU 4 Remedial Investigation Final Report

Dear Mr. Craig:

The United States Environmental Protection Agency (U.S. EPA) has completed its review of the revised Operable Unit (OU) 4 Remedial Investigation (RI) Final Report. The United States Department of Energy (U.S. DOE) has adequately addressed the majority of U.S. EPA's comments with appropriate responses and incorporated them into the text of the RI Report. However, there are a few required changes to Appendix D of the document. These required changes to Appendix D are attached to this letter.

Although these changes do not have a major impact on the risk calculations for OU 4, they do affect the overall consistency between OU reports. It is disturbing that this report could not be finalized given the amount of time spent by both agencies discussing risk assessment issues. These repeated reviews do not improve the cleanup process. U.S. EPA recommends that U.S. DOE develop a file of all changes made in each OU report, and that these changes be reviewed and incorporated into each new OU report for consistency. U.S. EPA should not have to review a document, which has not corrected a previously noted error, and subsequently provide the same response again and again. Incorporating this recommendation would save both agencies time and money. As U.S. DOE develops new OU reports they should strive to incorporate information gained from other OU reports. This would expedite review by all agencies and improve the cleanup process.

Therefore, U.S. EPA hereby approves the revised OU 4 RI Final Report pending incorporation of the attached comments into Appendix D of the RI Report. U.S. DOE must incorporate the attached changes into the OU 4 RI Report within thirty (30) days receipt of this letter. Only those tables cited in the comments and the references should be submitted for further review.

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

Sincerely,

James A. Saric
Remedial Project Manager

Enclosure

cc: Graham Mitchell, OEPA-SWDO
Pat Whitfield, U.S. DOE-HDQ
Jim Theising, FERMCO
Paul Clay, FERMCO

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: December 29, 1993

SUBJECT: Review of Remedial Investigation Report for Operable Unit 4, Fernald Environmental Management Project (FEMP), Fernald, OH, November 1993

FROM: Pat Van Leeuwen, Toxicologist
Technical Support Unit

TO: Jim Saric
Project Manager

I have reviewed the risk assessment portion (Appendix D) of the "Final" Remedial Investigation Report for Operable Unit 4 of the Fernald Environmental Management Project (FEMP), dated November 1993. I have focussed primarily on responses to my comments as no summary of additional text changes was provided, although I have stumbled across some. Please continue to request that **future changes in all documents be indicated in the review copy by shading or bold print.** This would greatly improve future reviews.

I still have a few comments on this document. Most refer to the choice of parameter values or references or such. These changes do not have a major impact on the risk calculations for this OU; however, they do affect the overall consistency we are trying to maintain between OU reports and in some cases, are just out-and-out errors. Some changes which were incorporated in this version only confounded existing problems. I am concerned that we are not able to finalize this document after all this time and feel that more time should be spent in "getting it right" rather than just "getting it out". These repeated reviews do not improve the process.

My recommendation is that U.S. DOE develop a **file of all changes** made in each OU report, and these **changes be reviewed and incorporated in each new OU report** for consistency. U.S. EPA should not have to answer the same questions or provide the same response again and again. These recommendations would save both agencies time and money.

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

Original Comment # 12, Table D.3-11

The SA parameter values for the Dermal Contact pathways are acceptable.

There are still problems with some parameter values or their references in Table D.3-11:

. I did not understand the use of 40 days/year for the Dermal Contact with Surface Water for the Trespass scenario. The explanation in section D.3.3.4 makes no sense. I had requested a description of the scenario and justification of the parameter value in the text, and recommended an exposure scenario of 1 hr/event x 52 events/year x upper-bound SA for partial body exposed. Somehow the basis for the 52 days/year trespasser exposure scenario has gotten lost. The Region 5 value is based on trespass onsite 3 days/week for the months of June, July and August (when children are not in school) = 36 days plus 1 day/week for the months of April, May, September and October = 16 days, for a total of 52 days/year. The reference to frozen water in Paddys Run does not appear to offer an explanation for the use of 40 days/year instead of the 52 days/year used in other exposure pathways.

. Add basis of 52 days/year to footnote "d".

. Revise explanation in section D.3.3.4 and perhaps the EF value used in this pathway.

. All parameter values (except the IR value) for Incidental Ingestion of Surface Water should be identical to the values for the Dermal Contact with Surface Water pathway, as the latter exposure is the basis of the Incidental Ingestion exposure.

. In the above two pathways, why is EV used instead of ET in the Dermal Contact pathway? When EV is used, it should be used to describe frequency of exposure as "events/year" instead of "days/year" (EF), since "events/day" as no meaning in this exposure scenario. In such cases, only EV (events/year) and ED (years) are needed. Please review these labels in this Table and in Table D.3-12, and the labels in the equations in which they were applied, and arrive as some consistency on this issue.

. Omit footnote "p"; footnote "o" is adequate for both pathways.

. In footnote "f", explain basis or reference text explanation.

.Footnote "g" is incorrect in the baseline risk assessment. It refers to methodology to develop non-site specific PRGs. Use instead footnote "h", the correct reference for default parameter values for the baseline risk assessment, and eliminate footnote "g".

Original Comment # 13, Table D.3-12

There are still problems with footnotes here:

. See note for Table D.3-11 regarding use of EV for ET.

. Regarding reference EPA 1988d in footnote "d", we are not familiar with this document, which I suspect was replaced by the Exposure Factors Handbook, reference 1990e. (This refernece is incorrect and should be 1989().) Why not use the updated, and more available, document as the source?

. In footnote "g", explain basis or reference text explanation.

. Regarding footnote "h", see Table D.3-11 correction for footnote "g".

. In section D.3.3.1, referred to in footnote "p", the balance of the daily exposure over the 50 year period is not described (250 days/year x 0.1 gm/day), leaving a question as to how the total lifetime soil ingestion of 4560 gm was determined.

Original Comment # 15, Table D.3-14

There are a number of remaining problems with references in these footnotes:

. There now appear to be three (3) references listed as EPA 1993d: (1) footnote "b" reference, listed here but not in reference section, (2) footnote "c" reference, listed here but not in reference section, and (3) "Drinking Water Regulations and Health Advisories", as shown in reference section. This is sloppy! Please make the appropriate changes.

. In footnote "a", the reference to EPA 1992d is incorrect. The correct reference is EPA 1992e, page 5-38!

. Footnote "e" refers to reference EPA 1992h. There is no such reference in the reference section!

. In footnote "f", why is the Werl Treatability Database used as the source of the values for "log K ow" instead of 1992e? The Werl Database values differ from the updated values used to calculate the predicted Kp values in the 1992e and later Dermal Exposure guidance prepared for use in Superfund risk assessments. We expect that the most recent information will be used when provided. Please explain.

. I came across the reference (EPA 1992g) to the RATS teleconference May 13, 1992 notes. I do not see where this reference was used in this report; never-the-less, the reference should be removed from the reference section. The RATS teleconference notes are internal, informal discussion notes and carry no weight-of-influence on any matter.

Original Comment # 18, Cobalt toxicity values

We still seem to have a communication gap here. The corrections provided in this draft are totally incorrect. The ECAO issue paper cited provides guidance on an oral RfD for cobalt. Please change footnotes "e" and "f" as shown below.

For oral RfD:

"e" EPA 1992(), ECAO "Risk Assessment Issue Paper for: Provisional RfD for Cobalt (7440-48-4)", dated 12/92; basis for value is the upper range of average intake for children.

For inhalation RfD:

"f" EPA 1990c, Memorandum from Pei-Fung Hurst, ECAO, Cincinnati, OH, to R. Riccio, U.S. EPA Region III, "Subject: Toxicity of Cobalt (Halby Chemical, Wilmington, Delaware)", dated October 9, 1990.

New Comment # 7 Section D.4.2, Tox Profiles

The change is acceptable; however, the request was to merely put the name of the chemical in the header in capital letters or in bold print, as underlining was used extensively in this section and does not serve to distinguish one chemical profile from another.