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APPROVAL OF THE OU 3 TREATABILITY STUDY WORK PLAN

02/09/94

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

REPLY TO THE ATTENTION OF:

FEB 09 1994

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

HRE-8J

RE: Approval of the OU 3 Treatability Study Work Plan

Dear Mr. Craig:

The United States Environmental Protection Agency (U.S. EPA) has completed its review of the United States Department of Energy's Operable Unit 3 Treatability Study Work Plan. Although, the Work Plan provides general information, it provides enough detail to meet the objectives.

Therefore, U.S. EPA approves the Work Plan pending incorporation of the attached comments.

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

Sincerely,

James A. Saric
Remedial Project Manager

Enclosures

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

(HALL (5)
PARTIAL
ACTION RESPONSE
TO R-0639
(7373)

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TECHNICAL REVIEW COMMENTS ON THE OPERABLE UNIT 3 TREATABILITY STUDY WORK PLAN

GENERAL COMMENT

Commenting Organization: U.S. EPA Commentor: Saric
Section #: NA Page #: NA Line #: NA
Original General Comment #1
Comment: The body of the work plan discusses treatability studies only in general and references other documents to the point of not containing worthwhile information itself. The U.S. Department of Energy (U.S. DOE) should revise the work plan to present important and applicable information in a summary format.

SPECIFIC COMMENTS

Commenting Organization: U.S. EPA Commentor: Saric
Section #: A Page #: A-2 and A-13 Line #: NA
Original Specific Comment #1
Comment: Information presented on the dry heat volumetric decontamination technology seems to contradict information presented on the dry heat surface decontamination technology. The surface technology text states that dry heat has been successful in removing polychlorinated biphenyls (PCB), but the volumetric technology text states that dry heat is untried for removing PCBs. U.S. DOE should resolve this apparent discrepancy.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: B.2.2 Page #: B-6 Line #: NA
Original Specific Comment #2
Comment: Figure B.2.1 depicts the mixing system for the ABCOV method. The figure shows what seems to be a closed-loop, four-tank system, but the figure does not show input and output locations or materials. U.S. DOE should revise the figure to show these items.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: C.2 Page #: C-7 Line #: 28
Original Specific Comment #3
Comment: The text states that the test variables will be considered effective if the concentration of uranium or thorium is reduced by 80 percent. Although 80 percent reduction would be substantial, the test material would

still be considered a low-level waste. U.S. DOE should justify the 80 percent reduction criterion.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: C.4.5 Page #: C-33 Line #: 1 through 4
Original Specific Comment #4
Comment: The text states that the optimal operating conditions will be selected for each medium based on performance and cost benefit. U.S. DOE should explain how performance and cost will be weighed against each other to determine the optimal conditions.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: E.1 Page #: E-5 Line #: 20
Original Specific Comment #5
Comment: The text states that the number of waste blends will "not exceed the minimum number required to stabilize all OU3 wastes." This statement indicates that U.S. DOE will develop the fewest number of waste blends possible that can incorporate all Operable Unit (OU) 3 wastes. As such, U.S. DOE would not actually optimize the waste blends; it would only prepare waste blends until all OU3 wastes have been included in at least one waste blend. U.S. DOE should clarify this statement in the text.

Comments on the "Operable Unit 3 Treatability Study Work Plan - December 1993 Draft"

U.S. EPA Region 5 Radiation Section

January 1994

Commenting Organization: U.S. EPA, Region 5, Radiation Section
Section #: 3.1 Page #: 3-2 Line #: 11 Code: C
Original Comment #: 1
Comment: Please define "background" for surface contaminated media, how background is to be determined, the frequency of determining background, and what procedures and instrumentation are to be used to determine release of materials.
Response:
Action:

Commenting Organization: U.S. EPA, Radiation Section
Section #: 3.1 Page #: 3-2 Line #: 11 Code: C
Original Comment #: 2
Comment: Please define "release without restrictions" in the context of surface contaminated and volumetrically contaminated media. Please explain the basis of "release without restriction" of formerly contaminated materials as opposed to release that restricts use to DOE facilities or NRC-licensed facilities.
Response:
Action:

Commenting Organization: U.S. EPA, Radiation Section
Section #: 3.1 Page #: 3-2 Line #: 11 Code: C
Original Comment #: 3
Comment: Please provide a copy of the *FERMCO Material Release Policy* to the following address: Gene Jablonowski, U.S. EPA (AT-18J), 77 West Jackson Blvd, Chicago, IL 60604-3590.
Response:
Action:

Commenting Organization: U.S. EPA, Radiation Section
Section #: 3.1 Page #: 3-2 Line #: 15 Code: C
Original Comment #: 4
Comment: Please explain the role of the commercial recycler in their handling of residual surface contaminated materials. Is the commercial recycler expected to decontaminate materials further prior to recycling and/or restrict use of the formerly contaminated recycled product? Does the process of recycling contaminated materials provide separation of radiological contaminants from the material media, or can waste from the recycling of contaminated material be considered radioactive?
Response:
Action:

Commenting Organization: U.S. EPA, Radiation Section
Section #: 11.3 Page #: 11-3 Line #: 22 Code: C
Original Comment #: 5
Comment: Please explain the basis for using Figure III-1 of DOE Order 5400.5, "Derived Concentration Guides (DCGs) for Members of the Public from Ingested Water and Inhalation Resulting in 100 mrem/yr," in establishing free release criteria of laboratory samples. Also, since Figure III-1 of DOE Order 5400.5 only applies to ingested fluid and inhaled air, explain what will be the basis for free release of solid samples, or whether all solid samples be returned to FEMP.
Response:
Action: