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

FERNALD
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REPLY TO THE ATTENTION OF:

OCT 22 1997

Mr. Johnny W. Reising
United States Department of Energy
Feed Materials Production Center
P.O. Box 398705
Cincinnati, Ohio 45239-8705

SRF-5J

RE: DMEPP: January 1, 1997,
Through June 30, 1997

Dear Mr. Reising:

The United States Environmental Protection Agency (U.S. EPA) has completed its review of the United States Department of Energy's (U.S. DOE) South Plume removal action system evaluation report for January 1, 1997, through June 30, 1997. This document meets the requirements of the Design, Monitoring, and Evaluation Program Plan (DMEPP) and summarizes the monitoring and operational activities, and assesses the effectiveness of the South Plume recovery well field.

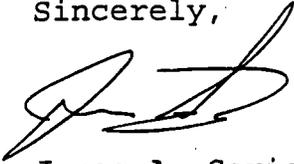
There appears to be a discrepancy between the modeled groundwater capture zone and the capture zone indicated by actually field measurements. The actual field data indicates that the recovery field is not capturing the entire portion of the South Plume.

U.S. EPA has attached comments on this document and requests U.S. DOE immediately address this issue.

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

Sincerely,



James A. Saric
Remedial Project Manager
Federal Facilities Section
SFD Remedial Response Branch #2

Enclosure

cc: Tom Schneider, OEPA-SWDO
Bill Murphie, U.S. DOE-HDQ
John Bradburne, FERMCO
Terry Hagen, FERMCO
Tom Walsh, FERMCO

TECHNICAL REVIEW COMMENTS ON
"SOUTH PLUME REMOVAL ACTION
SYSTEM EVALUATION REPORT FOR JANUARY 1 THROUGH JUNE 30, 1997"

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

GENERAL COMMENTS

Commenting Organization: U.S. EPA
Section #: 1.0 Page #: 1-4
Original General Comment #: 1

Commentor: Saric
Line #: 2

Comment: The text provides the average uranium concentration in the effluent from each of the four extraction wells. The Department of Energy (DOE) should provide a comparison of the predicted uranium concentration in the effluent from each extraction well and the actual uranium concentration. This comparison should be used as the basis for an overall evaluation of the model's ability to simulate the cleanup and the estimated cleanup time. DOE should present this comparison and evaluation in Section 3 of the report.

Commenting Organization: U.S. EPA
Section #: 4.2 Page #: 4-3
Original General Comment #: 2

Commentor: Saric
Line #: 14

Comment: The text states that the hydraulic capture zone inferred from the water level elevation contours is similar to capture zones presented in the previous Design Monitoring Evaluation Program Plan. Although this statement may be accurate, the water level contours presented in Figures 4-6 and 4-7 of the report do not compare favorably with the flow lines predicted by the groundwater flow model and presented in Figure 4-9. For example, Figures 4-6 and 4-7 indicate that groundwater flow in the northeast portion of the uranium plume (that is, "Knollman's Lobe") is toward the southeast, and the flow lines shown in Figure 4-9 for this portion of the plume indicate that groundwater flow is toward the south. Therefore, the model indicates that groundwater and hence the uranium plume will migrate south and be captured, whereas the actual field data indicate that groundwater flow is to the southeast and thus that the plume may not be captured. DOE should further evaluate the capture of "Knollman's Lobe," and what actions may be necessary to assure the extraction system is meeting its objective.