



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

L-0834

5412

REPLY TO THE ATTENTION OF:

FEB 17 1998

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

SRF-5J

RE: IEMP 3RD QTR Comments

Dear Mr. Reising:

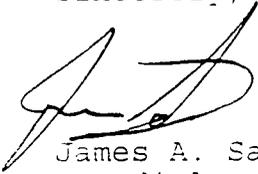
The United States Environmental Protection Agency (U.S. EPA) has completed its review of the United States Department of Energy's (U.S. DOE) integrated environmental monitoring report for the third quarter of 1997. This document is designed to meet the site-wide environmental monitoring reporting requirements, pursuant to the Integrated Environmental Monitoring Plan (IEMP).

U.S. EPA has discovered several inconsistencies between the information submitted in the quarterly report and the IEMP requirements, and made recommendations to make the document more useful. U.S. EPA has attached its comments on the report.

Given the nature of the quarterly monitoring and development of the report, it was agreed that U.S. DOE would respond to U.S. EPA's comments by including responses in the next quarterly environmental report. However, if there are comments that require further clarification or discussion, U.S. EPA requests U.S. DOE bring this to our attention before the next quarterly report or specific sampling event which may be impacted by a comment.

Please contact me at (412) 936-0992 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, WPA-WED
Bill Murphie, WPA-ICE-HDC
John Bradburne, FERMCC
Terry Hagen, FERMCC
Tom Walsh, FERMCC

TECHNICAL REVIEW COMMENTS ON
 "INTEGRATED ENVIRONMENTAL MONITORING STATUS REPORT
 FOR THIRD QUARTER 1997"

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

GENERAL COMMENTS

Commenting Organization: U.S. EPA Commentor: Saric
 Section #: Not Applicable (NA) Page #: NA Line #: NA
 Original General Comment #: 1

Comment: The text states that Integrated Environmental Monitoring Plan (IEMP) quarterly reports are intended to be more current than cumulative annual reports so that they can support timely decision-making. To help meet this objective, future quarterly reports should be revised to include a brief, additional section outlining remediation plans for the next two to four quarters. This section should also discuss any operational changes that might affect media and that would therefore require adjustment of the ongoing monitoring program. For instance, startup of a major dirt-moving operation such as the South Field excavation would require consideration of modifications to the monitoring programs for total suspended particulates and radioactive emissions. Another example is the potential modification of the South Plume recovery well system based on the observed efficiencies of the operating recovery wells. Although information on planned activities is available in other documents, its inclusion in future quarterly reports would make these reports more complete and thus would support timely decision-making.

Commenting Organization: U.S. EPA Commentor: Saric
 Section #: 1.0 Page #: NA Line #: NA
 Original General Comment #: 2

Comment: The current reporting schedule for groundwater monitoring data is such that each future quarterly report will present operational and groundwater flow information for one quarter but the analytical results for the preceding quarter. This segmented reporting is confusing and will interfere with timely decision-making. The U.S. Department of Energy (DOE) should describe in detail why analytical results for a particular quarter cannot be included in the report for that quarter.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 1.0 Page #: NA Line #: NA
Original General Comment #: 3

Comment: This section provides an update on groundwater monitoring results. Section 3.7.2 on Page 3-85 of the IEMP states that DOE will provide the U.S. Environmental Protection Agency (U.S. EPA) with a letter report within 60 days of the close of each quarter to provide figures, tables, maps, and so on reflecting that quarter's groundwater monitoring results. However, U.S. EPA has not received such a report for the third quarter of 1997. DOE should submit these letter reports to U.S. EPA in the future. Each letter report should include all groundwater elevation data, analytical data, and operational information for the quarter involved.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 1.3 Page #: NA Line #: NA
Original General Comment #: 4

Comment: This section provides an assessment of aquifer restoration progress. Section 3.7.2 on Page 3-85 of the IEMP states that DOE will report the latest geometry of the 20-microgram per liter ($\mu\text{g/L}$) total uranium plume as part of the restoration assessment. However, the geometry of the 20- $\mu\text{g/L}$ total uranium plume during the second quarter of 1997 is not described in the quarterly report. DOE should provide an isocentration map showing the total uranium concentrations detected during the quarter in each future quarterly report.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 1.3 Page #: NA Line #: NA
Original General Comment #: 5

Comment: This section evaluates groundwater monitoring results. Section 3.7.1 on Page 3-83 of the IEMP states that DOE will compare monitored total uranium concentrations to modeled total uranium concentrations in order to determine whether concentrations are decreasing or increasing as the model predicted. This comparison is not discussed in the quarterly report. DOE should specify which wells will supply the data for this comparison and should report the results of the comparison in future quarterly reports.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 1.4 Page #: NA Line #: NA
Original General Comment #: 6

Comment: DOE is required to install horizontal wells in order to collect groundwater in the perched aquifer zone of the till unit beneath the On-Site Disposal Facility and is further required to sample these wells. However, no horizontal well installation or sampling activity is

without treatment in future quarterly reports. In addition, DOE should specify the minimum, maximum, and average total uranium concentrations in the discharge water sent for treatment and in that discharged in future quarterly reports.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 1.3.2 Page #: 1-3 Line #: 17
Original Specific Comment #: 3

Comment: The text mentions Type 2 and Type 3 monitoring wells and discusses similarities between their elevation surfaces. In future quarterly reports, DOE should define these types of wells and discuss the differences between them. This addition to the reports would eliminate the need for the reader to consult the IEMP or other documents in order to understand the differences between the well types.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 1.3.2 Page #: 1-4 Line #: 9
Original Specific Comment #: 4

Comment: The text states that the colloidal borescope data were filtered to eliminate outliers before plotting. The filtered data were then used to support conclusions regarding capture zones drawn from groundwater elevation data. Future quarterly reports should include the filtering criteria used for deleting data as outliers and should cite a document that describes the data manipulation process in detail.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 1.3.2 Page #: 1-4 Line #: NA
Original Specific Comment #: 5

Comment: The text cites various figures showing groundwater elevation data and groundwater flow direction. Figure 1-27 is consistent with the borescope data in Figures 1-19 through 1-26. However, the direction of groundwater flow indicated by Figures 1-15 and 1-16 (specifically, the groundwater elevation data for wells 2899, 3899, 2898, and 2898) does not match the groundwater flow direction indicated by Figure 1-28 or the borescope data. DOE should explain the discrepancies between the different methods of determining groundwater flow direction and should discuss the impact of these discrepancies on determining the actual capture zone for the uranium plume in future quarterly reports.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 1.6 Page #: 1-7 Line #: 29 to 35
Original Specific Comment #: 6

Comment: The text discusses the findings and future focus of the South Plume Module Operation. However, no discussion is

