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RESTORATION AREA VERIFICATION SAMPLING PSP

11/22/96

USEPA

DOE-FN

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COMMENTS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

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K-0384

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REPLY TO THE ATTENTION OF:

SRF-5J

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

RE: Restoration Area
Verification Sampling PSP

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) restoration area verification sampling program Project Specific Plan (PSP).

The PSP provides the findings of exceedences of final remediation levels (FRL) for non-uranium contaminants detected outside the uranium-based groundwater restoration footprint, and outlines a sampling program for determining the vertical and lateral extent of the 20 microgram per liter uranium plume in the area of monitoring well 3069.

U.S. EPA's major objection to this PSP is U.S. DOE's approach to using maximum contaminant levels rather than FRL as the compliance point for contaminant monitoring. U.S. DOE committed to the FRL in the Record of Decision and any deviation must include further technical justification than that provided in the PSP.

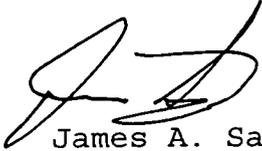
Therefore, U.S. EPA disapproves the PSP pending incorporation of adequate responses to the attached comments. U.S. DOE must submit a revised document and responses to comments within thirty (30) days receipt of this letter.

(Kappa J)
PARTIAL
ACTION RESPONSE
TO DOE-1417-96
(10056)

-2-

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
Jack Baublitz, U.S. DOE-HDQ
John Bradburne, FERMCO
Charles Little, FERMCO
Terry Hagen, FERMCO
Tom Walsh, FERMCO

constituents are detected sporadically outside the proposed footprint at levels that exceed the FRL. The same issue also was acknowledged in the 1995 Resource Conservation and Recovery Act (RCRA) annual report for groundwater, along with a recommendation for a focused sampling campaign to address geographic outliers and uncertainties in background concentration levels for several non-uranium constituents. It was understood that another purpose of that evaluation was to determine whether modification of the aquifer restoration footprint for the aquifer was necessary because of exceedences of the FRL for non-uranium contaminants, or whether additional monitoring would be required to determine what actions, if any, should be taken.

This PSP reports the results of the evaluation of exceedences of non-uranium contaminants detected outside the remedial action footprint. However, the PSP does not discuss sufficiently the proposed follow-up monitoring program for the constituents that require further characterization. The PSP defers any further monitoring to the Integrated Environmental Monitoring Program (IEMP). Characterization of the restoration footprint for the aquifer appears to be beyond the scope of the IEMP; therefore, such deferral makes the purpose of this PSP unclear. In addition, the PSP does not discuss adequately the follow-up monitoring schedule and the end use of the monitoring data to be obtained. Further, the deferral of monitoring to the IEMP makes it unclear how decisions related to restoration of the aquifer should be made if monitoring data should indicate that the restoration footprint requires modification. The PSP should be revised to address these issues.

SPECIFIC COMMENTS

Commenting Organization: U.S. EPA

Commentor: Saric

Section #:1.1

Page #: 3

Line #: 30 TO 34

Original Specific Comment #: 1

Comment: The text states that fluoride can be dismissed from further monitoring outside the restoration footprint because the exceedences were identified using an FRL based on a background value of 0.89 milligrams per liter (mg/L), while the MCL for fluoride is 4 mg/L. The text further states that "the MCL should be used to guide the restoration." The text states that, when fluoride levels detected are compared with the MCL action levels, no exceedences of the FRL result.

The final ROD for OU5 clearly states that the FRL for fluoride is 0.89 mg/L. The ROD also states that "extraction of contaminated

groundwater until such time as final remediation levels are attained at all points in the impacted areas of the Great Miami Aquifer" is a key component of the selected remedy for groundwater. The use of FRLs to determine remediation levels for the aquifer is consistent with the ROD for OU5. Any modification of remediation levels would be considered a change in the scope of the remedy. This issue warrants further discussions.

Commenting Organization: U.S. EPA

Commentor: Saric

Section #:1.1

Page #: 4

Lines #: 7 TO 13

Original Specific Comment #: 2

Comment: The text states that lead can be excluded from further monitoring outside the restoration footprint because the exceedences were "identified using an FRL based background value of 0.002 mg/L and the SWDA action level for lead is 0.015 mg/L." The text proposes that the decision to monitor for lead outside the restoration footprint be based on the SDWA action level. If that level were applied, the majority of lead exceedences would be eliminated.

The basis of DOE's position regarding the insignificance of exceedences of the FRL is unclear. The final ROD for OU5 clearly states that the FRL for lead is 0.002 mg/L. The ROD also states that "extraction of contaminated groundwater until such time as final remediation levels are attained at all points in the impacted areas of the Great Miami Aquifer" is a key component of the selected remedy for groundwater. The use of FRLs to determine remediation levels for the aquifer is consistent with the ROD for OU5. Any modification of remediation levels would be considered a change in the scope of the remedy.

Commenting Organization: U.S. EPA

Commentor: Saric

Section #:1.1

Page #: 4

Lines #: 25 TO 27

Original Specific Comment #: 3

Comment: The text states that quarterly sampling for antimony (from well 3423), manganese (from well 2436), and zinc (from well 3091) will be added to the scope of the IEMP. These compounds were detected outside the restoration area footprint at levels above the FRL. The inclusion of monitoring in the IEMP appears to be inconsistent with the purpose of the IEMP. If exceedences of the FRL are found outside of the current restoration footprint, verification and sampling should be completed to determine whether the restoration footprint requires modification. It was U.S. EPA's understanding that it was within the scope of this PSP

to outline the verification and sampling program and to show a decision tree for remediation of non-uranium contaminants. See general comment 2.

Commenting Organization: U.S. EPA
 Section #: 1.2
 Original Specific Comment #: 4

Page #: 4

Commentor: Saric
 Lines #: 31 To 37

Comment: The text discusses the bifurcation of the uranium plume near the water table and the occurrence of relatively high concentrations of uranium at depth. The text further sets forth the interpretation that the behavior of the plume in that area is caused by recharge from the southeast drainage ditch, which is diluting the plume near the water table and pushing higher concentrations of uranium deeper into the aquifer. Section 3 discusses the sampling program to verify that hypothesis.

It is recommended that, in addition to the analytical work proposed, DOE consider comparing water chemistry from surface water with water chemistry in the water table and the shallow aquifer. A comparison of water chemistry may help to prove this hypothesis.

Commenting Organization: U.S. EPA
 Section #:3.1
 Original Specific Comment #: 5

Page #: 11

Commentor: Saric
 Lines #: 27 TO 32

Comment: The text states that quarterly sampling will be added to the IEMP. See Specific comment 3 and general comment 2 for a discussion of that issue.

Commenting Organization: U.S. EPA
 Section #:3.1
 Original Specific Comment #: 6

Page #: 11

Commentor: Saric
 Line #: 36

Comment: The text states that collection of samples from locations outside of the boundary of the property will be subject to the approval of the landowner. There is no discussion in the text of sampling that will be completed if the landowner does not grant permission for testing. The text should be revised to address that issue.

