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**APPROVAL OF THE OU #2 REMEDIAL
INVESTIGATION REPORT**

USEPA/DOE-FN

**5
LETTER**



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

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REPLY TO THE ATTENTION OF:

MAR 23 1993

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 #2
Remedial Investigation Report

Dear Mr. Craig:

The United States Environmental Protection Agency (U.S. EPA) has completed its review of the Sampling and Analysis Plan Operable Unit 2 Remedial Investigation (RI) Work Plan Addendum. The Addendum addresses additional sampling required to complete the RI Report, and is the result of several meetings between U.S. EPA, the United States Department of Energy, and the Ohio Environmental Protection Agency.

The Addendum adequately addresses the majority of U.S. EPA's concerns. Therefore, U.S. EPA hereby approves the Addendum pending incorporation of the attached comments.

Please contact me at (312/FTS) 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
Nick Kaufman, FERMCO
Jim Thiesing, FERMCO
Paul Clay, FERMCO

**COMMENTS ON THE SAMPLING AND ANALYSIS PLAN
FOR RI/FS PLAN ADDENDUM OPERABLE UNIT 2**

GENERAL COMMENTS

1. All of the Great Miami Aquifer investigations proposed in the Operable Unit 2 (OU 2) remedial investigation/feasibility study (RI/FS) work plan addendum focus on the upper portion of this aquifer (2000-series wells). The work plan proposes no contingency for investigating deeper ground water if the results of the proposed investigations warrant it. DOE should indicate how and when the vertical extent of deep OU 2 ground water will be determined, if such investigation is deemed necessary.
2. Only one 2000-series well is proposed for the area in the Inactive Flyash Pile not underlain by till, and no wells currently exist in this area. An additional well should be installed between the Inactive Flyash Pile and the South Field to better characterize groundwater in the upper Great Miami Aquifer.
3. The OU 2 RI/FS work plan addendum should more clearly indicate that 16 South Field surface soil samples will be collected from the uppermost intervals of the proposed soil borings.
4. An inordinate amount (five) of the proposed hydropunch locations in the South Field are to be located along the upgradient edge of that unit. DOE should relocate several of these hydropunch locations farther downgradient (west) to better characterize potentially contaminated perched ground water.
5. DOE should indicate whether the Pulsed Laser Fluorescence analysis for hydropunch samples has been approved by the U.S. Environmental Protection Agency (EPA).
6. DOE should indicate why all groundwater samples are being analyzed according to analytical support level B standard. This appears to be inconsistent with earlier SCQ discussions.

SPECIFIC COMMENTS

1. Section 3.1.1, Page 11, Paragraph 4, Sentence 1. The text states that two 1000-series wells will be installed at the Solid Waste Landfill. However, Figure 8-2 indicates that three 1000-series wells will be installed. DOE should install at least three 1000-series wells to adequately determine if the Solid Waste Landfill is effecting perched ground-water quality. Also, it is unlikely that the proposed 100-series well (SWL-MW1-03) will detect releases at the proposed location. This well (SWL-MW1-03) should be relocated farther downgradient (east) along the southwest perimeter of the Solid Waste Landfill.
2. Section 3.1.1, Page 12, Paragraph 1, Sentence 5. The text states that the eight existing wells at the Solid Waste Landfill will be sampled. However, Table 8-1 indicates that six existing wells will be sampled, and the footnote on Table 8-2 states that seven existing wells will be sampled. These discrepancies should be addressed, and the OU 2 RI/FS work plan addendum should specify which existing wells will be sampled.
3. Section 3.1.1, Page 12, Paragraph 1. The text states that a fourth 2000-series monitoring well will be completed south of the Solid Waste Landfill if ground-water flow data indicates a southerly flow. DOE should indicate whether this fourth 2000-series well will be installed east of the Solid Waste Landfill in the event that an easterly flow direction is determined.
4. Section 3.1.2, Page 14, Paragraph 4, Sentence 4. The text states that existing wells at the Lime Sludge Ponds will be sampled. DOE should specify which existing wells will be sampled.
5. Figure 8-6. The figure shows proposed sampling locations for the Inactive Flyash Pile. Surface water and sediment sample location IFP-02 should be relocated farther downstream (south) to better assess the effect the Inactive Flyash Pile may have on surface water and sediment.
6. Section 3.1.4, Page 19, Paragraph 3, Sentence 4. The text states that a 2000-series well will be installed adjacent to Well 1711; however, Figure 8-6 indicates that a 1000-series well will be installed at that location. The OU 2 RI/FS work plan addendum should clearly indicate that a 2000-series well will be installed adjacent to Well 1711.

Comments on the "Sampling and Analysis Plan for the Operable Unit 2 Work Plan Addendum"

U.S. EPA Region 5 Radiation Section

March 1993

Commenting Organization: U.S. EPA

Commentor: Gene Jablonowski

General Comment

Code: E

Original Comment #: 1

Comment: Please complete the page numbering for the tables, figures, and their listings.

Response:

Action:

Commenting Organization: U.S. EPA

Commentor: Gene Jablonowski

Section #: 3.1.2 Page #: 14

Para. #: 1

Code: C

Original Comment #: 2

Comment: It is my understanding that there is not a center berm common to both ponds; but two separate, non-overlapping berms for each pond. It is also stated that samples will be collected from the center of the three outer berms of each pond; it seems that what is actually meant is that samples will be collected from the center of the berm on the three outer sides of each pond. The berm sampling locations graphically conveyed in Figure 8-4 seem appropriate.

Response:

Action:

Commenting Organization: U.S. EPA

Commentor: Gene Jablonowski

Section #: 3.2.2 Page #: 23

Para. #: 2

Code: C

Original Comment #: 3

Comment: Where in this document is Table 3-6, which is supposed to summarize the specific definitions of the five FEMP-defined analytical support levels (ASLs)?

Response:

Action:

Commenting Organization: U.S. EPA

Commentor: Gene Jablonowski

Section #: 4.2 Page #: 25

Para. #: 2

Code: C

Original Comment #: 4

Comment: Element number 3 (bottom of the page) of the paragraph states that each SAP will be provided to the U.S. EPA and the Ohio EPA for their information before sampling activities are initiated. It is my understanding that this and other SAPs are provided to the regulatory agencies for their review and approval.

Response:

Action:

Commenting Organization: U.S. EPA
 Section #: 6.2 Page #: 31 Para. #: 2 Commentor: Gene Jablonowski
 Code: C
 Original Comment #: 5
 Comment: It seems that quality assurance should ensure that project quality objectives, not "objections," are met.
 Response:
 Action:

Commenting Organization: U.S. EPA
 Section #: 7.2 Page #: 34 Table #: 7-1 Commentor: Gene Jablonowski
 Code: C
 Original Comment #: 6
 Comment: Please clarify what is the reference document for grain size analysis. The reference document is listed as Attachment I, Volume V, Method No. FM-GTT-0031, but what document is it an attachment to?
 Response:
 Action:

Commenting Organization: U.S. EPA
 Section #: 7.2 Page #: 35 → 40 Table #: 7-2 → 7-7 Commentor: Gene Jablonowski
 Code: C
 Original Comment #: 7
 Comment: Please clarify which table is specifically intended by the reference to "Table 1."
 Response:
 Action:

Commenting Organization: U.S. EPA
 Section #: 8.1.1 Page #: 41 Para. #: 1 Commentor: Gene Jablonowski
 Code: C
 Original Comment #: 8
 Comment: It is stated in this paragraph that actual sampling locations and analysis parameter selection will be designated by FERMC0 personnel of OU 2. Please clarify what assurances there will be that sampling locations and analysis parameters will be selected to ensure that the RI/FS, sampling, and data quality objectives will be met.
 Response:
 Action:

Commenting Organization: U.S. EPA
 Section #: 8.2 Table #: 8-1 (SWL Proposed Sampling Summary) Code: C Commentor: Gene Jablonowski
 Original Comment #: 9
 Comment: Regarding the stated number of new and existing monitoring wells, three inconsistencies exist. Table 8-1 implies that there are 7 existing monitoring wells while the first paragraph of page 12 states that there are 8. Table 8-1 states the number of new 2000-series wells to be 4 when that number actually is the maximum number of new wells to be installed. Also, Table 8-1 states that there will be 2 new 1000-series monitoring wells installed while Table 3-1 states that there will be 3 installed.
 Response:

Action:

Commenting Organization: U.S. EPA
 Section #: 8.2 Table #: 8-2, 8-4, 8-6, 8-8, and 8-10
 Original Comment #: 10

Commentor: Gene Jablonowski
 Code: C

Comment: Section 3.2.2, Development of DOOs, states that all FEMP HSL laboratory analysis and data validation for soil, waste, sediment, surface water, and groundwater samples will be performed at ASL C, with 10% at ASL D for each matrix; and all FEMP radiological laboratory analysis and data validation for soil, waste, sediment, surface water, and groundwater samples will be performed at ASL E, or at a minimum will meet the requirements of ASL C in support of risk assessment. Please clarify why, in the tables listing the new samples and analytes proposed for the various waste units, many of the groundwater and surface water analytes are listed as level B for Full Rad and FEMP HSL.

Response:

Action:

Commenting Organization: U.S. EPA
 Section #: 8.2 Table #: 8-7 (IFP Proposed Sampling Summary)
 Original Comment #: 11

Commentor: Gene Jablonowski
 Code: C

Comment: For borings, this table should indicate that the number of samples per location and the total number of samples may be greater than the stated numbers if, based on field observations, additional samples will be taken of fill if its thickness exceeds 3 feet, one sample for each 3 foot interval. This additional sampling is stated in section 3.1.4, page 17, of this SAP. Further, neither Table 8-7 nor Table 8-8, List of New Samples & Analytes Proposed for the Inactive Flyash Pile, address the additional 5 samples of flyash that are to be analyzed for leach of metals.

Response:

Action:

Commenting Organization: U.S. EPA
 Section #: 8.3.3 Page #: 79 Para. #: 3
 Original Comment #: 12

Commentor: Gene Jablonowski
 Code: C

Comment: On-site screening by Gamma Spectrometry to determine the presence and relative concentrations of radioisotopes should be performed on samples with field-measured activities greater than 10 times background. Stating that samples of "highly elevated radioactivity" will be candidates for on-site Gamma Spectroscopic screening implies that these samples may never be analyzed. Further, a 100 times background action level seems inappropriately high to ensure complete characterization of the nature and extent of contamination.

Response:

Action:

Commenting Organization: U.S. EPA
 Section #: 8.6.1 Page #: 95 and 96 Para. #: 2
 Original Comment #: 13

Commentor: Gene Jablonowski
 Code: C

Comment: Regarding the Health and Safety radiation monitoring equipment, please clarify whether these instruments are calibrated to a known, NIST-traceable standard once a week, or merely undergo a weekly operation check. Also, please state which isotopes are used as calibration standards. The following three additional comments are made:

1) On the Ludlum Model 12 Alpha Meter, does the equipped pancake probe incorporate a Geiger-Mueller detector, and if so please indicate how you shield out the betas and gammas to only detect the alphas.

2) Please indicate the type of detector used with your Ludlum Model 2 "BetaGamma" Meter and clarify the calibration routine.

3) It is stated that these instruments are not to be used if background exceeds 2 cpm for the Ludlum Model 12 and 300 cpm for the Ludlum Model 2; does this include cases when individuals are working in areas of elevated background?

Also, please clarify for the Eberline ESP-1 with the SPA-3 NaI detector, used for field screening and monitoring, whether it's calibrated to a known, NIST-traceable standard daily, or merely undergoes a daily operation check.

Response:

Action:

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

IN THE MATTER OF:)
)
 U.S. DEPARTMENT OF ENERGY) Administrative
 FEED MATERIALS PRODUCTION CENTER) Docket Number: V-W-90-C-057
 FERNALD, OHIO)
)
 OH6 890 008 976)

AGREEMENT TO EXTEND PERIOD FOR INFORMAL DISPUTE RESOLUTION
AND FOR SUBMISSION OF WRITTEN STATEMENT OF DISPUTE

On the basis of the following facts and in accordance with Section XIV of the September 1991 Amended Consent Agreement ("ACA"), the United States Department of Energy ("U.S. DOE") and the United States Environmental Protection Agency ("U.S. EPA") hereby agree to extend until April 2, 1993, the period for informal dispute resolution and submission of a written statement of dispute.

1. On February 2, 1993, U.S. DOE requested an extension of time under Section XVIII of the ACA to submit the Remedial Investigation, Feasibility Study, and Proposed Plan reports and the Record of Decision for Operable Unit two ("OU 2").
2. On February 9, 1993, U.S. EPA notified U.S. DOE that it did not concur with the February 2, 1993, extension request.
3. On February 16, 1993, U.S. DOE invoked the dispute resolution provisions of Section XIV of the ACA regarding U.S. EPA's February 9, 1993, non-concurrence.
4. Pursuant to Section XIV.B. of the ACA, U.S. DOE and U.S. EPA are required to engage in informal dispute resolution concerning the OU 2 extension request for the thirty day period from February 9 through March 10, 1993.
5. Pursuant to Section XIV.K. of the ACA, U.S. DOE and U.S. EPA may agree to extend the time periods for dispute resolution in order to expedite resolution of the dispute. U.S. DOE and U.S. EPA agree that time periods that may be extended include, but are not limited to, those for informal dispute resolution and for submission of a written statement of dispute.
6. On March 9, 1993, pursuant to Section XIV.K. of the ACA, U.S. DOE and U.S. EPA agreed to extend the informal dispute resolution period for fourteen (14) days.

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7. Pursuant to Section XIV.A. of the ACA, U.S. DOE must submit to U.S. EPA a written statement of dispute by March 24, 1993.
8. During the informal dispute resolution period, U.S. DOE and U.S. EPA have met to discuss the dispute on February 17 and 23; and March 4 and 19, 1993.
9. U.S. DOE and U.S. EPA agree that during the informal dispute resolution period substantial progress toward resolving the dispute has been made. U.S. DOE and U.S. EPA agree further that a ten (10) day extension of the informal dispute resolution period may serve to expedite resolution of the dispute.
10. U.S. DOE and U.S. EPA also agree that with the extension of the informal dispute period, it is appropriate to extend by ten (10) days the date by which U.S. DOE is required to submit a written statement of dispute.
11. Therefore, U.S. DOE and U.S. EPA hereby agree to extend until April 2, 1993, the informal dispute resolution period and the date for submission of a written statement of dispute.

For the U.S. Department
of Energy

Jack R. Craig
Remedial Project Manager

Date

For the U.S. Environmental
Protection Agency



James A. Saric
Remedial Project Manager

3/23/93

Date