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PROPOSED PHASE IV REMOVAL ACTIONS

12/27/94

DOE-0323-95
DOE-FN EPAS
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LETTER



Department of Energy
Fernald Environmental Management Project
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DEC 27 1994

DOE-0323-95

Mr. James A. Saric, Remedial Project Director
U.S. Environmental Protection Agency
Region V - 5HRE-8J
Chicago, Illinois 60604-3590

Mr. Thomas Schneider, Project Manager
Ohio Environmental Protection Agency
401 E. Fifth St.
Dayton, Ohio 45402-2086

Dear Mr. Saric and Mr. Schneider:

PROPOSED PHASE VI REMOVAL ACTIONS

Reference: Letter, DOE-0338-94, J. R. Craig to J. A. Saric and G. E. Mitchell, "Phase V Removal Actions," dated November 15, 1993.

This letter satisfies the Department of Energy, Fernald Area Office (DOE-FN) commitment to annually review existing removal actions and identify the need for any additional removal actions. The Phase I through Phase V removal actions began in consecutive years from 1990 through 1994, and Phase VI addresses this commitment for calendar year 1995.

This annual commitment is stipulated in the September 20, 1991, Amended Consent Agreement (ACA) between the DOE-FN and United States Environmental Protection Agency (U.S. EPA) for the Fernald Environmental Management Project (FEMP). Under Section IX.F.3. of the ACA, "...the U.S. DOE agrees to review annually the existing removal actions and remedial actions and the need for additional removal actions. On or before January 15, 1993, and every year thereafter until the Records of Decision (RODs) for the Operable Units (OUs) 1-5 are finalized, the U.S. DOE shall provide information on this review to U.S. EPA for review and comment..."

Based on a detailed review of current cleanup progress, the initiation of the OU3 Interim Record of Decision (IROD), the OU1, OU2, OU4, and OU5 Remedial Investigation/Feasibility Study (RI/FS) Proposed Plans and Records of Decision, the DOE proposes one additional removal action in Phase VI. DOE believes that other identified sources of contamination at the FEMP requiring expedited response in advance of the respective ROD have already been or are currently being addressed by ongoing removal actions.

The new removal action included in Phase VI is titled "Seepage Control at the South Field and Inactive Flyash Pile". This removal action (RA30), which is within Operable Unit 2, will implement controls to intercept seepage at the ditches and Flyash Pile, thereby minimizing the transport of contamination to the Great Miami Aquifer. Additional information on this removal action is provided in the enclosed fact sheet.

As previously discussed with EPA, the benefit of installing gradient control wells in the Great Miami Aquifer beneath the Southfield was evaluated. The action would be of limited duration due to planned excavation of the Southfield, and would therefore result in minimal beneficial impacts on migration of the plume. The DOE further evaluated the benefit of placing an extraction well in the aquifer beneath the Southfield to expedite uranium mass removal. Planned excavation activities and the time required to supply plumbing and power to the area resulted in a determination that the action would not provide justifiable benefit prior to the OU5 remedial action. Although no removal action in the Southfield area is proposed, the DOE-FN is conducting an optimization study to ensure the most efficient groundwater remediation practical. The results of the optimization will be discussed with EPA by mid January, 1995.

In the event that ongoing activities at the FEMP identify a contamination source or situation requiring the implementation of near-term response action, U.S. EPA will be notified and corrective actions will be implemented consistent with Section IX of the ACA.

Additionally, this letter satisfies the annual requirement for review of the Facility Utilization Report. This report satisfies Section IX.F.4 of the ACA, which states, "This study shall be prepared and submitted to U.S. EPA by January 15, 1993, and shall be reviewed on an annual basis and updated if necessary. Any updates shall be provided with the annual list of new removal actions, as described in Section IX.F.#..." This report is "a study detailing existing buildings and facilities that will be needed during remediation of the Site" and will also identify new buildings needed and buildings no longer needed.

As discussed with you on December 16, 1994, DOE believes an update to the Facility Utilization Report is not necessary based on the approval of the OU3 IROD, the OU1, OU2, OU4, and OU5 RI/FS remedial documentation. This report "is intended to allow for the systematic planning of removal actions in the production area." The only new removal action is located outside of the production area. DOE will be recommending, through a formal memoranda, the replacement of the Facility Utilization Report with the Prioritization and Sequencing Report.

If you have any questions, please contact Johnny Reising at 648-3139.

Sincerely,

Randi Allen
for Jack R. Craig
Fernald Remedial Action
Project Manager

FN:Nickel

Enclosure: As Stated

cc w/enc:

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FACT SHEET
SEEPAGE CONTROL AT THE SOUTH FIELD AND INACTIVE FLYASH PILE

1. HISTORY AND LOCATION

The South Field (SF) and Inactive Flyash Pile (IFP) are located southwest of the former Production Area. These units were used as disposal areas for nonprocess wastes including boiler plant ash and construction debris. Much of the material is contaminated with low concentrations of uranium.

Water seeping into the ditches along the northern and eastern edges of the SF and the western edge of the IFP has been observed to have uranium concentrations ranging from 23 to 910 ug/L. Sediments in the ditches and in the southeast corner of the SF have been found to have uranium concentrations ranging from 12 to 30 ug/g.

The drainage from the ditches at the SF travels rapidly overland to an area that is located directly above a region of the GMA with elevated concentrations of uranium in groundwater. It was considered prudent to attempt to minimize any further contribution of uranium to the groundwater from the seepage and the infiltration through contaminated sediments.

2. THREAT

In accordance with Section 40 CFR 300.415 (b) (2), the applicable factors for determining the appropriateness of this removal action are presented in the table below.

Factor	Explanation
Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants	The contaminated seepage drains into Paddys Run and areas that recharge the Great Miami Aquifer. This results in the potential for human consumption of the groundwater as well as direct contact by wildlife.
Actual or potential contamination of drinking water supplies or sensitive ecosystems	The contaminated seepage drains to areas that recharge the Great Miami Aquifer.
Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released	Wet weather leads to the development of the seepage.

3. SCOPE OF WORK

A time-critical removal action is being implemented with the following goals:

- To remove contaminated sediments so that infiltration through those sediments will not contribute to contamination of the GMA
- To intercept contaminated seepage in the drainage ditches along the IFP and SF and pump to the AWWT facility

The scope of work will include evaluation of alternatives to achieve those goals, development of a work plan, design of the selected alternative, and removal action construction.

4. SCHEDULE

A Removal Action Work Plan will be submitted to the USEPA on or before January 21, 1995.