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**ALTERNATE APPROACH TO THE FERNALD
ENVIRONMENTAL MANAGEMENT PROJECT
RESOURCE CONSERVATION AND RECOVERY
ACT GROUNDWATER MONITORING PROGRAM**

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LETTER**



Department of Energy
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MAY 12 1993

DOE-1946-93

Mr. Graham Mitchell and Mr. Paul D. Pardi
 Ohio Environmental Protection Agency
 40 South Main Street
 Dayton, Ohio 45402-2086

Dear Mr. Mitchell and Mr. Pardi:

ALTERNATE APPROACH TO THE FERNALD ENVIRONMENTAL MANAGEMENT PROJECT RESOURCE CONSERVATION AND RECOVERY ACT GROUNDWATER MONITORING PROGRAM

As requested during the May 7, 1993 meeting between Department of Energy, Fernald Field Office (DOE-FN) and the OEPA in Dayton, the DOE is providing this letter which summarizes the difficulties encountered through efforts to comply with Subpart F requirements and to propose a monitoring program pursuant to OAC 3745-65-90 that will enable groundwater characterization investigations to continue as proposed by the Operable Unit 5 (OU5) Workplan and its Addenda. This alternate monitoring proposal provides an avenue through which the OEPA may apply its Resource Conservation and Recovery Act (RCRA) authority toward activities conducted under this workplan.

The current Groundwater Monitoring Plan (GMP) was negotiated with the Ohio Environmental Protection Agency (OEPA) in order to bring the Fernald Environmental Management Project (FEMP) into compliance with State of Ohio Subpart F Hazardous Waste Rules OAC 3745-65-90 through 94. Three lines of groundwater monitoring wells were proposed at the property boundary, waste pit area, and the production area. Additionally, a till monitoring network with well locations based on results from a till zone hydrogeologic study was proposed to be installed by October 1993. To date, the property boundary line wells have been installed. The waste pit area and production area lines and the till well system have yet to be installed.

As work under the GMP has progressed, it became clear that compliance with all substantive requirements of Subpart F, as provided in the GMP, is impractical. For example, the requirement to immediately determine the rate and extent of contaminant migration cannot be fulfilled due to the complex nature of contamination resulting from many on-site sources. A Remedial Investigation (RI) pursuant to Comprehensive Environmental Response Compensation and Liability Act (CERCLA) has been in progress since 1988 which includes the determination of the nature, rate and extent of contaminant migration in the groundwater. These efforts are both extensive and costly, and could not have been performed within a single year. Additionally, it is anticipated that compliance with the GMP could require rate and extent determinations to progress beyond property boundaries. It is unlikely that FEMP would secure

property access to complete these investigations within the required one year time frame. Thus, the FEMP could be and has been subject to notices of violation or deficiency for failure to report the full rate and extent of contamination in the following annual report.

Attempts to comply with all substantive requirements of Subpart F have resulted in considerable duplication. Integration of the CERCLA and RCRA field investigations has not been possible since RCRA requires the reporting of investigation results within a one year time frame; whereas, the Remedial Investigation is conducted in accordance with schedules dictated by the Amended Consent Agreement. Thus to maintain RCRA compliance, two field investigations having similar objectives have been carried out in parallel.

The complexity of the investigations required under the Subpart F program have resulted in reporting difficulties. The FEMP's attempts at fulfilling the requirements of the annual report have resulted in the submittal of lengthy, detailed documents that do not fully describe the rate and extent of contaminant migration. As a result, the FEMP has received violations. The RCRA Annual Report is frequently over one thousand pages with appendices. A significant effort and cost is expended to collect, manage, and assess data for this report, yet much of the effort is duplicative to what is concurrently being performed as part of the RI.

Finally, the FEMP data base is incapable of producing data in the newly required Subpart F format for annual reports. Over 100,000 records stored in three separate databases must be joined and reconfigured to supply site data in the new RCRA format. Revising the database for Subpart F reporting would be very costly, and would not provide any additional environmental benefit.

The requirements of Subpart F, although applicable to the regulated waste management units, are inappropriate to the FEMP. The inappropriateness lies in the complex nature of FEMP's waste units and related contamination. Because the units are old and constructed without currently required environmental safeguards, the resulting contaminant plumes are intermingled, complex, and more extensive than those that would exist at newer, appropriately constructed facilities. This situation warrants a complex, time-consuming analysis of the behavior and effects of the hazardous waste constituents in the soil and ground water, which is the function of the CERCLA process at the facility. The original intent of Subpart F was specifically to avoid such complex analyses of environmental impacts and to allow for immediate release detection and rapid corrective action. Attempts to meet the substantive requirements of Subpart F result in competition with the CERCLA RI process for monetary and technical resources which are intended to attain the same goal.

The wells proposed in the GMP, excluding those at the property line, will not provide data critical to select or implement a corrective action, and therefore, do not successfully provide an integrated CERCLA/RCRA monitoring system. A great deal of groundwater data have been obtained in previous years, including metals, organic and radiological parameters. These data have been reported to the OEPA in previous RCRA Annual Reports, and through recent Technical Integration Exchange (TIE) meetings. In addition, a "snapshot" sampling event including nearly all FEMP monitoring wells, will be completed within the next two weeks. The analyses will include HSL inorganics,

organics, total and isotopic uranium, isotopic radium, thorium, and general water quality parameters. This sampling event, in addition to previously collected data, will provide sufficient information to complete the OU5 Remedial Investigation Report. Continual monitoring as proposed in the GMP will not yield data in time to be incorporated into the OU5 RI, and is not critical to remedy selection; therefore, no negative environmental impact will result by discontinuing GMP activities. On the contrary, further implementation of the GMP will compete with resources which could be dedicated to corrective action activities.

To resolve the lack of integration between the RCRA GMP and the CERCLA investigative process, DOE proposes an alternate ground water monitoring program as allowed through OAC 3745-65-90(D). This proposed program consists of the Operable Unit 5 Workplan and its Addenda, which set forth a program for characterization of the nature, rate and extent of contaminant migration sufficient to select an appropriate remedial alternative. In addition, the DOE proposes to continue quarterly monitoring of the property boundary line wells as a means of continually assessing the magnitude of off-site releases from the FEMP. The results of the quarterly monitoring will be reported by March 1 of each calendar year. The proposed approach will facilitate a complete integration of the FEMP's RCRA and CERCLA groundwater investigation and monitoring obligations by providing a mechanism through which Ohio's RCRA authority may be manifested through the CERCLA activities.

The cost savings from using the above approach to Subpart F monitoring amounts to approximately five million dollars during 1993/1994 and approximately three million dollars per year during each following year. The cost savings from implementation of this proposed integration will be used to accelerate the corrective action programs agreed upon by U.S. EPA, Ohio EPA, and DOE.

The remainder of the GMP monitoring wells are scheduled for installation June 1, 1993. To avoid the unnecessary installation of these wells, DOE requests further discussion and resolution of this issue. Kathleen Nickel will be in contact to schedule a mutually agreeable meeting date.

If you or your staff have any questions, please contact Ms. Nickel at (513) 648-3166.

Sincerely,


Thomas J. Rowland
Acting Manager

FN:Nickel

cc:

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