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**ADDENDUM TO THE RI/FS COMMUNITY RELATIONS PLAN FOR
REMOVAL ACTION NO. 1 - CONTAMINATED WATER BENEATH FEMP
BUILDINGS**

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ADDENDUM

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TO THE
RI/FS COMMUNITY RELATIONS PLAN
FOR REMOVAL ACTION No. 1

CONTAMINATED WATER BENEATH FEMP BUILDINGS

Fernald Environmental Management Project
Fernald, Ohio

U.S. Department of Energy
Fernald Field Office

August 1992

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TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
List of Acronyms	ii
Introduction	1
Objectives	2
Background	3
Overview of Community Concerns	4
Highlights of Community Relations Activities	4
Timetable	5

LIST OF ACRONYMS

AR:	Administrative Record
CERCLA:	Comprehensive Environmental Response, Compensation, and Liability Act [of 1980] (also known as Superfund)
CRP:	Community Relations Plan
DOE:	U.S. Department of Energy
EE/CA:	engineering evaluation/cost analysis
EPA:	U.S. Environmental Protection Agency
FEMP:	Fernald Environmental Management Project (formerly the Feed Materials Production Center)
FFCA:	Federal Facility Compliance Agreement
FMPC:	Feed Materials Production Center
HSL:	hazardous substance list
NCP:	National Oil and Hazardous Substances Pollution Contingency Plan [of 1990]
PEIC:	Public Environmental Information Center
RI/FS:	remedial investigation and feasibility study
RSE:	removal site evaluation
SARA:	Superfund Amendments and Reauthorization Act [of 1986]
VOC:	volatile organic compound

Introduction

This document was prepared as an addendum to the Fernald Environmental Management Project (FEMP) Remedial Investigation and Feasibility Study (RI/FS) Community Relations Plan (CRP), dated August 1990. This addendum addresses Removal Action No. 1, Contaminated Water Beneath FEMP Buildings.

This removal action is being conducted pursuant to the laws, regulations and agreements listed below, and will comply with the provisions of each:

- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), also known as Superfund, that provides for the investigation and cleanup of uncontrolled hazardous waste sites
- The Superfund Amendments and Reauthorization Act of 1986 (SARA) that renewed and updated CERCLA
- The National Oil and Hazardous Substances Pollution Contingency Plan of 1990 (NCP) that spells out how CERCLA and SARA will be implemented
- The Federal Facility Compliance Agreement (FFCA) of 1986 between the U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (EPA) that provides for the investigation and cleanup of environmental impacts from past and present activities at the FEMP
- The Consent Agreement of 1990 that amended the FFCA and fostered consistency among the operable unit concept and the current commitments of the RI/FS program without modifying the underlying objectives
- The Amended Consent Agreement of 1991 that establishes definitions and schedules for completion of RI/FS documents for the five operable units and identifies additional specific removal actions at the FEMP

The 1990 Consent Agreement specified four removal actions and provided for the identification of three more; these seven are now referred to as the Phase One Removal Actions. The Amended Consent Agreement for the FEMP, signed on September 20 and effective on December 19, 1991, specified 11 additional removal actions, referred to as Phase Two Removal Actions.

On January 14, 1992 six more removal actions, known as Phase Three Removal Actions, were approved by EPA and three emergency removal actions were initiated. In all, the three phases total 27 separate, sequentially numbered removal actions. DOE may identify additional removal actions each year by January 15, if needed.

Objectives

The objective of removal actions under CERCLA and the NCP is to "...take appropriate action to abate, stabilize, mitigate, or eliminate the release or threat of release..." of hazardous materials or waste in a manner that reduces or eliminates the threat to public health, welfare or the environment. Removal actions are emergency or short-term responses to immediate threats. They differ from remedial actions in that they are generally more limited in scope and cost.

Removal actions can be divided into three general categories: emergency, time critical, and non-time-critical. They are as follows:

- Emergency removal actions call for an immediate response. An Administrative Record file must be established and affected citizens must be notified.
- Time-critical removal actions have a planning period of less than six months. If on-site actions are expected to extend beyond 120 days, then an addendum to the CRP is required based on interviews with community residents and/or public interest groups to identify their concerns and determine ways in which residents would like to become involved.
- Non-time-critical removal actions usually have a planning period of at least six months and dictate the same community relations activities as discussed above. An added requirement is the preparation of an engineering evaluation/cost analysis (EE/CA). In this case, the addendum to the CRP must be completed before the EE/CA approval memorandum is signed.

The objective of Removal Action No. 1, Contaminated Water Beneath FEMP Buildings, a time-critical removal action, is to protect human health and the environment by removing the contaminated water beneath buildings at the FEMP.

A removal site evaluation (RSE) was performed and indicated that runoff could have an adverse impact on human health and the environment, and that a time-critical removal action was appropriate. A RSE is an evaluation of present conditions at an area of the site suspected of posing an immediate threat to

human health or the environment. It is performed to determine whether a removal action is needed and whether it is time-critical or non-time critical. Usually, the determination is based on the complexity of the problem or the severity of the threat. If the evaluation determines that a removal action is appropriate, a work plan for the removal action is prepared and is submitted to the U.S. EPA and the Ohio EPA. For a non-time critical removal action, an EE/CA, which similar to the RSE but is a more detailed evaluation of the alternatives, is done.

Background

In response to the FFCA and consistent with the CERCLA Consent Agreement signed by the DOE and the EPA in June 1990, a RI/FS is in progress pursuant to CERCLA, as amended by SARA. The technical strategy adopted for the RI/FS is to issue distinct RI/FS reports for each of the five identified operable units at the FEMP. As a result of recent DOE/EPA Consent Agreement renegotiations, Operable Unit 3 includes the former production area and production-associated facilities and equipment consisting of all above and below-grade improvements including, but not limited to, all structures, equipment utilities, drums tanks, solid wastes, waste, product, thorium, effluent lines, K-65 transfer line, wastewater treatment facilities, fire training facilities, scrap metal piles, feedstocks, and coal pile. The contaminated water beneath FEMP buildings in the production area is included in this definition.

Construction of a nitric acid fume scrubber facility in August 1988 led to the discovery of contaminated perched water beneath the floor of Plant 6. The wall of an abandoned clarifier pit was penetrated and 20,000 gallons of water flowed into the clarifier pit over a period of several days. Sampling of this water indicated that it was contaminated with uranium. It was also discovered that a relatively constant flow was occurring.

A Work Plan was written in November 1988 entitled the "Production and Additional Suspect Area Work Plan Addendum to the RI/FS Work Plan." The addendum included a comprehensive plan to sample and characterize the soil and the extent of perched water in the upper 20 feet of the soil under the FEMP production area. In addition to systematic borings at 250-foot intervals across the entire production area, focused borings were included to investigate areas around historic spills, sumps, and underground process equipment. An evaluation of the Production and Additional Suspect Area investigation determined that contaminated perched groundwater was present beneath Plants 6, 8, 9 and 2/3.

On November 6, 1989, a pumping system was placed in operation at Plant 6. On April 23, 1990, the pumping was halted due to sampling results which indicated the presence of volatile organic compounds (VOCs). Because of this discovery, a revised Plant 6 Contaminated Perched Water Removal Action Work Plan addressing this VOC contamination was prepared and approved. The Plant 9 and Plant 2/3

Contaminated Perched Water Removal Action Work Plans, which followed later, also addressed VOC contamination. A treatment system was constructed in Plant 8 for analytes on the Hazardous Substance List (HSL) and VOC. This treatment system is intended to treat all of the FEMP's contaminated water beneath FEMP buildings that is discovered to contain HSL/VOCs.

Removal actions, as described in the NCP, are primarily intended to abate, minimize, stabilize, mitigate, or eliminate a release or a threat of release of contaminants prior to a final action if there is a threat to public health or welfare or the environment. The reason for implementing a removal action is to mitigate contaminant migration pending final action if site conditions permit a straightforward mitigative action and if significant migration would occur in the interim if no action is taken. The Contaminated Water Beneath FEMP Buildings Removal Action will mitigate and stabilize the potential for vertical migration of contamination into the Great Miami Aquifer before the final remedial action for Operable Unit 3.

Sampling results of the contaminated perched groundwater have shown significant concentrations of uranium. Some possible sources of the contaminated perched water are leakage or overflow from various sumps, leakage from gravity lines which discharge to the sumps, historical losses through the acid brick flooring in Plant 2/3, and leaking underground pipes. Substances listed on the HSL (primarily volatile organic compounds) have been detected in the perched groundwater. VOCs are chemicals composed of carbon, hydrogen, and sometimes oxygen and chlorine, which tend to evaporate quickly. Examples are trichloroethylene and trichloroethane.

Overview of Community Concerns

In preparing this addendum, transcripts of community meetings held on: January 31, 1989; May 15, 1989; October 24, 1989; February 20, 1990; May 22, 1990; September 25, 1990; December 11, 1990; March 19, 1991; July 16, 1991; and October 29, 1991, and February 25, 1992 were reviewed. Also reviewed were transcripts from the RI/FS Environmental Impact Statement scoping meetings held on June 12 and 13, 1990.

A 45-day public comment period for the Contaminated Water Beneath FEMP Buildings Removal Action No. 1 was held from May 27 - July 11, 1992. The announcement ran in three local newspapers. There were no oral or written comments submitted.

Highlights of Community Relations Activities

Community concerns regarding Removal Action No. 1 suggest an active FEMP community relations effort with the following objective:

- Maintain an active effort to keep interested community members informed throughout the implementation of the Contaminated Water Beneath FEMP Buildings Removal Action.

The following specific activities have been identified to support the community relations objective for this removal action:

1. Prepare one or more fact sheets or updates for the purpose of providing information about the removal action and answering key concerns about the contaminated water beneath the buildings at the FEMP and distribute them at the quarterly public meetings.
2. Devote some portion of future community meetings to this issue; update the RI/FS exhibit to include new information as it becomes available. (Community meetings are held at regular intervals on dates selected by DOE.)
3. Include coverage about Removal Action No. 1 in the Fernald Project Cleanup Report as needed during the removal action.
4. Offer a roundtable presentation on this subject.
5. Provide a 24-hour phone line at the FEMP so concerned citizens can contact a FEMP representative during a time of alarm. The number is 513-738-6295, which is FEMP Security.
6. Make appropriate additions to the Administrative Record (AR) and publicize their availability at the Public Environmental Information Center, JAMTEK Building, 10845 Hamilton-Cleves Highway, Harrison, Ohio, 45030.

Timetable

The preparation of materials for all community relations activities will be tied to the removal action schedules. For a complete list of schedule dates and activities, please see the Contaminated Water Beneath FEMP Buildings Work Plan, which is in the Administrative Record, located at the PEIC. The activities will be scheduled to provide the maximum flexibility and information to the public. The work plan for this removal action has been approved by EPA.

Discussions and updates on the status of the removal action will be given at future public meetings.