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COMMUNITY RELATIONS PLAN VOLUME III OF THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY WORK PLAN AUGUST 1992

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WORK PLAN

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COMMUNITY RELATIONS PLAN

Volume III of the Remedial Investigation/Feasibility Study Work Plan

U.S. Department of Energy
Fernald Field Office

August 1992

Fernald Environmental Management Project

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VOLUME III
of the
RI/FS Work Plan

COMMUNITY RELATIONS PLAN

REMEDIAL INVESTIGATION/
FEASIBILITY STUDY
and
REMOVAL ACTIONS
at the
U.S. DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

U.S. DEPARTMENT OF ENERGY
Fernald Field Office

August 1992

FOREWORD

This document, Volume III: Community Relations Plan, is part of the Work Plan and supporting documents for the Remedial Investigation and Feasibility Study and Removal Actions being conducted for the U.S. Department of Energy's Fernald Environmental Management Project located near Fernald, Ohio. This August 1992 revision represents an update to the August 1990 Community Relations Plan, due to the many changes that have occurred in the last two years at the site.

TABLE OF CONTENTS

APPENDICES:

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

AR	Administrative Record
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CRP	Community Relations Plan
DOE	Department of Energy (United States)
EE/CA	engineering evaluation/cost analysis
EIS	Environmental Impact Statement
EM	Environmental Restoration and Waste Management
EMAC	Environmental Restoration and Waste Management Advisory Committee
ERMC	Environmental Restoration Management Contractor
EPA	Environmental Protection Agency (United States)
ES&H	Environmental Safety & Health [Advisory Committee]
FFCA	Federal Facility Compliance Agreement
FEMP	Fernald Environmental Management Project
FMPC	Feed Materials Production Center
FRESH	Fernald Residents for Environment, Safety and Health
GOCO	Government Owned Contract Operations
NCP	National Oil and Hazardous Substances Pollution Contingency Plan of 1990
NEPA	National Environmental Policy Act
NLO	National Lead of Ohio, Inc.
NOA	Notice of Availability
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
ODH	Ohio Department of Health
OEPA	Ohio Environmental Protection Agency
PEIC	Public Environmental Information Center
PIO	Public Information Officer
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation and Feasibility Study
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act of 1986
WEMCO	Westinghouse Environmental Management Company of Ohio
WMCO	Westinghouse Materials Company of Ohio

1.0 OVERVIEW

1.1 Introduction

The Feed Materials Production Center (FMPC), renamed on August 23, 1991 and hereinafter called the Fernald Environmental Management Project (FEMP), is a contractor-operated federal facility where pure uranium metals were produced for the U.S. Department of Energy (DOE) between 1951 and 1989. The FEMP site is located on 1050 acres in a rural area of Hamilton and Butler counties approximately 18 miles northwest of Cincinnati, Ohio. The production area is limited to an approximate 136-acre tract near the center of the FEMP site. The villages of Fernald, New Baltimore, Ross, New Haven, and Shandon are all located within a few miles of the plant.

This comprehensive Community Relations Plan (CRP) has been prepared to guide community relations activities of the DOE during its environmental studies at the FEMP, located near Fernald, Ohio. The environmental studies, known collectively as the Remedial Investigation and Feasibility Study (RI/FS) and related removal actions, are being conducted pursuant to the 1986 Federal Facility Compliance Agreement (FFCA) between DOE and the U.S. Environmental Protection Agency (EPA). The CRP is not only to guide community relations activities, but also to establish and encourage communication between the surrounding communities and the governmental agencies managing the site. The goal of the CRP is to involve residents and local officials in the investigation and clean up process. This CRP follows the guidance in EPA's Community Relations in Superfund -- A Handbook, Interim Version (EPA/540/6-88/002; June 1988) and in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

These RI/FS studies comply with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), known as Superfund, and the Superfund Amendments and Reauthorization Act of 1986 (SARA). The FFCA and relevant laws such as CERCLA and SARA describe the process to be followed during an RI/FS. This process calls for an ongoing and active community relations program that informs potentially affected communities of the environmental studies in progress, and provides for public involvement in key decisions made as the studies progress.

The CRP is designed to change in response to changing community needs. To evaluate the plan's effectiveness in meeting these needs, community members are consulted periodically. Community Assessments were held in 1986 when the original CRP was prepared and again in 1989. A Community Assessment is a series of interviews with local community members to determine information needs and sources, attitudes toward the FEMP, the environmental issues raised by the RI/FS, and public involvement. Since 1986, increased public environmental consciousness and new information about actual and potential releases of hazardous substances from the FEMP have contributed to a more visible community interest in the plant. This CRP incorporates information gathered during the 1989 community assessment.

1.2 The FEMP Community Relations Program

Community interest in remediation activities at the FEMP is characterized by several distinctive features that this CRP is intended to address, including:

- Distinct "communities" interested in FEMP cleanup issues
- The numerous parties engaged in conducting or overseeing the CERCLA-mandated remedial and removal actions and other environmental activities at the FEMP include DOE and its contractors and subcontractors, as well as federal and state regulatory agencies and their contractors
- The public's stated interest in interacting face-to-face with DOE personnel and RI/FS team members on a regular basis
- Community interest in frequent, timely, and understandable information about site developments
- The difficulty of distinguishing among the overlapping, and often confusing, array of regulatory programs carried out at the FEMP. Some of those programs, besides CERCLA and SARA already mentioned, are the Resource Conservation and Recovery Act (RCRA) and the National Environmental Policy Act (NEPA)

As a result, the community relations effort at the FEMP must use a wide variety of techniques if it is to succeed in providing the information and involvement opportunities necessary to meet everyone's needs. For example, large public meetings meet the need for face-to-face interaction in a public forum that some citizens desire, but cannot disseminate new information about site development as quickly as a press release can. Similarly, frequent updates sent to citizens on the FEMP mailing list provide timely notification of site events between public meetings, but do not provide the one-on-one opportunity for responses to individual questions that community roundtables do. The most distinctive feature of the FEMP community relations program, then, is the multiplicity of activities that will be undertaken to provide the broadest possible range of opportunities for community members to be informed and involved, as they so choose. These activities include:

- Large community meetings and hearings
- Community roundtables
- Publishing fact sheets
- Issuing RI/FS progress reports

- Workshops
- Exhibits
- Administrative Record/Public Reading Room
- Community hotline
- FEMP Speakers Bureau
- Plant tours and open houses
- Videotapes
- Press releases
- Availability sessions
- Public comment periods
- Responsiveness summaries
- Comment cards
- Briefings and presentations
- Telephone and personal contact

These activities should provide the appropriate range of formal and informal, oral and written, and small and large group opportunities for community interaction with DOE as the FEMP site investigation and remediation continue.

1.2.1 RI/FS Required Community Relations Activities

Following are RI/FS community relations activities that are required under CERCLA/SARA and are identified in the Community Relations in Superfund -- A Handbook, Interim Version, (EPA/540/G-88/002; June 1988). All of these are or will be a part of the FEMP's community relations program.

- Community Interviews. At the beginning of the RI/FS, before RI field work begins, community interviews must be conducted with affected residents and community leaders to determine their level of interest in the site, major concerns and issues, and information needs.

- Community Relations Plan. Based upon the community interviews, a CRP must be prepared and should include a description of the site background, history of community involvement at the site, community relations strategies, a schedule of community relations activities, and a list of affected and interested groups and individuals.

- Information Repository and Administrative Record. SARA requires that an administrative record (AR) for selection of a response action be established at or near the facility at issue. EPA requires that an information repository be established at or near the site so that each item developed, received, published, or made available to the public is available for public inspection and copying.

- Notification and Analysis of the Proposed Plan. SARA requires that the public be informed about the availability of the proposed plan (for a remedial action) with a notice in a major local newspaper of general circulation.

- Public Meetings. At least three public meetings should be held each year during the ongoing RI/FS. A transcript of the meeting must be made available to the public and must be part of the AR. These meetings may include exhibits showing maps, diagrams, or photographs accompanied by brief text explaining the display and the purpose of the exhibit. Progress reports or fact sheets summarizing current or proposed activities of the cleanup program should be made available at these meetings.

- Public Comment Period. Public comment periods, usually consisting of 30 days, will be held for each RI/FS document and proposed plan to give the public the opportunity to comment on and provide input to technical decisions. During the 30-day period, a workshop could be held to improve the public's understanding of the issue by inviting technical experts to explain the problem and allow citizens to comment on the proposed response actions. This will enable agency staff to identify citizens' concerns when preparing the responsiveness summary.

- Responsiveness Summary. At the conclusion of the comment period, SARA and the NCP require that a response to significant comments be prepared and that it accompany the final remedial action plan, or other decision document.

- Addressing Significant Changes Before Adoption of Final Remedial Action Plan. Before preparing the Record of Decision (ROD), SARA requires the final selected remedy be analyzed against the alternatives described in the RI/FS and proposed plan, to determine whether any "significant changes" have been made. If significant changes have been made, this may require additional public involvement.

- Public Notice. Under SARA, the public must be informed through a notice in a major local newspaper of general circulation when the proposed plan is issued and later when the final ROD is adopted.

- Revision to the Community Relations Plan. Prior to remedial design, the CRP should be revised, if necessary, to account for the needs and concerns of the community during remedial design and remedial action.

- Addressing Post-ROD Significant Changes. SARA requires an explanation of significant differences after the adoption of a final remedial action plan or ROD if any remedial action is taken, if any enforcement action under Section 106 is taken, or if any settlement or consent decree under Section 106 or Section 112 is entered into.

- Fact Sheet and Notice on the Remedial Engineering Design. Consistent with EPA's "Policy on CERCLA Compliance with Other Environmental Statutes," a fact sheet on the engineering design of the remedial action must be prepared and made available to the public before completion of the final engineering design. The public should be notified of the availability of the fact sheet. This may be accomplished through a general mailing of the fact sheet to all individuals on the site mailing list or by announcing availability by placing an ad in a local newspaper of general circulation.

1.2.2 Supplemental Community Relations Activities

Following are supplemental community relations activities in place at the FEMP:

- Interaction with Fernald Residents for Environment, Safety, and Health (FRESH). The FEMP community relations group cooperates with the local environmental group, FRESH, by attending monthly meetings to provide status on issues, activities at the site, and to answer questions. FRESH leadership is provided courtesy notification before news releases are issued concerning events and issues at the site.

- Media Relations Programs. DOE has a Public Information Officer (PIO) in the Fernald Field Office. News releases are distributed to a full range of media, from wire services and major daily newspapers to weekly community publications, all major Cincinnati TV stations, and numerous radio outlets.

- Environmental Safety and Health (ES&H) Advisory Committee. Community relations personnel have been liaisons between FEMP and the ES&H Advisory Committee chairperson. This committee was disbanded in October 1991 since its primary expertise was in health and safety matters, and the site mission had changed to environmental restoration and cleanup. As agreed by DOE and EPA in the 1991 Amended Consent Agreement, DOE is considering a committee with more expertise in restoration and remediation subjects.

- Community Roundtables. The Community Roundtable Program began in 1990; five roundtables were held that year, based on the results of a community survey. In 1991, a second survey was conducted to establish a new schedule and six roundtables were held from May through November. In 1992, roundtables were held in January, April and August. A roundtable is tentatively scheduled for September 21 and another for the latter part of October. Roundtables are not usually held the same month as the large public meetings.

- Speakers Bureau. The Speakers Bureau includes DOE and other FEMP contractor personnel who reached approximately 3000 people in 1990 and 2486 people in 1991. As of July, the Speakers Bureau has reached 4983 people in 1992. The Speakers Bureau has been expanded with additional emphasis on school visits. A new Speakers Bureau Brochure to notify the public about the availability of speakers was published early in 1992.

- Site Tours, Field Trips, and Open Houses. Site tours and field trips are available to the public to explain the remediation efforts currently underway at the FEMP. In September 1988 and September 1990, open houses were held for the public to tour the FEMP. In 1987, a "Family Day" for site employees and their families was held. More than 2000 people attended each event.

  Listed below are just some of the many organizations/agencies that requested site tours at the FEMP in 1992:
  - University of Cincinnati Institute of Environmental Health
  - Detroit Public Television
  - Ohio Department of Natural Resources
  - Idaho National Engineering Laboratory
  - Industrial Lab Technology class from Raymond Walters College
  - Journalists from Czech and Slovak Federal Republic
  - Risk Reduction Engineering Lab Research Symposium
  - Physics class from Miami University, Oxford, Ohio
  - Nippon Television of N.Y.C.
  - Civil & Environmental Engineering Class from University of Cincinnati
  - GOCO Rad-Waste Subcommittee
  - Ohio Emergency Management Agency
  - Stationary Engineering class from University of Cincinnati
  - TAFF and TRAC Teacher Program members
  - GOCO Training Committee
  - National Conference of State Legislatures
  - GOCO Planning/Scheduling Cross-Cultivation Committee
  - Local middle school teachers

- Partnership in Education. Under this program, FEMP personnel provide after-school science programs to approximately 80 students. Four schools are participating in the 1992-93 school year: Crosby Elementary, Miamitown Elementary, Garfield Junior High, and Ross Middle School.

- Township Meetings. FEMP personnel regularly attend several local township meetings each month, providing written or oral reports on the status of FEMP activities and cleanup progress.

- Fernald Project Cleanup Report. RI/FS information is distributed in this report to keep the community abreast of specific environmental restoration and waste management activities on site. It is distributed two weeks before public meetings.

- Special Assistance Projects. FEMP personnel often assist with off-site emergencies, accidents, fires, etc., either as part of mutual aid pacts with nearby communications centers or simply as volunteers. As a result of a June 1990 tornado, DOE honored community requests to make off-site warning sirens available to signal approaching severe weather.

- Public Participation Plan. A new program for encouraging public participation between the community and the regulators at the FEMP and other DOE sites was developed by DOE early in 1992. DOE's objective is to involve the community in reviewing documents relating to the cleanup of the FEMP and other DOE sites and thereby expand the public participation process. The current documents to be reviewed are: the Roadmap, Activity Data Sheets, Priority Scoring System, Site Specific Plan, and the Five-Year Plan.

  Workshops pertaining to a specific document will be scheduled and volunteers from the public will be asked to review and comment on the document. Minutes will be taken at all workshops and made available in the reading room at the PEIC. All public comments will be addressed and answers provided in a responsiveness summary which will also be available in the reading room. The review process will include, but not be limited to, identifying the function/purpose and scope of the document, figuring how the document interfaces with the other documents, and distinguishing major changes since the last revision as these documents must be updated routinely. Budget/funding numbers are not included for public review.

  A community workshop was held in June 1992 to explain the program and allow interested members of the community to sign up for the workshops. Workshops are scheduled in August and September for the Site-Specific Plan, the Five-Year Plan, and the Roadmap. Dates later in the year will be selected for Priority Scoring and the Activity Data Sheets. Since October is the start of the new fiscal year, the process will start anew each October.

1.3 Plan Organization

The CRP contains four sections and seven appendices. Community Relations Plans for removal actions will be addenda, as discussed in Section 1.3.1. A brief description or title of each follows:

- **Section 1.0, Overview,** as mentioned previously, describes the community relations program including the required activities and the supplemental activities. A procedure for adding CRP addenda for removal actions is provided in Section 1.3.1.

- **Section 2.0, Site Background,** describes the FEMP site, the RI/FS that is being performed, and the characteristics of the site that led to its inclusion on the National Priorities List (NPL).

- **Section 3.0, Community Background,** presents information about how local government is organized; describes the community's attitudes, concerns, and involvement with the FEMP; and discusses community information sources and information needs related to the RI/FS.

- **Section 4.0, RI/FS Community Relations Program,** identifies program highlights and objectives, suggested community relations techniques to be used in the community relations program, and key contacts.

- **Appendices:**

  Appendix A: Location and Hours of FEMP Reading Room and Administrative Record Files
  Appendix B: List of DOE, DOE Contractor, and Regulatory Agency Contacts
  Appendix C: List of Key Community Contacts
  Appendix D: Media Contacts
  Appendix E: Southwestern Ohio and Southeastern Indiana Legislators
  Appendix F: Locations for Public Meetings
  Appendix G: Community Relations Plan Removal Action Addendum Outline

1.3.1 Procedure for Community Relations Plan Addenda for Removal Actions

The activities at the FEMP are dynamic. As additional information is gained about the environmental contamination at the facility, plans of action are formulated and various responses are made. Some of these response actions are termed "removal actions." Removal actions are

usually shorter in duration and less costly than full remedial actions; they have accompanying documentation which varies with the nature and extent of the environmental problem. As these projects are defined, the CRP will be updated with an addendum for each removal action. The requirements for updating the CRP are contained in the EPA guidance document, Community Relations in Superfund -- A Handbook, Interim Version.

The RI/FS CRP addenda will follow the outline contained in Appendix G. Once these addenda have been approved by DOE, they will be submitted to EPA for review/comment/approval. The approved addenda will be added to this CRP and will be available to the public in the AR.

2.0 SITE BACKGROUND

This section describes the region in which the FEMP is located, identifies local population centers, and discusses the operative units of local government. In addition, a historical perspective is presented for the FEMP regarding the remedial investigation, feasibility study, RI/FS risk assessment, and the community relations program.

2.1 FEMP Description

The FEMP is bounded by Ohio Route 126 to the north, a transmission line to the east, Willey Road to the south, and Paddys Run Road and the Chesapeake and Ohio Railroad to the west, as shown in Figure 2-1. It occupies 1050 acres, of which approximately 850 acres lie in northern Hamilton County and about 200 acres in adjacent Butler County. Figure 2-2 provides a close-up view of the FEMP and identifies, among other areas, the former Production Area, the waste pits, and the K-65 silos. The map also shows how the storm-sewer outfall ditch flows into Paddys Run and how Paddys Run flows through the western portion of FEMP property.

The federally owned FEMP property is considered part of Butler and Hamilton counties; it does not constitute a federal reservation. The federal government pays no local taxes to the counties or townships in which the FEMP is located, in accordance with the U.S. Constitution Article 1. An effort is underway by Hamilton County to collect $29 million in lieu of taxes for property removed from the tax rolls when the FEMP was established in 1951. A detailed description of the FEMP site is provided in Section 2.0 of the RI/FS Work Plan.

2.2 Description of Regional Area

The 1050-acre FEMP is located in the Great Miami River Valley approximately 18 miles northwest of Cincinnati in southwestern Ohio (Figure 2-1.) Although the two counties are generally urbanized, the area immediately surrounding the FEMP is primarily rural and dominated by agriculture, with some light industry. Residential, commercial, and light industrial development exist along the Great Miami River and highway corridors. Commercial and public land uses include sand and gravel operations along the Great Miami River, industrial facilities, nurseries and produce stands, schools, and parks.

Figure 2-1. Regional Location of the Fernald Environmental Management Project

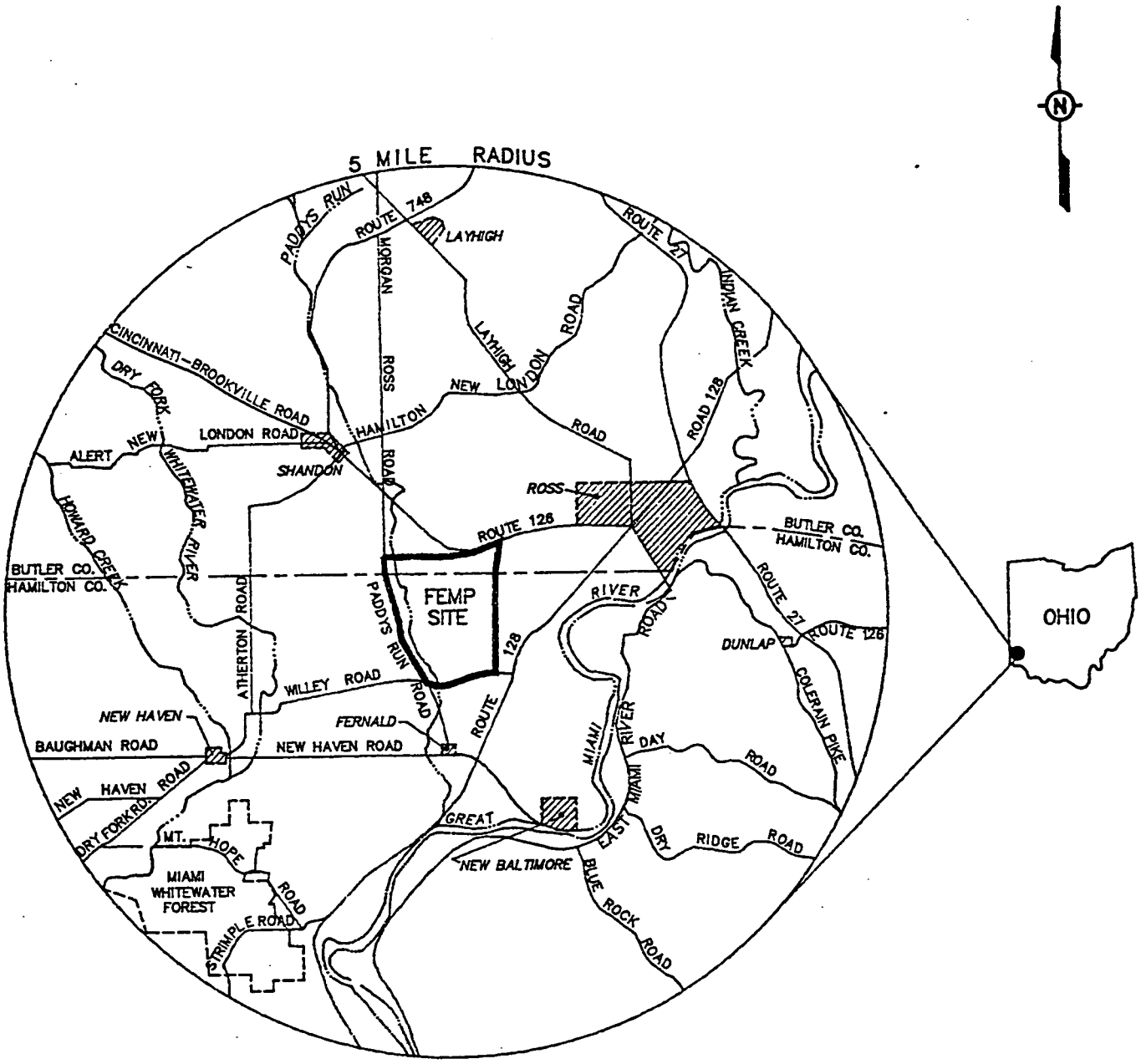
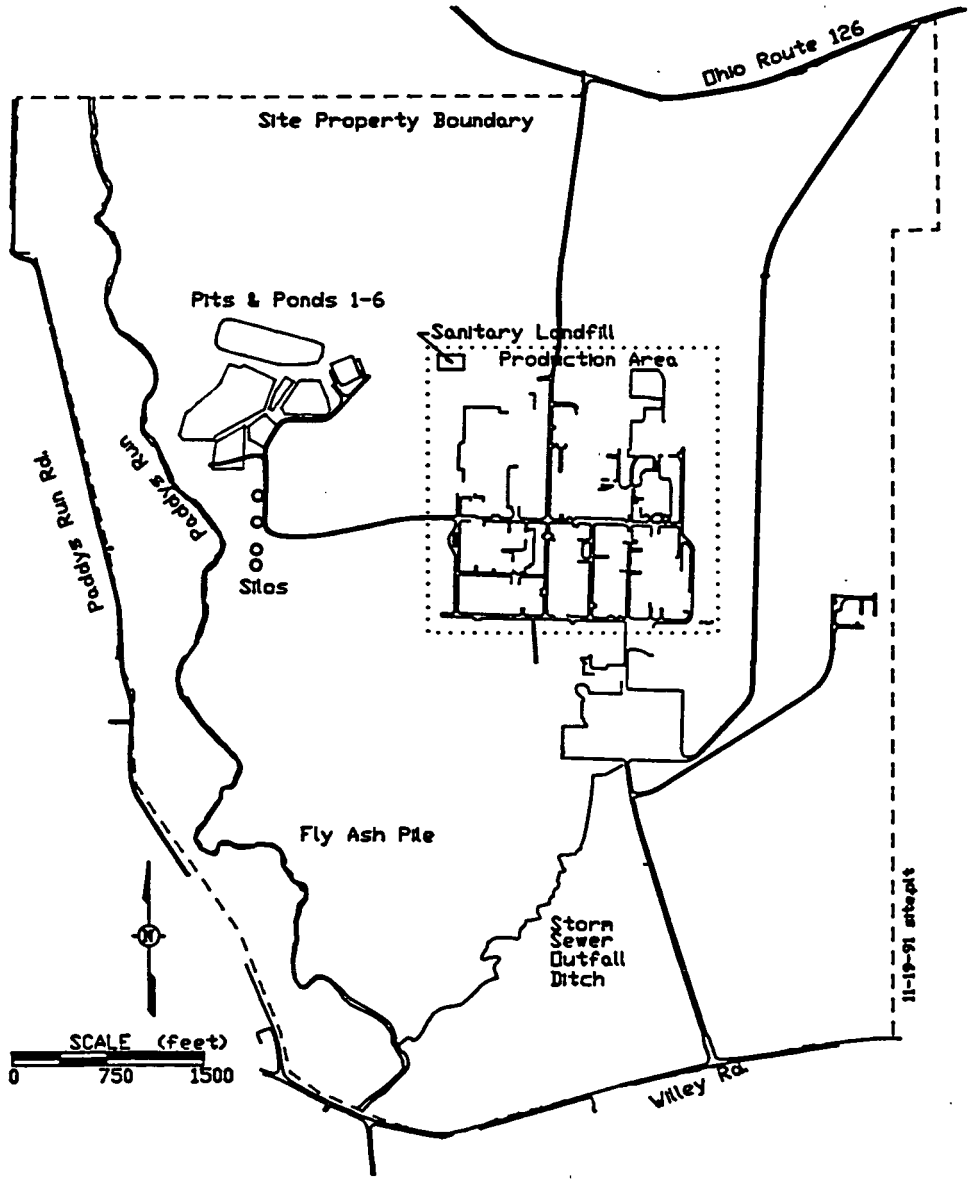


Figure 2-2. Simplified Site Map of the Fernald Environmental Management Project



One recreational park, the Miami Whitewater Forest, lies approximately five miles southwest of the FEMP. It is one of the largest parks in Hamilton County and is used primarily during the summer. Approximately 20 percent of the 2260-acre park is available or may be developed for public use (i.e., golf, paddle boats, trails). The remainder is dedicated as a wildlife sanctuary. The National Register of Historic Places lists four prehistoric Indian sites within a three mile radius.

2.3 FEMP History

Construction of the FEMP began in 1951 with production starting in 1952. The facility was originally under the auspices of the Atomic Energy Commission, followed by the Energy Research and Development Administration and currently, the DOE. From 1951 through 1985, the FEMP was managed by National Lead of Ohio, Inc. (NLO), under contract with the government. In 1986, Westinghouse Materials Company of Ohio (WMCO) assumed management of the FEMP. In 1991 Westinghouse renamed this subsidiary the Westinghouse Environmental Management Company of Ohio (WEMCO).

The original mission of the FEMP was production of high quality uranium products to be used in the production of nuclear weapons. In July 1989, the DOE decided to suspend production at the FEMP. The facility was placed in standby status, pending a final decision as to its future mission. In February 1991, DOE submitted a Closure Plan to Congress which would permanently stop production at the FEMP and focus on cleanup. After the 90-day response time had passed with no comments, the "plant closing" had become official. A ceremony marking the occasion was held at the site in August 1991 and a safe shutdown removal action work plan was developed in October 1991. At the ceremony, DOE renamed the facility and made a formal announcement that no more production would take place. The responsibility for DOE program management at the facility was transferred from the Defense Programs Office to the Office of Environmental Restoration and Waste Management. All current and future activities at the FEMP will further the cleanup of the facility.

Since 1952, various radionuclides have been discharged to the air, soil, and water, both on and off the FEMP property. The radionuclides include those in the uranium and thorium chains, as well as trace quantities of some long-lived fission products and transuranics. Other significant radionuclides of concern include radium, radon, and metal oxides associated with the K-65 silos.

Some of the hazardous substances which have been handled at the FEMP include hydrofluoric acid, nitric acid, sulfuric acid, polychlorinated biphenyls, tributyl phosphate, kerosene, gasoline, diesel fuel, methanol, uranyl nitrate, trichloromethane, perchloroethane, uranium hexafluoride, and ammonia. In accordance with SARA Title III, Community Right-to-Know, current inventories of hazardous substances are provided to local response agencies.

To date, the principal contaminant of concern identified by the RI/FS is uranium. The RI/FS continues to check for the presence of other organic and inorganic toxic substances known to have been handled or stored at the FEMP. Preliminary RI/FS results indicate that these materials are not major environmental contaminants associated with the FEMP. However, known and potential releases of radionuclides, principally uranium, were significant enough for the FEMP to be placed on the NPL in 1989.

Public and Media Interest

Environmental issues at the FEMP became the center of public controversy in late 1984 when it was reported that nearly 300 pounds of slightly enriched uranium oxide had been released to the atmosphere from the Plant 9 dust-collector system. It was also disclosed during this time that three off-property wells south of the FEMP had been found to be contaminated with uranium in 1981. DOE held four community meetings in late 1984-early 1985 and confirmed that the FEMP was responsible for the contamination of the wells. The citizens group, FRESH, was formed by area residents in 1984, and has continued to monitor FEMP activities.

By 1985, DOE had initiated significant plant improvements designed to both modernize the production facilities and to address environmental, safety, and health concerns identified in a June 1984 Oak Ridge Task Force Report on conditions at the FEMP. Many of those improvement projects -- new dust-collector systems, improved storm water runoff control, treatment of wastewater, etc. -- have since been completed, while others are in various stages of design and construction. Some proposed projects have been canceled or put on hold due to the change in mission from production to cleanup and environmental restoration.

As public interest in the FEMP continued to grow in 1985, DOE authorized reading rooms to be opened at the site and in the Lane Public Library in Hamilton as part of an effort to help the public understand the FEMP's operations. (These reading rooms were eventually consolidated with the administrative record in early 1992 [see Section 2.6].) Both the EPA and Ohio Environmental Protection Agency (OEPA) assumed active oversight responsibilities at the site, and WEMCO was selected as the new management and operating contractor, replacing NLO.

Two events in early 1986 -- unauthorized venting of the K-65 silos and a crack in a Pilot Plant reactor vessel -- increased public interest in the FEMP. The site appointed an ES&H Advisory Committee comprised of technical experts from industry and prominent universities, FEMP neighbors, and representatives of environmental groups which offered independent evaluations of activities at the site and communicated its findings to the media and the public via news releases or press conferences. The initial Advisory Committee was deactivated late in 1991 when a new type of advisory group was agreed to in the 1991 Amended Consent Agreement between EPA and DOE. In late summer, DOE held two scoping meetings on the then-proposed site-wide Renovation Environmental Impact Statement.

In **1987**, the FEMP came under increasingly heavy scrutiny by various federal and state entities (see "Legislative and Regulatory Agency Interest" section) as documents discussing environmental and safety problems at the FEMP and other facilities in the nuclear weapons complex were included in media stories. Much of the public interest centered on Government Accountability Project discussions of potential hazards at the site and on estimated costs of site cleanup in the wake of the RI/FS that was begun as part of the FFCA between DOE and EPA. In the meantime, environmental improvements were continuing at the FEMP, and a program to ship low-level radioactive waste off site was well underway.

Public concern reached its peak in late **1988**. Nationally, congressional and media attention had turned to problems being reported throughout the federal nuclear weapons complex, but national and international media attention again quickly focused on the FEMP as a result of continuing activities in the class action suit (explained in detail on pg. 8). Locally, the Catholic Archdiocese's Fort Scott Camp, located two miles east of the FEMP, closed because "adverse publicity reduced attendance" (quoting from the brochure). A local Girl Scout camp, Camp Ross, closed because "of concerns the Girl Scout Council had about the FEMP." In addition, a DOE study commonly referred to as the "2010 Report" recommended closure of the FEMP by about 1994, prompting heavy debate among state and federal legislators regarding the site's future. While the report recommended closing the site, it also indicated that environmental cleanup and restoration activities should continue after production ceased.

The year **1989** brought continued discussion and debate about the environmental and health effects of the FEMP, particularly with the approach of the early summer opening of a summary trial on the class action lawsuit by neighbors. Both the Ohio Department of Health (ODH) and the OEPA conducted extensive testing of public and private water supplies in the area surrounding the FEMP and found no evidence of contamination beyond the three wells that had been identified several years earlier. In July 1989, WEMCO suspended all production at the FEMP to concentrate efforts on cleanup. A DOE "Tiger Team" arrived at the site shortly thereafter. The Tiger Team was chartered by DOE Secretary James Watkins to conduct an assessment of environmental compliance and other issues at the FEMP and other DOE facilities nationwide. The team subsequently issued a report detailing several areas in which the FEMP was not in compliance. Later in the year, the FEMP was designated an NPL cleanup site. As work on the RI/FS progressed, DOE conducted three community meetings to report on the results of the environmental investigation and the alternatives being considered for final remediation.

In late **1989** and into **1990**, additional monitoring wells were found to contain elevated levels of uranium. In spite of explanations that the new findings refined site characterization, plant neighbors expressed concern. Additional off-site wells with above-background levels of uranium were identified in a plume south of the FEMP. The DOE agreed to provide bottled water to homes with levels above 2.7 parts per billion (ppb) and to investigate an alternate water source. A study on a public water supply conducted by Hamilton County is now under review by DOE. WEMCO reported significant weight losses in drums

of waste material which fall under the aegis of the RCRA, federal legislation designed to control the use and disposal of hazardous chemicals. The waste materials from the drums were being transferred from the Plant 1 pad to storage areas suitable for RCRA wastes. Regular media coverage of the site continues, focusing primarily on environmental issues and long-term cleanup and restoration plans.

In 1991 and into 1992 all attention at the site was focused on cleanup. Closure of the Fernald Site became effective following a 120-day review period by Congress, marking the formal end of the production at the site. DOE officially changed the site name to represent the mission change from production to environmental restoration and waste management. DOE completed successful negotiations with EPA on an Amended Consent Agreement which established a revised schedule for cleanup activities with realistic and achievable milestones. Several removal actions were initiated including Safe Shutdown. An aggressive plan to ship more than 28 million pounds of waste from the plant by 1995 was begun. The successful installation of bentonite clay over residues in the K-65 silos reduced radon accumulation in the silo headspace by more than 90 percent. DOE committed to pay its "fair share" of the cost of a public water supply for local residents whose water had been impacted by site operations. The Secretary of Energy announced that the Fernald Site would become a fully-staffed field office to manage Environmental Restoration and Waste Management activities. Late in 1991 DOE issued a Request for Proposal at Fernald for the first Environmental Restoration Management Contractor (ERMC) that would oversee, direct and manage the cleanup program at a DOE site. On August 11, Fluor Daniel, a large engineering, design and construction company out of Irvine, California, was awarded the 5 year contract.

Governmental and Regulatory Agency Interest

OEPA interest in the FEMP became a public issue in the fall of 1984, focusing on RCRA waste on site. In 1985, the expiration of the FEMP's National Pollutant Discharge Elimination System (NPDES) permit for discharges to area waterways became an issue that eventually led to the consent decrees between the state and DOE. (In February 1990, a new NPDES permit was issued to the FEMP.) Earlier OEPA filed two lawsuits totaling more than $200 million, focusing on FEMP air and water releases, and resulting in state oversight of FEMP waste management.

Both OEPA and the ODH have tested groundwater from wells near the FEMP, finding three wells and one cistern with elevated levels of uranium. The state and DOE were involved in a dispute about state oversight of the FEMP in 1987-88. In 1988, then-Governor Richard Celeste recommended the plant be closed, then retracted his statement a month later. He also appointed a special committee to evaluate the plant and review the facility's health, safety, and environmental record. Governor Celeste joined the committee for a site tour and a meeting with area residents.

The EPA became more active in the FEMP in 1985, focusing on the plant's radiation monitoring and operating procedures, well contamination, and discharge of uranium-contaminated water into the Great Miami River. This eventually led to the FFCA (detailed in Section 2.4) that invoked CERCLA mandates for the RI/FS. In 1989, EPA charged WEMCO with $350,000 in environmental fines, one month after naming the site to the NPL. In December 1989, a new cleanup agreement between EPA and DOE had been negotiated; it was signed April 9, 1990.

State and federal elected officials have also focused on the FEMP since 1984. Members of Ohio's congressional delegation have initiated or testified at hearings and made media statements about contamination, worker health and safety, cleanup budgets, health impacts, and EPA oversight issues at the FEMP and other facilities in the DOE nuclear weapons complex. The congressional delegation has been instrumental in making information available about FEMP historic releases and operating procedures from plant records. Then-Congressman Tom Luken of Cincinnati tried several times to expand EPA's role in enforcing environmental standards at DOE facilities such as the FEMP. In 1989, the House passed a bill calling for the government weapons industry to conform to environmental laws, at a time when EPA strengthened its enforcement activity at Superfund sites. As public attention focused on cleanup, U.S. Senator John Glenn of Ohio urged DOE to employ current plant workers for cleanup.

Lawsuits

In 1985, area residents filed a class-action lawsuit seeking damages for emotional stress and decreased property values. The suit was settled after a summary trial in 1989, with DOE agreeing to pay $78 million -- $73 million for health monitoring and $5 million to local property owners. DOE paid the first installment in March 1990 with the balance due by the end of 1991.

Plant employees and five unions filed a $500 million class action lawsuit against NLO in early 1990 for lifetime medical monitoring for workers and compensation for lost income, difficulty in securing other jobs, and emotional distress. The trial began in September 1991 and focused only on whether the suit was filed after the statute of limitations ran out. The court dismissed the claims of six out of 10 plaintiffs. The trial for the remaining plaintiffs will be held next year. Other miscellaneous individual lawsuits have been filed against NLO.

2.4 RI/FS History and Status

The RI/FS with its two distinct parallel activities is a comprehensive environmental investigation conducted in a systematic fashion in accordance with strict federal and state regulations and guidance. The FEMP RI/FS resulted from the FFCA that DOE and EPA signed on July 18, 1986. The FFCA ensured that environmental impacts associated with the FEMP would be thoroughly and adequately

investigated so that appropriate remedial response actions could be formulated, assessed, and implemented. DOE and EPA have modified the FFCA several times since 1986. By 1990, a CERCLA Consent Agreement that includes SARA-mandated activity had been negotiated and was signed April 9, 1990. This Consent Agreement was modified pursuant to a dispute resolution agreement between EPA and DOE. The negotiations to amend the consent agreement began on May 13, 1991. After four months of negotiations, an Amended Consent Agreement was signed September 20 and was effective December 19, 1991.

In response to the original FFCA, a site-wide RI/FS was initiated pursuant to CERCLA. A work plan for the site-wide RI/FS was originally issued to EPA in December 1986. DOE contracted with an environmental services team managed by Advanced Sciences, Inc., with major subcontractors International Technology Corporation and Pennsylvania Drilling, to conduct the RI/FS. After a series of technical discussions and negotiations, DOE submitted a revised RI/FS Work Plan in March 1988 and received EPA approval in May 1988.

A proposed modification to the site-wide remedial action management strategy was introduced in August 1988, upon submission of the detailed FS Work Plan. In particular, an "operable unit" strategy was proposed to separate the FEMP into six distinct operable units into which all areas requiring cleanup could be categorized. As part of the 1990 Consent Agreement between DOE and EPA, this number was revised to five; all succeeding references will be to five operable units. The categorization is based on similarities in the physical characteristics of the unit, the wastes involved, the problems being addressed and their associated regulatory requirements, and the type(s) of remedial action technologies anticipated. The components of each operable unit are identified in Table 2-1 and located on the map in Figure 2-3.

The principal reason for the use of operable units as distinct study areas is derived from the need to address a wide variety of complex problems for the various types of facilities at the FEMP. The operable unit approach allows for a prioritization of effort, a focus of technical resources, and a more effective project management. In addition, the operable unit approach can accommodate separate schedules so that the FS process for each operable unit can be finalized at the earliest possible date and remedial actions can be initiated. Therefore, cleanup will be able to proceed before the analysis of the total site is complete. This approach will result in five RI and FS reports -- one for each operable unit. Under the 1991 Amended Consent Agreement, a comprehensive site-wide operable unit was established to consist of Operable Units 1 through 5. The purpose is to guarantee that the response actions selected for each of the five operable units protect human health and the environment throughout the entire site.

RI findings have confirmed elevated levels of uranium in groundwater both on and off property. RI studies have confirmed the nature and extent of contamination in each operable unit as follows:

TABLE 2-1

FEMP OPERABLE UNITS COMPONENTS

Operable Unit 1 -- Waste Storage Area

Waste Pits 1-6, Clearwell, burn pit, berms, liners and soil within the operable unit boundary as approved in the RI/FS Work Plan Addendum.

Operable Unit 2 -- Other Waste Units

Flyash piles, other South Field disposal areas, lime sludge ponds, solid waste landfill, berms, liners, and soil within the operable unit boundary as approved in the RI/FS Work Plan Addendum.

Operable Unit 3 -- Production Area

Production area and production-associated facilities and equipment (all above- and below-grade improvements) including, but not limited to, all structures, equipment, utilities, drums, tanks, solid waste, waste product, thorium, effluent lines, K-65 transfer line, wastewater treatment facilities, scrap metal piles, feedstocks, and coal pile.

Operable Unit 4 -- Silos 1-4

Silos 1, 2, 3, and 4, berms, decant tank system, and soil within the operable unit boundary as approved in the RI/FS Work Plan Addendum.

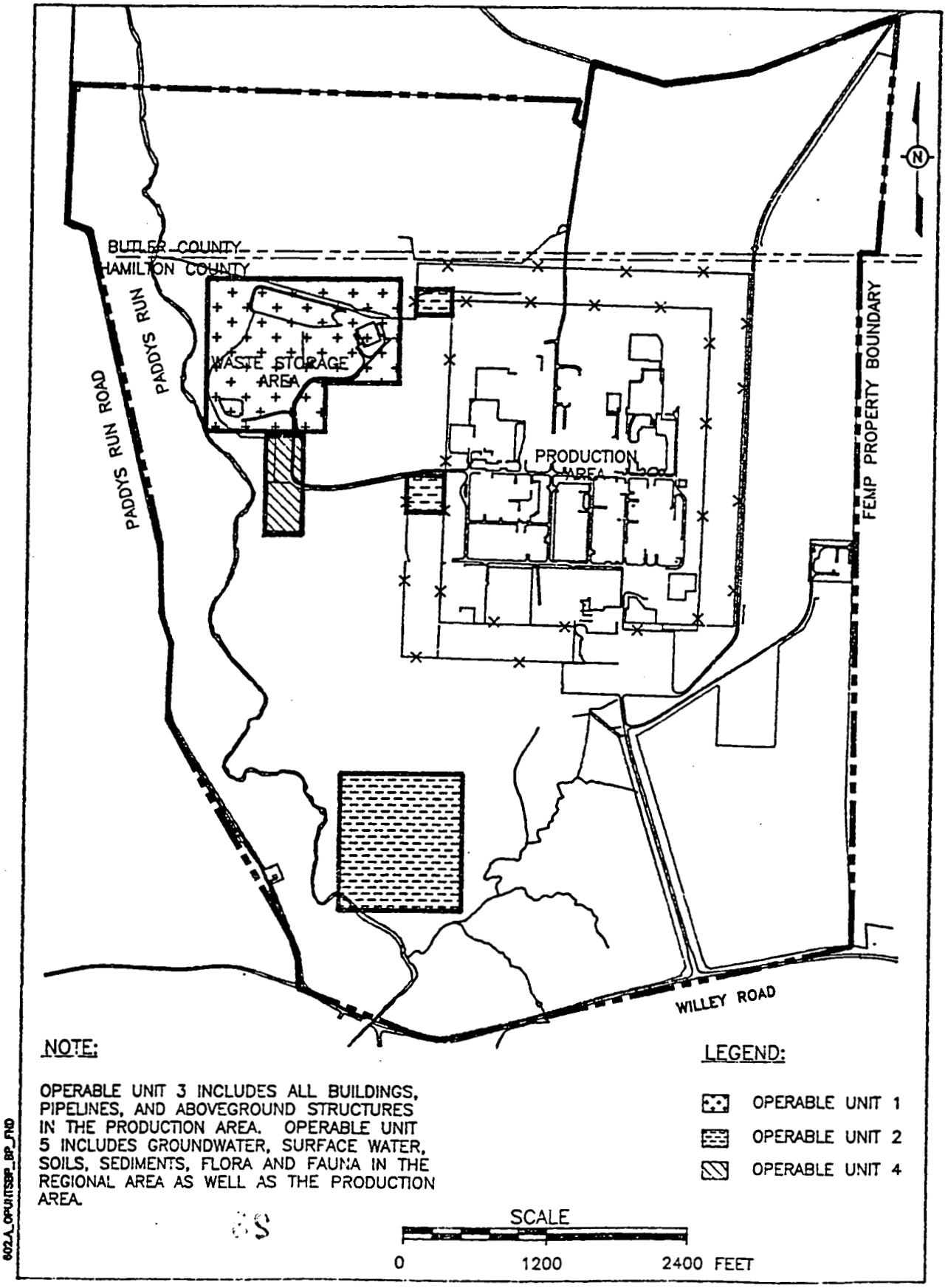
Operable Unit 5 -- Environmental Media

Groundwater, (including site-wide perched groundwater), surface water, soil not included in the definitions of Operable Units 1-4, sediments, flora, and fauna.

Comprehensive Site-Wide Operable Unit

An evaluation of remedies selected for Operable Units 1-5 above (including remedial and removal actions), to ensure that they are protective of human health and the environment on a site-wide basis, as required by CERCLA, SARA, the NCP and applicable EPA policy and guidance, as specified in the 1991 Amended Consent Agreement.

Figure 2-3 FEMP Operable Units Locations



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- **Operable Unit 1 - Waste Pit Area.** Elevated levels of uranium have been found in this area. Studies to date have shown that storm water runoff has transported this contamination to Paddys Run, which in turn has contributed to contamination of the Great Miami Aquifer (identified as the south plume.) The Waste Pit Area Storm Water Runoff Control (August 1990) engineering evaluation/cost analysis (EE/CA) identified a method to contain this potential pathway.

- **Operable Unit 2 - Other Waste Units.** Radionuclides, metals, cyanide, and organic compounds have been detected in all areas.

- **Operable Unit 3 - Production Area.** Elevated levels of uranium have been found in perched groundwater beneath plant facilities, as identified in the RI for Operable Unit 3. The Amended Consent Agreement transferred production area perched groundwater to Operable Unit 5 and focused Operable Unit 3 on scoping the facilities and equipment associated with uranium metals production in preparation for decontamination and dismantlement. Some of the contaminated water has been pumped from beneath Plant 6 as part of the removal action associated with this operable unit. The RI has identified additional pockets of contaminated water near Plant 8, Plant 9, and Plant 2/3. This water is also being extracted and treated in FEMP treatment facilities prior to discharge to the Great Miami River. Investigations are continuing to identify any additional evidence of releases of contamination to the environment that may need to be defined and investigated as part of this operable unit.

- **Operable Unit 4 - Silos 1-4.** To reduce radon emission levels and to provide protection from releases to the environment in the event of silo dome collapse, bentonite clay was applied over the residues in Silos 1 and 2 in November 1991. Radionuclides and metals have been detected in Silos 1, 2, and 3 (Silo 4 remains empty) and the surrounding berms and soil.

- **Operable Unit 5 - Environmental Media.** An area of off-property groundwater contamination located on private property has been identified. New monitoring wells are being installed to define the western and southern limits of the plume of uranium contamination within the Great Miami Aquifer. Soil contaminated with radionuclides and metals, particularly in and around the former production area, is being characterized for treatment.

Cleanup activities in all five operable units are proceeding according to the 1991 Amended Consent Agreement schedules. The public will be invited to comment on the proposed plan for each operable unit. Submittal schedules are shown in Table 2-2. A risk assessment is being prepared for each operable unit, and will be submitted as an addendum to each RI report. The risk assessments compare the levels of contaminants found both on and off plant property against public health and environmental standards and

criteria, and evaluate them in the context of population characteristics. After state and community comments on the proposed plan are received, EPA will issue a ROD for each operable unit. Comment responses will be documented in separate responsiveness summaries which will be compiled for each operable unit. These documents will be placed in the AR. After detailed engineering design for the alternative selected in the ROD is complete, final cleanup (or remediation) can begin.

The Comprehensive Site-Wide Operable Unit will evaluate the remedies selected for the five operable units. The purpose of establishing the site as one comprehensive operable unit is to guarantee that the response actions selected for each operable unit protect human health and the environment throughout the entire site.

TABLE 2-2
SUBMITTAL SCHEDULES FOR PRIMARY REPORTS -- OPERABLE UNITS 1 - 5
PER CERCLA AMENDED CONSENT AGREEMENT
(SIGNED SEPTEMBER 20, 1991)

REPORTS: OPERABLE UNITS 1 - 5

	1	2	3	4	5
Initial Screening of Alternatives	1/04/91	4/18/91	3/28/95	10/24/90	4/16/93
RI Report/ Baseline Risk Assessment	10/12/93	10/19/92	3/13/96	4/19/93	6/24/94
Feasibility Study/ Proposed Plan	3/07/94	3/15/93	8/07/96	9/10/93	11/16/94
Record of Decision	12/06/94	12/10/93	5/02/97	6/10/94	8/02/95

2.5 Removal Action History and Status

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. Major

environmental studies, such as the RI/FS underway at the FEMP, may identify conditions that require immediate attention to protect public health and the environment or to prevent known contamination from spreading. Since the RI/FS involves extensive sampling and analysis of soil, water and other media and is a long-term process with fixed schedules, removal actions are the appropriate and necessary response to immediate threats.

Removal actions may be identified at any time during the RI, the FS, and remedial activities. Removal action procedures, schedules and documentation are dictated by the NCP and the EPA Office of Solid Waste and Emergency Response Directive 9360.0-03B, Superfund Removal Procedures, Rev. 3. 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 AR 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 EE/CA. In this case, the addendum to the CRP must be completed before the EE/CA approval memorandum is signed.

DOE has adopted a comprehensive community relations strategy for all removal actions and integrated their activities into the community relations program designed to inform and involve the community with respect to RI/FS activities at the FEMP. Several of the same community relations activities may be required for both RI/FS and removal action activities, such as community meetings, public comment periods, community interviews, materials development and dissemination, documentation in the FEMP AR, and responsiveness summaries. Removal actions are discussed routinely during RI/FS community meetings, and updates are given in the Fernald Project Cleanup Report. All public participation is documented in the AR established for each removal action.

Individual CRPs for the South Groundwater Contamination Plume Removal Action and the Waste Pit Area Storm Water Runoff Control Removal Action have already been issued. Community relations activities for future removal actions will be incorporated in this RI/FS CRP as addenda, as was discussed in Section 1.3.1. Some removal actions already completed are Silos 1 and 2, and the K-65 Decant Sump Tank. These have been incorporated into the RI/FS CRP as addenda. Suggested community relations activities

for a "non-time-critical removal action" are provided in the generic schedule in Table 4-1, with "Day 1" representing the date of issue of the EE/CA document.

The 1990 Consent Agreement required that DOE perform four removal actions. A brief history and current status follows:

Removal Action 1: Contaminated Water Beneath FEMP Buildings -- Monitoring wells identified pockets of contaminated water beneath Plants 6, 2/3, 8, and 9. To minimize the potential for the movement of contaminants in these zones to the underlying aquifer, a series of wells were installed to extract the groundwater for treatment prior to discharge. Pumping operations are in progress at all locations and a treatment system is in place at Plant 8. As of July 1, 1992, more than 180,000 gallons of extracted groundwater has been processed through the treatment system. A public comment period on this removal action was held from May 27 - July 11, 1992 and an addendum to the RI/FS CRP was prepared.

Removal Action 2: Waste Pit Area Runoff Control -- This area includes six pits, a burn pit, and the Clearwell (a storm water runoff collection point) which have been used for the storage and disposal of radiological and chemical wastes from plant operations over the years. The objective of the removal action was to collect and treat potentially-contaminated stormwater runoff from the waste pit area to prevent it from reaching Paddys Run, a small stream which runs along the western boundary of the FEMP. An EE/CA was submitted to EPA on May 30, 1990 and revised on August 10, 1990. A workshop discussing the EE/CA was held in June 1990. A public comment period was held May 30 - July 2, 1990. In August 1990 a responsiveness summary was issued that addressed all significant comments received. This eight-phase removal action was completed June 15, 1992.

Removal Action 3: South Groundwater Contamination Plume -- The south plume represents a portion of the regionally important Great Miami Aquifer that has elevated levels of uranium and is a potential off-property migration pathway for uranium. The EE/CA was submitted to EPA and the AR on April 16, 1990 and revised November 1990. A workshop discussing the EE/CA was held May 30, 1990. A public comment period on the EE/CA was held from April 16 -June 18, 1990. In August 1990 a responsiveness summary was issued that addressed all significant comments received. This removal action has been broken into five parts:

- Part 1 includes installation of an alternate water source to an industry affected by the contamination plume
- Part 2 involves the installation of a groundwater recovery well treatment system
- Part 3 calls for construction of an Interim Advanced Wastewater Treatment system to remove uranium from site wastewater streams

- Part 4 involves groundwater monitoring and institutional controls to prevent the use of contaminated groundwater
- Part 5 entails additional sampling to identify the location and extent of any remaining contamination

Removal Action 4: Silos 1 and 2 (K-65) -- Two 80-foot-diameter concrete silos store radium-bearing materials which release radon gas to the atmosphere and which may leach contaminants to underlying soils and aquifers. Preliminary to the final remedial action covered by Operable Unit 4, the K-65 Silos EE/CA was issued August 1, 1990 which recommended actions to minimize the potential release of contaminants resulting from a catastrophic failure of the silo domes. This EE/CA also examined radon release mitigation measures. A workshop on the EE/CA was held on August 16 and the public comment period lasted from August 1 - 30, 1990. This removal action was completed in December 1991 with the installation of bentonite clay over the radium-bearing radioactive waste material. Monitoring has shown a reduction in radon concentrations in the silo headspace by 99.9%. Reduction in the direct radiation on the silo dome is 95%.

The 1990 Consent Agreement also provided a means for identifying other necessary removal actions. As a result of additional characterization of the facility, three more removal actions were proposed for a total of seven. When DOE and EPA signed the Amended Consent Agreement in September 1991, it specified 11 additional removal actions for the FEMP and provided for the identification and implementation of further removal actions. Those identified in the 1990 Consent Agreement have been designated Phase One Removal Actions; the 1991 Amended Consent Agreement contains designated Phase Two Removal Actions, and EPA approved six additional Phase Three Removal Actions on January 14, 1992 bringing the total to 27. A brief description and status of the remaining 23 follows:

Removal Action 5: K-65 Decant Sump Tank -- Samples of liquid removed from the K-65 silos decant sump tank, and sludge removed from the base of the tank were analyzed and characterized to determine proper treatment and final disposition. This removal action was completed in April 1991.

Removal Action 6: Waste Pit 6 Residues -- A crane with a clamshell attachment was used to scoop up a mound of dried radioactive waste in Pit 6 and submerge it evenly below the surface of the water thereby eliminating potential airborne emissions due to wind from the area. It was completed in December 1990.

Removal Action 7: Plant 1 Pad Continuing Release -- This removal action will protect surface soils and groundwater from continuing releases of hazardous materials resulting from waste management activities on the eight-acre Plant 1 storage pad. It is being conducted in three phases:

- Phase I of implementing control measures is complete
- Phase II involves installation of a new covered concrete storage pad and is approximately 85% complete
- Phase III involves activities to upgrade the existing Plant 1 storage pad and is scheduled for completion by February 1995

A public comment period on this removal action was held from May 27 - July 11, 1992 and an addendum to the RI/FS CRP was prepared.

Removal Action 8: Inactive Fly Ash Pile Control -- This removal action was completed with the installation of warning signs and a chain-link barrier around the perimeter of the Inactive Flyash Pile/Other South Field Disposal Areas.

Removal Action 9: Removal of Waste Inventories -- This removal action involves the characterization, overpacking, and disposition of low-level radioactive waste materials and is ongoing at the FEMP. As of July 1, 1992, more than 74,000 drum equivalents of low-level waste had been shipped to the Nevada Test Site. A public comment period on this removal action was held from May 27 - July 11, 1992 and an addendum to the RI/FS CRP was prepared.

Removal Action 10: Active Fly Ash Pile Controls -- This removal action was completed in late June 1992 with the installation of a silt fence around the base of the flyash pile to mitigate storm water runoff, and the placement of wind barriers to mitigate wind erosion. A public comment period on this removal action was held from May 27 - July 11, 1992 and an addendum to the RI/FS CRP was prepared.

Removal Action 11: Pit 5 Experimental Treatment Facility -- This removal action was completed March 22, 1992 with the dismantling of the greenhouse-type facility and packaging the building materials and sludge for safe storage pending final disposition.

Removal Action 12: Safe Shutdown -- This removal action was initiated to ensure the safe and permanent shutdown of production facilities. Its status is "ongoing" and so far more than 2.6 million pounds of uranium products have been transferred from the FEMP under the Safe Shutdown program. A public comment period on this removal action was held from May 27 - July 11, 1992 and an addendum to the RI/FS CRP was prepared.

Removal Action 13: Plant 1 Ore Silos -- Under this removal action, all 14 Plant 1 ore silos and support structures will be dismantled and demolished. Completion is scheduled by December 1993. A public comment period on this removal action was held from May 27 - July 11, 1992 and an addendum to the RI/FS CRP was prepared.

Removal Action 14: Contaminated Soils Adjacent to Sewage Treatment Plant Incinerator -- The scope of this removal action will include the isolation or removal and disposition of contaminated soils in the vicinity of an incinerator at the sewage treatment plant. Excavation of contaminated soils is on schedule for completion by August 1992. A public comment period on this removal action was held from May 27 - July 11, 1992 and an addendum to the RI/FS CRP was prepared.

Removal Action 15: Scrap Metal Piles -- This removal action will address the stabilization and disposition of low-level radioactive waste scrap metal currently stockpiled outdoors at the FEMP. Conditional approval of the work plan was received from EPA on May 18, 1992.

Removal Action 16: Collect Uncontrolled Production Area Runoff - Northeast -- The scope of this removal action is to collect stormwater runoff from perimeter areas of the 136-acre former production area which are not presently draining into the stormwater retention basin. Construction is expected to begin in August 1992 and be completed by August 1993. A public comment period on this removal action was held from May 27 - July 11, 1992 and an addendum to the RI/FS CRP was prepared.

Removal Action 17: Improved Storage of Soil and Debris -- Activities under this removal action will include characterization, interim storage, and management of contaminated soils and debris until their final remediation under Operable Unit 3. A public comment period on this removal action was held from May 27 - July 11, 1992 and an addendum to the RI/FS CRP was prepared.

Removal Action 18: Control Exposed Material in Pit 5 -- The objective of this removal action is to eliminate the possibility of airborne contamination resulting from exposed materials in Pit 5. A work plan was submitted to EPA on March 26, 1992.

Removal Action 19: Plant 7 Dismantling -- Activities under this removal action will involve decontamination and dismantling of the Plant 7 building. The work plan is due to EPA by April 1993.

Removal Action 20: Stabilization of Uranyl Nitrate Inventories -- This removal action is designed to process the uranyl nitrate to a stable form. The processing began in mid-July 1992. There are

approximately 230,000 gallons of acidic uranyl nitrate stored in 21 tanks in or near the Plant 2/3 Refinery.

Removal Action 21: Expedited Silo 3 -- This removal action was completed in January 1992 with the removal of an out-of-service dust collector and hopper assembly from the dome of Silo 3.

Removal Action 22: Waste Pit Area Containment Improvement -- This removal action is designed to minimize the potential for wind or water erosion of contaminated materials from access roads and exposed surfaces in the Operable Unit 1 area. The work plan was submitted to EPA in August 1992.

Removal Action 23: Inactive Flyash Pile -- This removal action, a continuation of Removal Action No. 8, focused on isolated areas of radiological surface contamination in the Inactive Flyash Pile/Other South Field Disposal Areas. The results of the investigation were submitted to EPA on June 30, 1992.

Removal Action 24: Pilot Plant Sump -- This removal action was initiated to address contaminated liquids and sludges remaining in an out-of-service sump at the FEMP's pilot plant. The work plan was submitted to EPA in July 1992 and will be resubmitted with comments addressed in September 1992.

Removal Action 25: Nitric Acid Tank Car and Area -- This removal action was initiated to remove the residual contents of a Nitric Acid Tank Car, decontaminate and dispose of the tank car itself, and address potentially contaminated surrounding soils related to the tank car. The work plan is scheduled to be submitted to EPA by October 1992.

Removal Action 26: Asbestos Removals (Asbestos Program) -- This removal action documents ongoing asbestos abatement activities at the FEMP to mitigate the potential for contaminant release and migration. Field activities in support of asbestos identification and abatement are in progress.

Removal Action 27: Management of Contaminated Structures at the FEMP -- This removal action was initiated to address contaminated structures and mitigate any potential threat to human health and the environment associated with them. An EE/CA to support the identification of additional removal actions for managing contaminated structures at the FEMP is due to EPA by December 1992.

On or before January 15 of each year, DOE may identify and submit to EPA a list of additional removal actions and a schedule for submitting work plans.

2.6 Administrative Record History and Status

The AR is an official file of all information collected during the RI/FS that will be considered or relied upon in selecting a remedy on the cleanup at the FEMP. It is required by CERCLA, the NCP (40 Code of Federal Regulations 300.800 Subpart I), and the terms of the FFCA between DOE and EPA. This file is to be available for public review and must be located near the site. The AR will be maintained by the lead agency (DOE) and will be updated on an ongoing basis as relevant information becomes available. The FEMP reading rooms have been consolidated into one information repository which is located in the same building as the AR. In 1990 the DOE established a Public Environmental Information Center (PEIC) to house the AR and provide convenient public access to documents about cleanup activities at the FEMP. It is located in the JAMTEK Building at 10845 Hamilton-Cleves Road, Harrison, Ohio 45030 (about one mile south of the FEMP). It is open Monday and Thursday from 9:00 - 8:00, Tuesday, Wednesday, and Friday from 9:00 - 4:30, and from 9:00 - 1:00 on Saturday. The AR contains historical documents and all other documents used to make decisions in the FEMP's long-range cleanup program. Distinct AR files will be maintained for each operable unit in the RI/FS and for each removal action that DOE and EPA identify. As new documents are added to the AR, the public is informed through notices published in local newspapers.

The AR includes, at a minimum, factual information and data obtained before and during the RI/FS studies, policy and guidance documents, a record of public participation, information from other agencies, enforcement documents (such as the FFCA and administrative orders), and an index. In addition, the FFCA specifies two types of documents that DOE must include in the AR. These are known as primary and secondary documents. Primary documents are identified in Table 2-2. Secondary documents that must be included are the Site Characterization Study that predated the RI/FS, initial remedial action and data quality objectives, the detailed analysis of alternatives that is performed in each FS, the postscreening investigation work plan, treatability studies, sampling and data results, and a summary of public comments received and DOE's response to those comments. When the RI/FS is completed, the AR will form the legal basis for cleanup decisions for both remedial and removal actions.

The FFCA also stipulates that an AR be located at the EPA Region 5 office in Chicago (see Appendix A) and that the AR and its index be updated bi-monthly. A copy of the modified AR Index is submitted to EPA with each addition to the AR.

2.7 Environmental Impact Statement (EIS) History and Status

The FEMP is under the authority of DOE policy and guidance. It is the expressed policy of the DOE as contained in DOE Order 5400.4, CERCLA Implementation, that documents prepared in compliance with requirements at all CERCLA sites will also comply with the requirements of the 1970 NEPA. The current guidance directs that NEPA requirements be integrated with CERCLA documents to minimize paperwork and cost of project documents. The FEMP is preparing an EIS to support cleanup activities at the FEMP. The RI/FS-EIS, as it is known, will address the socioeconomic, environmental and cumulative impacts of proposed remedial actions at the FEMP. The RI/FS-EIS will be contained within the Operable Unit 2 RI and FS reports. In accordance with NEPA regulations, each subsequent operable unit RI and FS report will contain NEPA language specific to that operable unit. The other operable unit RI and FS reports will also reference the Operable Unit 2 (RI and FS) reports to reduce paperwork and duplication of effort.

The FEMP NEPA-CERCLA Integration Plan, finalized in early 1990, defines the FEMP RI/FS-specific process by which the NEPA-based regulations, requirements, and guidelines can be integrated into and satisfied within the context of the enforcement-driven RI/FS process and the operable unit approach adopted for the FEMP. A NEPA public comment period will be scheduled when each operable unit's FS (which will contain NEPA discussion) is submitted to EPA (see Table 2-2). The EIS effort involves scoping meetings, NEPA data preparation and documentation, impact analyses to support the operable units, evaluation of cumulative effects, preparation of draft and final EIS documents, and associated public hearings, public comment periods, and responsiveness summaries.

To ensure both CERCLA/SARA and NEPA public involvement requirements are met, NEPA activities are being integrated into the RI/FS community relations program. This integration is designed to provide an exchange of information, avoid duplication of public participation and scheduling efforts, and share resources in the preparation of public meetings and hearings. For example, the RI/FS community relations staff and the NEPA staff are cooperating to provide consistency in meeting approaches and optimal meeting scheduling. Also, the staff working on NEPA documentation is available to make presentations and answer questions at RI/FS community meetings about the NEPA process as it relates to the FEMP RI/FS.

3.0 COMMUNITY BACKGROUND

This section of the FEMP RI/FS CRP describes the affected communities, how they would prefer to obtain information about the FEMP, their attitudes, concerns, and basic information needs, and discusses their involvement with FEMP environmental efforts. All statements presented in this section are based on the community assessment performed in 1989, as well as on subsequent media articles and comments made by area residents during and following RI/FS community meetings in 1989. This summary identifies typical concerns and should not be interpreted as exhaustive or representative of all community members.

3.1 Population and Units of Local Government

The combined population of Hamilton and Butler counties is 1,157,707. Hamilton County supports a population of about 866,228, while Butler County has a population of 291,479 ("Ohio Population by Governmental Unit, 1980-1990," Ohio Data Users Center Department of Development in conjunction with the U.S. Bureau of the Census, Columbus, Ohio, February 1991.)

Most of the communities surrounding the FEMP are unincorporated towns varying from an estimated population of 39 in Fernald to approximately 3000 in Ross. Figure 2-1 identified these communities, which have been characterized as agricultural and as "bedroom communities" for commuters in the greater Cincinnati area.

The township is the basic unit of local government in the area where the FEMP is located. There are three township governments within two counties in the immediate vicinity: Ross and Morgan townships in Butler County; Crosby Township in Hamilton County. Representatives of township government participate in emergency preparedness activities at the FEMP, receive regular reports about activities from FEMP staff, and are included in the list of persons contacted about unusual activities at the plant. Each township derives its authority from its parent county. Table 3-1 presents the population of each township surrounding the FEMP. Communities located in the vicinity of the FEMP are identified.

There are no hospitals or retirement homes within five miles of the FEMP. The closest such facilities are located in the cities of Hamilton and Cincinnati. The nearest public schools are located approximately 2 to 3 miles from the FEMP. Air monitoring stations and/or emergency warning systems are located near schools in the area. Area public schools are identified in Table 3-2.

3.2 Definition of Community

For the purpose of this CRP, the term "community" is defined as FEMP neighbors and other persons interested in environmental activities (including the RI/FS) at the FEMP. The community can be differentiated by two factors: geography and the level of interest in technical information concerning the FEMP.

TABLE 3-1
POPULATION STATISTICS FOR SOUTHWESTERN OHIO

TOWNSHIP (including unincorporated communities)	POPULATION
Ross Township	6,383
Millville	
Ross	
Shandon	
Crosby Township	2,665
New Baltimore	
Fernald	
New Haven	
West Crosby	
Morgan Township	4,972
Okeana	
Shandon	
INCORPORATED COMMUNITIES	
City of Harrison	7,518
City of Hamilton	61,368

Note: 1990 population data have not been published for small communities.

Source: "Ohio Population by Governmental Unit, 1980-1990," Ohio Data Users Center Department of Development in conjunction with the U.S. Bureau of the Census, Columbus, Ohio, February 1991.

TABLE 3-2
PUBLIC SCHOOLS LOCATED IN THE VICINITY OF THE FEMP

SCHOOL	LOCATION
Elda Elementary School	Ross
Ross Middle School	Ross
Ross High School	Ross
Crosby Elementary School	New Haven Road, near New Haven
Morgan Elementary School	Near Shandon

Geographic Considerations of Community

Geographically, the community can be categorized into two groups:

- Those who reside within the five-mile radius of the FEMP, primarily in the communities of Fernald, Ross, Shandon, New Baltimore, New Haven, and Okeana, Ohio, supplemented by residents of the two larger communities of Hamilton and Harrison, Ohio.

- Those who live in the Greater Cincinnati metropolitan area; to date, this has included members of groups focusing on environmental and nuclear issues, as well as units of local government.

Proximity to the FEMP directly affects community preferences about the types and immediacy of information received about environmental issues at the FEMP. Here are two examples obtained from the 1989 Community Assessment:

- Persons living close to the FEMP expressed more concern about the quality of drinking water, the effect of the plant on their health and the value of their land, while interested persons in the Greater Cincinnati area focused on the more global nuclear weapons and nuclear power issues.

- Timely information about site-specific events that people can see or hear about locally is critical to plant neighbors, whereas persons living farther away from the FEMP expressed more interest in broader-scope issues.

Proximity to the FEMP also affects public attendance at community meetings. The majority of persons who regularly attend RI/FS meetings live in the vicinity of the FEMP. This is confirmed by those who ask questions at the meetings and by the addresses on the comment cards submitted to DOE.

Information Complexity

From an information-needs perspective, the affected community is represented by individuals who require basic information concerning the FEMP's mission and current status, to those who request detailed information concerning all aspects of FEMP activities and relevant national policy. Community interviews (described in Section 3.4) clearly demonstrated a need for this range of information to be communicated. For example, some interviewees did not have a clear understanding of the FEMP mission, while others were well informed of the status of the RI/FS, uranium levels, and south plume progress. The challenge for future community meetings and publications is to cover this wide range.

3.3 Community Involvement with the FEMP

Before 1984, community involvement with the FEMP was minimal. Identification and disclosure of contamination at the FEMP in 1984 significantly increased the FEMP's profile in the community. The FEMP became the subject of frequent media attention, much of it critical, both locally and in the national press. Media reports fueled community fears and concerns, and raised questions about the impacts of the FEMP's operations on the health of FEMP workers and plant neighbors -- questions that were not immediately answerable. In 1985, plant neighbors had filed a class action suit seeking damages from the FEMP for stress and for decreased property values, which further clouded relationships between DOE and community residents. In 1985 DOE instructed NLO to employ a public information officer and to initiate a public information and community relations function.

The RI/FS, begun in 1986, started to provide answers to many of the community's questions about the type and extent of FEMP contamination and its potential effects on human health and the environment. Many questions still remain, however, and the high level of community interest in and involvement with FEMP site contamination issues that has existed since the first disclosures in 1984 can be expected to continue unabated for the foreseeable future. A list of other events or activities since 1984 that have impacted community involvement is provided below.

- DOE held four community meetings in the year following the announcement of the air emission and off-site well contamination in 1984.

- A local citizens group named FRESH was formed in 1984 as a result of these disclosures. Since then, FRESH has been an active voice in the community with an interest in health, DOE accountability, and site cleanup issues. According to a FRESH spokesperson, the group began with about 50 involved persons; that number has since risen to about 300.

- An AR for the RI/FS and all removal actions was established in 1990. The location is in the JAMTEK Building, 10845 Hamilton-Cleves Highway, Harrison, Ohio 45030. The site is called the PEIC.

- In 1985 two reading rooms were opened: one at the site and one at the Lane Public Library in Hamilton, Ohio. In 1989 the reading room in Hamilton, Ohio was closed because of lack of space, but two more were opened: Public Library of Cincinnati and Hamilton County (main branch) in Cincinnati and the Public Library in Harrison, Ohio. When DOE established the PEIC in 1990 to house the AR and to provide a reading room, it closed the one at the site. Public attendance at the reading rooms in Cincinnati and Harrison declined after the PEIC opened. Therefore, in early 1992, the reading rooms at Cincinnati and Harrison were consolidated into the PEIC. (Appendix A provides the location, telephone number and hours.)

- Area residents have participated in media interviews since 1985, resulting in both local and national television programs, and newspaper and magazine articles focusing on the FEMP. National media attention was prevalent in the fall of 1988 and again in late 1989-early 1990, with articles about the FEMP and the entire DOE nuclear defense facilities network appearing in Time (cover story), U.S. News and World Report and Newsweek magazines, as well as in newspapers with national circulation and syndicated television programs, such as the Phil Donahue Show.

- The FEMP ES&H Advisory Committee was created in 1985 to review FEMP activities. The committee consisted of environmental experts from industry and prominent universities, as well as concerned citizens and environmental activists. Its first priority was to ensure that the emergency siren system was installed and fully operational and to review both environmental and safety-related issues at the FEMP. The last ES&H Advisory Committee meeting was held in August 1991. The committee was deactivated in October 1991 (see Section 1.2.2).

- When the RI/FS began in 1986, a community assessment identified community concerns about the health and welfare of those who live near the FEMP; shortly thereafter WEMCO created a Community Relations Section as a point of contact for the community. Another community assessment was performed in 1989.

- The FEMP publishes two newsletters with similar titles. The FMPC Update (renamed Fernald Project Update) began publication in 1987 and was the primary communications tool with the local community until regular public meetings began to be held in 1989. The Fernald Project Update is issued on an "as needed" basis (approximately four times a year), and distributed to nearly 900 persons who asked to be on the FEMP mailing list. It covers a wide range of FEMP activities. A separate publication was started in 1990 to deal exclusively with RI/FS-related activities; after two issues, the Cleanup Update was renamed the Fernald Project Cleanup Report which is mandated by CERCLA and is published two weeks before each community meeting.

- In September 1988, DOE held an "open house" at the site. The open house featured a tour of the plant and a major RI/FS exhibit, which included a videotape, a slide show, and a photographic and field equipment display. Technical RI/FS staff answered community questions. A similar DOE "open house" was held in 1990 which featured even more exhibits and was attended by more than 2000 people.

- For the past three years, regular community meetings have been held to discuss the RI/FS and related topics. RI/FS-specific fact sheets have been prepared and distributed during these community meetings and through the PEIC. Area residents submit comment cards during or following these meetings; most ask to be added to the RI/FS mailing list. DOE responds to all queries needing follow-up in writing, on the telephone, or in person.

- Each year hundreds of people tour the plant and numerous others get information from a comprehensive community relations program that includes Partnership in Education, Speakers Bureau, regular reports at community meetings, community roundtables, press releases, monthly meetings with FRESH, cooperative planning and training committee, etc.

- A series of community roundtables was initiated by DOE in 1990 to discuss a wide range of FEMP issues with area residents. These roundtables are typically informal and small in nature. Roundtables are held frequently, usually four to six per year.

- A major activity that is not directly related to the RI/FS but that has had a highly visible role in community involvement is the extensive FEMP emergency preparedness program

designed to respond to a plant emergency. This program includes routine cooperation with local government officials, an emergency-warning siren system that is used to alert FEMP neighbors in the event of a FEMP emergency or of approaching severe weather, emergency drills, and an ongoing community information program. The 1989 Community Assessment (see Section 3.4) revealed that individuals involved in this emergency preparedness network tend to be well-informed about the FEMP.

3.4 Community Attitudes and Concerns

Following the announcement of air emissions and off-property well contamination, community members voiced concern about the following issues during four community meetings held by DOE in 1985:

- Property values
- Communication between DOE and the local community
- Long-term health effects of the FEMP on the surrounding population

To expand and update this information, DOE conducted community assessments in 1986 and 1989. This series of interviews with local community members sought to assess information needs and sources, attitudes toward the FEMP, the environmental issues raised by the RI/FS, and public involvement with the site. These two assessments are described briefly below.

1986 Community Assessment

In 1986, plant neighbors were interviewed. At that time, their general concerns were:

- Accurate, timely communications
- Ease of access to information
- Adequate access to technical information
- Declining property values
- Access to contractor staff performing the RI/FS

Health and environmental concerns centered around:

- The K-65 silos
- Identification of and information about radiological and toxic materials on site
- Fumes and air particulates from the FEMP
- Threats to drinking water
- Potential for increased rates of cancer

1989 Community Assessment

To update DOE's knowledge about community concerns, the RI/FS community relations staff conducted a second assessment in the summer of 1989. Interviewees who live in the vicinity of the FEMP included:

- Plant neighbors, many of whom lived near the FEMP for 10 years or more
- School administrators
- Former plant workers
- Parents with children (young or grown) who live near the FEMP
- Persons who live near the FEMP with incidences of cancer in their immediate families
- Spokesperson for a recreational facility near the plant that closed recently
- Representatives of FRESH
- FRESH supporters and nonsupporters
- Local business owners
- Township elected officials
- County emergency response team personnel
- Former local business owners
- Clergy
- Farmers
- Spouse of current plant employee
- Family who sold land to FEMP before it was built

In addition, persons in the Greater Cincinnati metropolitan area were identified and interviewed. They represented the Cincinnati City Council's Intergovernmental Affairs and Environment Committee, and various environmental and antinuclear organizations. The persons interviewed were not intended to provide a statistically representative sample.

Interviewees were identified from FEMP contact lists (Appendix C), from local township governing boards, from newspaper and magazine articles, and from referrals. Interviewees were chosen from among those who might have cause to be interested in or informed about plant environmental activities. Each person was interviewed for about one hour-and-a-half and promised anonymity at the outset.

This interview process shed light on a broad spectrum of community attitudes about the FEMP and its environmental activities. The public preferences expressed during the interviews provide the basis for many of the community relations activities specified in the CRP.

Information: Many persons interviewed expressed distrust of information provided by DOE. Their reasons varied; they felt they had received misinformation, inadequate information, or information that only told the "good news." They questioned why some announcements of events or occurrences do not appear to be timely. They noted contradictions between DOE data and data released by other agencies.

Another commonly held attitude identified during the community interviews was the concern that there are still too many unknowns about site contamination and its potential health effects. Interviewees cited the secrecy under which the FEMP previously operated, the technical complexity of information about plant operations and the environmental consequences, and DOE's credibility problem (discussed in Section 4.0).

The major concerns identified in the 1989 community assessment follow. The results reveal a significant shift in perspective since the 1986 assessment. They are generally listed in order of how frequently they came up and how much people discussed them.

The Effect of the FEMP on Human Health. Health effects, particularly on children, were overwhelmingly the primary concern. Interviewees expressed alarm or had concern that plant neighbors and current and former employees have health problems that many believe are related to contamination from the FEMP. They also expressed concern about persons in these groups who are now healthy but who may be diagnosed as having cancer in the future. Interviewees cited cancer, birth defects, learning disabilities, and leukemia as potential health impacts about which they are concerned. These concerns also were reflected in articles focusing on the FEMP that have appeared in the national news media, such as Time, Newsweek, U.S. News and World Report, Good Housekeeping, and McCall's, during the past two years. It should be noted, however, that not all of the persons interviewed who have family members with cancer or birth defects blamed the FEMP as the cause of their illnesses.

The Effect of the FEMP on Property Values. The public generally holds the perception that property values surrounding the FEMP have decreased in recent years because of the notoriety of the plant and questions about its impact on the local environment and human health. Many people interviewed felt that the potential unhealthy influence on residents living close to the plant might be a factor in lower property values. Specific concerns include devalued property, inability to sell property within a "reasonable" time at a "reasonable" price, and a smaller pool of buyers interested in purchasing property in the vicinity of the FEMP. While not unanimous, there was strong sentiment among interviewees supporting this view. Property values were a major issue during the class action suit's summary trial held in June 1989.

Contamination. A widely held view among persons interviewed was that the FEMP has contaminated local water supplies and the air. Concern about environmental contamination, while not unfounded, was generalized; few interviewees provided specifics.

K-65 Silos. The K-65 silos appeared to represent a focal point for community concern. The silos were readily recognized by local community members who were interviewed. There was a general lack of information about their contents and persons expressed fear about radioactive contamination either leaking out over a period of time or spilling into the local environment due to a major structural failure of the silos themselves.

Plant Closing with No Cleanup. In the absence of an announced decision about an anticipated plant closing, interviewees expressed much concern about when the plant might close and DOE's cleanup plans for a nonoperational facility. Many persons expressed the fear that DOE would not clean up the plant if the FEMP closes. Some persons, mostly located in the Greater Cincinnati area, expressed concern that the area could become a fenced-off "sacrifice zone."

Other Issues. Fewer interviewees expressed other related concerns, including:

- **Transportation and final storage of nuclear materials and waste from the FEMP.** One resident raised the following questions: How would local residents be protected from contamination if a truck or rail accident occurred? Would they be notified of shipment dates and routes? If an off-site repository is not available, what facilities are available at the FEMP to safely store the material and waste indefinitely?

- **The effect of the FEMP on the local economy.** Another resident raised the following questions: Do fewer people buy locally grown fruits and vegetables because they are afraid of contamination? Is locally produced milk safe? What other economic effects can we expect, in the wake of the two residential summer camp closings in the area?

- **The FEMP emergency warning system.** Some residents believe the siren, which is tested once a week, is too loud; others, not loud enough. In addition, people who are trying to sell their homes report that the siren discourages prospective buyers.

3.5 Community Information Needs and Sources

The persons who were interviewed identified several specific information needs which focused on both content (information, message, technical complexity) and format. Following is a summary of the types of information and the format recommended by interviewees.

Topics Needing More Information

The following represent specific areas of information that interviewees suggested DOE make available. Many, but not all, of these topics are related to areas of concern identified in Section 3.4 of this document. More commonly mentioned information needs are listed first.

- Health risks to persons living near the FEMP
- Biological issues -- studies conducted independently of the RI/FS on how uranium enters the food chain through meat or milk
- Storm water runoff
- Quality of groundwater
- Identification of materials stored on site (now and in the past) and uranium processing performed at the FEMP
- Environmental sampling and monitoring of air, soil, water, plants and animals on privately owned land near the plant

Since the community assessment was completed, several other issues have arisen during public meetings and in the media. Such issues include the suspension of production, FEMP investigations conducted by DOE's Tiger Team and the Federal Bureau of Investigation, new RI/FS findings of elevated levels of uranium in on-site and off-site groundwater, the CERCLA Consent Agreement between DOE and EPA, residents' concern over the cost of cleanup, leakage of waste materials stored at the plant, the suit filed by plant union employees, and the status of WEMCO's plant operation and maintenance contract.

Community Information Sources

Members of the communities receive their information about the FEMP and the RI/FS from several sources. Here is a summary, with the most widely used information sources listed first:

Direct Contact. Direct contact with the FEMP occurs most often at the RI/FS community meetings. Area residents have also been in contact through plant tours, the emergency preparedness programs, FRESH meetings, township trustee meetings, Speakers Bureau Program, and the Coordinating and Planning Committee.

The Local Media. Newspapers include the Cincinnati Enquirer, the Cincinnati Post, the Hamilton Journal-News, and the Harrison Press. All metropolitan Cincinnati television stations were named as information sources. Radio stations WKRC, WLW, and WCKY call the FEMP on a regular basis and cover press conferences and major events. In spite of their dependence on the media, many area residents expressed their dissatisfaction with the media's tendency to focus only on "bad news."

FEMP Publications. Publications identified by interviewees as sources of information about the plant included the Fernald Project Update and the Annual Environmental Report.

Word of Mouth. Persons interviewed indicated that they tend to listen to what their neighbors and friends say about the FEMP. Among those "neighbors and friends" identified by interviewees were current and former FEMP workers.

Environmentally Focused Organizations. National environmentally focused organizations named as information sources include the Sierra Club, Greenpeace, the Cincinnati Chapter of SANE/FREEZE: Campaign for Global Security (an organization dedicated to abolishing nuclear weapons), and related national information networks. The concern of the broader-based environmental groups in the Cincinnati metropolitan area focused on water quality, in particular, and on the nuclear issue, in general. For example, SANE-FREEZE hosted a meeting about the FEMP in February 1989. Only occasionally do persons who attend FEMP community meetings identify themselves as members of these groups.

One local citizen activist group, FRESH, was identified as a source of information about the FEMP upon which community residents rely. Many interviewees said they had attended FRESH meetings in recent years, whether or not they were members. There were varying opinions, ranging from nonsupport to support for FRESH.

State and Federal Agencies. Only one person interviewed acknowledged invoking the Freedom of Information Act to obtain FEMP records. Some residents contacted agencies such as EPA and OEPA for information and some have contacted the ODH to have their water sampled and analyzed.

Suggested Communication Techniques

The 1989 community assessment provided suggestions on communication techniques that might be helpful for DOE to pursue. The following summary, based on these interviews, suggests how the community members might like to receive future information about the FEMP's environmental activities.

Publications. Interviewees were most interested in receiving or continuing to receive written information about the FEMP RI/FS. Regarding the Fernald Project Update, persons interviewed said they would prefer simple, focused articles that relate complex RI/FS technical material to daily life, cleaner publication design, and more RI/FS "news." Across the board, persons interviewed said they wanted more information, and information that they could trust. A few persons recommended focusing the Fernald Project Update solely on the RI/FS.

Community Meetings. Most of the persons interviewed had attended at least one community meeting. Their opinions about meetings ranged from support of large group meetings, to support for small meetings and workshops, to eliminating meetings. Most interviewees wanted to receive handouts based on speakers' presentations. A few of the suggestions for alternative approaches to community meetings included: holding meetings in different locations; videotaping meetings so area residents can view the tapes at their convenience; holding a dialogue with plant managers (no technical staff); and holding a small group meeting or series of meetings that focus on specific topics.

Other Forms of Communication. Individual suggestions to improve the flow of environmental information between the FEMP and the community included: either new or more personal contact with FEMP personnel, plant tours, use of the FEMP Speakers Bureau, and changes to the reading rooms to make them easier for people to use.

4.0 THE FEMP RI/FS COMMUNITY RELATIONS PROGRAM

4.1 Introduction

The goal of the Superfund process at the FEMP is to identify environmental problems and to recommend and implement CERCLA/SARA-required cleanup solutions. Parallel to this CERCLA/SARA-mandated RI/FS and removal actions activity, DOE is also focusing on other environmental efforts, including: (1) activities to satisfy requirements of NEPA and RCRA, and (2) a rechanneling of plant resources from production to environmental restoration. Collectively, these related environmental investigation, remediation, and restoration activities represent a major, visible effort to comply with applicable environmental laws and regulations -- a cornerstone of good community relations. In addition to demonstrating compliance, members of the community have asked DOE to demonstrate three other things to them: (1) that DOE deserves their trust; (2) that the contamination problems at the FEMP can be cleaned up; and (3) that DOE is pledged to doing the job that is necessary to clean up contamination at the FEMP. These sentiments have been expressed frequently by the community during interviews, at public meetings, in the media, and during informal contacts.

Consistent with these community sentiments, DOE will focus on communicating three major messages during the implementation of the FEMP RI/FS community relations program. These messages are:

- Credibility/Trust: DOE is committed to sharing all relevant information with the public in an accurate and timely manner.

- Capability: The environmental problems at the FEMP are solvable. Technologies exist to identify and solve the majority of environmental problems at the FEMP.

- Commitment: DOE is committed to cleaning up the FEMP and the nearby environment.

With these major messages in mind, the following section describes a range of public information and involvement activities that are recommended to meet and exceed CERCLA/SARA requirements and the program objectives identified below. This section also explains how these activities address the community information needs identified in the preceding section.

4.2 Program Objectives

The FEMP has been designated a NPL site under Superfund, which brings with it certain requirements for informing and involving the public regarding environmental work at the site. The objectives listed

below are consistent with community relations program objectives recommended by EPA both in its guidance for Superfund sites, and during discussions between FEMP managers and EPA Superfund managers regarding community relations needs at the FEMP.

The RI/FS community relations program for the FEMP is built upon the three mutually supportive objectives shown below.

Objective 1: Ensure that interested parties are provided with information necessary to understand key issues and decisions at the FEMP

From the beginning, this has been the most basic aim of the FEMP Community Relations Program -- to provide residents with information they need in order to understand the FEMP RI/FS. In keeping with Secretary of Energy Watkins' recent initiatives, the thrust of the current public information effort is to maximize openness by providing the community with general and specific written information, and by seeking direct communication between appropriate technical experts and the interested community. This objective includes informing the public of events or planned actions in a timely manner at technical levels appropriate for each of the interested audiences.

Objective 2: Increase opportunities for the community to comment on and provide input into RI/FS and removal action decisions

Public participation relies heavily on access to relevant information; thus, the second objective flows directly out of the first -- to increase opportunities for the public to participate in the environmental decision-making process. The assumption is that the more the public can be brought into the formal CERCLA/SARA process, the less the community will feel the need to redress concerns outside this process. This effort encourages and expands the dialogue already developed between DOE and individual members of the community. It seeks to increase opportunities for the public to comment on and provide input throughout the remedial process.

Objective 3: Identify, focus, and resolve conflict to the extent possible

The conflict management strategy for the FEMP is designed to define the issues, identify concerned parties, negotiate issues, and build on the dialogue developed during the public involvement activities undertaken as a part of the second objective. If this dialogue is successful, DOE will be able to anticipate and acknowledge differences of opinion and work with the interested parties to minimize certain conflicts that may arise out of those differences.

Timely, accurate information freely shared with the community is essential to comply with these objectives and is a goal of the community relations program. Activities recommended to incorporate the first two objectives are identified in Section 4.3. Section 4.4 provides suggestions to fulfill the third objective.

4.3 Program Highlights

The activities that follow are designed to meet one or more of the FEMP RI/FS Community Relations Program objectives identified in Section 4.2. The activities are also designed to meet the range of community needs for technical and general information, in both oral and written form, and to respond to community requests for greater participation in the RI/FS and removal action process that are identified in Sections 1.2 and 3.2.

A variety of techniques will be used as appropriate, to communicate with local residents about new issues (such as those identified in Section 3.5). For example, to announce and explain any future elevated levels of contaminants, telephone/personal contacts with key individuals may be made, press releases could inform the larger community, and explanations could be provided in the Fernald Project Cleanup Report, Roundtables, FRESH meetings, and township trustee briefings.

RI/FS Community Meetings. At least three community meetings will be held each year to ensure that interested area residents have a routine public forum for expressing their views and getting answers to their questions. The meetings will be designed to meet the community's need for ease of access to information and for regular opportunities to discuss RI/FS and removal action progress and related issues with RI/FS and other environmental experts. In addition, public meetings will be scheduled to discuss and accept comment on major RI/FS documents, such as the draft FS report and the proposed plan for each operable unit, as specified in the 1991 Amended Consent Agreement between EPA and DOE.

Advance notification of meetings will be given to persons on the FEMP mailing list via a DOE "Dear Neighbor" letter and flyers will be distributed throughout the local community, allowing interested community members adequate time to make arrangements to attend. Potential meeting locations are identified in Appendix F. To ensure that each meeting fulfills public information and involvement needs, DOE will continue to solicit community input into planning future meetings. DOE will continue to coordinate these meetings with EPA and OEPA, who are invited to participate, along with other appropriate agencies. Each meeting will feature technical presentations, comments by DOE and the regulators, and opportunities for individuals or group spokepersons to make statements or ask questions. Meeting transcripts will be provided in a timely manner at the PEIC (see Appendix A).

Response to Community Questions. DOE will continue to distribute comment cards at all community meetings as a vehicle for identifying community questions and concerns, and to provide answers in a

timely, focused manner. The community's questions and comments are captured on RI/FS comment cards distributed during RI/FS community meetings and at other community events. Responses will be made during the community event, such as a meeting, whenever possible. However, when additional data are needed to provide an answer, DOE will answer those questions in writing within a specified reasonable time, such as 30 days.

Telephone and Personal Contacts. DOE will continue to maintain frequent telephone and personal communication with local community leaders, residential and commercial plant neighbors, and other organizations. (Appendix C identifies such key contact persons.) Any of these persons, or others as appropriate, will be contacted in a timely fashion about significant events such as the issuance of a major RI/FS document, announced cleanup activity, recent RI and related findings, or unexpected releases of contaminants.

Fernald Project Cleanup Report. This DOE publication is designed to provide up-to-date information on new findings and site developments related to ongoing cleanup activities at the FEMP. It is issued two weeks before each public meeting and it is expected to be published three or four times a year. Its sole focus will be on information about CERCLA-related activities, and not general plant news as reported in the current Fernald Project Update. Two issues (November 1990 and March 1991) went out under the name Cleanup Update; under the new name, Fernald Project Cleanup Report, issues were mailed in July and October 1991 and February and July 1992. The Fernald Project Update will be retained as a general topic newsletter and the Fernald Project Cleanup Report will be devoted exclusively to cleanup and CERCLA-related activities.

Presentations and Briefings to Community Groups and Elected Officials. DOE will continue to provide briefings about the FEMP in general and about the RI/FS and removal actions in particular to Ross, Crosby, and Morgan township governments (see Appendix C for a list of township officials). Site tours and briefings are prepared to meet informational needs of area, state, and federal elected representatives. (Appendix E provides a list of current elected officials.) DOE also makes presentations to other units of local government and local organizations on request. A site briefing is given at all FRESH meetings by DOE or WEMCO community relations personnel and numerous presentations have been given to local governments.

Community Roundtables. Informal opportunities also exist for small groups of community members to discuss a variety of FEMP issues, such as contaminated groundwater, with technical staff. The Community Roundtable program, initiated by DOE in March 1990, is structured around the results of questionnaires sent to persons on the FEMP mailing list. In 1991, community residents identified contaminated groundwater, cleanup progress at the FEMP, and hazardous waste at the FEMP as the three issues they would most like to discuss. In 1992, some potential roundtable subjects are: the vitrification

process, results of sampling, Site-Wide Characterization Report, and the public water supply. Roundtable discussions focused on one topic will be held as long as community interest is maintained.

Workshops. Both the community assessment and public response to "availability sessions" that feature direct communication with RI/FS technical staff indicate a need for more informal communication. Workshops focusing on specific aspects of the RI/FS offer an opportunity to disseminate such detailed technical information while encouraging informal dialogue between DOE and the community. Topics will focus on known areas of community interest, such as risk assessments, removal actions, the south plume, the K-65 silos, or other areas of the RI/FS. Workshops will be developed and offered to small groups in the area on an as-needed basis; e.g., to discuss removal actions and the alternatives available for each operable unit. Each workshop may be held more than once, depending on need and proposed audience. DOE has committed to holding a workshop for each removal action EE/CA during the public comment period.

Community Hotline. Events that alarm nearby residents -- such as fires in the area of the plant, the presence of RI/FS personnel in white coveralls, or the overflow of the outfall line at Manhole 180 -- have occurred near the FEMP site on weekends or after hours on weekdays. In some cases these events have been related to FEMP operations or cleanup activities, and in other cases they have not, but residents have not had a reliable way to confirm if there is cause for concern. In response, DOE is developing a set of protocols that will function as a 24-hour hotline for these types of questions. These protocols include:

- Providing a telephone number that can be used during normal business hours to call DOE's PIO at 738-9245
- Disseminating the phone number for the plant's 24-hour security office to be used at all other times -- 738-6295
- Instructing all RI/FS contractors to report: (1) their presence off-property to the security office on weekends and after hours on weekdays, and (2) any nonroutine events
- Requiring all such community hotline communications to be logged

These community hotline phone numbers will be widely and frequently disseminated. Additional protocols will be developed as the need is identified. In addition, EPA has invited the public to call the EPA Region 5 toll-free hotline: 1-800-621-8431.

Reading Room. The information repository program began in 1985. The four repositories, known locally as reading rooms and recently consolidated to the PEIC, contain copies of technical reports, fact sheets,

news releases, and briefings related to the RI/FS. Copies of all RI and FS reports will be available for public review also. The materials in the reading room at the PEIC will be organized in such a way that the AR can be distinguished from other site-related materials.

Persons interviewed who had made use of the newly-opened reading rooms mentioned difficulties in finding materials they were seeking. They made several suggestions, including videotapes of relevant RI/FS information and improving the organization of the materials to make the rooms more "user friendly." The PEIC exceeds these recommendations by providing full-time personnel to assist the public and by remaining open until 8:00 two nights a week. Other highlights include: index will be updated monthly, reading areas and a meeting room are available, equipment for viewing videotapes is provided, users' logs are maintained, and photocopying of documents is free to the public. The reading room location is provided in Appendix A.

Administrative Record. The AR for each operable unit and for each removal action undertaken is located in the PEIC, at 10845 Hamilton-Cleves Road, JAMTEK Building near Ross, Ohio. The mailing address is Harrison, Ohio 45030. It documents comments received from the public and DOE's response to those comments. DOE will inform the community about the availability of AR files maintained for each operable unit in the RI/FS and for each removal action undertaken. New documents are being added to the AR regularly as they are produced. Notices of Availability (NOA) appear in local newspapers identifying documents that have been added to the AR for public review and comment.

RI/FS Fact Sheets and Other Materials. RI/FS materials focusing on specific topics will continue to be developed and distributed at RI/FS community meetings, placed in the AR, and made available to community groups on request. Each individual fact sheet will be tailored to the community's information needs. Such fact sheets may focus on RI/FS vocabulary, opportunities for public participation in the RI/FS, and technical explanations of field sampling activities, feasibility study and removal action alternatives analyses, and risk assessments. When each preferred alternative is identified, the fact sheet to be developed and distributed will focus specifically on the proposed plan.

News Media Relations. Media briefings and press releases will continue to be used to announce community meetings and RI/FS program milestones. (A list of local media is provided in Appendix D.) In response to community requests to be informed as soon as possible of new findings or unanticipated events at the FEMP, press releases will also be issued to announce these types of findings and events in a timely manner. Press releases will ensure that not only the local community but the greater Cincinnati area is kept informed. Attempts will be made to strengthen the rapport already established with local media contacts and to continue to supply reporters with information that will be useful for preparing their articles.

Speakers Bureau. The FEMP Speakers Bureau was designed to provide FEMP speakers for community, business, civic and professional organizations. RI/FS staff and personnel supporting other environmental projects, such as removal actions and the EIS, will be available to assist in this ongoing FEMP effort. More emphasis has been directed to providing FEMP speakers for students and educators.

Plant Tours, Field Trips and Open Houses. Plant tours will continue. These tours demonstrate cleanup activities planned, initiated, or completed on site. Field trips and open houses will be scheduled as appropriate.

Videotape(s). Use of videotape(s) was frequently mentioned as a means to improve information-sharing with the community. The prepared video concept is based on an 8-minute RI/FS videotape developed for the 1988 FEMP Open House, which was well received by the community. Video "stories" may be developed as appropriate, tied to key RI or FS milestones or topics that need special attention. The videotapes are available for viewing at the PEIC and possibly available for loan. The videotapes might also be used at community meetings, by the speakers bureau, or in a RI/FS or other FEMP exhibit.

Removal Action Community Relations Activities. Removal action community relations activities are part of the integrated community relations program designed to inform and involve the community in the FEMP cleanup process. This program recognizes the fact that RI/FS community relations activities have much in common with community relations activities which support removal actions and that two community relations programs can be confusing to the community. Such activities include community meetings, public comment periods, community interviews, materials development and dissemination, documentation in the AR, and community relations plans. Removal actions will continue to be routinely discussed during RI/FS community meetings. Removal actions will also be included in the Fernald Project Cleanup Report. The AR established for each removal action will document public participation as well as any community relations plan that addresses specific removal action activity. A generic schedule for suggested community relations removal action activities is provided in Table 4-1; a generic outline for a removal action addenda to the CRP is provided in Appendix G.

Public Participation Plan. DOE initiated a new program early in 1992 designed to encourage public participation by reviewing and commenting on DOE planning documents that focus on cleanup. A community workshop was held June 1992 to explain the program and allow interested members of the community to sign up for future workshops. All significant comments made by the public will be addressed in a responsiveness summary that will be made available to the public in the reading room.

TABLE 4-1
GENERIC TIMETABLE FOR SUGGESTED COMMUNITY RELATIONS ACTIVITIES FOR A NON-TIME-CRITICAL REMOVAL ACTION

		Date(s)
1.	Establish Administrative Record File at all locations for the records of each removal action	Prior to Day 1
2.	Publish the NOA of Administrative Record File in at least one major local newspaper	Prior to Day 1
3.	Publish the NOA of EE/CA in at least one major local newspaper	Day 1
4.	Provide the EE/CA to all AR file locations	Day 1
5.	Provide a 30-day period for public comment on the EE/CA	Day 1 - Day 30
6.	Provide a description of the removal action in the Fernald Project Cleanup Report	Next Available Issue
7.	Conduct a workshop to discuss the EE/CA	Day 1 - Day 30
8.	Decide whether to extend public comment period if requested*	Day 30
	After Original Public Comment Period	
9.	Develop responses to significant community concerns	Day 31 - Day 45
10.	Provide Responsiveness Summary to all AR file locations	Day 60

*When a public comment period is extended, the Responsiveness Summary deadline will be extended by the same number of days as the public comment period.

Public Notices. NOAs will be published in at least one local newspaper for each EE/CA and for all RI/FS primary documents.

Public Comment Periods. Public comment periods will be held for each EE/CA, for some removal actions, for each draft feasibility study report, as part of the NEPA program, and when the proposed plan for each operable unit is announced.

EIS Public Participation. The procedures for integrating the EIS into the RI/FS, documented in the FEMP NEPA/CERCLA Integration Plan, include community involvement activities such as scoping meetings, public hearings, public comment periods, and responsiveness summaries.

To maximize the opportunity for both CERCLA/SARA and NEPA public involvement requirements to be met, NEPA activities are being integrated into the RI/FS community relations program. This integration is designed to provide an exchange of information, avoid duplication of public participation and scheduling efforts, and share resources in the preparation of public meetings and hearings. For example, the community relations staff and the NEPA staff are cooperating to provide consistency in meeting approaches and optimal meeting scheduling. Also, the NEPA staff make presentations and answer questions at community meetings.

This effort is designed to aid the public in understanding each report and preparing comments. Each proposed plan that details DOE's preferred alternative will be distributed to the public. A notice will be published in local newspapers to announce each public comment period, the location(s) of the relevant AR, and any associated public meetings or hearings.

Responsiveness Summaries. Following completion of each public comment period for each operable unit and each removal action, a responsiveness summary will be prepared. The responsiveness summary will summarize the comments received during the comment period, as well as how DOE intends to incorporate, address, or respond to those comments. In particular, the responsiveness summary will explain any significant changes between the proposed plan and the final report.

Table 4-2 presents a summary of the activities identified in the Program Highlights Section and its schedule status per year.

Table 4-2

FEMP RI/FS COMMUNITY RELATIONS PROGRAM HIGHLIGHTS

	ACTIVITY	SCHEDULE STATUS PER YEAR
•	RI/FS Community Meetings	held at least three times a year at discretion of DOE
•	Responses To Questions	as requested, at a maximum within 30 days
•	Community Contacts	as requested
•	Fernald Project Cleanup Report	issued two weeks prior to the DOE Community Meetings
•	Presentations/Briefings	as requested
•	Community Roundtables	at least four to six held per year
•	Workshops	DOE will conduct to explain significant RI/FS, Removal Action, or other activities
•	Community Hotline	on-going
•	Reading Room at PEIC	on-going
•	Administrative Record	updated as documents are completed and approved
•	Fact Sheets	DOE will issue to explain significant RI/FS, Removal Action or other activities
•	Press Releases	DOE will issue for significant events at the FEMP
•	Public Notices	DOE will issue for meetings, NOAs, public comment periods, other events per regulations, as indicated in the CRP
•	Speakers Bureau	as requested
•	Plant Tours	as requested, at the discretion of DOE
•	Videotapes	as needed
•	Removal Action Activities	prepare an addendum to the CRP for each removal action
•	EIS Scoping Meetings	as required by legislation, guidance
•	Responsiveness Summaries	prepare as needed in conjunction with public comment periods

4.4 Fulfilling the Conflict Management Objective

Rationale. The following approach to addressing the third objective of community relations, i.e., to focus and resolve conflict, builds on public information and involvement activities described in the previous subsection. The approach is designed to help DOE anticipate and resolve the types of conflicts that have been demonstrated to arise routinely during the investigation and remediation of hazardous and mixed waste contamination at federal facilities around the country. At other sites, such conflict has frequently led to congressional inquiries, lawsuits, the need to reinvestigate or recharacterize site contamination, project delays, or the inability to reach or implement a ROD. Some of these situations have already occurred at the FEMP.

Approach. The following four requirements form the basis for an effective conflict management approach for the FEMP:

1. Maintain complete openness in providing RI/FS, removal action, and related information.

2. Identify and eliminate potential sources of conflict that are avoidable, e.g., conflicts that are not based on the substance of the Superfund process, but rather on how the process is being conducted.

3. Identify unavoidable sources of conflict early in each step of the Superfund process so DOE, as lead agency, can address or mitigate these conflicts to the extent possible.

4. Establish a working relationship with the community, or representatives thereof, based on mutual trust and reciprocity.

Requirement 1. The activities identified in the previous subsection are designed to satisfy the first conflict management requirement. The variety of activities -- from fact sheets and progress reports to plant tours and community meetings -- will ensure that all information relevant to the RI/FS and removal actions will be made available to the public.

Requirement 2. Well-planned and well-implemented public information and involvement activities also contribute to the second requirement by avoiding conflict that is based on misinformation or public perceptions that the community has not been involved in the Superfund process. Timely responses by DOE to comment cards and other requests for information will also help avoid unnecessary conflict.

Requirement 3. Perhaps the greatest challenge in managing conflicts during the cleanup process is in identifying potential sources of conflict early enough so that they can be addressed or mitigated. By interacting directly with the community on a regular basis through face-to-face meetings, availability sessions, community roundtables, workshops, and telephone contacts, DOE will ensure that it is kept apprised of the community's concerns and desires throughout this process. This routine feedback will enable DOE to identify potential sources of conflict in a timely manner. While the specific nature of these conflicts cannot be anticipated, DOE is committed to taking those actions that are both feasible and technically sound, to address or mitigate areas of conflict between the community and DOE with respect to the Superfund process. In particular, proposed plans, public comment periods, and responsiveness summaries will ensure that DOE obtains and responds to the public's input on a preferred remedial alternative before a decision is made.

Requirement 4. Finally, building a relationship with the community in which area residents become partners -- not adversaries -- in the decision-making process for remediation is the ultimate goal of a community relations program. This relationship can only be built, however, on mutual trust, credibility, and open sharing of information. DOE is committed to a community relations program that it believes will build and maintain this relationship.

4.5 RI/FS Program Contacts

In carrying out the FEMP's RI/FS community relations program, certain key positions have been identified for overseeing and coordinating the activities described in this section. Appendix B identifies these persons and the current phone numbers of the individuals who hold them. The Fernald Project Cleanup Report will regularly identify these key individuals and how they can be reached so that changes in personnel can be reflected.

APPENDIX A

LOCATION AND HOURS OF FEMP READING ROOM AND ADMINISTRATIVE RECORD FILES

Location	Hours
Public Environmental Information Center JAMTEK Building 10845 Hamilton-Cleves Highway Harrison, Ohio 45030 513-738-0164	Mon and Thurs: 9 am - 8 pm Tues, Wed, Fri: 9 am - 4:30 pm Sat: 9 am - 1 pm

The Adminstrative Record is also available at the U.S. EPA Region 5 Office:

U.S. EPA - Region 5, (HRE-8J)
77 W. Jackson Blvd.
Chicago, IL 60604
800-621-8431

APPENDIX B

LIST OF U.S. DOE, U.S. DOE CONTRACTOR, AND REGULATORY AGENCY CONTACTS

U.S. DOE/U.S. DOE CONTRACTORS AT THE FEMP

Contacts During Business Hours:

Ken Morgan — 513-738-9245
Director of External Affairs and Public Contact Person — (FAX) 513-738-6650
Department of Energy
P. O. Box 398705
Cincinnati, OH 45239-8705

Gary Stegner — 513-738-9331
Public Affairs Specialist — (FAX) 513-738-6650
Department of Energy
P.O. Box 398705
Cincinnati, OH 45239-8705

Pete Kelley — 513-738-6644
Public Affairs Manager — (FAX) 513-738-6968
Westinghouse Environmental Management Company of Ohio
P. O. Box 398704
Cincinnati, OH 45239-8704

Gregory K. Ossmann — 513-870-8148
Manager, Community Relations — (FAX) 513-870-0444
PARSONS
6120 South Gilmore Road
Fairfield, Ohio 45014

John F. Martin — 513-738-3100
RI/FS Community Relations Task Leader — (FAX) 513-738-0767
Advanced Sciences, Inc.
P. O. Box 475
Ross, OH 45061-0475

Evening and Weekend Contact:

FEMP Security — 513-738-6295

U.S. EPA

U.S. EPA Hotline — 800-621-8431

James Saric — 312-886-0992
Remedial Project Manager — (FAX) 312-353-4788
U.S. EPA - Region 5 (HRE-8J)
77 W. Jackson Blvd.
Chicago, IL 60604

Cheryl Allen — 312-353-6196
Superfund Community Relations Section — (FAX) 312-353-1155
U.S. EPA - Region 5 (P-19J)
77 W. Jackson Blvd.
Chicago, IL 60604

OHIO EPA

Donald R. Schregardus, Director — 614-644-3020
Ohio Environmental Protection Agency — (FAX) 614-644-2329
P.O. Box 1049
1800 Watermark Drive
Columbus, OH 43266-0149

Patricia Madigan, Community Relations — 614-644-2160
Chief of Public Interest Center

Jane Taft, Public Involvement Coordinator — 614-644-2160

Tom Winston, District Chief — 513-285-6357
Ohio Environmental Protection Agency
Southwest District Office — (FAX) 513-285-6249
40 South Main Street
Dayton, OH 45402-2086

Graham Mitchell, Project Coordinator — 513-285-6357

Tom Schneider, Remedial Response — 513-285-6357

Rich Bendula, Groundwater — 513-285-6357

Martyn Burt, Water Pollution Control — 513-285-6357

Phil Harris, Hazardous Waste — 513-285-6357

Jim Crawford, Emergency Response — 513-285-6357

Dan Riestenberg, Emergency Response — 513-285-6357

Departments of Health

Ohio Department of Health 246 N. High Street Columbus, OH 43212	800-523-4439 614-466-3543
Robert Owen, Administrator Radiological Health Program 1224 Kinnear Road Columbus, OH 43212	614-644-2727
Hamilton County Health Department 138 E. Court Street, Room 707 Cincinnati, OH 45202	513-632-8451
Butler County Health Department Administration Building 130 High Street Hamilton, OH 45011	513-887-3111
Allan Blevens, Chief of Environmental Services	513-887-3120
Patricia Burg, Director of Administration	513-887-3098

APPENDIX C

LIST OF KEY COMMUNITY CONTACTS

TOWNSHIP GOVERNMENTS IN THE VICINITY OF THE FEMP

Crosby Township Trustees

Gary Storer, President
[redacted]

Warren E. Strunk
[redacted]

Jane Harper
[redacted]

Doris Turner, Clerk
[redacted]

Ross Township Trustees

Thomas Willsey, Jr., President
[redacted]

David M. Young
[redacted]

Donald H. Thiem, Vice President
[redacted]

Betty Brown, Clerk
[redacted]

Morgan Township Trustees

Robert Copeland, President

Anthony Sears

Karl Dillhoff

Charlotte Lahmann, Clerk

BUSINESSES LOCATED NEAR THE FEMP

Delta Steel Corp.
Daniel Baker, Controller
10860 Paddy's Run Road
Harrison, OH 45030
513-738-1232

Albright & Wilson, Inc.
Martin Laughlin, Plant Manager
Paddy's Run Road
Harrison, OH 45030
513-738-1261

Welch Sand & Gravel, Inc.
James R. Welch, Vice-President
11489 Hamilton-Cleves Highway
Harrison, OH 45030
513-738-3438

Dan Cornelius, Realtor
2647 Cincinnati-Brookville Road
P.O. Box 0146
Ross, OH 45061-0146
Business 513-738-8833

Best Panel Homes
Carl Otte, Vice President
11301 Paddy's Run Road
Harrison, OH 45030
513-738-1212

Ruetgers-Nease Chemical Co., Inc.
Noah Cope, Plant Manager
Paddy's Run Road
Harrison, OH 45030
513-738-1255

Schaefer Box & Pallet Co.
Stan Schaefer
11825 Paddy's Run Road
Harrison, OH 45030
513-738-2505

Knollman Farm, Inc.
2513 Willey Road
Harrison, OH 45030
513-738-1745
Residence 513-738-2563

SCHOOLS

Ross Local Schools

Kenneth A. Rupe, Superintendent
3371 Hamilton-Cleves Road
Hamilton, OH 45013
513-863-1253

Elda Elementary
Mick Teufel, Principal
3980 Hamilton-Cleves Road
Hamilton, OH 45013
513-738-1972

Morgan Elementary
Steve Miller, Principal
3427 Chapel Road
Hamilton, OH 45013
513-738-1986

Ross Middle School
Steve Kidd, Principal
3371 Hamilton-Cleves Road
Hamilton, OH 45013
513-863-1251

Ross High School
Dan Hare, Principal
3425 Hamilton-Cleves Road
Hamilton, OH 45013
513-863-1252

Southwest Local Schools

Dr. Kay Bowling, Superintendent
230 South Elm Street
Harrison, OH 45030
513-367-4139

Crosby Elementary
Daniel Lawler, Principal
8382 New Haven Road
Harrison, OH 45030
513-738-1717

Wm. Henry Harrison High School
Carroll E. Roberts
513-367-4169

Harrison Junior School
John Jostworth
513-367-4831

Harrison Elementary School
Robert Stoll
513-367-4161

Elizabethtown Elementary School
Fritz Monroe
513-353-2340

Hooven Elementary School
Fritz Monroe
513-353-2620

Miamitown Elementary School
Carter Cordes
513-738-1717

Whitewater Valley Elementary School
Gregg Tracy
513-367-5577

FEMP NEIGHBORS AND KEY MEMBERS OF FRESH

Russell Beckner

[redacted]

Vicky Dastillung, FRESH

[redacted]

Sandy Butterfield, FRESH

[redacted]

Pam Dunn, FRESH

[redacted]

Lisa Crawford
Spokesperson for FRESH

[redacted]

Gerda B. McFarland, FRESH

[redacted]

APPENDIX D

MEDIA CONTACTS

WIRE SERVICES

Associated Press
John Nolan, Cincinnati Correspondent
312 Elm Street
Cincinnati, OH 45202
513-241-2386
FAX: 513-241-2665

United Press International
Rick Van Sant, Bureau Manager
125 E. Court Street
Cincinnati, OH 45202
513-721-0345

NEWSPAPERS

Cincinnati Post
Mike Philipps, Metro Editor
Al Salvato, Reporter
125 E. Court Street
Cincinnati, OH 45202
513-352-2722
FAX: 513-621-3962

Press Community Newspapers
Western Division
Joe Beach, Managing Editor
5505 Cheviot Road
Cincinnati, OH 45247
513-923-3111
FAX: 513-923-1806

Cincinnati Business Courier
Bryan Settle, Editor
1005 Carew Tower
Cincinnati, OH 45202
513-621-6665
FAX: 513-621-2462

Dayton Daily News
Jim Ripley, Metro Editor
Jim Babcock, Reporter
4th and Ludlow Sts
Dayton, OH 45401
513-225-2213
FAX: 513-225-2489

Cincinnati Enquirer
Ron Liebau, Metro Editor
Ben Kaufman, Reporter
312 Elm Street
Cincinnati, OH 45202
513-721-2700
FAX: 513-768-8340

Hamilton Journal-News
Ozzie Kleinas, Managing Editor
Joe Fiertag, Reporter
Court St. at Journal Square
Hamilton, OH 45012
513-863-8200
FAX: 513-863-7988

Whitewater Publications
John Estridge, Editor
P.O. Box 38
Brookville, IN 47021
317-647-4221

Harrison Press
Ollie Roehm, Editor
307 Harrison Ave.
Harrison, OH 45030
513-367-4582
FAX: 513-367-4593

Harrison Record
Robert Hyle, Editor
613 Harrison Ave.
Harrison, OH 45030
513-367-0261

Register Publications
(Affiliate of Harrison Record)
Joe Awad, Editor
126 W. High St., P.O. Box 328
Lawrenceburg, IN 47025
812-537-0063
FAX: 812-537-5576

TELEVISION

WCPO-TV, Channel 9 (CBS Affiliate)
500 Central Avenue
Cincinnati, OH 45202
513-852-4072 (Newsroom)

WLWT-TV, Channel 5 (NBC Affiliate)
140 W. 9th Street
Cincinnati, OH 45202
513-352-5011 (Newsroom)
513-352-5000 (Switchboard)

WKRC-TV, Channel 12 (ABC Affiliate)
1906 Highland Avenue
Cincinnati, OH 45219
513-421-6872 (Newsroom)
513-763-5500 (Switchboard)

WXIX-TV, Channel 19 (Fox Broadcasting Network Affiliate)
10490 Taconic Terrace
Cincinnati, OH 45215
513-772-1919 (Switchboard)

3709

RADIO

WCKY-WWEZ FM
219 McFarland Street
Cincinnati, OH 45202
513-241-6565 (Switchboard)

WGUC FM
1223 Central Parkway
Cincinnati, OH 45214
513-556-4444

WKRC/WKRQ AM
1906 Highland Avenue
Cincinnati, OH 45202
513-721-6397 (Newsroom)
513-381-5500 (Switchboard)

WLW AM
3 E. 4th Street
Cincinnati, OH 45202
513-421-6397 (Newsline)
513-241-9597 (Switchboard)

WVXU FM (Xavier University)
3800 Victory Parkway
Cincinnati, OH 45207
513-745-3738
513-731-9898

WMOH AM
2081 Fairgrove Avenue
Hamilton, OH 45011
513-863-6501 (Newsroom)

APPENDIX E

SOUTHWESTERN OHIO AND SOUTHEASTERN INDIANA LEGISLATORS

U.S. SENATE

Ohio

The Honorable John H. Glenn
Room 503
Hart Senate Office Building
Washington, D.C. 20510
202-224-3353
550 Main Street, Suite 10407
Cincinnati, OH 45202
513-684-3265

The Honorable Howard M. Metzenbaum
Room 140
Russell Senate Office Building
Washington, D.C. 20510
202-224-2315
Federal Office Building
Cincinnati, OH 45202
513-684-3894

Indiana

The Honorable Richard G. Lugar
Room 306
Hart Senate Office Building
Washington, D.C. 20510
202-224-4814
1180 Market Tower
10 W. Market Street
Indianapolis, IN 46204
317-226-5555

The Honorable Daniel R. Coats
Room 407
Russell Senate Office Building
Washington, D.C. 20510
202-224-5623
1180 Market Tower
10 W. Market Street
Indianapolis, IN 46204
317-226-5555

U.S. HOUSE OF REPRESENTATIVES

Ohio

The Honorable Charles J. Luken
Representative, First District
Room 1632
Longworth House Office Building
Washington, D.C. 20515
202-225-2216
602 Main Street, Room 712
Cincinnati, OH 45202
513-684-2723

The Honorable John A. Boehner
Representative, Eighth District
Longworth House Office Building
Room 1020
Washington, D.C. 20515
202-224-3121
5617 Liberty-Fairfield Road
Hamilton, OH 45011
513-894-6003

The Honorable Bob McEwen
Representative, Sixth District
Room 2431
Rayburn House Office Building
Washington, D.C. 20515
202-225-5705
301 North High Street
Hillsboro, OH 45133
513-393-4223

Indiana

The Honorable Lee H. Hamilton
Representative, Ninth District
Room 2187
Rayburn House Office Building
Washington, D.C. 20515
202-225-5315
1201 East 10th Street, Room 107
Jeffersonville, IN 47130
812-288-3999

STATE OF OHIO
Legislative Information
1-800-282-0253

The Honorable George V. Voinovich
Governor, State of Ohio
State House
Columbus, OH 43266-0601
614-466-3555

Hamilton County - Senate

The Honorable Stanley J. Aronoff
Senator, Eighth District
President, Ohio Senate
State House
Columbus, OH 43266-0604
614-466-8068
513-241-0400

The Honorable William F. Bowen
Senator, Ninth District
State House
Columbus, OH 43266-0604
614-466-5980
513-961-5415

The Honorable Richard H. Finan
President Pro Tempore
Senator, Seventh District
State House
Columbus, OH 43266-0604
614-466-9737
513-563-6161

Hamilton County - House

The Honorable Louis W. Blessing, Jr.
Representative, Twenty-second District
Vern Riffe Center
State House
Columbus, OH 43215
614-466-9091
513-385-1234

The Honorable Jerome F. Luebbers
Representative, Twenty-first District
Vern Riffe Center
State House
Columbus, OH 43215
614-466-5786
513-241-9433

The Honorable William L. Mallory
Majority Floor Leader
Vern Riffe Center
Representative, Twenty-third District
Columbus, OH 43215
614-466-7197
513-721-0065

The Honorable Jacquelyn K. O'Brien
Representative, Twenty-sixth District
Vern Riffe Center
State House
Columbus, OH 43215
614-466-8104
513-231-5331

Hamilton County - House

The Honorable Cheryl Winkler
Representative, Twentieth District
State House
Columbus, OH 43215
614-466-2715
513-574-2577

The Honorable L. Helen Rankin
Representative, Twenty-fifth District
State House
Columbus, OH 43215
614-466-5130
513-751-4122

The Honorable Terry M. Tranter
Representative, Twenty-fourth District
State House
Columbus,OH 43215
614-466-2591
513-621-9204

The Honorable Dale Van Vyven
Representative, Twenty-seventh District
State House
Columbus, OH 43215
614-466-8120
513-563-2541

Butler County - Senate and House

The Honorable Barry Levey
Senator, Fourth District
State House
Columbus, OH 43215
614-466-8072
513-422-2001

The Honorable Scott Nein
Representative, Fifty-seventh District
State House
Columbus, OH 43266-0604
614-466-8550
513-779-1600

The Honorable Michael A. Fox
Representative, Fifty-sixth District
State House
Columbus, OH 43266-0604
614-644-6721
513-896-1865

COUNTY COMMISSIONERS

Butler County Commissioners

Courtney E. Combs, President
Cale L. Logsdon
Henry Helton
Administration Building
130 High Street
Hamilton, OH 45011
513-887-3247

Hamilton County Commissioners

John S. Dowlin, President
Steven J. Chabot, Commissioner
Guy Guckenberger, Commissioner
David Krings, Administrator
Administration Building
138 East Court Street, Room 603
Cincinnati, OH 45202
513-632-8222

APPENDIX F

LOCATIONS AND SEATING CAPACITIES FOR PUBLIC MEETINGS

	under 25	25-75	over 75
Crosby Elementary School 8382 New Haven Road, Harrison, OH Dan Lawler, Principal 738-1717	X	X	
Ross Middle/High School 3425 Hamilton-Cleves Road, Ross, OH Dan Hare, Principal 863-1252	X	X	X
Stricker's Grove Rt. 128, Hamilton-Cleves Road, Ross, OH Ralph Stricker 738-3366 or 521-9747			X
Venice Presbyterian Church 4244 Layhigh Road, Ross, OH (with Session approval) 738-1317	X	X	
Executive Resource Associates 10991 Hamilton-Cleves Road, Harrison, OH Receptionist 738-0002	X	X	
Advanced Sciences, Inc. 11003 Hamilton-Cleves Road, Ross, OH Receptionist 738-3100	X		
The Plantation 9660 Dry Fork Road Harrison, Ohio 45030 Jeff Beckman 367-5610		X	X
Public Environmental Information Center JAMTEK Building 10845 Hamilton-Cleves Road Harrison, Ohio 45030 Gary Walters 738-0164	X		
The Meadowbrook Conference Center 2398 Venice Boulevard Ross, Ohio 45061 Earl Hilvers 738-2448 or 738-9924			X

APPENDIX G

COMMUNITY RELATIONS PLAN REMOVAL ACTION ADDENDUM OUTLINE

DOE has adopted a comprehensive community relations strategy for all removal actions and integrated the activities into the community relations program which is designed to inform and involve the community. In order to meet the NCP requirements for the numerous removal actions occurring at the FEMP, a 30-day public comment period will be held for each removal action and an addendum to the CRP for each removal action will be prepared. Each addendum will follow the same outline as described below:

List of Acronyms

List of Tables and Figures

Introduction to Removal Action

Objectives of Removal Action

Background

Overview of Community Concerns

Highlights of Community Relations Activities

Timetable

REMOVAL ACTION

ADDENDA

ADDENDUM

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

TABLE OF CONTENTS

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, wastewaster 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.

ADDENDUM

TO THE

RI/FS COMMUNITY RELATIONS PLAN

FOR THE

K-65 REMOVAL ACTION
(Silos 1 and 2)

August 1990

Prepared by:

Westinghouse Materials Company of Ohio
Cincinnati, Ohio

For the:

U. S. Department of Energy
Oak Ridge Operations Office

I. Introduction

This addendum to the RI/FS Community Relations Plan has been prepared to guide the community relations activities of the U. S. Department of Energy (DOE) to support the development and implementation of the K-65 Removal Action (Silos 1 and 2) at the Feed Materials Production Center (FMPC) located near Fernald, Ohio. The scope of this removal action can be broadly defined as the control of contamination from the contents of Silos 1 and 2 and will contribute to the efficient performance of the long term remedial action for Operable Unit 4.

The removal action is being conducted pursuant to the Consent Agreement Under CERCLA 120 and 106(a) between DOE and the United States Environmental Protection Agency (U. S. EPA). As stated in the Consent Agreement this removal action is Removal Number 4: Silos 1 and 2. These 80 foot diameter concrete silos contain radium-bearing materials that release radon gas to the atmosphere and contaminants may leach to underlying soils and groundwater. This removal action is designed to comply with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, known as Superfund, the Superfund Amendments and Reauthorization Act (SARA) of 1986, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) of 1990 (40 CFR 300.415 (m)). The Consent Agreement, relevant laws such as CERCLA and SARA, and the NCP describe the process to be followed during a removal action.

The objectives of this removal action are as follows: to reduce routine emissions of radon from the K-65 Silos to the maximum extent practical within the context of the removal action; to decrease, mitigate, or otherwise control the radon gas inventory in the K-65 Silos so that a failure of the dome(s) will not result in a release of significant quantities of radon gas, which would pose a threat to the public; and to decrease, mitigate, or otherwise control the threat of K-65 residues released in significant quantities as a result of dome failure caused by a tornado.

Community relations activities relating to the K-65 Silos at the FMPC are designed to achieve two overall objectives. These are:

- To ensure that interested parties are provided with information necessary to understand key issues and decisions relating to the K-65 Silos.

- To provide opportunities for the community to comment on documents that support the U. S. EPA and the DOE decision to implement the recommended removal action.

This addendum to the RI/FS Community Relations Plan for the K-65 Silos presents an overview of the FMPC, the Remedial Investigation/Feasibility Study (RI/FS) and its relationship to the K-65 Silos Removal Action, a discussion of contamination associated with the K-65 Silos and highlights of the community relations activities to support the K-65 Silos Removal Action.

II. Background of K-65 Silos Removal Action

On July 18, 1986, a Federal Facility Compliance Agreement (FFCA) was jointly signed by the DOE and the U.S. Environmental Protection Agency (U.S. EPA) pertaining to environmental impacts associated with the DOE Feed Materials Production Center (FMPC) in Fernald, Ohio. The FFCA is intended to ensure that environmental impacts associated with past and present activities at the FMPC are thoroughly and adequately investigated so that appropriate response actions can be formulated, assessed, and implemented.

In response to the FFCA, and consistent with the new CERCLA Consent Agreement signed by DOE and U.S. EPA in April 1990, a Remedial Investigation and Feasibility Study (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 FMPC. Operable Unit 4 is composed of Silos 1-4. Silos 1 and 2, known as the K-65 silos, contain the residue of pitchblende processing. Silo 3 contains metal oxides and Silo 4 is empty. This removal action deals specifically with Silos 1 and 2, the K-65 Silos.

The two K-65 Silos are located on the west side of the FMPC and were constructed in 1951 and 1952. The silos are used for storage of radium-bearing wastes (K-65 residues), a by-product of uranium ore processing.

By 1963, indications of exterior surface deterioration to the silos was apparent, and a repair program was begun. In 1964, repairs were made to the shot-crete coat, and an earthen embankment (berm) was constructed around Silos 1 and 2 to counterbalance the load from the silo contents. The berm also protected the walls from further weathering and acted as a radiation shield. Vents in the silos were sealed in 1979, and the berms were enlarged in 1983 to reduce erosion.

The following projects have been completed prior to initiating activities to implement a removal action:

- Berms were constructed in 1963-1964 around each silo to provide lateral support to the silo walls. To correct erosion problems, the slope of the berms was changed from 1.5:1 to 3:1 (1983). The berms provide radiological shielding as a secondary benefit.

- A radon treatment system was added in 1987 to reduce the level of radon gas in the air space in the domes above the residues and thus lower the radiation levels on the dome. This system is operated only when access to the silo domes for sampling or maintenance is required.

- In response to a structural analysis (Camargo 1986), protective structures, including a protective dome coating, were added in 1987 to minimize further concrete deterioration and to reduce the radon emissions.

Removal actions, as described in the NCP of March 1990 40 Code of Federal Regulations (CFR) 300.415, are primarily intended to abate, minimize, stabilize, mitigate, or eliminate a release or a threat of release prior to a final action if there is a threat to public health or welfare or the environment. A second reason for implementing a removal action is to mitigate contaminant migration pending final action if site conditions permit a straight forward mitigative action and if significant migration could occur in the interim if no action is taken. Additionally, based on the NCP, the K-65 Removal Action will be consistent with the anticipated long-term remedial action, and will contribute to the efficient performance of the long-term remedy to the extent practicable.

The K-65 Silos Removal Action is a non-time critical removal action as defined in the NCP since more than six months time is available for planning. An Engineering Evaluation/Cost Analysis (EE/CA) has been performed to analyze removal action alternatives and to support DOE selection of a preferred alternative. The K-65 Silos Removal Action EE/CA, published August 1, 1990, will be used as the basis for remedy selection and implementation.

III. Background Information on Contamination Related to This Removal Action

During the early 1950's, FMPC processed pitchblende (uranium-rich ore) ore from the Belgian Congo. No chemical separation or purification was performed on the radium-rich ore before it arrived at the FMPC. This ore was processed to remove uranium at Mallinckrodt Chemical Works at St. Louis and later at the FMPC. The residue of this processing contained significant amounts of radium, which at that time had significant economic value. This residue was considered valuable and, as a part of the purchase agreement, the residue was to be retained by the mining company, African Metals. Ownership was assumed by the DOE from African Metals in the early 1980's.

Silos 1 and 2 were constructed in 1951 and 1952 for the purpose of storing this residue, which was called K-65 material. These silos received residues during the years between 1952 and 1958. The silos contain approximately 9600 tons of residue. The radioactive constituents of concern are uranium, radium and thorium 230. The radium releases radon which subsequently becomes radon daughter products because the silos were not designed or constructed to be gas tight.

In late 1985, Camargo Associates Limited performed a structural analysis of the silos that showed evidence of structural instability and recommended that some protective action be taken (Camargo 1986). In January 1986, 20-ft diameter, protective plywood covers for the domes of the silos were constructed and installed on Silos 1 and 2. In late 1987, a foam coating was applied to the domes of the silos to further reduce weathering and to reduce radon gas emissions. A radon treatment system was also developed and installed to remove radon from the silos prior to installation of the plywood covers and foam coating.

In January 1990, Bechtel National, Inc. completed an additional structural analysis of Silos 1 and 2. Included in this analysis were predicted life expectancies of the silos and an evaluation of their structural integrity.

The findings showed that the silo concrete had lost at least 60 percent of its design strength, and confirmed the Camargo finding that the silo domes might fail under certain tornado loads. The result of silo dome failure would be an immediate release to the environment of radon gas from the head space of the silos (the area between the top of the residues and the silo dome). There would also be the potential for K-65 residues to become airborne under certain tornado loading conditions. Based on these impacts and the removal action criteria established in the NCP, a removal action for the K-65 Silos has been deemed appropriate.

IV. Timetable for K-65 Silos Removal Action Community Relations Activities

		Date(s)
1.	Establish Administrative Record (AR) File at all AR file locations for the records of this removal action	5/9/90
2.	File a Notice of Availability (NOA) of Administrative Record File in at least one major local newspaper	5/9/90
3.	File a NOA of EE/CA in at least one major local newspaper	7/31/90
4.	Place the K-65 Silos Removal Action EE/CA in all AR file locations	8/1/90
5.	Provide description of removal action in RI/FS Cleanup Update	8/90
6.	Prepare fact sheet for special mailing	8/31/90
7.	Provide 30-day period for written public comment on the EE/CA	8/1/90-8/31/90
8.	Conduct a K-65 Silos EE/CA workshop	8/16/90
9.	Develop responses to significant community concerns	9/4/90-9/25/90
10.	Add the Responsiveness Summary to all AR file locations	9/30/90

ADDENDUM B

TO THE

RI/FS COMMUNITY RELATIONS PLAN

FOR THE

K-65 DECANT SUMP TANK REMOVAL ACTION

Prepared by:

U. S. Department of Energy

August 1991

I. Introduction

On July 18, 1986, a Federal Facility Compliance Agreement (FFCA) was jointly signed by the DOE and the U.S. Environmental Protection Agency (U.S. EPA) pertaining to environmental impacts associated with DOE's Feed Materials Production Center (FMPC) near Fernald, Ohio. The FFCA is intended to ensure that environmental impacts associated with past and present activities at the FMPC are thoroughly and adequately investigated so that appropriate response actions can be formulated, assessed, and implemented.

This addendum to the Community Relations Plan (CRP) for the Remedial Investigation/Feasibility Study (RI/FS) and Removal Action at the U.S. Department of Energy (DOE) at the Feed Materials Production Center (FMPC) has been prepared to guide the Community Relations activities of the DOE to support the development and implementation of the K-65 Decant Sump Tank Removal Action at the FMPC. The scope of this removal action can be defined as the removal and disposition of the liquid in the K-65 decant sump tank.

The removal action is being conducted pursuant to the June 1990 CERCLA Consent Agreement between DOE and the U. S. EPA. Through U.S. EPA correspondence concerning the Consent Agreement this removal action was added to the Consent Agreement as Removal Number 5: K-65 Decant Sump Tank Removal Action. This removal action is designed to comply with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, known as Superfund, the Superfund Amendments and Reauthorization Act (SARA) of 1986, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) of 1990 (40 CFR 300.415 (m)). The Consent Agreement, relevant laws such as CERCLA and SARA, and the NCP describe the process to be followed during a removal action.

This removal action includes the following activities:

- Removing the liquid from the K-65 decant sump tank;
- Sampling the liquid prior to storing the liquid. The liquid will be stored in a hazardous waste management controlled area until the treatment option for this removal action is determined;
- analyzing the liquid; and
- Treatment of the liquid based on the analytical results.

Community Relations activities relating to the K-65 decant sump tank, and Silos 1 and 2 (the K-65 Silos) at the FMPC are designed to achieve two overall objectives. These are:

- To ensure that interested parties are provided with information necessary to understand key issues and decisions relating to the K-65 Silos.

- To provide opportunities for the community to review the documents and proposed actions that support DOE's implementation of the recommended removal action.

This addendum to the CRP discusses the relationship of the K-65 Decant Sump Tank Removal Action to the RI/FS, a discussion of contamination associated with the K-65 decant sump tank, and highlights of the Community Relations activities to support the K-65 Decant Sump Tank Removal Action.

II. Background of K-65 Decant Sump Tank Removal Action

In response to the FFCA, and consistent with the CERCLA Consent Agreement signed by DOE and U.S. EPA in June 1990, an 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 FMPC. Operable Unit 4 at the FMPC includes facilities used for the storage or disposal of radiological wastes from FMPC operations. These facilities include the K-65 decant sump tank, which contains material previuosly collected from the K-65 residues and water currently collected from the underdrain system for Silos 1 and 2.

The K-65 Silos are located on the west side of the FMPC and were constructed in 1951 and 1952. The silos are used for storage of radium-bearing wastes (K-65 material), a by-product of uranium ore processing. During the years between 1952 and 1958 when the K-65 material was transferred as a slurry into the K-65 Silos, the decant system of the K-65 Silos collected the liquid portion of the material and was stored in the 9,000 gallon K-65 decant sump tank.

The K-65 decant sump tank is located to the west between the K-65 Silos and approximately 35 feet below the surface of the berm surrounding the K-65 Silos. The K-65 Silos decant system piping, designed to collect the liquid portion of the slurry material, has since been taken apart. The K-65 decant sump tank, currently, collects water from the K-65 Silos underdrain system. Although there is no data to indicate any of the components of the decant sump tank drainage and collection system have leaked into the surrounding soil, the decant liquid in the sump tank, although maintaining a static level, has the potential for leaking into the surrounding soil.

This liquid is a potential threat to the environment.

The following projects have been completed prior to initiating activities to implement a removal action:

- Through 1980, the K-65 decant sump tank was routinely pumped to remove the liquid collected from the underdrain system and treated through the existing FMPC waste water treatment facilities.

- Monthly sampling of the liquid has occurred since August 1989. Analysis of the samples indicates the presence of uranium isotopes, total uranium, radium-226 and thorium-230.

Removal actions, as described in the NCP of March 1990, are primarily intended to abate, minimize, stabilize, mitigate, or eliminate a release or a threat of release prior to a final action if there is a threat to public health or welfare or the environment. A second reason for implementing a removal action is to mitigate contaminant migration pending final action if site conditions permit a straight forward mitigative action and if significant migration would occur in the interim if no action is taken. The K-65 Decant Sump Tank Removal Action will abate, stabilize, and eliminate the threat of a release to the environment prior to the final remedial action.

A removal action for the K-65 Decant Sump Tank has been deemed appropriate, based on the above criteria. The K-65 Decant Sump Tank Removal Action is a time-critical removal action since less than six months' time is available for planning. The K-65 Decant Sump Tank Removal Action Work Plan outlines the methodology to be used in the implementation of the Removal Action. The K-65 Decant Sump Tank Removal Action Work Plan will be used by the DOE as the basis for implementating the Removal Action.

III. Background Information on Contamination Related to This Removal Action

In monthly water sampling of the K-65 Decant Sump Tank, elevated levels of uranium have been encountered and above-background levels of radium have also been found in the water. Although there is no data to indicate any of the components of the decant sump tank drainage and collection system have leaked into the surrounding soil, the decant liquid in the sump tank, although maintaining a static level, has the potential for leaking into the surrounding soil. This liquid is a potential threat to the environment. There is also concern for the potential of puncturing the tank during the K-65 Silos embankment and subsoils sampling.

As documented in Section 3.4 of the RI/FS Community Relations Plan, the K-65 Silos and related systems have appeared to represent a focal point for community

concern. During the Community Assessment conducted in 1989, persons expressed fear about radioactive contamination either leaking out over a period of time or spilling into the local environment. The K-65 decant sump tank, as a part of Operable Unit 4, is one of the integral parts of CERCLA/SARA cleanup activity centering on the silos.

The K-65 Decant Sump Tank Removal Action provides a partial solution to the problem of potential leakage of K-65 silo material (in this case, the material is the water collected from the K-65 Silos underdrain system); in that respect, this removal action addresses one of the public's fears about potential leakage of material from this area.

IV. Timetable for K-65 Decant Sump Tank Removal Action Community Relations Activities

The following timetable provides a schedule for community relations activities that are designed to inform the community about the K-65 Decant Sump Tank Removal Action. Each of these activities are described in detailed Section 4.0 of the RI/FS Community Relations Plan. In addition, other activities will be undertaken to meet community information needs. For example, a Community Roundtable meeting focusing on this removal could be held if sufficient community interest exists.

Since the Administrative Record file for this removal action has been opened, the K-65 Decant Sump Tank Removal Action has been discussed during two community meetings and in two issues of the FMPC publication that communicates cleanup news to the community. No questions surrounding this removal action were asked at either community meeting.

		Date
1.	Establish Administrative Record File at all AR file locations for the records of this removal action	10/30/90
2.	File of Notice of Availability (NOA) of Administrative Record File in at least one major local newspaper	10/30/90
3.	Provide description of removal action in FMPC Cleanup Update	11/90

		Date
4.	Provided status of removal action in FMPC Cleanup Report (publication title changed to Fernald Site Cleanup Report in 6/91)	3/91, 7/91
5.	Provide description of removal action in the FMPC Update	5/91
6.	Include removal action discussions in FMPC Community Meeting agenda.	3/91, 7/91

ADDENDUM

TO THE

RI/FS COMMUNITY RELATIONS PLAN

FOR REMOVAL ACTION No. 7

PLANT 1 PAD CONTINUING RELEASE

Fernald Environmental Management Project
Fernald, Ohio

U.S. Department of Energy
Fernald Field Office

August 1992

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RI/FS:	remedial investigation and feasibility study
RSE:	removal site evaluation
SARA:	Superfund Amendments and Reauthorization Act [of 1986]

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. 7, Plant 1 Pad Continuing Release.

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 legislation will be implemented
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- 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. 7, Plant 1 Pad Continuing Release, a time-critical removal action, is to protect human health and the environment from the existing areas of contamination on and around the Plant 1 Pad and control the stormwater runoff from the pad that could result in an increased risk of release of hazardous material to the environment.

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 for the Plant

1 pad area. 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 EPA and the Ohio EPA. For a non-time critical removal action, an EE/CA, which is 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 Consent Agreement signed by DOE and 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 now includes the former production area and additional suspect areas, and specifically includes facilities, buildings, equipment and above or below ground improvements within these areas. The Plant 1 Pad is within the purview of Operable Unit 3; Operable Unit 3 includes the former production area and all of the production-related facilities.

Plant 1 was the "sampling plant" for large amounts of uranium metal process residues and waste materials during the production era at the FEMP. The concrete storage pad associated with Plant 1 has been used as a drum storage location to support the Plant 1 operations since 1952. The Plant 1 Pad and its adjacent unpaved area comprise approximately 12 acres on the northwest side of the FEMP's "process" area.

Approximately 45,000 drums are now stored on the pad. Some of these drums have deteriorated as a result of being exposed to the elements. Sections of the pad have no curbs or sumps for containing or controlling the stormwater runoff, resulting in an increased risk of release of hazardous material to the environment. Additionally, the pad has a number of cracks and joints which may serve as a route of contamination release to underlying soils and groundwater.

The following drummed waste management practices have been initiated in preparation for implementation of the Plant 1 Pad Continuing Release Removal Action to reduce the risk of further releases of contamination from the pad:

- Drum Management -- Includes characterization of waste materials in the drums, prioritization of leaking containers, movement of drums containing hazardous waste to indoor storage, daily leak inspections on the pad, overpacking of deteriorated drums,

expedited repairs to the concrete surface of the pad, and erection of a temporary cover over a portion of the pad

- Sampling and Analysis -- Includes surface soils, subsurface soils, and groundwater
- Air Monitoring -- Ensures detection of any airborne threat

Removal actions, as described in the NCP, are intended to abate, minimize, stabilize, mitigate, or eliminate a release or a threat of release prior to a final action if there is a threat to public health or welfare or the environment. The Plant 1 Pad Continuing Release Removal Action will mitigate the threat of release of contaminants from the Plant 1 Pad to the environment prior to the final remedial action for Operable Unit 3.

Due to past storage and operational activities, sampling results show there are existing areas of contamination on and around the Plant 1 pad. Materials containing varying amounts of uranium metal and thorium as well as drums of barium salts, waste oils, and lead have been, and still are, stored on the pad. Without corrective action, there is a risk of continued releases of these contaminants to the surrounding environment.

Presently, there are several pathways for potential contaminants from the Plant 1 Pad to enter the environment. Rainwater runoff can penetrate the cracks in the pad and seep to the soils below. The runoff can also flow directly into the storm sewer system or onto the soils adjacent to the pad. In addition, airborne releases of dried material can reach the environment.

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 Plant 1 Pad Continuing Release Removal Action 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. 7 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 Plant 1 Pad Continuing Release 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 answering key concerns 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. 7 in the Fernald Project Cleanup Report as needed during the removal action.

4. Offer a roundtable presentation on the 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 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 Plant 1 Pad Continuing Release 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 EPA.

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

ADDENDUM

TO THE

RI/FS COMMUNITY RELATIONS PLAN

FOR REMOVAL ACTION No. 9

REMOVAL OF WASTE INVENTORIES AND

THORIUM MANAGEMENT PROCEDURES

Fernald Environmental Management Project
Fernald Field Ohio

U.S. Department of Energy
Fernald Field Office

August 1992

TABLE OF CONTENTS

LIST OF ACRONYMS

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
LLW:	low-level waste
NCP:	National Oil and Hazardous Substances Pollution Contingency Plan [of 1990]
NTS:	Nevada Test Site
RCRA:	Resource Conservation and Recovery Act
RI/FS:	remedial investigation and feasibility study
RSE:	removal site evaluation
SARA:	Superfund Amendments and Reauthorization Act [of 1986]

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. 9, Removal of Waste Inventories and Thorium Management Procedures.

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, which 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 of 1986 (FFCA) 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, 1991 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 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 usually last between 120 days and six months. They require the same response as an emergency removal action plus issuance of an addendum to the CRP 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 specific objective of Removal Action No. 9, Removal of Waste Inventories and Thorium Management Procedures, a non-time-critical removal action, is to prepare all low-level waste (LLW) and thorium inventories currently on the FEMP for shipment to the Nevada Test Site (NTS) for disposal. This will be accomplished through the characterization, identification, packaging and storage of all subject materials.

A removal site evaluation (RSE) was performed and indicated that the waste inventories and thorium 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

DOE will address two issues in this removal: LLW inventories and thorium management. Each of these issues is described briefly below.

Low-Level Waste: The FEMP LLW Management Program has been operational since the initiation of activities in the early 1950s. As a consequence of production operations, considerable quantities of radioactive LLW have been generated. Until 1984, these wastes were placed in a series of waste pits and silos located on the western portion of the FEMP. Beginning in 1984, much of the newly generated waste was placed in containers as the pits began to fill up. In 1986, placement of all LLW materials into pits was terminated. Since that time, all LLW materials have been containerized and stored for future disposition. Since the cessation of production activities in July 1989, waste materials generated at the FEMP are limited to those which result from environmental restoration activities.

In August 1985, the FEMP initiated a large-scale off-site shipment program involving the transfer of LLW inventories to the NTS. This program involves the characterization, treatment, packaging, and transport of waste in full compliance with DOE Orders, Department of Transportation shipping requirements, and NTS waste-acceptance criteria. At issue in current shipments to NTS is the possibility of hazardous wastes mixed with radioactive wastes. The hazardous components of the mixed wastes are regulated under the authority of the Resource Conservation and Recovery Act (RCRA). Thus, the characterization efforts include a determination of whether RCRA hazardous wastes are present in a given container of waste.

Thorium: The FEMP serves as the DOE repository for thorium materials. Thorium is also used for weapons production. The FEMP currently maintains an inventory of over 15,000 containers of thorium within five separate warehouse facilities. Thorium inventories are stored within the FEMP Production Area. This is a controlled area, requiring strict access and worker health and safety procedures. These inventories are a component of Operable Unit 3 in the RI/FS being conducted pursuant to the Amended Consent Agreement.

Table 1 presents current thorium storage locations and status. Figure 1 illustrates the storage locations for thorium materials at the FEMP. The condition of the individual containers of thorium and of the warehouses in which the thorium is stored ranges from poor to good. Some of the containers are

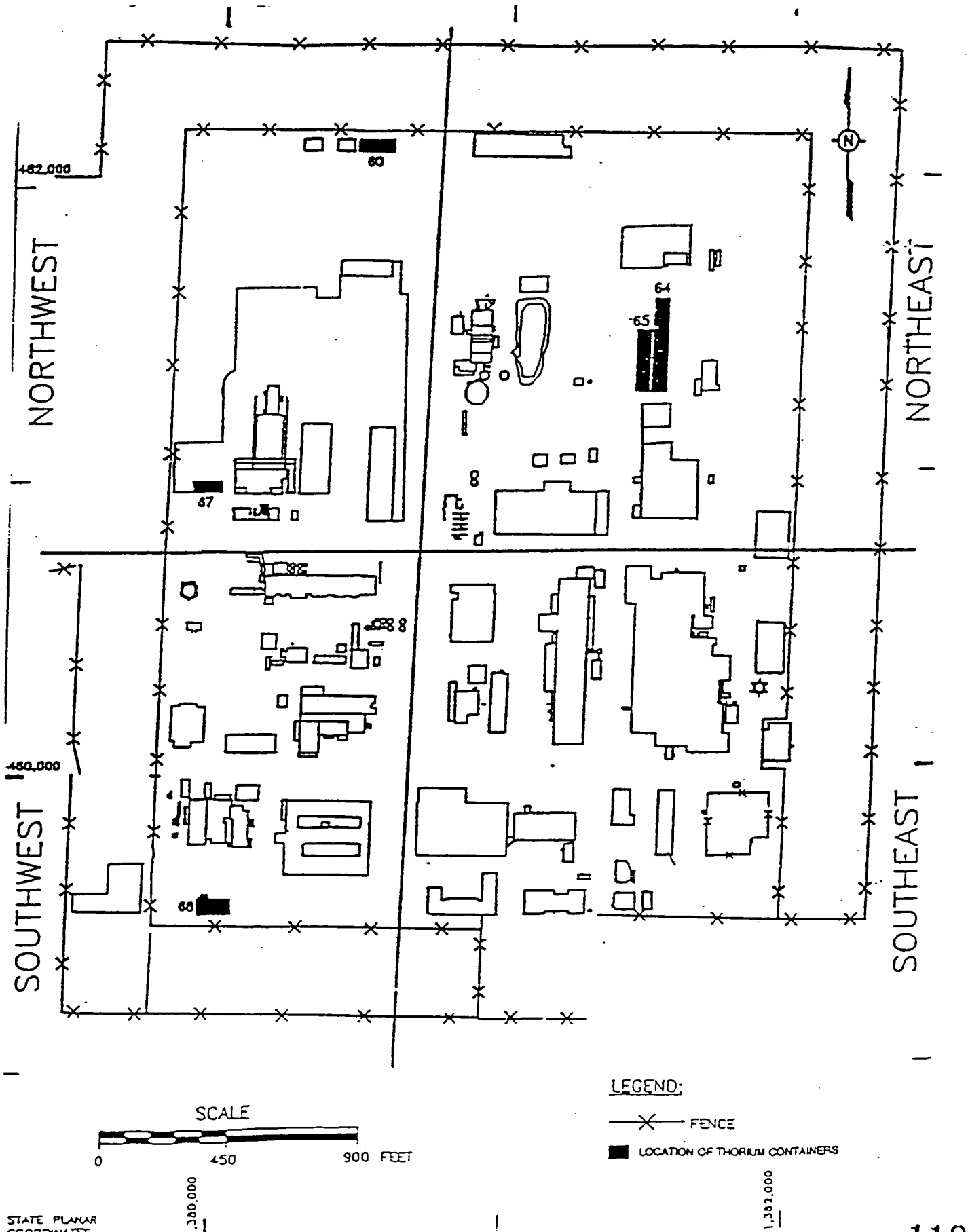
TABLE 1. THORIUM STORAGE

Building Number	Number of Containers	Condition of Containers	Condition of Warehouse	Other Comments
60	1788	Excellent	Good	Containers in good condition and determined to be non-RCRA.
64	420	Good	Good	Thirty-five-gallon drums on pallets, plus various sized wooden crates. Some containers evaluated as non-RCRA; some require further evaluation for determination.
65	5599	Poor	Fair	Various sizes of drums (35- and 55-gallon and tall 55-gallon containers) stacked three high. Most are not on pallets. Drums sitting on the concrete floor have deteriorated. The deteriorated containers have been designated as non-RCRA.
67	6004	Good	Good	Various sizes of containers (primarily cans) in baskets or on pallets. One container (five-gallon pail) damaged. Some containers evaluated as non-RCRA, some require further evaluation for determination. Some containers have been designated as containing RCRA hazardous constituents.
68	1314	Good	Good	Minimal exterior drum corrosion evident.

3709

3709

FIGURE 1. THORIUM STORAGE LOCATIONS AT THE FEMP



corroded, while others are in excellent condition. Some of the warehouse space is in need of repair, while other space is in good condition.

DOE has obtained authorization to ship FEMP thorium inventories to NTS for disposal. All thorium materials at the FEMP are being characterized (including a RCRA determination), repacked as necessary, and overpacked for shipment.

The planned removal action will answer a number of the questions and concerns which have been raised by the public regarding waste management at the FEMP. A written plan for the storage of waste will be produced. Estimates of volume of wastes, condition of existing containers, and construction materials of proposed containers will be identified. The methods for storage of wastes will be improved. Storage locations on the FEMP and the final disposal site will be designated. DOE will provide notification of shipment of waste off the property.

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 were reviewed. Also reviewed were transcripts from the RI/FS Environmental Impact Statement scoping meetings held on June 12 and 13, 1990. The major concerns voiced by community members about low-level, thorium and hazardous wastes stored at the FEMP centered around the types and volume of waste being stored, storage management procedures, and most particularly the treatment and storage of containerized wastes. The following is a discussion of questions, grouped by subject, that addressed the issue of waste storage and management at the FEMP.

1. Nature and extent of potential contamination -- people were concerned that all media (soil, air, surface water and groundwater) are being checked for possible contamination. The types and amounts of contamination are also a concern. The possibility of contaminant migration off-site was also a concern.

2. Storage -- most concern was expressed regarding the actual condition of waste containers and warehouses. Community members are also concerned about what types and volumes of waste are being stored on site, the exact location of the wastes, the practices for monitoring stored wastes, and a schedule for completion of all preparations for disposal.

3. Transportation and Disposal -- the community has expressed the need to be informed of the means of shipment (rail or truck), the proposed routes to be used, and the ultimate destination for disposal of FEMP wastes. Also, the community is concerned that shipment of FEMP wastes to another location will create another Superfund site.

4. Public information -- the public has commented on its need to be notified in advance of all off-site shipments and a desire to be informed of all plans and schedules for overpacking/handling of wastes.

In order to better determine the community's concerns about this planned removal action and to maintain open communication with the community, telephone interviews were conducted with community members who have expressed an interest in the FEMP in the past. The interviews were conducted to conform with CERCLA guidance and to respond to community members' concern that their opinions have not been solicited prior to the planning and implementation of remedial activity.

The community members interviewed expressed concern that if the thorium is not sold, it will be stored or disposed of at the FEMP. There are also community concerns about transport of the waste to another location. Some are worried about risks associated with transport from the FEMP to the storage/disposal facility, the means of transportation, the route to the alternate site, and obtaining permission from all the other jurisdictions along the way. Other concerns include the exact location of waste storage on the FEMP and notification of DOE's intentions with regard to the handling of wastes. If the thorium is sold, the community would like to be notified of: the buyer; its destination; method of transport; and its estimated departure and arrival date.

A 45-day public comment period for Removal of Waste Inventories and Thorium Management Procedures Removal Action No. 9 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 LLW and thorium management/storage suggest an active FEMP community relations effort regarding this removal action. Proposed community relations objectives for this removal include the following:

- Maintain an active effort throughout the implementation of the removal action to keep interested community members informed about the nature and extent of potential contamination, status of stored materials, and plans for transportation and disposal.

- Provide information on development of plans for transportation and disposal of these materials.

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

1. Prepare one or more fact sheets or updates for the purpose of providing information about

the removal action answering key concerns 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. 9 in the Fernald Project Cleanup Report as needed during the removal action.

4. Offer a roundtable presentation on LLW and thorium management.

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 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 Removal of Waste Inventories and Thorium Management Procedures Work Plan, which is in the Administrative Record, located at the PEIC. Since the removal action is in two parts, these activities will be scheduled to provide the maximum flexibility and information to the public.

ADDENDUM

TO THE

RI/FS COMMUNITY RELATIONS PLAN

FOR REMOVAL ACTION No. 10

ACTIVE FLYASH PILE CONTROLS

Fernald Environmental Management Project
Fernald, Ohio

U.S. Department of Energy
Fernald Office

August 1992

TABLE OF CONTENTS

LIST OF ACRONYMS

CERCLA:	Comprehensive Environmental Response, Compensation, and Liability Act [of 1980] (also known as Superfund)
CRP:	Community Relations Plan
DOE:	U.S. Department of Energy
EPA:	U.S. Environmental Protection Agency
FEMP:	Fernald Environmental Management Project (formerly the Feed Materials Production Center)
FFCA:	Federal Facility Compliance Agreement
NCP:	National Oil and Hazardous Substances Pollution Contingency Plan [of 1990]
RI/FS:	remedial investigation and feasibility study
SARA:	Superfund Amendments and Reauthorization Act [of 1986]

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. 10, Active Flyash Pile Controls.

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 legislation will be implemented

- The Federal Facility Compliance Agreement of 1986 (FFCA) 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 specific objective of Removal Action No. 10, Active Flyash Pile Controls, a time-critical removal action, is to significantly mitigate the wind and water erosion of the existing active flyash pile at the FEMP site. This will be accomplished by implementing the following activities: (1) installation of a silt trap made from permeable geotextile fabric around the toe of the ash pile; (2) installation of a wind barrier made from high density polyethylene around the top perimeter of the ash pile; (3) alteration of the active working surface to minimize the noncompacted area and to prevent increase in the maximum height of the existing pile; (4) minor regrading of the outer berm and compacting the nonworking top surfaces of the ash pile; (5) application of water and foam and binding type dust-control agents on side slopes and

top; and (6) providing periodic routine inspection and necessary maintenance identified during inspection. A combination of methods is necessary as no one method addresses all concerns of the removal action.

As the Active Flyash Pile Controls Removal Action is implemented, the active flyash pile will be partitioned into an inactive area where no additional ash will be deposited and no additional grading will be performed, and an active working area where future ash will be deposited. The active and inactive areas will change as the ash pile is built up. Regrading and compaction of the active working area will be conducted periodically. Water and dust control agents will be applied in conjunction with regrading and compaction activities.

Background

The active flyash pile is one of the subunits included in Operable Unit 2 for final remediation at the FEMP under CERCLA. It is located approximately 3000 feet southwest of the FEMP's former production area, and just east of the South Field, another subunit of Operable Unit 2.

The active flyash pile has been receiving coal ash since the mid-1960s when two coal-fired boilers were put in use for steam production at the FEMP. The steam was a source for heating, laundry facility operations, uranium metal production, and minor miscellaneous uses. Uranium metal production at the FEMP was informally suspended by WEMCO and DOE for environmental reasons in July 1989 and was officially ended by DOE in July 1991. Coal combustion generates approximately seven tons of ash waste per day during fall and winter and approximately three tons of ash waste per day during spring and summer. Ash waste consists of 70 percent bottom ash (collected below the boilers) and 30 percent precipitator ash (collected from pollution control devices) and flyash (removed from the middle levels of the boiler).

The active flyash pile is estimated to contain approximately 59,000 cubic yards of flyash and has a surface area of about three to four acres. It has never been covered and surface vegetation is negligible. The pile depth ranges from three to 40 feet. Flyash from the FEMP is transported to the active flyash pile several times a week. Currently, water and a dust-control agent are added at the time the ash is loaded into the truck for transport to the ash pile. The removal action will continue this practice.

The working surface of the ash pile gently slopes from the east and the south down to the north while the sides slope steeply at a natural angle of repose in the western and southern edges. Since July 1991, the ash pile has been watered down as needed and historically graded approximately every three months to maintain a level working surface.

The characterization of the active flyash pile is based on two studies (Weston 1987; DOE 1988). Samples have been analyzed for barium and chromium, volatile organics, and radionuclides in composite ash samples (DOE 1991). Based on these previous investigations, the flyash from the active flyash pile is assumed to be nontoxic and nonhazardous and to contain radionuclides below unrestricted release values. Flyash, as defined in the Ohio Environmental Protection Agency Policy Number 4.07, is considered to be nontoxic if its leachate does not exceed 30 times Ohio Drinking Water Standards. Pursuant to Ohio Administrative Code 3745-27-02, nontoxic flyash is not regarded as solid waste.

In July 1991, after a period of hot and dry weather and recent grading of the pile, high wind conditions produced a large fugitive ash cloud that was visible off the FEMP property. Two inspections of the active flyash pile made in September 1991 revealed small amounts of ash (less than one inch thick) in the grass within 20 feet of the base of the pile and a light dusting on vegetation around the pile. Signs of mild scouring from runoff water were also visible on the south and west slopes of the pile.

In 1988, water samples were collected from both the storm sewer outfall ditch (located directly east of the pile) and a drainage ditch (located west of the pile) as part of the Best Management Plan Sampling Program. The samples indicated elevated levels of heavy metals and total suspended solids. These elevated levels may be attributed to ash pile runoff. A review of the 1987 water sample analysis by Roy F. Weston, Inc. indicates a possible migration of heavy metals into the natural stream as a result of the ash pile runoff.

In summary, there are two potential threats from the active flyash pile that necessitate Removal Action No. 10. First, fugitive dust carried by wind, and second, possible migration of contaminants via storm water runoff. Since this removal action is only an interim step prior to final remediation under CERCLA, the active flyash pile will continue to receive ash as required to support boiler plant operations.

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 were reviewed. Also reviewed were transcripts from the RI/FS Environmental Impact Statement scoping meetings held on June 12 and 13, 1990.

The community voiced its concern about flyash at the July 16, 1991 community meeting. Earlier that month, the incident of the fugitive ash cloud, mentioned above, had occurred. One community member testified at the July community meeting that she witnessed the incident and was concerned about the possibility of the flyash containing uranium and being blown around a public road and a house directly across from the location of the flyash piles.

In order to better determine the community's concerns about this planned removal action and to maintain open communication with the community, telephone interviews were conducted with community members who have expressed an interest in the FEMP in the past. The interviews were conducted to conform with CERCLA guidance and to respond to community members' concern that their opinions have not been solicited prior to the planning and implementation of remedial activity.

Some local residents interviewed indicated that they were not aware of the active flyash pile at the FEMP and were not informed on flyash in general, but were concerned about their personal health and how they might be effected living so close to the FEMP. One community member contacted, who was knowledgeable about flyash, was concerned about dried-out flyash being blown into the air by wind gusts. He was concerned that the flyash might be contaminated with radioactive and/or hazardous wastes.

A 45-day public comment period for Active Flyash Pile Controls, Removal Action No. 10, 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 the Active Flyash Pile Removal Action 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 Active Flyash Pile 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 flyash piles at the FEMP and distribute them at the quarterly public meetings.

2. Devote some portion of a community meeting 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 the Active Flyash Pile Controls Removal Action in the next issue of the Fernald Project Cleanup Report.

4. Offer a roundtable presentation on the removal action.

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 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 Active Flyash Pile Controls Work Plan, which is in the Administrative Record, located at the PEIC. Since the removal action is in multiple phases, these activities will be scheduled to provide the maximum flexibility and information to the public. The work plans for this removal action have been submitted to EPA.

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

REFERENCES

1. U.S. Department of Energy, 1988, "FMPC Sampling and Analysis Report," 2 vols., Draft, DOE, Oak Ridge Operations Office, Oak Ridge, TN.

2. U.S. Department of Energy, 1991, "Removal Site Evaluation - Active Flyash Pile Controls," Fernald Environmental Management Project, DOE Fernald Office, Cincinnati, OH.

3. Weston, Roy F. Inc., 1987, "Characterization Investigation Study, Volume 2: Chemical and Radiological Analyses of the Waste Storage Pits," FMPC/SUB008, prepared for Westinghouse Materials Co. of Ohio, Cincinnati, OH.

ADDENDUM

TO THE

RI/FS COMMUNITY RELATIONS PLAN

FOR REMOVAL ACTION No. 12

SAFE SHUTDOWN

Fernald Environmental Management Project
Fernald, Ohio

U.S. Department of Energy
Fernald Field Office

August 1992

TABLE OF CONTENTS

LIST OF ACRONYMS

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
MEF:	material evaluation form
NCP:	National Oil and Hazardous Substances Pollution Contingency Plan [of 1990]
RI/FS:	remedial investigation and feasibility study
SARA:	Superfund Amendments and Reauthorization Act [of 1986]

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. 12, Safe Shutdown.

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 of 1986 (FFCA) 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, 1991 and effective on December 19, 1991, specified eleven 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 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 usually last between 120 days and six months. They require the same response as an emergency removal action plus issuance of an addendum to the CRP 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.

The specific objective of Removal Action No. 12, a non-time-critical removal action, is to remove uranium and other process/raw materials from equipment and lines in former production areas and from the facility. This will be accomplished through a multi-phased approach including: preliminary assessment of process facilities; characterization of process equipment and hold-up materials; transfer of existing inventories of subject materials to approved storage; lock-out/tag-out of process equipment; and preparation of all appropriate documents.

Background

In July 1991, the FEMP initiated the Safe Shutdown Program to provide planning, engineering and program control for the proper disposition of all uranium materials, production-related materials and associated equipment. The program will also assure the proper characterization, emptying and deenergization of all previously operated production-related equipment in compliance with DOE, U.S. EPA and Ohio EPA requirements and regulations.

Although the immediate cessation of production-related operations occurred in July 1989, much of the equipment was maintained so as to be available for restart. This would allow continued production, including production of intermediate products, for future DOE use in programs at other sites. The official termination of the FEMP production mission took place in June 1991, without restart of production processes or stabilization of intermediate products.

The overall objective of the Safe Shutdown Program involves the transfer of materials from existing production-related equipment. After characterization of the contents of a piece of equipment, wastes will be transferred to appropriate containers and either stored at approved locations on site or transferred off site for disposal. All applicable energy sources related to a piece of equipment will be physically isolated to render that piece of equipment nonoperational. With the transfer of waste materials to storage containers, the potential for a release to the environment is significantly reduced. Inspection of the storage containers and storage areas will be performed in accordance with all applicable procedures, including the established FEMP Drum Management Plan. The equipment will then be decontaminated according to established DOE orders and any applicable FEMP policies and procedures.

Following preliminary facility assessments, materials and equipment will be characterized using process knowledge, existing analytical determinations, and any applicable material safety data sheets. Information concerning each material will then be recorded on a material evaluation form (MEF). The MEF provides a vehicle to evaluate materials in any category (raw, product, process, excess, or waste) and characterizes the materials (hazardous, radioactive, or mixed) for proper handling and disposition. If confirmation of the characterization of any material cannot be completed from the information assembled on the MEF, analytical sampling must be performed in order to properly identify the characteristics and/or constituents of the material.

Included in the Safe Shutdown Program is the disposition of chemicals and materials either directly or indirectly related to the production of uranium products. Since production ceased, approximately 400,000 pounds of directly related production materials (e.g., magnesium metal turnings) have been successfully transferred to the private sector.

The proper disposition of uranium material products and recoverable residues will also be conducted as an integral part of the Safe Shutdown Program. These materials will remain in their designated storage areas awaiting interest notification from other federal facilities or approved customers from the private sector. Since production ceased, approximately 2,600,000 pounds of uranium product have been transferred from the FEMP as part of the Safe Shutdown Program.

The FEMP Safe Shutdown Program represents an effort to mitigate potential sources of contamination to the environment and to stabilize, isolate, and/or treat any existing contamination to prevent release or migration. The primary governing requirement of the Safe Shutdown Program is DOE Order 5820.2A, Radioactive Waste Management, which establishes policies and guidelines for the management, decontamination, and decommissioning of radioactively contaminated facilities.

Integration With Operable Unit 3 RI/FS

The inventory of uranium and other process/raw materials that currently exists in the nine production plants lies within the purview of Operable Unit 3 of the ongoing site-wide RI/FS. Each plant's original production responsibilities are described below.

Plant 1 operations included a sampling line for incoming uranium compounds, a roller mill to reduce the particle size of MgF_2, a safe geometry digester, a drum reconditioning system, scrap drum baler, warehouses and storage pads for drummed residues and wastes, and dust collectors.

Plant 2 and Plant 3 operations included a nitric acid digestion system, a metal dissovler system, a liquid-liquid extraction system, a boildown and denitration area where purified uranyl nitrate was converted to orange oxide (UO_3), a nitric acid recovery system, a combined raffinate area, a hot raffinate building, a refinery sump system, and dust collectors.

Plant 4 operations included reactors to convert orange oxide (UO_3) to brown oxide (UO_2) or black oxide (U_3O_8) and then to green salt (UF_4), ammonia dissociators, nitrogen generators, an hydrogen fluoride (HF) recovery area, a tank farm, product packaging stations, and dust collectors.

Plant 5 operations included derby manufacturing that featured jolters, F-machines, Rockwell furnaces, a breakout system, slag milling and liner preparation, and dust collectors; also, ingot manufacturing that featured vacuum remelt casting furnaces, crucible charge and burnout areas, ingot separation, mold cleaning and painting, ingot sawing and saw blade sharpening, a Hilco oil reclaiming system, and dust collectors.

Plant 6 operations included machining processes to heat treat ingots before shipping for extrusion, to cut off extruded ingots, to heat treat the blank cores, and to machine cores to a finished target element, a chip cleaning and briquetting system, machines for sizing and scalping pillow ingots, a rolling mill system, a waste water processing system, electrostatic precipitators, and dust collectors.

Plant 7 is a skeletal structure used for the storage of empty cans and drums. All process equipment used for a UF_6 to UF_4 process was removed in the late 1950s.

Plant 8 operations included several types of furnaces, liquid filtering systems, a halide acid metal dissolution area, a drum washer, a ball mill, and dust collectors.

Plant 9 operations included N-Reactor vacuum remelt casting furnaces, Rockwell furnaces, ingot sawing and machining, Zirnlo declading, a waste water processing system, an electrostatic precipitator, and dust collectors.

The pilot plant operations included small-scale facilities of all the production processes for the FEMP. In the early 1980s, a production-scale UF_6 to UF_4 unit was installed and operated.

Consistent with the provisions of the NCP, removal actions shall be appropriately integrated with the ongoing RI/FS to ensure appropriate Administrative Record documentation is provided regarding actions taken which may affect preexisting site conditions relative to Operable Unit 3 and the associated source term, and to ensure the removal action supports final remedial objectives. Within the FEMP Administrative Record, a separate file will be established for placement of supporting documentation pertaining to Safe Shutdown, Removal Action No. 12, including all key program documentation, current safe shutdown work procedures, and a compilation of appropriate materials disposition records for materials removed throughout the removal action.

The implementation of safe shutdown activities clearly supports the final remedial objectives for Operable Unit 3 by providing a necessary preliminary step for preparation of the systems for subsequent remedial activities. The proposed safe shutdown actions are consistent with final remedial actions based on the fact that mitigation of personnel/environmental risk, and safe permanent disposition of FEMP wastes/materials are ultimate goals.

Close coordination will be maintained with the ongoing RI/FS and with other removal actions for Operable Unit 3 to ensure that planned removal action program activities appropriately support RI/FS field investigations and alternative evaluations by incorporating interim cleanup of source terms into baseline risk determination and Operable Unit 3 site characterizations.

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 were reviewed. Also reviewed were transcripts from the RI/FS Environmental Impact Statement scoping meetings held on June 12 and 13, 1990. The major concerns voiced by community members about low-level and hazardous wastes stored at the FEMP centered around the types and volume of waste being stored, storage management procedures, and most particularly the treatment and storage of containerized wastes. The following is a discussion of questions, grouped by subject, that addressed the issue of waste storage and management at the FEMP.

1. Nature and extent of potential contamination -- people were concerned that all media (soil, air, surface water and groundwater) are being checked for all possible types and amounts of contamination. The possibility of contaminant migration off site was also a concern.

2. Storage -- most concern was expressed regarding the actual condition of waste containers and warehouses. Community members are also concerned about what types and volumes of waste are being stored on site, the exact location of the wastes, the practices for monitoring stored wastes, and a schedule for completion of all preparations for disposal.

3. Transportation and disposal -- the community has expressed the need to be informed of the means of shipment (rail or truck), the proposed routes to be used, and the ultimate destination for disposal of FEMP wastes. Also, the community is concerned that shipment of FEMP wastes to another location might create another Superfund site.

4. Public information -- the public has commented on their need to be notified in advance of all off-site shipments and a desire to be informed of all plans and schedules for overpacking/handling of wastes.

In order to better determine the community's concerns about this planned removal action and to maintain open communication with the community, telephone interviews were conducted with community members who have expressed an interest in the FEMP in the past. The interviews were conducted to conform with CERCLA guidance and to respond to community members' concern that their opinions have not been solicited prior to the planning and implementation of removal/and remedial activities.

The local residents and merchants interviewed indicated that their greatest concerns regarding the Safe Shutdown Program are: the generation of additional waste volume through the decontamination of the equipment; safe, conforming storage of new waste volumes; the potential releases of contaminants during

implementation of the Safe Shutdown Program (airborne and water releases); and whether the Safe Shutdown Program will actually result in a restart of production operations.

A 45-day public comment period for Safe Shutdown, Removal Action No. 12, 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 the Safe Shutdown Removal Action 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 Safe Shutdown Program about the status of stored waste materials and plans for transportation and disposal.

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 answering key concerns 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 safe shutdown in the Fernald Project Cleanup Report as needed during the removal action.

4. Offer a roundtable presentation on the Safe Shutdown Program.

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 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 safe Shutdown Work Plan which is in the Administrative Record, located at the PEIC. Since the removal action is in multiple phases, these activities will be scheduled to provide the maximum flexibility and information to the public. The work plans for this removal action have been submitted to EPA.

3709

ADDENDUM

TO THE

RI/FS COMMUNITY RELATIONS PLAN

FOR REMOVAL ACTION No. 13

PLANT 1 ORE SILOS REMOVAL ACTION

Fernald Environmental Management Project
Fernald, Ohio

U.S. Department of Energy
Fernald Field Office

August 1992

TABLE OF CONTENTS

LIST OF ACRONYMS

CERCLA:	Comprehensive Environmental Response, Compensation, and Liability Act [of 1980] (also known as Superfund)
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DOE:	U.S. Department of Energy
EPA:	U.S. Environmental Protection Agency
EE/CA:	engineering evaluation/cost analysis
FEMP:	Fernald Environmental Management Project (formerly the Feed Materials Production Center)
FFCA:	Federal Facility Compliance Agreement
NCP:	National Oil and Hazardous Substances Pollution Contingency Plan [of 1990]
HEPA:	high efficiency particulate Air [filters]
RI/FS:	remedial investigation and feasibility study
SARA:	Superfund Amendments and Reauthorization Act [of 1986]
UNH:	uranyl nitrate hydrate

Introduction

This document is 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. 13, Plant 1 Ore Silos.

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 of 1986 (FFCA) 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 removal 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 specific objective of Removal Action No. 13, Plant 1 Ore Silos, a time-critical removal action, is to protect human health and the environment by eliminating the potential threat of release of contaminants from the Plant 1 ore silos. The schedule provides 26 months for completion after start of field activities. Other considerations were: (1) the silos contained radioactive metal oxide process residue and when they were emptied, they were neither flushed nor decontaminated; (2) the silos are in an advanced state of deterioration, were not adequately sealed, and leakage has occurred; (3) although the silos have been

sealed since a release of contaminated material, the threat of future releases still exists because of the advanced state of deterioration; and (4) the potential for release of radionuclides to both on- and off-site populations from airborne or air-conveyed releases (from the ore silo facility) exists due to weather-related events.

The Plant 1 Ore Silos Removal Action will be accomplished by removing six concrete silos, eight tile silos, supporting steel structures down to the top of the concrete slab, and auxiliary equipment. The removal action will also address the segregation, size reduction, decontamination, packaging, certification, shipping, and disposal of the low-level radioactive waste scrap metal and masonry rubble. The silo pads and surrounding soils are not included in this removal action and will be addressed as part of the final remedial action for Operable Unit 3 and/or Operable Unit 5. The removal action will implement the following activities: (1) installing protective structures for nearby facilities; (2) installing temporary containment systems; (3) erecting scaffolding and preparing the silos for removal; (4) removal of the silos; (5) segregation, size reduction, and packaging of wastes for disposal; (6) removal, size reduction and placement of structural steel in temporary storage; and (7) cleaning the area.

All activities will be controlled to prevent the spread of contamination. A containment system will be built around the Plant 1 ore silos to act as a physical barrier during the removal action. This containment system will include a ventilation system with high efficiency particulate air (HEPA) filters. The air will pass through the HEPA filters before being discharged into the atmosphere.

Installation of protective structures will prevent potential damage to nearby facilities in the event of an accident involving falling silo structures or debris throughout the course of the removal action. Removal of the silos and remaining structures followed by silo area cleanup will minimize the release of contaminated materials from the Plant 1 silos area. Subsurface conveyors, originally used to transfer material between plants, will not be removed under this action but will be removed under final remediation.

Background

Plant 1 was the receiving point and sampling plant for incoming ores and residues to be used for processing. It also served as the collection point for FEMP wastes for shipment off site. The Plant 1 ore silos are part of the former production area which makes up most of Operable Unit 3.

The Plant 1 ore silos were constructed in 1953. They include the two groups of silos, consisting of six reinforced concrete silos and eight glazed tile silos. Four of the glazed tile silos are 44 feet tall and the remaining four are 10 feet tall; the six reinforced concrete silos are 10 feet tall. These reinforced concrete

silos and the eight glazed tile silos sit on separate superstructures which are approximately 38 feet tall and are connected by a mezzanine.

The contents of the Plant 1 ore silos were removed except for small amounts of residue. The estimated height of residual material in each of the eight glazed tile silos ranges from 1-4 feet. The residual material in the concrete silos is minimal. The silo area is bounded on the south by four uranyl nitrate hydrate (UNH) tanks which presently contain about 10,000 gallons of approximately one percent uranium-235 UNH in weak nitric acid solution. A removal action is being prepared to address the UNH tanks.

The original purpose of the Plant 1 ore silos was to sample and blend ore concentrates. The blended concentrates then became feed material for the refinery processes that occurred in Plant 2/3. This system proved to be inefficient and was terminated. In approximately 1955, the silos were temporarily used as overflow storage for the cold metal oxides stream which was a by-product of ore processing.

In the 1970s, spalling of the tile silos due to weathering, particularly the freeze-thaw cycles, was first observed on the two westerly tile silos. This deterioration has continued to the present. Spalling was also evident on the upper course of the southwest silo. The steel support structures are extensively corroded, with rust evident throughout. A structural evaluation was performed on the silos in late 1990 and early 1991. The report provided two recommendations: (1) demolish the entire facility or (2) demolish the tall tile silos and inspect and repair, as required, the support structure for both the tile and concrete silos.

The first alternative was selected because the second would be inconsistent with the final remediation of the site and would result in the creation of additional waste.

On February 6, 1991, a spill was observed on the ground level under the northwest tile silo during a routine inspection. It is believed that heavy rain on the previous day wet the residues to the point of flow from the silo. Also, residues had accumulated on the lower platform under both western tile silos and the northwest tile silo. Approximately 2,600 pounds of residue and corrosion were released from the three silos. The spills were cleaned up and the debris stored in drums pending further evaluation. After the cleanup effort, further inspection and emergency maintenance activities were conducted to seal the silo vents to prevent similar incidents and to reduce the potential for release.

In March and April 1991, Westinghouse Environmental Management Company of Ohio personnel surveyed radiation levels, took smear samples from the silo surfaces, and collected samples from inside the tile silos. The radiation levels and results from the smear samples indicated that worker health would be at risk at such levels. The results were:

- Contact radiation rates ranging from <0.5 to 7.5 millirem per hour (rem/hr), with the highest reading occurring at the base of the northwest tile silo; at three feet from the silos, the highest radiation rate was 2 mrem/hr at one of the tile silos

- Smear sample rates ranging from nondetectible to 12,000 disintegration per minute (dpm) alpha/100 cm; the highest levels measured on the external surfaces of the silos were 3,300 dpm alpha/100 cm^2 and 1000 dpm beta-gamma/100 cm^2 also found on the northwest tile silo

- Grab sample results indicating the presence of uranium and radionuclides of the uranium decay chain. Few organic compounds were observed above detection limits. None of the results from the toxicity characteristic leaching procedure (TCLP) tests are above regulatory limits.

The presence of asbestos and lead was identified during industrial hygiene investigation surveys. Asbestos is present in transit panels of the small electrical building beneath the silo structure and the covered walkway on the south side of the structure. Lead exists in the paint on the steel structures and in the residue in the silos. Lead in the residue is present as part of the natural uranium decay chain. The investigation also indicates that polychlorinated biphenyls do not exist in transformers, capacitors, and switchgear located in the building.

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. The Plant 1 ore silos were mentioned as a future removal action at the July 16, 1991, October 29, 1991, and February 25, 1992 community meetings. The incident involving the accidental release of residues from the Plant 1 ore silos was discussed in detail at the April 2, 1991 community meeting. A videotape of the cleanup process was shown at the meeting.

A 45-day public comment period for the Plant 1 Ore Silos Removal Action was held from May 25 - 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 the Plant 1 Ore Silos Removal Action 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 Plant 1 Ore Silos 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 Plant 1 Ore Silos 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 the Plant 1 Ore Silos Removal Action in the Fernald Project Cleanup Report as needed during the removal action.

4. Offer a roundtable presentation on Plant 1 ore silos.

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 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 Plant 1 Ore Silos 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.

REFERENCES

1. U.S. Department of Energy, "Fernald Environmental Management Project Plant 1 Ore Silos Removal Action Number 13 Work Plan," March 1992, Revision 1.

ADDENDUM

TO THE

RI/FS COMMUNITY RELATIONS PLAN

FOR REMOVAL ACTION No. 14

CONTAMINATED SOILS ADJACENT TO THE SEWAGE TREATMENT PLANT INCINERATOR

Fernald Environmental Management Project
Fernald, Ohio

U.S. Department of Energy
Fernald Field Office

August 1992

TABLE OF CONTENTS

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CERCLA:	Comprehensive Environmental Response, Compensation, and Liability Act [of 1980] (also known as Superfund)
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DOE:	U.S. Department of Energy
EPA:	U.S. Environmental Protection Agency
EE/CA:	engineering evaluation/cost analysis
EMP:	environmental monitoring program
FEMP:	Fernald Environmental Management Project (formerly the Feed Materials Production Center)
FFCA:	Federal Facility Compliance Agreement
NCP:	National Oil and Hazardous Substances Pollution Contingency Plan [of 1990]
RI/FS:	remedial investigation and feasibility study
RSE:	removal site evaluation
SARA:	Superfund Amendments and Reauthorization Act [of 1986]

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. 14, Contaminated Soils Adjacent to the Sewage Treatment Plant Incinerator.

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 of 1986 (FFCA) 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 specific objectives of Removal Action No. 14, Contaminated Soils Adjacent to the Sewage Treatment Plant Incinerator, a non-time-critical removal action, are to reduce the potential for contaminant migration to previously uncontaminated areas and minimize the potential for exposure to human health or the environment until final remedial actions can be implemented. The schedule provides 26 months for completion after the start of field activities. The following factors apply specifically to the above-background concentrations of contaminants occurring in the soils adjacent to the sewage treatment plant area: (1) actual or potential exposure to nearby human populations, animals, or the food chain from

hazardous substances or pollutants or contaminants; specifically, this applies to the nearby resident farmer and nearby grazing cattle; (2) high levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface; specifically, this is appropriate based on radiological concentrations found in surface soil samples taken adjacent to the solid waste incinerator at the sewage treatment plant; and (3) weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released; specifically, this is appropriate based on radiological concentrations found in surface soil samples taken adjacent to the solid waste incinerator at the sewage treatment plant and the possibility of significant weather events carrying the contaminants out of the study area in surface runoff.

The Contaminated Soils Adjacent to the Sewage Treatment Plant Incinerator Removal Action will consist of three phases:

- Phase 1: Layout survey grid to define the study area; conduct off-property surface soil sampling along the sampling grid; perform a radiological walkover survey to highlight areas where soils have uranium concentrations in excess of 100 pCi/g; and excavate the highlighted area.

- Phase 2: Collect post-excavation surface soil samples from 40 on-site locations, at depths of zero to six inches; take post-excavation validation samples from the excavated areas; and issue an interim report outlining excavation and sampling activities and analytical results from Phases 1 and 2.

- Phase 3: Revise the removal site evaluation (RSE) by incorporating all sampling results and issue a final report outlining any further actions warranted in the study area. A RSE is an evaluation of the present conditions at an area of the site, performed to determine whether a removal action is needed, and whether it is time critical or non-time critical. Usually, this determination is made by 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 is done. It is similar to the RSE, but is a more detailed evaluation of the alternatives.

Background

The solid waste incinerator at the sewage treatment plant has been identified as a suspect facility to be addressed under the RI/FS for Operable Unit 3, which addresses the production area and associated facilities. The air and soil will be addressed under Operable Unit 5.

The sewage treatment plant area is located on the eastern edge of the FEMP property. The sewage treatment plant, associated facilities, and the abandoned incinerator are contained within a six-foot chain-link-fenced area on FEMP property where access is restricted by security officers. The sewage treatment plant became operational in 1952 for the treatment of FEMP sanitary wastewater. The system was later transitioned to receive both sanitary and process-related wastewaters. The practice of treating process-related wastewater flows was discontinued recently with the installation and start-up of the biodenitrification effluent treatment system. Surface radiological measurements and limited soil samples collected in the vicinity of these facilities indicate the presence of localized elevated concentrations of radionuclides.

The solid waste incinerator is located in the northwest corner of the sewage treatment plant area. The incinerator was operated from November 1954 through December 1979, at which time a new solid waste incinerator at Building 39 was put into service. The incinerator at the sewage treatment plant was used to burn contaminated and uncontaminated combustible trash during its period of operation. Soil sampling results from the RI/FS indicate that radiological concentrations in the soils adjacent to the solid waste incinerator exceed those observed in prior routine environmental sampling conducted in 1984 and 1985 as part of the FEMP's environmental monitoring program (EMP). The solid waste incinerator is located within the fenced area of the sewage treatment plant, but the majority of the area with contaminated soils is located outside the boundary. Access to the sewage treatment plant is controlled by WEMCO personnel; however, access to the areas adjacent to the incinerator is relatively uncontrolled.

The area outside the fence has primarily been used for grazing cattle under a lease agreement with the DOE and a neighboring farmer. Livestock fencing was installed in April 1991 to prevent access to areas adjacent to the incinerator. Based on RI/FS data, the new fence was installed approximately 665 feet north of the incinerator.

Both the routine EMP and the RI/FS have shown evidence of localized radiological contamination in the vicinity of the sewage treatment plant area. Air sampling data for 1989 from Air Monitoring Station 3, approximately 350 feet downwind (northeast) of the incinerator, show average radiological concentrations of less than one millirem per year.

The RI/FS surface soil and sub-surface soil samples collected in the vicinity of the solid waste incinerator showed considerably higher radiological concentrations than previously observed under the EMP. The two highest surface soil radiological concentrations, closest to the incinerator, measured 25,670 pCi/g and 2,376 pCi/g of uranium-238. In addition to surface soil samples, there were a limited number of RI/FS soil samples collected from depth of up to 20 feet. The results from these samples are listed in Table 4 of the RSE for this removal action. Only one subsurface sample of 224.4 pCi/g of uranium-238 at a depth

of 1.5 - 3.0 feet, exceeded the 100 pCi/g-field-action level. All of these sampling points are within the sewage treatment plant compound.

There has been extensive subgrade disturbance within the sewage treatment plant compound due to plant upgrades and the placing of fill to improve drainage. Since there has been little-to-no known disturbance of the soils outside the fenced area at the Sewage Treatment Plant, contamination is likely to be limited to surface soils as a result of air deposition from incinerator operations. Radiological walkover surveys performed as part of the RI/FS indicate some areas with higher than background concentrations of gamma-emitting radionuclides. All of the areas of high concentrations are on FEMP property with the exception of a localized area adjacent to the FEMP property-line fence bordering a field used for grazing. Based on the available walkover data, however, it is not anticipated that concentrations in the off-property soil will exceed the 100 pCi/g-action level.

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. The Contaminated Soils Adjacent to the Sewage Plant Incinerator Removal Action was described briefly at the October 29, 1991 and the February 25, 1992 community meetings as one of the removal actions to be completed per the 1991 Amended Consent Agreement.

A 45-day public comment period for Removal Action No. 14, Contaminated Soils Adjacent to the Sewage Treatment Plant Incinerator, 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 the Contaminated Soils Adjacent to the Sewage Treatment Plant Incinerator Removal Action 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 Soils Adjacent to the Sewage Treatment Plant Incinerator 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, answering key concerns about the contaminated soils adjacent to the sewage treatment plant incinerator and distribute them at the quarterly public meetings.

2. Devote some portion of future community meetings to this issue; and update the 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 the Contaminated Soil Adjacent to the Sewage Treatment Plant Incinerator Removal Action in the Fernald Project Cleanup Report as needed during the removal action.

4. Offer a roundtable presentation on the removal action.

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 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 schedule which provides 26 months for completion after start of field activities. For a complete list of schedule dates and activities, please see the Contaminated Soils Adjacent to the Sewage Treatment Plant Incinerator 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 was approved by EPA in May 1992.

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

REFERENCES

1. U.S. Department of Energy, Fernald Office, Fernald, Ohio, "Contaminated Soils Adjacent To The Sewage Treatment Plant Incinerator Removal Action Number 14 Work Plan," March 1992.

ADDENDUM

TO THE

RI/FS COMMUNITY RELATIONS PLAN

FOR REMOVAL ACTION No. 16

COLLECT UNCONTROLLED PRODUCTION AREA STORMWATER RUNOFF

Fernald Environmental Management Project
Fernald, Ohio

U.S. Department of Energy
Fernald Field Office

August 1992

TABLE OF CONTENTS

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FFCA:	Federal Facility Compliance Agreement
NCP:	National Oil and Hazardous Substances Pollution Contingency Plan [of 1990]
RI/FS:	remedial investigation and feasibility study
RSE:	removal site evaluation
SARA:	Superfund Amendments and Reauthorization Act [of 1986]
SSLS:	storm sewer lift station
SWRB:	Storm Water Retention Basin
TCLP:	toxicity characteristic leaching procedure

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. 16, Collect Uncontrolled Production Area Stormwater Runoff.

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 legislation will be implemented

- The Federal Facility Compliance Agreement of 1986 (FFCA) 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. 16, Collect Uncontrolled Production Area Stormwater Runoff, a time-critical removal action, is to protect human health and the environment by collecting the uncontrolled production area stormwater runoff which currently flows directly to Paddys Run. This would eliminate the possibility of the migration of uranium-contaminated runoff to the groundwater via infiltration along the streambed.

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 for the production area stormwater runoff. 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

The FEMP production area includes those facilities previously used to produce high-purity uranium metals using various chemical and metallurgical processes. Past activities also included thorium processing and recycling of fuel materials. The production area is confined within a 136-acre fenced area located approximately in the center of the 1050-acre site.

The majority of the stormwater from the 136-acre production area is collected in the existing storm sewer system and discharged into the storm water retention basin (SWRB) for appropriate handling. Several perimeter subdrainage areas of the production area, collectively about eight acres, currently do not drain to the existing storm sewer system but flow uncontrolled away from the production area. This uncontrolled stormwater runoff contains various concentrations of dissolved uranium and other contaminants.

The uncontrolled stormwater runoff from the production area flows to Paddys Run by means of drainage ditches and culverts. Upon entering Paddys Run, the potential exists for these contaminants to migrate to the Great Miami Aquifer via infiltration. This aquifer is within the buried valley aquifer of the Great Miami River Basin, which was designated a sole-source aquifer by the EPA under Section 1424(e) of the Safe Drinking Water Act. This designation implies that the aquifer is the sole or principal source of drinking water for this area. Contamination of Paddys Run and/or the underlying aquifer may pose potential exposure risks to public health and the environment. A removal action, which addresses contamination in the aquifer, entitled "South Groundwater Contamination Plume," is currently underway.

Human exposure to the contaminants in the stormwater runoff may occur as a result of the release of contaminants into Paddys Run. The contaminants then may be discharged from Paddys Run to the Great Miami River or the underlying sand and gravel aquifer. Paddys Run is not used as a drinking water supply. Some potential exposure pathways include: ingestion of contaminated sediment from the stream

by children who often play in the creek; ingestion of contaminated groundwater from the aquifer underlying Paddys Run; ingestion of crops irrigated by contaminated water; ingestion of beef from cattle exposed to uranium through water and grazing and ingestion of milk from cows exposed to uranium through water and grazing.

Currently, the storm sewer system from the production area flows to Manhole 34. A 14-inch dam in the 60-inch-diameter storm sewer downstream of Manhole 34 diverts normal flow into the wetwell of the storm sewer lift station (SSLS). The lift station pumps the normal dry weather flow in the storm sewer system to the Great Miami River via Manhole 175.

During periods of heavy precipitation, the flow collected in the storm sewer will overflow the 14-inch high dam in the 60-inch storm sewer and flow to the SWRB, which is designed to retain a 10-year/24-hour rainfall event (approximately 10.2 million gallons). The most recent occurrence of this magnitude was in May 1990 when two days of heavy rain caused the SWRB to overflow. It is important to note that this type of overflow does not violate any environmental laws.

In the event of a release, the discharge from the SWRB can be diverted to the general sump or to the biodenitrification surge lagoon for further treatment, if necessary. A recently designed project will modify Manhole 34 to allow all storm sewer water to flow to the SWRB instead of being pumped to the Great Miami River. In the event of a spill, Manhole 34 will still have the ability to be diverted to the general sump. The pumping capacity of the SWRB is also being upgraded to address the additional SSLS water.

The DOE is installing a 300-gallons-per minute trailer-mounted interim advanced wastewater treatment system that will treat SWRB/SSLS effluent before discharge to the Great Miami River. This interim unit will remain in operation until the advanced wastewater treatment system comes on line, which will provide permanent treatment for a combined retention basin/lift station flow of 700-gallons per minute.

The underlying groundwater has been contaminated with inorganic and organic chemical compounds. To date, the following actions have been taken to mitigate this problem:

- A SWRB was constructed and placed in operation in October 1986 to retain runoff from the FEMP production area. Construction of an additional chamber to the SWRB was completed in December 1988. It was designed to retain the runoff from a 10-year/24-hour rainfall event, greatly reducing the volume of contaminated stormwater from the FEMP production area discharged to Paddys Run.

- Another project was completed in 1988 to control the stormwater runoff from the Plant 1 storage pad area (Surface Water Control of Plant 1 Storage Pad). Before this, stormwater runoff from several portions of the Plant 1 storage pad and adjacent areas flowed to Paddys Run via drainage ditches. The implementation of this project redirected the stormwater flows from these areas of the Plant 1 storage pad to the site storm sewer system.

- Removal Action No. 2, Waste Pit Area Runoff Control, completed in July 1992, addressed the contaminated runoff that flows from the waste pit perimeter areas to Paddys Run. In the past, DOE disposed of wastes in a series of pits located west of the production area. Most of the surface area stormwater runoff from the pits is collected in a Clearwell and treated before being pumped to the Great Miami River.

- A project called Storm Sewer Improvements - Plantwide addresses stormwater runoff from the production area. One part of this project involves expanding the existing storm sewer system so runoff from all portions of the production area is collected and channeled to the SWRB. This part of the project will be completed under Removal Action No. 16, Collect Uncontrolled Production Area Stormwater Runoff. The other part of Storm Sewer Improvements-Plantwide will provide for the rehabilitation and/or repair of several sections of the existing storm sewer system.

This removal action is a component of Operable Unit 5 under the on-going RI/FS. Construction involved in Removal Action No. 16, Collect Uncontrolled Production Area Stormwater Runoff, will include concrete drainage trenches, curbs and utilization of existing topographic features to collect the production area perimeter stormwater runoff. Stormwater collected will be redirected to the existing storm sewer system. This removal action will not impact any wetlands as currently delineated on FEMP property. Excavation activities involve the removal of enough soil to physically install concrete trench drains with steel grates. Trench drains will be installed in certain areas to intercept stormwater runoff before it leaves the FEMP production area. Storm sewer sections will be installed to connect the new trench drains to the existing storm sewer system. In other areas, curbing will be placed to redirect the runoff to the existing storm sewer system. After construction and the start-up testing period is complete, the system will be operated and maintained by Fluor Daniel Environmental Restoration Management Corporation.

The implementation of Removal Action No. 16 will require the movement of soil and other material likely to result in fugitive dust emissions. Fugitive dust emissions will be controlled by dampening the area where excavations take place. Accumulated soils will be covered to eliminate the potential for fugitive dust emissions.

Soil excavated during the installation of trench drains, curbs, storm sewer lines and concrete structures will be used as backfill to the maximum extent possible. Excess material will be handled in accordance with current site standard operating procedures.

All activities associated with Removal Action No. 16, including installation of the curbing and trench drains around the perimeter of the production area and containment of all identified contaminated soils resulting from excavation and construction activities, will be completed on or before August 30, 1993. The final report for the Collect Uncontrolled Production Area Stormwater Runoff Removal Action is scheduled to be complete in June 1994.

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. Comments from the Waste Pit Area Runoff Control Engineering Evaluation/Cost Analysis workshop held on June 6, 1990, also were reviewed. At the May 22, 1990 community meeting, questions were raised regarding the May 1990 overflowing of the SWRB (mentioned above) and the fact that DOE did not write a press release on the incident. This incident was the most recent overflow incident of the SWRB.

A 45-day public comment period for the Collect Uncontrolled Production Area Stormwater Runoff Removal Action 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. 16 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 Collect Uncontrolled Production Area Stormwater Runoff 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 production area stormwater runoff 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. 16 in the Fernald Project Cleanup Report as needed during the removal action.

4. Offer a roundtable presentation on the production area runoff.

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 and publicize their availability at the Public Environmental Information Center, located in the 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 Collect Uncontrolled Production Area Stormwater Runoff 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 conditionally approved by EPA and the Ohio Environmental Protection Agency pending the incorporation of comments.

Discussions and updates on the status of the removal action will be given at future public meetings and published in future issues of the Fernald Project Cleanup Report.

REFERENCES

1. U.S. Department of Energy, "Fernald Environmental Management Project, Collect Uncontrolled Production Area Stormwater Runoff Removal Action Work Plan," February 1992

ADDENDUM

TO THE

RI/FS COMMUNITY RELATIONS PLAN

FOR REMOVAL ACTION No. 17

IMPROVED STORAGE OF SOIL AND DEBRIS

Fernald Environmental Management Project
Fernald, Ohio

U.S. Department of Energy
Fernald Field Office

August 1992

TABLE OF CONTENTS

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EE/CA:	engineering evaluation/cost analysis
FEMP:	Fernald Environmental Management Project (formerly the Feed Materials Production Center)
FFCA:	Federal Facility Compliance Agreement
NCP:	National Oil and Hazardous Substances Pollution Contingency Plan [of 1990]
PCB:	polychlorinated biphenyl
PEIC:	Public Environmental Information Center
RI/FS:	remedial investigation and feasibility study
ROD:	Record of Decision
RSE:	removal site evaluation
SARA:	Superfund Amendments and Reauthorization Act [of 1986]
SSOP:	Site Standard Operating Procedure

Introduction

This document is 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. 17, Improved Storage of Soil and Debris.

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
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- 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, which are referred to as Phase Two Removal Actions.

On January 14, 1992 six more removal actions, known as the 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 the remedial actions being pursued in the RI/FS 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 goal of Removal Action No. 17, Improved Storage of Soil and Debris, a non-time-critical removal action, is to establish a site-wide management concept for soil and debris presently at the FEMP and for soil and debris that will be generated during future cleanup. Specific objectives of this removal action are to: (1) minimize the potential for contaminant release from soil and debris to the environment; (2) contribute to efficient performance of interim response actions and other FEMP activities; (3) support the future implementation of the final remediation activities; (4) minimize future soil and debris waste

volumes and (5) comply with federal and state applicable or relevant and appropriate requirements (ARARs) to the maximum extent practicable.

The removal action will consist of two phases. In broad terms, Phase I will entail identifying contaminated soil and debris, reducing the potential for contaminant release through a variety of actions and building appropriate storage facilities. Phase II will involve storing the soil and debris in these improved storage facilities until the final remedial actions are selected.

If the soil is contaminated only with uranium and not with any other regulated substance, it will either be stockpiled or covered with tarpaulins, as determined by total uranium activity concentrations. Soil with a uranium concentration of 100 pCi/g or less will be put in stockpiles. Soils with uranium readings exceeding 100 pCi/g will be stored temporarily under tarpaulins until the improved storage facilities are constructed. However, soil containing hazardous waste or polychlorinated biphenyls (PCBs) that exceed regulatory standards will be put into containers and stored in designated storage facilities at the FEMP.

Whenever possible, debris will be decontaminated and recycled. The debris that can be recycled will be stored under tarpaulins before being decontaminated. The radiologically contaminated debris that cannot be reused will be put into containers for off-site disposal, if possible. If the contaminated debris cannot be shipped off-site, then it will be kept in containers and stored in the improved storage facilities. Any uncontaminated debris that cannot be shipped off site to an industrial solid waste landfill will be kept in uncovered piles, separated from the contaminated material.

For a detailed account of removal action activities, refer to the "Improved Storage of Soil and Debris Removal Action Work Plan, March 1992." The Work Plan has been entered into the Administrative Record, which is located at the DOE Public Environmental Information Center (PEIC), JAMTEK Building, 10845 Hamilton-Cleves Highway, Harrison, Ohio, 45030.

Background

Soil and debris are generated at the FEMP during construction and demolition projects, removal actions, environmental response actions, routine maintenance, and other operation or remediation activities. Current activities have produced approximately 20 on-site soil piles that will require handling and storage. (See Attachment 3 of the "Improved Storage of Soils and Debris Work Plan" for a current list of existing piles.) Additional soil and debris will continue to be generated in the future as a result of these same activities. All future contaminated soil and debris will be managed according to this plan. The final disposition of these waste materials will be determined through the Superfund process.

Because FEMP soil and debris are now stored in piles or containers, primarily in outdoor piles, there is a potential for contaminants to be released into the environment via airborne and surface water/groundwater pathways. A removal site evaluation (RSE), or evaluation of present conditions at an area of the site, was performed and indicated that contaminant migration from the soil and debris piles could have an adverse impact on human health and the environment.

The following are the regulatory definitions for soil and debris.

Soil

In general, soil that must be addressed by this removal action will result from excavation and demolition activities. The EPA has defined soil (in 40 Code of Federal Regulations [CFR] Part 268 {55 FR 55172}) as unconsolidated earth material composing the surficial geologic strata, consisting of clay, silt, sand, or gravel-size particles (sizes as classified by the U.S. Soil Conservation Service). Soil will also include a mixture of the above-mentioned materials with other liquids, sludges, or solids that are inseparable by simple mechanical removal processes.

The FEMP has defined soil in "Controlling the Generation of Construction/Maintenance Waste" (Site Standard Operating Procedure-00441, Westinghouse Environmental Management Company of Ohio, 1991e) as dirt or gravel particles with maximum dimensions of 2 inches.

Debris

Debris at the FEMP will consist primarily of process equipment and scrap building materials that will be generated during decontamination and decommissioning activities. The EPA has defined debris (in 40 CFR Parts 148, 260, 261, and other regulatory changes [57 FR 9831]) as solid materials that have been manufactured or processed (excluding treatment residuals). Debris also includes natural geologic material that exceeds a 9.5-mm-sieve size such as gravel, cobbles, and boulders, or is an inseparable mixture of such materials with soil, liquid, sludge, or other solid waste materials. The EPA also classifies plant or animal matter as debris.

The FEMP has defined debris in SSOP-00441 as materials such as concrete block, stone, asphalt paving, and similar material that cannot be reused and varies in size from broken fragments of masonry or stone to large structures like tank pads or walls that are scheduled for demolition.

The specific types of contamination that may be present within the soil and debris associated with this removal action are: (1) CERCLA hazardous substances, (2) hazardous wastes, (3) radioactive waste, (4) mixed waste, (5) underground storage tank waste, (6) asbestos, (7) petroleum products, and (8) PCBs.

The schedule for Removal Action No. 17, Improved Storage of Soils and Debris, calls for a 12-month completion time with construction of the initial structures scheduled to begin in mid-July 1993, and construction of the last structures for the removal action ending in June 1994.

Overview of Community Concerns

In preparing this addendum, transcripts were reviewed 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. Transcripts from the RI/FS Environmental Impact Statement scoping meetings, which were held June 12 and 13, 1990, also were examined.

A 45-day public comment period for Removal Action No. 17, Improved Storage of Soil and Debris, 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. 17, Improved Storage of Soil and Debris, 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 Removal Action No. 17, Improved Storage of Soils and Debris

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, answering key concerns about the improved storage of soil and debris, and distribute them at the quarterly public meetings.

2. Devote some portion of future community meetings to this issue; update the 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 the Improved Storage of Soil and Debris Removal Action in the Fernald Project Cleanup Report as needed during the removal action.

4. Offer a roundtable presentation on the removal action.

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 and publicize their availability at the PEIC.

Timetable

The preparation of materials for all community relations activities will be tied to the removal action schedule, which provides 12 months for completion. For a complete list of schedule dates and activities, please see the Improved Storage of Soil and Debris 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 was submitted to EPA for approval in March 1992. Discussions and updates on the status of the removal action will be given at future public meetings.

REFERENCES

1. U.S. Department of Energy, Fernald Environmental Management Project, Fernald, Ohio, "Improved Storage of Soil and Debris Removal Action Number 17 Work Plan", March 1992.

2. 40 Code of Federal Regulations - Protection of Environment

3. Westinghouse Management Company of Ohio, Fernald Environmental Management Project, Fernald, Ohio, "Controlling the Generation of Construction/Maintenance Waste," SSOP-00441, November 27, 1991.