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FERNALD PROJECT CLEANUP REPORT
OCTOBER 1993

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FACTSHEET

FERNALD PROJECT CLEANUP REPORT OCTOBER 1993

Meeting format encourages discussion

The Fernald Project Cleanup Report is intended to update the community on activities associated with cleanup at the Fernald Environmental Management Project. The report is designed as a supplement to information provided at regular community meetings and through other communication activities.

The next community meeting is scheduled for Thursday, October 21, 1993, at the Plantation, 9660 Dry Fork Road, Harrison, Ohio, 45030. Fernald technical personnel will be on hand at 6 p.m. to explain exhibits on various cleanup activities. Status of cleanup activities will be contained in handouts at the meeting. The general meeting will begin at 7 p.m. and will include a brief summary of current issues. Then the meeting will break into small groups for separate discussions on the three topics listed below. Following the breakout sessions, the general meeting will reconvene with statements by the U.S. and Ohio Environmental Protection Agencies, and Fernald Residents for Environmental Safety and Health (FRESH). A question-and-answer session will follow.

Topics for the three breakout sessions are:

* Public Participation: How do you want to participate in decision making at Fernald? Do we have too many meetings? Are we neglecting the issues you care about?

* Waste Disposition/Transportation: Should wastes be disposed in an off-site location, or should wastes be disposed in on-site facilities? Which wastes should go off site, and which wastes should stay?

* Future Use: What should be done with the Fernald site after it is cleaned up? How much are you willing to spend to clean the site for a specific future use?

Other opportunities are available for the public to become informed about activities at Fernald and to become involved in the cleanup decision-making process. Public meetings of the Fernald Citizens Task Force will take place on the second Thursday of each month from 4-6 p.m. at the Meadowbrook Inn in Ross, except for the November meeting which will be held on November 18 (the third Thursday) because of Veteran's Day. A Science, Technology, the Environment, and the Public (STEP) session on risk is scheduled 7-9 p.m. October 19 at the Plantation in Harrison. Public sessions on water pathways and cleanup technologies are planned for November 1993.

Additional information about Fernald cleanup, including more detailed reports, records, and other documents, is available at the Public Environmental Information Center located in the JAMTEK Building, 10845 Hamilton-Cleves Highway, just south of the Fernald site.

Citizens Task Force helps guide cleanup

A citizens advisory group, the Fernald Citizens Task Force, has been created to help guide cleanup at Fernald.

The U.S. Environmental Protection Agency (U.S. EPA), the Ohio Environmental Protection Agency (Ohio EPA), and DOE collaborated to form the task force. It includes representatives of the constituencies affected by clean-up decisions. The first public meeting of the task force was held October 14.

The objective of forming a task force is to seek consensus among these "stakeholders" concerning cleanup strategies,

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future uses of the Fernald site and other environmental restoration issues. U.S. EPA, Ohio EPA, and DOE have agreed to consider carefully the Task Force's recommendations in their decisionmaking processes, though its recommendations are not legally binding.

The major concerns of the Task Force are:

·What should be the future use of the site?

·What should be the cleanup levels?

·Where should radioactive and hazardous wastes present at the Fernald site be disposed?

·What should be the cleanup priorities?

The Fernald Citizens Task Force consists of 14 stakeholders and two alternates. Representatives from U.S. EPA, Ohio EPA, and DOE are ex-officio members of the task force and will participate in its discussions.

The stakeholder members and alternates are: John Applegate, law professor, University of Cincinnati; James Bierer, teacher, Ross School District; Marvin Clawson, land owner near Fernald; Lisa Crawford, Fernald Residents for Environment, Safety and Health (FRESH); Pam Dunn, FRESH; Constance Fox, physician, Physicians for Social Responsibility; Guy Guckenberger, Hamilton County Commissioner; Jerry Monahan, Greater Cincinnati Building and Construction Trades Council; Thomas Rentschler, Miami River Conservancy and area businessman; Robert Schwab, president, Fernald Atomic Trades and Labor Council; Warren E. Strunk, Crosby Township trustee; Thomas Wagner, community planning professor, University of Cincinnati; Gene Willeke, environmental science professor, Miami University; Russell Beckner (alternate), resident of the Fernald area; Jackie Embry (alternate), nurse, Hamilton County Health Department; Jim Saric (ex-officio), U.S. EPA; Graham Mitchell (ex-officio), Ohio EPA; and J. Phillip Hamric (ex-officio), DOE Fernald Site Manager.

Members will serve without pay, although they will be reimbursed for travel and other expenses. DOE is providing funding and administrative support for the committee.

John Applegate, who specializes in environmental law at the University of Cincinnati College of Law, will chair the Task Force. Professor Applegate said, "The goal of this Task Force is to enhance stakeholder involvement and to improve decisionmaking in the Fernald restoration process. The two go hand in hand: Better decisions will mean greater public acceptance of those decisions. Public acceptance is especially important for decisions about the future use of the Fernald site." Noting that DOE is undertaking the cleanup of many sites around the country, Applegate stated, "It is my hope that the Fernald Citizens Task Force will be a model for citizen participation at other restoration projects."

Nominees for the Fernald Citizens Task Force were selected by Dr. Eula Bingham, a University of Cincinnati professor of environmental health in the College of Medicine and director of the Ohio Hazardous Substances Research, Education, and Management Institute. Dr. Bingham served as convener for the advisory group, and has spent the last three months talking with key stakeholders and interested parties about the task force's mission. She also developed a specific charter for the advisory group. Professor Applegate praised Dr. Bingham's efforts. "Dr. Bingham has assembled a truly representative group of individuals committed to a bright future for Fernald and its neighbors."

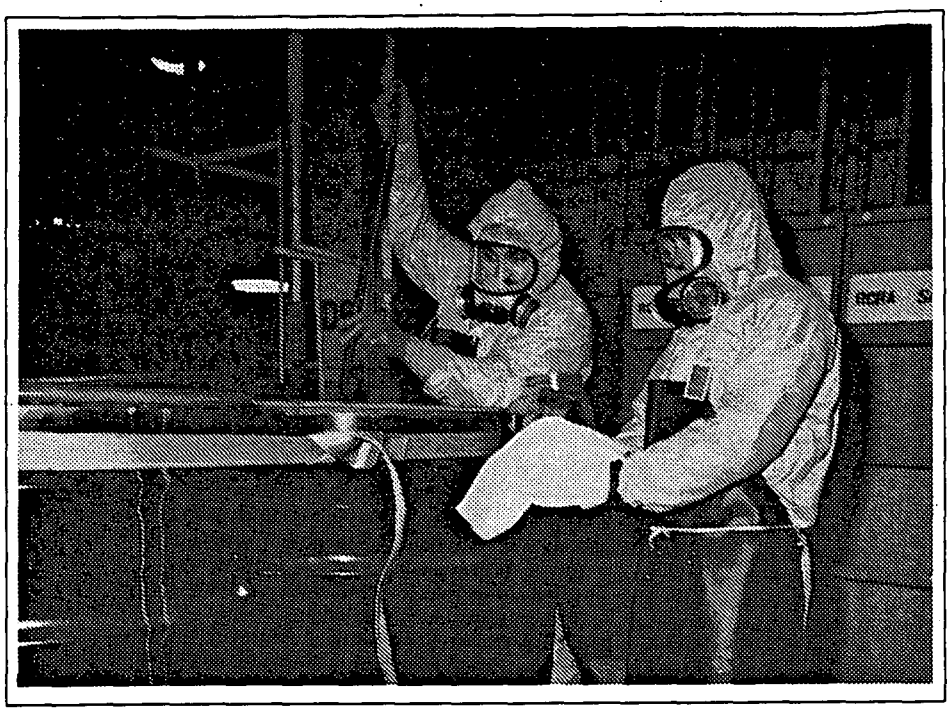
Task Force members toured the Fernald site September 9. The task force also held an orientation retreat at Miami University September 18. At the retreat, members heard presentations about the operational history and current site conditions at Fernald, as well as briefings on risk assessment.

Workers repackage and consolidate thorium 484

Much progress has been made in an effort to repackage and consolidate low-level thorium waste at Fernald.

Workers have completed an important project to consolidate thorium storage from five locations down to two remote areas in Buildings 64/65 and Building 60.

In addition, approximately 7,600 containers of thorium have been overpacked and are ready for shipment. Overpacking of thorium drums in Building 65 is scheduled to begin this fall. Upon completion of overpacking Building 65 thorium scheduled for early 1994, all thorium at Fernald will have been packaged into containers suitable for safe on-site storage and safe shipment for disposal.



Fernald workers recently completed an important thorium project.

Fernald shipped 1,621 containers of approved thorium waste (oxides from the former Plant 8 silo and bin) to the Nevada Test Site (NTS) for disposal in 1992. The Fernald site serves as the DOE repository for thorium; approximately 930 metric tons of thorium are currently stored on site. More than 800 tons of thorium are pending approval and planned for shipment in 1994.

Fernald is seeking approval from the DOE Nevada Field Office to ship additional thorium waste streams to NTS, and concerns raised by the Nevada Department of Environmental Protection are being addressed.

Some of the thorium at Fernald had been held for sale to a private company; the sale did not materialize and that thorium also has been declared waste and will be shipped for disposal.

Fernald scrap metal being melted for re-use

This photo shows the scrap metal pile before the Removal Action.

The original 1,800-ton scrap metal pile adjacent to the old Decontamination and Decommissioning (D&D) building at Fernald has been packaged and shipped to the Scientific Ecology Group, Inc. (SEG) facility in Oak Ridge, Tenn., for recycling or other beneficial reuse.

This project is being conducted as part of an agreement between DOE and U.S. EPA for cleanup of the Fernald site, and is designed to eliminate the potential

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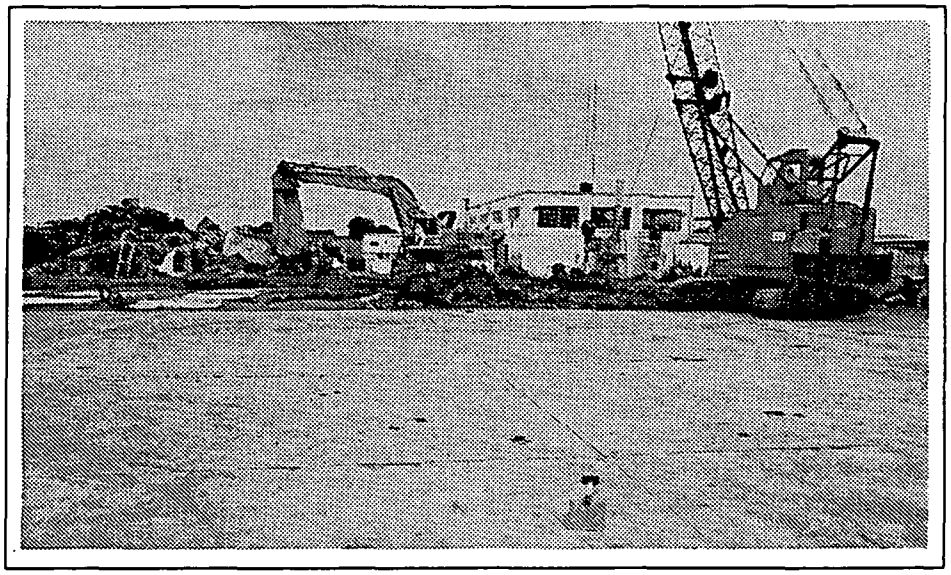
threat of material releases to the environment due to wind or rain from the low-level radioactive scrap metal stockpiled outdoors at Fernald. The project also is addressing approximately 1,300 tons of scrap copper.

All site activities associated with the 1,800-ton scrap metal pile (Phase I) were completed in August 1993. Most of this scrap metal is being melted and formed into shield blocks for use in DOE high-energy physics programs.

Approximately 400 tons of additional scrap metal, including heavy equipment from the field north of the Boiler Plant, was shipped to SEG to reach the 2,200 tons specified in the contract. Approximately 2,100 tons will be beneficially reused; 100 tons of scrap aluminum and stainless steel will be recycled.



This photo shows the clean pad after the scrap metal pile was removed.

Phase IIA, containerization of scrap copper including scrap copper ingots, is also complete. The scrap copper will be shipped to a selected vendor for recycling or other beneficial reuse in early 1994 (Phase IIB). The Removal Action will be completed at that time.

Non-recoverable scrap metal at Fernald is presently being packaged into appropriate containers and shipped off site for disposal under Removal Action No. 9 (Removal of Waste Inventories).

Fernald RCRA program gets thumbs up

The Ohio Environmental Protection Agency (OEPA) conducted a RCRA field inspection and an audit of associated records at Fernald in June 1993, and commented favorably on Fernald's overall hazardous waste management program and the progress that has been made since the last inspection.

A formal OEPA inspection report was issued to DOE and FERMCO. The report said that Fernald appears to be in "substantial compliance" with applicable regulations regarding the storage of hazardous wastes.

Approximately 12,000 containers of RCRA-regulated material are stored at Fernald. Due to radionuclide contamination, this material is considered mixed waste. Some examples are contaminated oils, sludges, lead, mercury, assorted combustibles, rags, floor sweepings, etc.

Disposal options available for RCRA mixed waste are limited at the present time. Until a decision is made regarding the permanent disposition of Fernald's RCRA waste, it will remain stored temporarily on site in specially-designed warehouses equipped with state-of-the-art environmental protection features.

Most of the Hazardous Waste Management Units on site were inspected and no negative findings were reported. Visual inspections were conducted inside all RCRA container storage facilities and no deficiencies were reported.

The OEPA commented favorably on labeling, stacking, aisle spacing, storage, and the overall appearance of Fernald's improved drum management program.

Operating records and documents associated with the RCRA program also were audited and found them to be complete and accurate.

MAWS restarted one month after burn incident

Activities in support of the Minimum Additive Waste Stabilization (MAWS) program were restarted September 30, 1993, a month after MAWS equipment was shut down as a result of an incident in which a subcontractor employee received burns from a flash fire.

The incident occurred August 30, 1993, while glass gems were being made in Plant 9 during the equipment-test phase of the program. The operator erroneously sprayed an aerosol graphite compound onto a steel plate used to catch molten glass to form gems. The operator thought applying graphite would improve the operation. However, the aerosol propellant was drawn into the melter unit and caused ignition and a flash fire. The operator was treated at a local hospital and released.

As a result, FERMCO shut down MAWS equipment to reassess the program's operating and safety protocols, and implement appropriate corrective actions.

In October 1993, MAWS equipment will be tested at the desired capacity to prove the MAWS systems fully operational. Glass gems have been produced successfully at Fernald from a batch of simulated (non-contaminated) waste.

The MAWS program combines vitrification (transforming waste into glass), water treatment and soil decontamination processes. MAWS equipment at Fernald includes a soil decontamination unit, a melter with an off-gas system, and a water treatment system.

The MAWS program is designed to blend waste materials with contaminated soils and, through the use of electricity, melt them into a stable glass form which is safe for permanent disposal. This process yields three effluent streams: 1) clean water; 2) clean soil, and 3) glass.

The soil decontamination process separates contaminated soils into clean and contaminated portions. The contaminated portion is blended with other wastes (such as Fernald pit wastes) and melted into a stable glass form. The clean portions can be used as excavation backfill as needed at Fernald.

Uranium emissions continue to decrease

Airborne uranium emissions from Fernald in 1992 declined to 0.23 kilograms (0.51 pounds), according to the annual Fernald Site Environmental Report issued in August 1993.

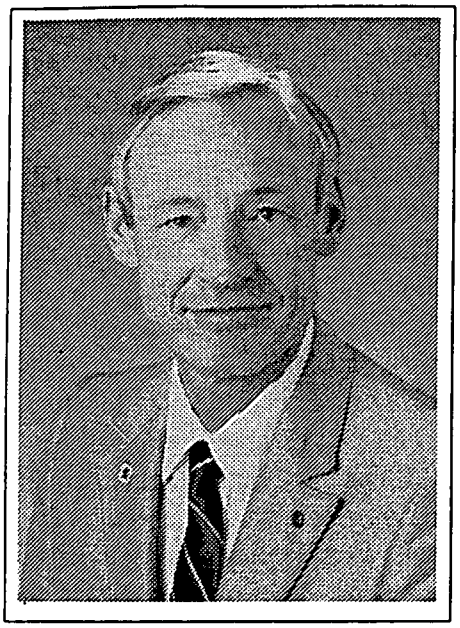
The report presents sampling data for air, water, soil, sediment, vegetation, meat, fish and other media which are collected throughout the year as part of the Fernald environmental monitoring program. The report also calculates the radiation dose to the public resulting from Fernald operations.

In 1992, the dose to the maximally exposed individual was calculated at 1.0 millirem, as compared to the 9.4 millirem in 1991. The limit set by the International Commission on Radiological Protection is 100 millirem.

The Department of Energy seeks to limit radon concentrations at its facilities to below 3.0 picocuries per liter (pCi/L). At the Fernald fence line, measurements in 1992 were approximately 0.57 pCi/L and the dose to public from radon was 51 millirem. These measurements are significantly lower than 1991 (0.90 pCi/L at fence line and 93 millirem dose) measurements. This reduction is due to the placement in late 1991 of a layer of bentonite clay over radon-producing waste stored in two concrete K-65 silos at Fernald. Uranium emissions from Fernald continued to decrease as production at the facility has ended and cleanup and environmental restoration has begun. The 0.23 kilograms released to the air from Fernald in 1992 compared to 0.29 kilograms (0.6 pounds) released in 1991. All emissions were well within applicable Department of Energy limits.

Environmental reports are published annually and copies may be obtained at the Public Environmental Information Center, 10485 Hamilton-Cleves Road, or by contacting the DOE Fernald Field Office at (513) 648-3131.

DOE gets permanent manager at Fernald



J. Phillip Hamric, former deputy manager of the U. S. Department of Energy's (DOE) Richland Field Office, was appointed manager of the DOE Fernald Field Office effective September 6, 1993.

"We are pleased to announce the appointment of Phil Hamric to the Fernald manager's position," said Thomas P. Grumbly, director of the DOE Office of Environmental Restoration and Waste Management. "We are confident that his experience in managing other DOE operations will serve him well as he directs the cleanup effort at Fernald."

In his most recent assignment, Hamric assisted the Richland Field Office manager and had a special interest in conduct of operations at the DOE Hanford Site. Prior to his appointment at Hanford, Hamric completed two special DOE assignments. He was acting manager of the Idaho Operations Office and director of the Special Isotope Separation Project Management Office for the Idaho Operations Office. In April 1984 he was named assistant manager for Nuclear Operations.

Hamric began his government career in 1971 with the Atomic Energy Commission and transferred to the Idaho Operations Office in 1972 as deputy director of the Operational Safety Division. He began his nuclear career at Hanford in 1963, working in reactor physics for the General Electric Corp.

Hamric holds a Bachelor of Science degree in physics from the Virginia Military Institute and has completed graduate work at the University of Washington. He also served two years as an officer in the U. S. Army. He was presented the DOE's Meritorious Service Award in 1988 and 1990.

Wise awarded construction contract

A contract has been awarded to Wise Construction Company of Dayton, Ohio, to provide construction support for the cleanup of Fernald.

Most large construction projects at Fernald are subcontracted to various companies under an existing Project Labor Agreement (PLA) between FERMCO and the Greater Cincinnati Building and Construction Trades Council. Wise will provide day-to-day remediation construction support for smaller or more urgent remediation projects which fall outside the normal and routine maintenance activities at Fernald. Under its contract, Wise will become signatory to the PLA.

The Wise contract includes an initial term of two months (August-September 1993) with options for three one-year extensions. If all of the options are exercised, the contract value of approximately $21 million is the largest construction subcontract FERMCO has awarded since becoming the Environmental Restoration Management Contractor at Fernald in December 1992.

Wise is a member of and certified by the Cincinnati Minority Supplier Development Council and is an active member of the Dayton chapter of the National Association of Minority Contractors. Wise was awarded the contract under a very competitive procurement action in which several small disadvantaged firms competed.

"We are pleased to announce this contract award, because Wise has already successfully completed a number of construction projects at Fernald, including our new Decontamination and Decommissioning Facility," said Nick Kaufman, FERMCO president. "We are fully committed to supporting the Department of Energy in its efforts to provide opportunities for Small Disadvantaged businesses, and awarding a contract of this size demonstrates that commitment."

Large portion of Fernald's uranium inventory sold

Approximately 20 percent of Fernald's uranium product inventory has been sold to a company in France for commercial nuclear power use. The sale includes uranium currently in storage at Fernald and DOE's Hanford site near Richland, Washington.

The sale includes 611,028 pounds of natural uranium, and 6,804,550 pounds of enriched uranium. Of the uranium sold, approximately 431,734 pounds (71 percent) of the natural uranium, and 3,192,031 pounds (47 percent) of the enriched uranium, is stored at Fernald.

This material was sold under an agreement with the European Atomic Energy Community for the peaceful use of atomic energy, and will not conflict with common defense or security. The French company is responsible for transportation and shipping costs.

The company, which is licensed with the regulatory agencies for nuclear power plant operations, will provide shipping containers approved by the U.S. Department of Transportation. The Fernald material is in the form of uranium trioxide (powder), derbies, ingots, cores, and recycled metal.

Shipping audit finds deficiencies

During an audit of Fernald's waste shipping program in August 1993, a DOE-Nevada audit team identified several significant findings that were considered serious enough to result in DOE-Nevada consideration of an immediate suspension of all Fernald waste shipments to the NTS.

The general suspension was not imposed immediately. An agreement to give Fernald 30 days to initiate corrective actions was based on the high degree of confidence DOE-Nevada has in Fernald waste shipping and certification personnel and the support management has demonstrated for these people.

The audit was conducted July 26-August 2. These audits are performed annually to monitor Fernald compliance to the Nevada Test Site's waste acceptance criteria.

Fernald committed to a 30 day corrective action project to address the audit concerns. Employees from several FERMCO divisions pulled together during the month of August to address the audit findings. A Corrective Action Project Team identified root causes and initiated corrective actions. Four subteams addressed the identified areas of concern: training, procedures, open non-conformance reports, and contaminated trash.

On September 2, 1993, the DOE-Nevada lead auditor returned to Fernald to review the corrective action progress report. The lead auditor was impressed with the significant progress completed in the first 30 days. The lead auditor also was satisfied with the progress and agreed that Fernald had demonstrated significant commitment to completing corrective actions. This was the justification for DOE-Nevada's decision to allow Fernald to continue to ship while implementing corrective actions.

The most significant findings discovered during the audit related to the Waste Certification Program and other support organization activities. Findings included uncontrolled, outdated or non-existing procedures; training that was incomplete, not completely documented or not provided; and nonconformances that remained open without corrective actions plans. The 30 day corrective action report addresses each of these findings with root cause and corrective action determinations.

The suspension imposed for the Contaminated Trash Waste Stream remains in effect. The findings in this area were considered programmatic and therefore serious enough to result in an immediate suspension of contaminated trash shipments to the NTS. The Corrective Action Project Team has initiated the corrective actions necessary to resume shipping of the contaminated waste stream to the NTS. The DOE-Nevada audit team will review the root cause and corrective actions for this finding during the close out surveillance. Fernald anticipates a favorable review and recertification of this waste stream in November 1993.

DOE-Nevada audit team

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observations related to the Construction/Removal Action Waste Stream characterization files were significant enough to require a temporary suspension of these waste shipments. This suspension was self imposed by FERMCO. Resumption of Construction/ Removal Action waste has been completed with NTS Waste Acceptance Criteria Checklist for each project file. The checklist is completed by Waste Characterization personnel and provided to appropriate personnel to be included in waste shipment paperwork packages. Waste streams with completed checklists were shipped to the NTS.

Not all of the DOE-Nevada audit team findings were negative. The team did acknowledge many highlights, improvements, and other positive aspects of the waste shipping and certification program.

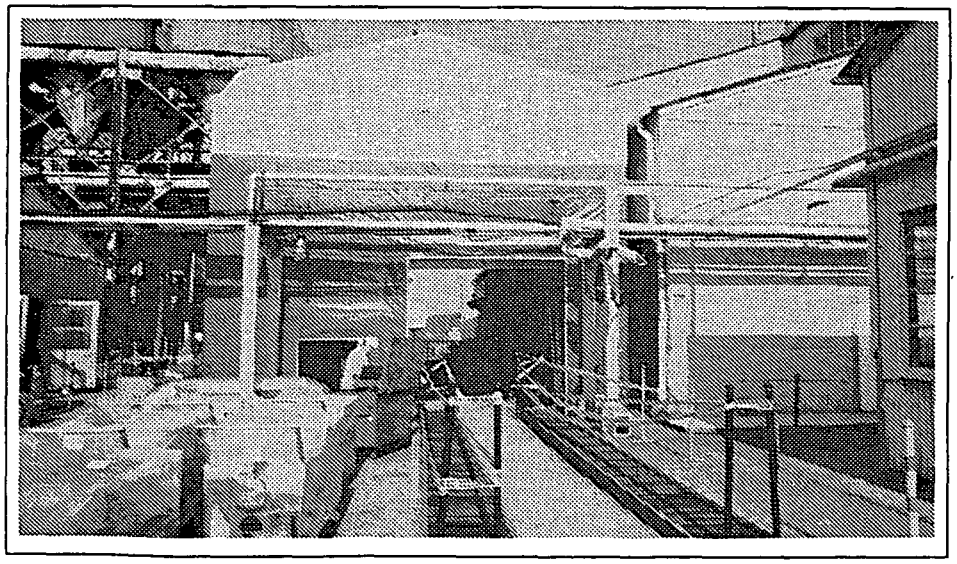
Fernald has approval from the DOE Nevada Field Office to dispose of general waste streams at NTS, including: process area scrap wastes (scrap metal and wood); construction and Removal Action waste (demolition debris); residues and thorium waste (refinery feed and oxides); and baled trash.

The waste shipping goal for Fiscal Year 1993 (October 1, 1992 through September 30, 1993) was to dispose of 117,000 drum equivalents (DEs), including 67,000 DEs of low-level radioactive waste to NTS, and 50,000 DEs of low-level radioactive waste through subcontractors. This goal included currently-generated waste from construction and restoration activities (30,000 DEs), characterized backlog waste (30,000 DEs), scrap metal (40,000 DEs to eliminate the scrap metal and scrap copper bulk storage areas), and process are scrap metal (17,000 DEs).

Actual shipments reflected different volumes from the estimates, including process area scrap metal (38,631 DEs shipped); construction (16,784); residues (13,833); scrap metal to subcontractors (30,232 DEs shipped as the scrap metal pile was over-estimated by 10,230 DEs); contaminated trash (4,006); and consolidated boxes (2,931). Another 15,000 DEs of copper has been boxed and prepared for shipment in early FY 1994. The total volume of waste shipped offsite or otherwise removed from inventory for FY 1993 is 106,417 DEs.

Successfully resolving the DOE-Nevada audit comments and completing the close out surveillance in October will complete the approval process for five additional waste streams for shipment to the NTS. These waste streams include Metal Melt Slag from the scrap metal recycling project, two thorium waste streams, regulated asbestos, and the AMCCOM (4A) depleted uranium metal. These approvals are projected for December 1993.

First major dismantling project under way



Workers are cutting pieces inside this building, and rolling out the Plant 1 Ore Silos in sea/land containers for disposal.

Weatherproof fabric lining has been wrapped around the scaffolding of the two north concrete silos to create a "tent-like" effect around the silos during dismantling. The fabric lining contains three high-efficiency particulate air (HEPA) filters which will minimize any airborne contamination from escaping into the environment.

Installation of the Size Reduction Building (tension support structure) is complete. Five

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HEPA filters have been installed inside the building, a heavy-duty crane is in place and rails have been installed inside the building to transport heavy metal and concrete in and out of the building in sea/land containers.

Dismantling of the two north concrete silos began in September 1993. As workers tear down the concrete silos, they are cutting the pieces of concrete, steel and piping inside the size reduction building to minimize the spread of potential contamination, and packaging it for waste disposal.

All 14 silos and support structures will be dismantled under this CERCLA Removal Action. The project is scheduled for completion in December 1994.

2 million safe work hours achieved

Fernald successfully completed two million safe work hours without lost-time injury during a five-month period from April 1 to August 30, 1993.

Fernald is firmly committed to safety and it is viewed as a specific quality that cannot be delegated. The heart of FERMCO's safety and health program is a commitment by managers, supervisors, and employees, to prevent accidents and the conditions that lead to injuries.

The environmental, safety, and health training program is designed to make certain that every worker receives the instruction necessary to carry out his or her task safely.

While FERMCO has compiled an impressive safety record during its first six months at Fernald, good statistics are not the objective. The only goal in the Fernald safety program is zero accidents and zero injuries.

Bids evaluated for Plant 1 dismantling

FERMCO received bid packages for the Plant 7 dismantling project in August 1993. Bids have been evaluated to determine their responsiveness to subcontract requirements.

FERMCO submitted an award recommendation to DOE in September 1993 for approval. The contract award is currently on hold due to budget constraints.

The first stage of the project will involve the removal of interior duct work, piping and transite material.

Activities under this CERCLA Removal Action include characterization, decontamination, removal, containerization and disposal or reuse of materials in the building; and decontamination and dismantling of the building itself.

UNH project still on hold

The processing of Fernald's uranyl nitrate hexahydrate (UNH) inventory remains on hold until a determination is made whether to process the material on site, or safely transfer the UNH to an off-site facility for processing.

Preparations are being made to restart the Plant 8 wastewater treatment system at Fernald, which is needed for the treatment of water generated from site cleanup projects. The system would be used for processing UNH material, if it is determined feasible to process that material on site. The Plant 8 wastewater treatment system was shut down earlier this year after UNH material was inadvertently transferred into the system during routine wastewater treatment operations. Stringent guidelines and procedures have been developed under Fernald's Conduct of Operations program for future operation of the Plant 8 wastewater treatment system.

A steel barrier has been installed over four UNH tanks adjacent to the Plant 1 Ore Silos as an interim safety measure to guard against the possibility of falling debris during the initial stages of dismantling the ore silos under a separate project.

As of October 6, 1993, no restart date has been scheduled for the Stabilization of Uranyl Nitrate Inventories (CERCLA Removal Action No. 20). The Removal Action is tentatively scheduled for completion in late-1994.

Federal Facilities Compliance Act takes effect

A Conceptual Site Treatment Plan outlining Fernald's plans to provide for treatment of its mixed waste inventory is on schedule for submittal to the U.S. EPA and Ohio EPA in October 1993.

The regulatory agencies, in their review of site treatment plans prepared by Fernald and other DOE sites in Ohio and across the country, will consider the need for regional treatment facilties that promote the most efficient and cost-effective methods for treating waste that contains both hazardous and radiological constituents.

The Federal Facility Compliance Act (FFCAct) became effective in 1992 to bring federal facilities into compliance with the Resource Conservation and Recovery Act (RCRA), a federal law designed to ensure the safe storage, treatment, and disposal of hazardous and mixed waste.

Recognizing the lack of capacity to treat mixed wastes, the FFCAct requires DOE to prepare site-specific treatment plans to develop treatment capacity for mixed waste.

The ruling mandates that all site-specific treatment plans must be approved by appropriate regulatory agencies, which in turn will issue compliance orders. Public input and acceptance is crucial to Fernald earning Ohio EPA's compliance order.

A communications plan for the Fernald Site Treatment Plan is to be incorporated into the Fernald Public Involvement Program, so the public can participate in the development of the site treatment plan.

Fernald's Conceptual Site Treatment Plan will be a preliminary version of later plans to be reviewed by the state of Ohio and the EPA. Each progressive stage of the treatment plan will contain further detail of the plans for treatment, with increased categorization of mixed waste inventories. The draft and final plan will contain input from the Ohio EPA and other stakeholders, and will outline the preferred alternatives for treatment. DOE-Fernald expects to have its final plans and orders in place by October 1995.

Fernald also hopes to use its final Site Treatment Plan as a vehicle for providing information about technology needs and options for Fernald and other DOE cleanup sites. The Fernald plan also will be used in conjunction with plans from the other DOE sites in Ohio as a basis for nationwide discussions on treatment strategies and options for mixed waste.

Contaminated groundwater being extracted

Fernald began removing uranium-contaminated groundwater from an area south of the site on August 27, 1993. Pumping of the South Plume marks the completion of several years of planning and construction.

The extraction wells and associated piping system will protect human health by intercepting the leading edge of the plume, and thereby limit the spread of contamination in the aquifer.

The groundwater force main directs extracted South Plume groundwater to the Fernald site for monitoring and aeration. The aeration facility increases the extracted groundwater's dissolved oxygen concentration to an acceptable water quality level before discharge to the river. The aerated water will flow to the Great Miami River via a new Fernald effluent outfall pipeline, which parallels the existing outfall line.

In 1992, Fernald installed two Interim Advanced Wastewater Treatment systems to treat existing wastewater streams and to offset any additional uranium which will be discharged to the river as a result of the South Plume Removal Action pumping activity.

A related project also is in progress to install a water treatment system with an additional 200 gallons-per-minute treatment capacity dedicated to a portion of the South Plume discharge.

Construction of this South Plume Interim Treatment facility is scheduled so that operation can begin in March 1994. Project design was completed in August 1993.

Two soil types successfully decontaminated

A Soil Decontamination Pilot Plant has been constructed at Fernald to perform further testing after successful bench-scale studies were completed. Two types of soils which were contaminated by different processes are being run through the pilot plant.

Small amounts of soil contaminated by runoff from the Plant 1 Pad area, and small amounts of soil contaminated by air deposition from the old incinerator area, have been run through the system and successfully decontaminated.

The initial operation in the process is to reduce soil clumps to clay, silt, sand, gravel, etc. This is accomplished by high-pressure water or mixers and/or chemicals, followed by removal of contaminants from individual soil particles. Used washing (extracting) solution is then regenerated through precipitation and/or ion exchange processes and recycled back through the soil washing process. The remaining residue is collected, containerized and stored for either disposal or subsequent treatment.

This study is being performed to generate data for the detailed analyses of alternatives as part of the Operable Unit 5 Feasibility Study.

Monitoring well plug reconsidered

A CERCLA Removal Action (Plug Well at KC-2 Warehouse) was initiated to address contaminated sediments from well No. 67, and to plug and abandon the well itself.

Based on an evaluation of available data, it does not appear that the materials in Well No. 67 have impacted the regional aquifer. In addition, the costs to plug and abandon Well No. 67 at this time are excessive in comparison to the apparent risk posed by the well to the aquifer.

Due to the limited funding currently available for remediation activities, these funds would be better allocated on other more urgent projects. A recommendation has been made that Well No. 67 be left open and sampled on a semiannual basis for uranium and Hazardous Substance Listed metals. This sampling would continue until the KC-2 Warehouse is decommissioned. At this time the warehouse does not have a scheduled date for closure. Once the warehouse is decommissioned, the well casing will be removed and the hole will be grouted to the surface. ***DOE is awaiting response to this proposal from the U.S. EPA.***

Water Treatment Facility under construction

Construction of an Advanced Waste Water Treatment (AWWT) facility designed to remove uranium from wastewater is under way at Fernald. Two separate contracts for construction of the building and for the ion exchange system were awarded for this project. Work is proceeding on schedule under both contracts.

The treatment system will consist of two parallel treatment systems. Phase I will treat 700 gallons per minute (gpm) of contaminated stormwater runoff from the Stormwater Retention Basin. When capacity is available, the treatment system will treat uranium-contaminated groundwater being extracted from the South Groundwater Contamination Plume.

Phase II will treat 400 gpm of wastewater from cleanup and other activities at the site. This consists of approximately 200 gpm existing wastewater flows and 200 gpm future remediation flows. The AWWT is designed to reduce uranium in Fernald's existing wastewater discharges to less than the proposed Safe Drinking Water Standard of 20 parts per billion.

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Administrative Record RI/FS additions

The following documents are among those recently added to the Administrative Record. The Fernald site's Administrative Record is located in the Public Environmental Information Center, JAMTEK Building, 10845 Hamilton-Cleves Highway, Harrison, Ohio, 45030. The telephone number is (513) 738-0164.

* Removal Site Evaluation for KC-2 Warehouse/Well 67

* U.S. EPA and Ohio EPA comments on the Plant 7 Removal Action Work Plan

* Revised South Plume Groundwater Recovery System Design, Monitoring, and Evaluation Program Plan

* Ohio EPA approval of the Nitric Acid Tank Car and Area Removal Action Work Plan

* Transcript of proceedings, overheads, and handouts from the June 22, 1993, community meeting

* Draft RI/FS Work Plan Addendum for Operable Unit 5: Surface and Subsurface Soil Sampling Investigation

* Ohio EPA comments on the Operable Unit 4 Remedial Investigation Report

* 1993 annual procedure updates for three Removal Actions: Removal of Waste Inventories; Safe Shutdown, and Asbestos Removals (Asbestos Program)

DOE proposes plan for silos

DOE submitted its Proposed Plan for Remedial Action for Operable Unit 4 to the U.S. EPA in September 1993. In the Proposed Plan, DOE identifies an initial preference for vitrification of the contents removed from Silos 1, 2, and 3 and the decant sump tank sludge, followed by off-site shipment of the vitrified material for disposal at the Nevada Test Site.

Demolition debris from the silos and contaminated soils excavated in the vicinity would be stored at Fernald on an interim basis, in a manner consistent with the approved work plan for Improved Storage of Soil and Debris (Removal Action No. 17).

Viable remedial action alternatives are evaluated in the Operable Unit 4 Feasibility Study (FS) Report, which was submitted to the U.S. EPA ahead of schedule on September 9, 1993. Fernald's Sitewide Environmental Impact Statement (EIS), which addresses requirements of the National Environmental Policy Act (NEPA), also was issued to U.S. EPA as an appendix to the Operable Unit 4 FS Report.

The Sitewide EIS evaluates the leading remedial alternatives for all five Operable Units and the environmental impacts associated with them. The intent was to issue the first FS Report as an integrated document that satisfies both NEPA and CERCLA, to be called a Feasibility Study/Environmental Impact Statement. DOE anticipates comments on the FS report from the U.S. EPA and Ohio EPA in November 1993.

The Remedial Investigation (RI) Report for Operable Unit 4, including all validated analytical data from sampling activities, was conditionally approved by the U.S. EPA and Ohio EPA in September 1993. The RI Report provides details about the nature and extent of contamination in Operable Unit 4 and establishes remedial action objectives. The report also includes a Baseline Risk Assessment for Operable Unit 4. This Baseline Risk Assessment evaluates the pathways of exposure and the extent of exposure for existing conditions prior to any remedial activities in Operable Unit 4. Based on the results of the site investigations and risk calculations, the risks associated with Operable Unit 4 exceed generally-accepted regulatory thresholds, thereby necessitating the implementation of remedial actions.

Monitoring programs integrated

As of September 10, 1993, Fernald is operating under an Alternate RCRA Groundwater Monitoring Program approved by the Ohio EPA. The Alternate Monitoring Program allows Fernald to integrate its RCRA groundwater monitoring requirements with ongoing CERCLA activities.

Fernald has been working toward integration for several years. Until now, integration had not been possible due to schedule differences between CERCLA and RCRA programs. As a result, Fernald performed costly duplicative activities to achieve compliance with both CERCLA and RCRA schedules.

The agreement between DOE and Ohio EPA provides the necessary flexibility to the RCRA reporting requirements to accomplish integration and eliminate duplication of effort. This integration is expected to save taxpayers about $2 million per year.

Fernald Project Cleanup Report is prepared by Fernald Environmental Restoration Management Corporation periodically for the U.S. Department of Energy, to inform the community about cleanup progress at the Fernald Environmental Management Project.

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