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**CONSENT AGREEMENT/FFCA/FFA AND RI/FS MONTHLY PROGRESS
REPORT FOR MARCH 1995**

04/19/95

DOE-0864-95
DOE-FN EPAS
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REPORT



Department of Energy
Fernald Environmental Management Project
 P. O. Box 398705
 Cincinnati, Ohio 45239-8705
 (513) 648-3155

APR 19 1995

DOE-0864-95

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

Mr. Tom Schneider, Project Manager
 Ohio Environmental Protection Agency
 401 East Fifth Street
 Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

**CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY
 AGREEMENT AND REMEDIAL INVESTIGATION/FEASIBILITY STUDY MONTHLY PROGRESS REPORT
 FOR MARCH 1995**

Enclosure 1 is the consolidated CA/FFCA/FFA and RI/FS Monthly Progress Report which describes the activities accomplished March 1 through 31, 1995, and planned actions for the period of April 1995. Also, enclosed are diskettes containing Lotus 1-2-3 (version 2.2) data files of the K-65 hourly data (see Enclosure 2).

If you or your staff should have any questions, please contact me at (513) 648-3107.

Sincerely,

Johnny Rasing

for

Jack R. Craig
 Fernald Remedial Action
 Project Manager

Enclosures: As Stated

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cc w/enc:

K. A. Chaney, EM-423/GTN
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Introduction

The Consent Agreement (CA) As Amended under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sections 120 and 106(a), the Federal Facility Compliance Agreement (FFCA), and the Federal Facility Agreement for Control and Abatement of Radon-222 Emissions (FFA-CARE) between the U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (U.S. EPA) signed September 20, 1991, July 18, 1986, and November 19, 1991, respectively, require that monthly reports be submitted to the U.S. EPA regarding progress made to meet the provisions of those agreements. This report fulfills those requirements by describing actions undertaken at the Fernald Environmental Management Project (FEMP) during the period March 1 through March 31, 1995, and planned actions for the period April 1 through April 30, 1995.

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WORK ASSIGNMENTS AND PROGRESS

Descriptions of work progress are presented in the following sections and/or enclosures to this report:

- CA Section IX - Removal Actions
- CA Section X - Remedial Investigation/Feasibility Study
- Enclosure A - Waste Water Flows and Radionuclide Concentrations under CA Section XXIII.B
- Enclosure B - FFCA: Initial Remedial Measures and Other Open Actions
- Enclosure C - FFA: Control and Abatement of Radon-222 Emissions
- Enclosure D - Effluent Radiation Discharges to the Great Miami River

CA Section IX. Removal Actions

This section provides an update of activities associated with the implementation of Removal Actions (RAs) at the FEMP during March 1995. Information is presented for each of the Removal Actions identified in the Consent Agreement As Amended.

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REMOVAL ACTION SUMMARY

NO.	TITLE	SCOPE	STATUS
Phase I			
1	Contaminated Water Under FEMP Buildings	Pump water from extraction wells underneath Plants 2/3, 6, 8, and 9. Treat extracted water for volatile organic chemicals and uranium removal before discharge.	Plant 6 Operational Plants 2/3, 8, & 9 Temp. Inoperable
2	Waste Pit Area Run-off Control	Collect and treat contaminated storm water run-off from the waste pit area.	Operational: 7/30/92 Operation Ongoing
3	South Groundwater Contamination Plume	Part 1 - Install new alternate water supply and transfer to industrial user.	Operational: 12/7/92 Operation Ongoing
		Part 2 - Pump and discharge groundwater from South Plume.	Operational: 8/27/93 Operation RW 5 offline indefinitely
		Part 3 - Install and operate Interim Advanced Waste Water Treatment system to reduce uranium contaminant loading to the Great Miami River.	Operational: 7/30/92 Operation Ongoing
		Part 4 - Conduct groundwater monitoring and institutional controls by sampling private and existing RI/FS wells in the South Plume area and installing homeowner treatment systems.	Ongoing
		Part 5 - Conduct groundwater modeling and geochemical investigating to define the extent of the groundwater plume contaminated with uranium.	Completed: 2/25/94
		OU 2 Dispute Resolution Supplemental Project - Provide for partial treatment of the South Plume discharge to further reduce uranium flow to the Great Miami River.	Operational: 3/31/94 Operation Ongoing
4	Silos 1 & 2	Install bentonite cap to reduce and monitor radon emissions. Provide follow-on monitoring.	Cap Completed: 11/28/91 Monitoring: Ongoing

* Shading denotes completed actions

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NO.	TITLE	SCOPE	STATUS
5	Decant Sump Tank	Periodically remove liquid from K-65 decant sump tank.	Ongoing
6	Waste Pit 6 Residues	Eliminate potential airborne contamination by resubmerging exposed pit material.	Completed: 12/19/90
7	Plant 1 Pad Continuing Release	Stage I - Implement run-on/off control measures. Stage II - Install new pad. Stage III - Upgrade existing Plant 1 Storage Pad	Completed: 1/17/92 Completed: 12/4/92 Ongoing
Phase II			
8	Inactive Flyash Pile Control	Install plastic chain-link barrier and post warning signs.	Completed: 12/23/91
9	Removal of Waste Inventories	Disposition of low-level waste off-site.	Ongoing
10	Active Flyash Pile Controls	Phase I - Complete interim surface stabilization. Phase II - Complete active flyash pile controls.	Completed: 6/29/92 Maintenance: Ongoing
11	Pit 5 - Experimental Treatment Facility	Remove contents, structure, and filter material. Backfill and cap with clay cover.	Completed: 3/20/92
12	Safe Shutdown	Remove uranium and other material from former processing equipment and ship material and equipment off-site.	Ongoing
13	Plant 1 Ore Silos	Dismantle fourteen ore silos and their support structures.	Completed: 11/18/94
14	Contaminated Soil Adjacent to Sewage Treatment Plant Incinerator	Isolate or remove and dispose of contaminated soils from the vicinity of the sewage treatment plant.	Final Report Submitted: 11/18/94
15	Scrap Metal Piles	Phase I - Disposition LLW ferrous/non-ferrous scrap metal Phase II - IIA - Containerization of scrap copper IIB - Disposition of scrap copper	Ongoing Completed: 9/29/92 Ongoing
16	Collect Uncontrolled Production Area Run-off - Northeast	Collect storm water run-off from the northeast perimeter of the former production area in the Storm Water Retention Basin.	Completed: 8/20/93

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NO.	TITLE	SCOPE	STATUS
17	Improved Storage of Soil and Debris	Improve storage of existing and future generated soils and debris.	Ongoing
18	Control Exposed Material in Pit 5	Eliminate potential airborne contamination by re-submerging exposed pit material.	Completed: 5/13/93
Phase III			
19	Plant 7 Dismantling	Dismantle and dispose of the Plant 7 structure.	Completed: 11/18/94
20	Stabilization of UNH Inventories	Neutralize, filter and package UNH inventory.	Ongoing
21	Expedited Silo 3	Mitigate the potential release of hazardous waste material by covering and sealing dust collector hopper, removing dust collector, and capping and covering obvious release pathways.	Completed: 2/24/93
22	Waste Pit Area Containment Improvement	Stabilize south berm of Pit 4; regrade drainage ditches along Pits 3, 4, 5, and 6; and resurface road between Pits 3, 4, 5, and 6.	Completed: 7/30/93
23	Inactive Flyash Pile	Conduct field investigation to identify locations requiring material removal.	Completed: 4/30/92
24	Pilot Plant Sump	Remove liquid and sludge from the sump.	Completed: 10/15/93
25	Nitric Acid Tank Car and Surrounding Area	Remove residual contents from tank car and decontaminate and dispose of tank car.	Completed: 10/11/93
26	Asbestos Removals (Asbestos Program)	Mitigate the potential for contaminant and migration of asbestos fibers.	Ongoing
27	Management of Contaminated Structures at the FEMP	Submit an Engineering Evaluation/Cost Analysis for managing contaminated structures. Identify alternatives for managing contaminated structures.	Final EE/CA Approved 6/16/93
28	Contamination at the Fire Training Facility	Remove, decontaminate, dispose, treat or store contaminated structures, equipment, and soil from the former Fire Training Facility.	Ongoing
29	Erosion Control at Inactive Flyash Pile	Mitigate the threat of erosion induced slope failure and discharge of flyash to Paddy's Run.	Final Report Submitted to DOE 2/94 Maintenance: Ongoing
30	Seepage Control at the South Field and Inactive Flyash Pile	Minimize future groundwater contamination by intercepting contaminated seeps that drain from the South Field and Inactive Flyash Pile and infiltrate to the GMA.	Ongoing

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Removal Actions

RA No. 1, Contaminated Water Under FEMP Buildings

Current Month:

The Plant 2 extraction well system is down awaiting replacement of the hold tank level gauges. Maintenance is checking the probes, water meter and pump on the Plant 8 system. The Volatile Organic Compounds (VOC) treatment facility and the Plant 6 perched water system continue to operate.

Planned Activities:

- Repair Plant 2, Plant 6, and Plant 8 systems.

RA No. 3, South Groundwater Contamination Plume

Part 1 - Alternate Water Supply

Current Month:

The U.S. Army Corps of Engineers, through an Interagency Agreement (IA), is proceeding with obtaining the necessary documents to transfer easement rights to Albright and Wilson Americas (A&W).

The Off-site Water Flow Meter project was initiated as part of a settlement agreement between the United States, Albright & Wilson Americas, and the Rowe Brothers. The settlement requires installation of a meter at the Part 1 Well Field, visible from some portion of the easement and accessible to the Rowe Brothers. Installation of the meter, including meter pit and visible instrumentation, was completed on March 23, 1995. Closeout of the construction contract is pending the investigation of standing water in the meter pit. This system is operational as designed.

The requisition for providing bottled water to Delta Steel is in process and will be effective April 1, 1995.

The contractor for Project A of the Public Water Supply (PWS) began work and has installed over 1000 feet of pipe during the month of March.

The analysis of cultural resources and final report for data recovery field work for Project B of the PWS is in progress. It is anticipated that an advertisement for bids for Project B will be published in April by the Hamilton County Department of Public Works (HCDPW).

Planned Activities:

- Continue proceedings to transfer ownership of the pumping and piping equipment as well as the easement rights to Albright and Wilson in accordance with the agreement of 1990.
- Continue to support HCDPW on installation of the entire PWS including service connections.

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RA No. 3, South Groundwater Contamination Plume (continued)

- Provide cultural resource monitoring during construction of Project A.
- Continue work on cultural resources report for Project B along State Route 128.

Part 2 - Pumping and Discharge System

Current Month:

Efforts are underway to compile the Design, Monitoring, and Evaluation Program Plan (DMEPP) for the period beginning March 1994 and ending December 1994. This report summarizes the operation and effectiveness of the five-well extraction system south of the FEMP.

Planned Activities:

- Submit DMEPP to U.S. and Ohio EPAs.

Part 3 - Interim Advanced Waste Water Treatment (IAWWT)

IAWWT Storm Water Retention Basin (SWRB) Unit

Current Month:

Nothing to report.

Planned Activities:

- Continue to operate.

IAWWT Bionitrification Effluent Treatment System (BDN-ETS) Unit

Current Month:

Unit has ceased operation since the Advanced Waste Water Treatment (AWWT) became operational in January.

Planned Activities:

- None.

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Part 4 - Groundwater Monitoring and Institutional Controls

Current Month:

Nothing to report.

Planned Activities:

- Continue to monitor performance of the ion exchange units installed at private residences.

Operable Unit 2 Dispute Resolution Supplemental Project (Uranium Reduction in FEMP Discharge)

Step 1

Install 200 gallons per minute (gpm) system dedicated to the treatment of a portion of the extracted South Plume groundwater—commonly known as South Plume Interim Treatment (SPIT) System.

Current Month:

Nothing to report.

Planned Activities:

- Continue to operate.

Step 2

Utilization of off-peak Advanced Waste Water Treatment (AWWT) capacity.

Current Month:

Nothing to report.

Planned Activities:

- Continue to operate.

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Step 3

Elimination of low uranium concentration streams.

Current Month:

Nothing to report.

Planned Activities:

- Continue to operate.

Step 4

Extend operating life/increase capacity of the IAWWT (SWRB).

Current Month:

Necessary piping modifications have been made in the SWRB Valve House to allow South Plume groundwater to be filtered and treated in the IAWWT trailers. This modification was completed in order to satisfy the commitment in the OU 2 Dispute Resolution.

Planned Activities:

- Change out ion exchange resin within the vessels

RA No. 7, Plant 1 Pad Continuing Release

Current Month:

The engineering evaluation of the repair process of the expansion joint material was completed the week of March 13, 1995.

Planned Activities:

- Obtain cost estimates from material suppliers for repairs of the expansion joint material by the end of April.
- Plug the remaining four monitoring wells located on the pad by July 31, 1995.
- Complete the repair (weather permitting) of the expansion joint material by the end of May.

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KEY MILESTONES	STATUS	DUE DATE
Complete Resurfacing of Phase III pad	Completed	September 30, 1994
Issue Final Report to EPA	Completed	February 21, 1995

RA No. 9, Removal of Waste Inventories

Current Month:

The volume of waste shipped off-site in March 1995 was 8,930 drum equivalents (DEs) for a total of 40,366 DEs shipped to the NTS in FY-95. This volume includes approximately 9,000 drums of residues removed from inventory and shipped to-date.

The FY 1995 volume shipped to the NTS is 4,165 DEs ahead of schedule, primarily due to release of ISO and large metal box shipments of process area scrap materials, and an additional level of effort of residue material packaging operations. Lastly, an additional 5,100 DEs of construction waste is being held pending development of a compaction plan. The compaction plan will reduce the volume of material shipped for disposal by 3,570 DEs.

Waste Programs Management (WPM) dispositioned approximately 8,142 DEs of legacy waste materials to achieve an "excellence" rating for the performance measure established for Performance Objective Criterion (POC) 95-1.1. This task, conducted in conjunction with initiation of Plant 7 recyclable materials shipment activities, was realized through dedication, commitment, and professionalism of WPM and matrixed support personnel.

The volume of low level waste materials shipped in FY-95 per waste stream is as follows:

<u>Waste Stream</u>	<u>DEs Shipped (3/31/95)</u>
Process Area Scrap	10,389.56
Thorium	775.72
Residues to NTS	8,291.36
Contaminated Trash	1,458.40
SEG Residues	2,095.40
Construction (Legacy)	4,112.26
Construction (Newly Generated)	13,242.78

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RA No. 9, Removal of Waste Inventories

Planned Activities:

- During April 1995 ship an additional 3,800 DEs of backlog low level waste to NTS.
- Continue preparation of Plant 4 process area scrap and trash packages and shipment to NTS.
- Continue disposition of Plant 7 structural steel to a recycling facility in Pennsylvania.

RA No. 12, Safe Shutdown

Current Month:

Final housekeeping and NDA (non-destructive assay) scanning verification for removal of holdup removal in the facility has been completed. The facility has been placed into Safe Shutdown configuration and relinquished to Construction on March 31, 1995 for dismantlement.

Implementation planning for Plant 1 is complete. Plans are being reviewed and preparations are being made to commence removal activities on April 1, 1995. Work crews have been trained to initiate relocation of rabbit hutch enriched material.

A radiological control point and dress-out area has been established and safe shutdown work crews have been assigned to the facility.

Of the 1,917 items under consideration approximately 1,225 items have been excessed and 692 have been identified as "In-Use/Future Use" items.

To date, 1,467 maintenance work orders to isolate and disconnect all utilities/energy sources from equipment not in use have been prepared. Of these, 819 have been completed.

Planned Activities:

- Continue to issue task orders to identify and/or remove hold-up materials from process equipment in the Pilot Plant
- Initiate removal of holdup material in Plant 1
- Initiate Implementation Plan writing for the Pilot Plant and Plant 9

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RA No. 13, Plant 1 Ore Silos

Current Month:

Preparation of the Final Report continues. The Final Report is scheduled to be submitted internally on May 30, 1995 for transmittal to U.S. EPA/Ohio EPA by December 19, 1995.

Planned Activities:

- Continue preparation of the Final Report.

KEY MILESTONES	STATUS	DUE DATE
Complete Removal Action	Completed	December 19, 1994

RA No. 15, Scrap Metal Piles

Current Month:

Phase I: None to report.

Phase II: A Statement of Work (SOW) continues to be developed for a treatability test to demonstrate a process for decontamination of copper.

Planned Activities:

- Phase I: Final disposition of the waste streams continues to be determined.
- Phase II: Determine path forward for project since it is not currently baselined.

KEY MILESTONES	STATUS	DUE DATE
Phase I - On-Site Processing Off-Site Processing	Completed Completed	Sept. 30, 1993 March 25, 1994
Phase I - Submit draft Final Report to U.S. EPA	Completed	October 4, 1994
Phase IIB: Submittal of Subcontractor's Removal Action Project Plan	Cannot proceed until treatability/engineering study is completed.	Sept. 30, 1993
Phase IIB: Submittal of Final Report	Cannot proceed until treatability/engineering study is completed.	March 30, 1995

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RA No. 17, Improved Storage of Soil and Debris

Current Month:

March activities included the continued placement of concrete curb and gutter that will serve as the drainage trench to be installed around the perimeter base of the pile North of Third Street. Final grading has begun on the west area of the soil pile where the curb and gutter has recently been placed. The re-installment of the chain-link fencing (removed prior to initial regrading) has also commenced on the west area of the pile.

The removal and containerization of this residue/debris is the only remaining scope (as part of the RA 17 scope) for the Scrap Metal Pad (SMP) area. A shift in program management this month has dedicated one specific labor crew to complete this removal and containerization effort.

Planned Activities:

- Continue placement of concrete curb and gutter (trench drain system) around the perimeter base of Soil and Rubble Pile.
- Continue containerization and removal of the remaining debris/residue at the Scrap Metal Pad as weather permits.
- Final grading will continue to follow behind the curb and gutter placement from West to East.
- Re-installation of the chain-link fencing will continue as the final grading is completed from West to East.

RA No. 19, Plant 7 Dismantling

Current Month:

An audit of the steel recycler's transportation contractor was completed on March 7, 1995. The readiness assessment of the steel recycler's facility was conducted on March 15-17, 1995. Shipments (two loads/day) of the Plant 7 steel to the decontamination facility began on March 27, 1995.

Planned Activities:

- Increase shipments of the Plant 7 steel to the decontamination facility from two loads per day to four loads per day.

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RA No. 20, Stabilization of UNH Inventories

Current Month:

Weekly telephone conferences between Ohio EPA, DOE-HQ, DOE-OH, DOE-FN, FERMCO, and the Defense Nuclear Safety Board (DNFSB) occurred on a regular basis throughout the month of March. These calls keep all parties aware of project events.

The "insitu" Magnesium Oxide (MgO) addition proposal was approved by the DOE-HQ and FERMCO was given verbal approval to proceed on March 10, 1995. All critical documents were prepared and released to the DOE, Ohio EPA, and DNFSB. The Readiness Assessment was completed on the afternoon of Thursday, March 23, 1995. The "insitu" magnesium oxide neutralization process started at 10:45 am Friday, March 24, 1995. By agreement with the Ohio EPA this action constitutes start-up for the UNH project and halts further potential fines and penalties which started when the January 17, 1995 date was missed.

During the latter part of March, preparation was undertaken to transfer UNH from tank D1-1 to D1-2/D1-3. This transfer was deemed necessary because of observed UNH leaking from carbon steel steam coil piping attached to the tank. The leaking raised concern that the stainless steel steam coil within the tank had failed. Since the UNH is corrosive to carbon steel, the tank integrity was in question. The ready to operate letter was sent to the Operational Readiness Assessment (ORA) team leader and the ORA was performed in late March. The transfer of UNH began on Friday, March 31, 1995, and was completed on the following Monday.

During the latter part of March, preparation was made to transfer UNH from the SE CD Blend to NW CD Blend by gravity using existing piping. The transfer was perceived as a solution to keep the SE tank from overflowing. The SE tank is collecting rainwater and near the overflow line. The transfer was made on Monday, March 27, 1995. This action eliminated any further potential for overflow of UNH from the tank.

The leak control program has been very effective and the leaks for this month, even with major changes in temperature, remains at 10 or below (all in secondary containment).

The start-up on July 20, 1995 is on schedule at this time. No significant schedule improvement is expected. The following major scheduled activities were completed during March:

- All 6 pump skids were vendor tested and Construction Acceptance Tested (CAT); and subsequently walked-down and are being punch-listed.
- All major process operating procedures have been redrafted and were sent out for review and comment.
- The weld maps were completed along with the supporting statistics. FERMCO submitted this information to DOE for use in the ongoing preparation of the secondary containment waiver request.

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RA No. 20, Stabilization of UNH Inventories

- The Safety Analysis Report (SAR) and Technical Safety Requirement (TSR) have been sent from DOE-FN to DOE-OH for approval and are expected to receive final approvals in early April.
- Construction punch list items were completed and construction turnover to operations occurred on March 31, 1995.
- Work orders were prepared to configure each of the tanks for bottom discharge. This will allow acceleration of the processing schedule by eliminating the need for recycle piping and more complicated pump priming.
- Drawings were prepared which detailed the temporary spool pieces and hoses which will be assembled to connect each of the tank bottom discharge hookups. This effort will allow maintenance to have a better perspective of the work required to perform the temporary hookups which will occur rapidly during an accelerated processing schedule.

Progress on obtaining a sole source vendor for treating some of the UNH material by neutralization/solidification and treating the site's Thorium Nitrate RCRA waste, continued throughout March. Proceeding with this effort, in parallel with the ongoing neutralization and filtration effort, would help the site in trying to meet the September 25 completion date for UNH processing specified in the Ohio EPA Director's Findings and Orders. UNH samples were shipped to the vendor for testing in their lab in early March. Lab testing on UNH appeared to be successful. The samples were returned to Fernald for TCLP testing. Thorium Nitrate samples exceed the radiological restrictions on the vendor's lab and will be tested in the near future by the vendor after they successfully obtain an increase to their lab limits. A scope of work, workplan, cost estimate, schedule, health and safety plan, quality plan, and change proposal for the stabilization process were nearing completion at the end of March. DOE-FN and FERMCO personnel will meet with the Washington Office of the NRC to officially submit documents, answer questions, etc. This meeting requires a 10 day public awareness announcement period and is scheduled for April 12, 1995.

Planned Activities:

- Continue to keep new scheduled activity commitments.
- Continue pursuing the parallel neutralization/solidification effort.
- Meet with NRC on April 12, 1995.

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RA No. 26, Asbestos Removals (Asbestos Program)

Current Month:

Water Treatment abatement and insulation was completed on March 23, 1995. The pipe insulation removed was radiologically surveyed and free-released for disposal as sanitary waste, at a significant savings over the disposal of contaminated asbestos waste.

Planned Activities:

- Complete disposal of nonradiological contaminated pipe insulation to a sanitary disposal site.
- Provide Asbestos Program update internally by April 5, 1995.
- Estimate outside overhead lines.
- Compilation of work packages continues.

RA No. 28, Contamination at the Fire Training Facility

Current Month:

March activities included moving the open top tank from the Fire Training Facility (FTF) to the decontamination pad for size reduction and containerization on March 22, 1995. Five thousand gallons of contaminated media water was treated in late March.

Planned Activities:

- Continue validation of data from analytical sampling of soils.
- Continue to work free release issues relative to the building debris.
- Continue work on the final report.

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RA No. 30, Seepage Control at the South Field and Inactive Flyash Pile

Previously, a project at the FEMP was designated as Removal Action (RA) No. 30. Although that project was no longer regarded as a removal action, correspondence had surfaced associating the number 30 with the activity. It was thought that confusion could be avoided by using a new number. Removal Action No. 31 was created for the Seepage Control project, but using RA No. 31 has created tracking problems, therefore, RA No. 31 will revert back to Removal Action 30.

Current Month:

A revised work plan was submitted to EPA on January 20, 1995. Conditional approval of the report was received on March 9, 1995. Informal comment responses to EPA and Ohio EPA were prepared and submitted on March 31, 1995. Formal comment responses are due April 8, 1995. The design is approximately 90% complete.

Planned Activities for April:

- Incorporate comments into revised work plan.
- Issue revised work plan to EPA.

KEY MILESTONES	STATUS	DUE DATE
Submit RSE	Completed	October 11, 1994
Submit work plan to DOE	Completed	December 22, 1994
Submit work plan to EPA	Completed	January 20, 1995
Complete Removal Action	Work plan in progress	October 17, 1995

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1.0 Operable Unit 1

Operable Unit 1 (OU 1), as defined in the Amended Consent Agreement, includes Waste Pits 1 - 6, Clearwell, Burn Pit, berms, liners, and soil within the operable unit boundary.

1.1 RI/FS Work Plan

Status:

Complete.

1.2 Remedial Investigation

Status:

Complete.

OPERABLE UNIT 1 REMEDIAL INVESTIGATION REPORT

PRIMARY MILESTONES

SCOPE	SUBMIT TO EPA	RECEIVE FROM EPA	SUBMIT TO EPA FINAL
Details the nature and extent of contaminants within the OU 1 study area. Estimates the volume of contaminated media and materials. Provides a baseline risk assessment and establishes remedial action objectives.	10/4/93 A	12/20/93 A	02/04/94 A

C = Consent Agreement Date

A = Actual

* = Request for extension

1.3 Feasibility Study/Proposed Plan

Status:

Complete.

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1.3 Feasibility Study/Proposed Plan (continued)

OPERABLE UNIT 1 FEASIBILITY STUDY/PROPOSED PLAN

PRIMARY MILESTONES

SCOPE	SUBMIT TO EPA	RECEIVE FROM EPA	SUBMIT TO EPA FINAL
Describes and analyzes potential remedial alternatives. A comparative analysis is performed for all alternatives. The Proposed Plan identifies potential remedial alternatives as listed in the FS and presents the preferred alternative to the U.S. EPA and the public.	03/04/94 A	06/01/94 A	07/01/94 A

C = Consent Agreement Date
A = Actual

1.4 Treatability Studies

Status:

Excavation of the four trenches, Phase II of the Dewatering and Excavation Evaluation Program (DEEP) Wet Excavation, was completed on February 22, 1995. Readiness Assessment activities are currently under way to conduct the three slurry tests in Waste Pits 1, 2, and 3. Once the Readiness Assessment activities have been completed the slurry testing will begin (approximately April 7) and last two weeks.

Issues/Corrective Actions:

None to report.

1.5 Record of Decision

Status:

U.S. EPA approval of the Draft OU 1 Proposed Record of Decision was received December 27, 1994. Responses to comments were drafted and transmitted to U.S. EPA and Ohio EPA on January 13, 1995, for review. Based on feedback obtained from U.S. EPA and Ohio EPA on the draft comment responses, the ROD was finalized and signed by DOE on January 24, 1995. The Final OU 1 ROD and the final comment response package were then transmitted on January 25, 1995, to U.S. EPA and Ohio EPA for review and approval. In an undated letter, faxed from Ohio EPA on February 24, 1995, Ohio EPA provided its concurrence with the selected remedy for Operable Unit 1. U.S. EPA signed the Final OU 1 ROD on March 1, 1995. Copies of the signed Final OU 1 ROD were transmitted to U.S. EPA, Ohio EPA, and others on March 10, 1995.

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Issues/Corrective Actions:

None to report.

1.6 RD/RA Work Plan

The Remedial Design Work Plan identifies and defines the activities required to develop the final construction plans, specifications, and bid documents for the implementation of the selected remedy described in the OU 1 Record of Decision. The Remedial Action Work Plan provides the basis for implementation of the Remedial Design Work Plan and includes, but is not limited to, the following: Safety & Analysis Plan, Quality Assurance Project Plan, Health & Safety Plan, Operations & Maintenance Plan, and a plan for satisfying permitting requirements.

Status:

Within 60 days of finalization of the OU 1 Record of Decision, or by May 1, 1995, a Remedial Design Work Plan must be submitted to U.S. EPA. To ensure that this schedule is maintained, a preliminary draft of the RD Work Plan was distributed for internal FEMP review on February 1, 1995; the specific focus being format, deliverables, and schedule. A revised Draft RD Work Plan reflecting previous comments received and funding projections for OU 1 was distributed on March 16, 1995, for DOE internal review.

Issues/Corrective Actions:

None to report.

1.7 Planned Activities for April 1995

- Begin Phase II of the DEEP project (slurry testing) by April 7, 1995. This testing, scheduled to be completed April 20, 1995, will complete Phase II of the DEEP project.
- Revise RD Work Plan, based on comments received from DOE internal review, and prepare the document for submission to U.S.EPA and Ohio EPA by the May 1, 1995 due date.

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2.0 Operable Unit 2

Operable Unit 2 (OU 2), as defined in the Amended Consent Agreement, includes the Flyash Piles, other South Field disposal areas, Lime Sludge Ponds, Solid Waste Landfill, berms, liners, and soil within the operable unit boundary.

2.1 RI/FS Work Plan Addendum

Status:

Complete.

2.1.1 RI Field Investigation

Status:

Complete.

2.2 Remedial Investigation

Status:

U.S. EPA approval of the Operable Unit 2 Remedial Investigation Report (RI) was received on December 22, 1994. The Final RI report was submitted to the EPA on January 20, 1995.

Issues/Corrective Actions:

None to report.

OPERABLE UNIT 2 REMEDIAL INVESTIGATION REPORT

PRIMARY MILESTONES

SCOPE	SUBMIT TO EPA	RECEIVE FROM EPA	FINAL DUE DATE TO EPA	ACTUAL DATE SUBMITTED
Details the nature and extent of contaminants within the OU 2 study area. Estimates the volume of contaminated media and materials. Provides a baseline risk assessment and establishes remedial action objectives.	2/18/94 C	4/22/94	1/21/95	1/20/95

C = Consent Agreement Date

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2.3 Feasibility Study/Proposed Plan

Status:

The Feasibility Study/Proposed Plan (FS/PP) was conditionally approved by U.S. EPA on October 5, 1994. The FS/PP was revised based on the EPA's comments of the October 5, submittal. Responses, actions, and changed pages were incorporated and resubmitted on November 17, 1994. A formal approval letter from the U.S. EPA was received on January 30, 1995. The Finalized Operable Unit 2 Feasibility Study Report was issued on the due date of March 1, 1995. Internal distribution of the document was completed the week of March 6, 1995.

Issues/Corrective Actions:

None to report.

OPERABLE UNIT 2 FEASIBILITY STUDY/PP REPORT

PRIMARY MILESTONES

SCOPE	SUBMIT DRAFT TO EPA	RECEIVE FROM EPA	SUBMIT FINAL DRAFT TO EPA	ACTUAL FINAL SUBMITTAL TO EPA
Describes and analyzes potential remedial alternatives. A comparative analysis will be performed for all alternatives. The Proposed Plan identifies potential remedial alternatives as listed in the FS and presents the preferred alternative to the U.S. EPA and the public.	4/29/94 C	7/5/94 C	8/24/94 C	3/1/95

C = Consent Agreement Date

2.4 Treatability Studies

Status:

None to report.

Issues/Corrective Actions:

None to report.

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2.5 RD/RA Work Plan

Status:

Work is being rescheduled to begin in 1995 consistent with plans for the sitewide disposal facility.

2.6 Record of Decision

Status:

Comments were received on the February submittal of the Record of Decision from U.S. EPA on March 9, 1995 (and from Ohio EPA on March 27, 1995). Response to comments and the revised ROD document including the Responsiveness Summary are scheduled to be submitted to U.S.EPA on April 8, 1995. Anticipated approval of the ROD document is within 30 days of that submittal with U.S. EPA signature and finalization of the ROD document by May 31, 1995.

2.7 Pre-Design Field Investigation

Status:

Lysimeter sampling continues, previously several had malfunctioned and the defective equipment was replaced. K_d studies, laboratory and geotechnical analyses continues. The development of a draft report has been initiated.

2.8 Planned Activities for April:

- Incorporate revised comments into the ROD.
- Submit the Final Draft ROD to EPA.

SCOPE	DUE DATE OF DRAFT ROD TO EPA	SUBMITTAL OF DRAFT ROD TO EPA	SUBMITTAL OF FINAL DRAFT ROD TO EPA *
Presents the selected remedial action for OU 2 in accordance with CERCLA.	2/04/95	2/03/95	4/08/95

NOTE: The date for submittal of the Final Draft ROD document to EPA was revised from May 3, 1995 to April 8, 1995.

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3.0 Operable Unit 3

Operable Unit 3 (OU 3), as defined in the Amended Consent Agreement, includes the Production Area and production-associated facilities and equipment (including all above-and below-grade improvements) including all structures, equipment, utilities, drums, tanks, solid waste, waste, product, thorium, effluent lines, K-65 transfer lines, waste water treatment facilities, fire training facilities, scrap metal piles, feed stocks, and coal pile.

3.1 RI/FS Work Plan

Status:

Nothing to report.

Issues/Corrective Actions:

None to report.

3.2 Remedial Investigation/Feasibility Study Report

Status:

A streamlined and combined RI/FS Report is under development. Preliminary draft sections of the RI/FS Report have been completed for internal review. Appendices are under development for costs, on-site waste acceptance criteria, source terms, and short-term risks. Volume estimates for materials associated with OU 3 were completed and loaded into the SWIFTS database. One-hundred percent of the chemical field characterization analytical data have been received from the laboratories, validated, and entered into the sitewide environmental database. Radiological data is still being received from off-site laboratories and is undergoing quality control checks and data validation. A portion of the radiological data is undergoing reanalysis.

Issues/Corrective Actions:

None to Report.

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OPERABLE UNIT 3 REMEDIAL INVESTIGATION/FEASIBILITY STUDY

**PRIMARY
MILESTONES**

SCOPE	SUBMIT TO EPA	RECEIVE FROM EPA	SUBMIT TO EPA FINAL
Details the nature and extent of contaminants within the OU 3 study area. Estimates the volume of contaminated media and materials. Characterizes contamination in the former production area. Develops remedial action objectives and describes and analyzes potential remedial alternatives. A comparative analysis will be performed for all alternatives. The Proposed Plan identifies potential remedial alternatives as listed in the FS and presents the preferred alternative to the U.S. EPA and the public.	09/11/95 C	12/05/95 C	01/24/96 C

C = Consent Agreement Date

F = Forecast Date

3.3 Treatability Studies

Status:

The Statement of Work was issued by Florida International University, who will be performing the engineering study, on March 24, 1995 to potential vendors in support of the Analysis of Potential Surface Blasting Decontamination Technologies for Structural Steel Study. Concrete samples were taken during March in support of the K₁ study (solubility of specific materials). Preliminary data on the Transite Characterization Study was received from the University of Cincinnati. Work continued on developing the Statement of Work for the Engineering Study in support of the Scrap Copper Pile Study. Shipments of structural steel to ALARON began as part of the Recycling of Structural Steel from Plant 7 Metals Project.

Issues/Corrective Actions:

None to report.

3.4 Interim Action - Record of Decision

Status:

Complete.

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3.5 Interim Action RD/RA Work Plan

The OU 3 RD/RA Work Plan for Interim Remedial Action and Building 4A Implementation Plan were finalized following Ohio EPA approval on January 20, 1995 and U.S. EPA approval on February 17, 1995, and submitted to the regulatory agencies on March 17, 1995.

The draft OU 3 Remedial Design Prioritization and Sequencing Report (PSR), including the Material Balance Model (MBM) as Appendix A to the PSR, was revised following internal review and was submitted to U.S. EPA and Ohio EPA on March 17, 1995. U.S. EPA/Ohio EPA comments are due by May 16, 1995. The PSR has been prepared in a manner that meets the intent of the Amended Consent Agreement requirement for "a schedule for implementation of the RD/RA tasks and submittal of RD/RA reports." The MBM was specified in the OU 3 RD/RA Work Plan as a deliverable and was included as Appendix A to the PSR due to it being an integral part of the determination of a remediation schedule.

Status:

Issues/Corrective Actions:

None to report.

3.6 Planned Activities for April 1995

- Issue contracts to vendors as part of the Analysis of Potential Surface Blasting Decontamination Technologies for Structural Steel Study.
- Prepare the Statement of Work for contract modification for the Transite Characterization Study. The current contract will be modified to allow the University of Cincinnati to determine the correlation between processes and the surface/volume contamination.
- NFS to start test work on the Thorium Nitrate Study.
- Complete final sampling on transite for the EET Decontamination of Transite Study.
- Continue to develop Statement of Work for the Engineering Study in support of the Scrap Copper Pile Study.
- Install process equipment at ALARON. This equipment will allow a continuous grit blast process for removing contaminants from structural steel.
- Continue writing final treatability reports for the following Treatability Studies: Chemical Leaching of Concrete and the Kelly Decontamination of Concrete.

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3.6 Planned Activities for April 1995 (continued)

- Continue sampling in support of the FEMP reevaluation of making RCRA determinations on light gauge metal with lead based paint.
- Complete a draft of RI/FS Report for peer review.
- Participate in a meeting with the U.S. EPA and Ohio EPA on April 5 to discuss OU 3 data issues, data presentation, source term methodology, material categories/volumes, and alternative costs.
- Revise the RI/FS Report based on peer review comments and develop a complete first draft of the document for submittal to DOE-FN, DOE-OFO, and DOE-HQ in early May.
- Continue the K_1 Leaching Study to determine leachate characteristics of Total Uranium and Technicium-99 from concrete and paint matrices.

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4.0 Operable Unit 4

Operable Unit 4 (OU 4), as defined in the Amended Consent Agreement, consists of Silos 1, 2, 3, and 4, the silo berms, the Decant Sump Tank System, and soil within the operable unit boundary.

4.1 RI/FS Work Plan

Status:

Complete.

4.2 Remedial Investigation

Status:

Complete.

4.3 Feasibility Study/Proposed Plan

Status:

Complete.

OPERABLE UNIT 4 FEASIBILITY STUDY/PP REPORT

PRIMARY MILESTONES

SCOPE	SUBMIT TO EPA	RECEIVE FROM EPA	SUBMIT TO EPA FINAL
Describes and analyzes potential remedial alternatives. A comparative analysis is performed for all alternatives. The Proposed Plan identifies potential remedial alternatives as listed in the FS and presents the preferred alternative to the U.S. EPA and the public.	09/10/93 C 09/09/93 A	11/10/93 C 11/12/93 A	12/28/93 C 12/21/93 A

C = Consent Agreement Date
A = Actual Date

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4.4 Treatability Studies

4.4.1 Bench Scale Treatability Studies

Status:

Complete.

4.4.2 Pilot Plant Treatability Studies

Status:

The Test Plan will be submitted to the U.S. EPA as an attachment to the Phase II Work Plan in April 1995.

Issues/Corrective Actions:

None to report.

4.5 Record of Decision

Status:

Complete.

4.6 RD Work Plan

Status:

The work plan for the OU 4 Remedial Design was submitted to the U.S. EPA and Ohio EPA on January 26, 1995. The document was conditionally approved by Ohio EPA on February 27, 1995. U. S. EPA comments and conditional approval were received on March 27, 1995.

4.7 Planned Activities for April 1995

- Continue construction of the Phase I Pilot Plant facility.
- Submit Phase II work plan to the U. S. EPA for approval.

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5.0 Operable Unit 5

Operable Unit 5 (OU 5) as defined in the Amended Consent Agreement, includes: groundwater, surface water, and soil not included in the definitions of Operable Units 1 through 4, sediment, flora and fauna.

5.1 Remedial Investigation

Status:

Volume 1 of the RI Report was revised to remove redlining, comment numbers in the margins, and line numbering and submitted to the two Administrative Record sites (EPA Region 5 and DOE-FN's Public Environmental Information Center) and Ohio EPA on March 17, 1995. Covers, spines and title pages marked "FINAL" and a revised bibliography were sent to all holders of the RI Report to indicate that the document had received final approval from the agencies.

Issues/Corrective Actions:

None to report.

OPERABLE UNIT 5 REMEDIAL INVESTIGATION REPORT

PRIMARY MILESTONES

SCOPE	SUBMIT TO EPA	RECEIVE FROM EPA	SUBMIT TO EPA FINAL
Details the nature and extent of contaminants within the OU 5 study area. Estimates the volume of contaminated media and materials. Provides a baseline risk assessment and establishes remedial action objectives.	06/24/94 C	09/12/94 C	11/01/94 C 11/01/94 A

C = Consent Agreement Date
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5.2 Feasibility Study/Proposed Plan (FS/PP)

Status:

Notified U.S. EPA on March 3 that the 20-day extension would be needed in order to respond to the agencies' comments (547) on the draft FS/PP. Responses to all agency comments and the revised three-volume FS Report were submitted on March 23, 1995 with redlined text changes and comment numbers placed in the margins. The Proposed Plan accompanied the FS submittal as a separate document.

On March 28, 1995 OU 5 held a public workshop on the FS/PP. Approximately 35 members of the public attended to hear a presentation on the facts and figures leading to the selection of OU 5's preferred alternative. Plans are being made for an additional workshop to assist the public in making informed comments on the preferred alternative.

The K₁ Sampling Report was completed at the end of the month and is undergoing internal review.

Issues/Corrective Actions:

Approval, within the time indicated in the Amended Consent Agreement, of the OU 5 Proposed Plan is needed in order for the public comment period to be initiated to meet the draft Record of Decision submittal date of July 3, 1995.

OPERABLE UNIT 5 FEASIBILITY STUDY/PROPOSED PLAN

PRIMARY MILESTONES

SCOPE	SUBMIT TO EPA	RECEIVE FROM EPA	SUBMIT TO EPA FINAL
Describes and analyzes potential remedial alternatives. A comparative analysis will be performed for all alternatives. The Proposed Plan identifies potential remedial alternatives as listed in the FS and presents the preferred alternative to the U.S. EPA and the public.	11/15/94 C 11/15/94 A	01/16/95 C	02/14/95 C

C = Consent Agreement Date

A = Actual Date

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5.3 RCRA Monitoring

Status:

The 1994 RCRA Annual Report was submitted to the Ohio EPA on February 23, 1995.

Ohio EPA gave conditional approval of the "Summary of Monitoring Well Integrity Investigation (Grout Contamination)" on March 9, 1995. Responses to Ohio EPA comments will be completed by the end of May 1995.

Issues/Corrective Actions:

None to report.

5.4 Treatability Studies

Complete.

5.5 Record of Decision (ROD)

Status:

Preparation of the draft Record of Decision began in late March and is presently in internal review.

Issues/Corrective Actions:

None

None to report.

5.6 Planned Activities for April 1995

- Prepare for public comment period on the OU 5 Proposed Plan.
- Continue preparation of the draft Record of Decision.
- Complete K₁ Sampling Report.
- Prepare to receive either EPA approval or final comments on the draft final FS Report.

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6.0 Community Relations

Status:

Mr. Michael Jacobs from Falls Church, Virginia, has joined the Fernald Area Field Office as public affairs specialist. Michael will assist Gary Stegner in public affairs/community relations activities. Formerly with the Indian Health Service, an agency within the Department of Health and Human Services, Michael was responsible for responding to national media requests, coordinating the agency's Freedom of Information Act Program, and writing speeches and other executive communications. Michael received his Bachelor of Science in Communications from University of Tennessee.

On March 1, 1995 the monthly meeting for the Fernald Envoy Program was conducted. About 45 envoys attended and were updated on:

- RD/RA Public Involvement: The DOE Public Information Director gave a presentation on continuing public involvement during the Remedial Design/Remedial Action phase of cleanup at Fernald. However, as the budget and the size of the workforce decrease, the Envoy Program is going to become an even more important resource in communicating with the public.
- The Evaluation Survey of the Envoy Program conducted by the University of Cincinnati is completed and the results are very positive. The groups and organizations contacted for evaluation of their respective envoy have a more positive outlook on Fernald and are pleased to have an envoy assigned to them. It is obvious that Envoys are disseminating information, but it is also important to get the feedback to the decision-makers at Fernald.

On March 1, U.S. EPA signed the *Final Record of Decision (ROD) for Remedial Actions at Operable Unit 1 (OU 1)*. The selected remedy for OU 1, as identified in the Final ROD, consists of the removal, treatment, and off-site disposal at a permitted commercial disposal facility. This OU 1 document is available to the public in the Public Environmental Information Center (PEIC), JAMTEK Building, 10845 Hamilton-Cleves Highway, Harrison, Ohio 45030.

On March 11, the Fernald Citizens Task Force held their monthly meeting at the Joint Information Center in Fairfield, Ohio. Approximately 25 spectators were in attendance representing FRESH, ODH, ATSDR, Ross Township, local residents, FERMCO, DOE, U.S. EPA and Ohio EPA, and other interested parties. Topics discussed included:

- The considerations and conditions drafted to be submitted with the "Recommendation for an On-Site Disposal Facility at Fernald" that was recommended and voted on at the February meeting.

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6.0 Community Relations (continued)

- The DOE site manager presented Fernald's budget for FY96 and FY97. A similar presentation will be given to the public at a community meeting on March 14, 1995.
- Scenarios of cleanup projects at the site were discussed and some important projects considered top cleanup priorities were the K-65 silos, safe shutdown, and following the requirements of the Amended Consent Agreement.

Due to a lack of time, the discussion on cleanup priorities will be continued at a special called meeting on March 28, 1995.

Approximately 100 people attended the DOE community meeting on March 14 at the Plantation in Harrison. The meeting focused on Fernald's budget/ funding scenarios and cleanup priorities. DOE Ohio Field office and DOE Fernald Area Office representatives discussed the funding process and the targeted budgets for fiscal years 1996 and 1997. U.S. and Ohio EPA representatives commented on the reduced budgets for Fernald and stressed the need to meet all Amended Consent Agreement milestones. FRESH President Lisa Crawford also provided comments. Small group sessions were held to encourage discussion on Fernald's budget scenarios and site cleanup priorities. The top priorities expressed during the meeting included: K-65 Silos, waste management (legacy, UNH, nuclear), and Amended Consent Agreement milestones. John Applegate also discussed the Fernald Citizens Task Force's recent recommendation for an on-site waste disposal facility.

The Ross Township Trustees held a special meeting on March 21, for Ross Township residents to learn more about the proposed on-site disposal facility for Fernald. More than 100 people attended the meeting at Ross High School. DOE Fernald Area Office representatives discussed the technical and scientific basis for an on-site disposal facility and explained the facility's construction plans and protective measures. Fernald Citizens Task Force Chair, John Applegate, discussed the task force's mission and its decision to recommend on-site disposal. Tom Schneider, Ohio EPA, and Gene Jablonowski, U.S. EPA, also answered questions about the on-site disposal facility.

The regular monthly meeting of the Fernald Residents for Environmental Safety and Health (FRESH) was held on March 23, 1995 with about 35 in attendance. At the meeting, the DOE-FN Public Information Director's presentation included the following topics:

- Removal Action #12, Safe Shutdown, is being given top priority. DOE placed Plant 4 in safe shutdown configuration on March 31, 1995.
- Summaries of the March 14 Community Meeting and the March 21 Ross Township meeting.

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6.0 Community Relations (continued)

- Notification of submittal of the *Proposed Site Treatment Plan*.
- A new Fernald Cleanup Report videotape entitled "Shaping Tomorrow Together" focuses on Fernald public involvement and is now available at the PEIC. Several FRESH members and community leaders are featured in the video.

On March 28, starting at 5:00 p.m., the Fernald Citizens Task Force met at the Ross Firehouse to continue the discussion on cleanup priorities at Fernald that was carried over from their March 11 meeting. About 20 spectators attended including local residents, the Ross Township trustees, and FERMCO/DOE employees. The task force decided to draft a recommendation to be voted on at the April meeting that will be sent to DOE-HQ listing these items of concern: (1) special nuclear materials (2) safe shutdown (3) legacy waste (4) simplify overlapping regulations, and (5) the adequacy of staffing levels.

On March 28, approximately 60 people attended a DOE public informational meeting to discuss the *Operable Unit 5 Feasibility Study and Proposed Plan*. Presentations were given on the RI/FS process and on the FS and how the cleanup objectives were arrived at. The driving force behind cleanup objectives is the protection of the aquifer. Cleanup alternatives for both groundwater and soils were reviewed and the preferred alternative was defined -- "Full excavation of contaminated soil, with placement in an on-property engineered disposal facility; extraction and treatment of contaminated groundwater within the Great Miami Aquifer." The public comment period on the *OU 5 Proposed Plan* is expected to begin in late April.

On March 31, DOE submitted the *Proposed Site Treatment Plan* to Ohio EPA. Under the Federal Facilities Compliance Act, the State is required to seek public input on the plan. Ohio EPA is taking the lead for public involvement activities on the plan. DOE will assist Ohio EPA with any public meetings or workshops and will meet its own obligations under federal and DOE policies to distribute the plan, provide local announcements, and establish a process for addressing stakeholder comments. DOE Headquarters has prepared a *Federal Register* notice for all DOE sites developing plans. A 90-day public comment period will be held on the *Proposed Site Treatment Plan* from April 6 - July 6. Comments should be submitted to Ohio EPA.

Issues/Corrective Action:

None.

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

Remedial Investigations/Feasibility Studies

6.1 Planned Activities for April 1995

- The public comment period on the *Proposed Site Treatment Plan* will begin on April 6 and close on July 6. All comments should be submitted to the Ohio EPA.
- The regular monthly meeting of the Fernald Citizens Task Force will be held April 8 at the Joint Information Center located at 6025 Dixie Hwy. in Fairfield, Ohio. The meeting runs from 8:30 a.m. to 12:30 and is open to the public.
- Fernald will host DOE's seventh annual National Technology Information Exchange (TIE) Workshop, April 18 through April 20, beginning at 7:30 a.m., at the Cincinnati Marriott, 11320 Chester Road, Springdale. Several key stakeholders, including FRESH members, have been invited to attend. The Fernald Environmental Management Project is hosting the event and professionals within DOE's nuclear weapons complex will share information about environmental restoration and waste management problems and solutions. Mr. James Owendoff, Deputy Assistant Secretary for Environmental Restoration, will be the keynote speaker. Members of Fernald's technical staff will chair various sessions.
- The regular monthly meeting of FRESH will be held on April 27, at the Venice Presbyterian Church in Ross, Ohio, beginning at 7:30 p.m. Representatives from the Agency for Toxic Substances and Disease Registry (ATSDR) have been invited to attend and discuss their studies on milk and the K-65 Silos emissions.
- The 30-day public comment period on the *Operable Unit 5 Proposed Plan* is scheduled to begin in late April or early May.

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

PERIOD ENDING MARCH 31, 1995

ENCLOSURE A

**WASTE WATER FLOWS AND RADIONUCLIDE
CONCENTRATIONS UNDER CA SECTION XXIII.B**

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

Introduction

The accompanying Effluent Radiation Reports provide, in accordance with the requirements of Section XXIII.B of the Consent Agreement As Amended under CERCLA Sections 120 and 106 (a), data on the daily waste water flows, radionuclide concentrations, and loadings released to the Great Miami River and an estimate of runoff and radionuclide concentrations to Paddy's Run during March 1995.

Summary - March 1995

The total quantity of uranium discharged from the FEMP to the Great Miami River via Manhole 175 (Outfall 11o00004001) was 1.06 kilograms. The average uranium concentration for the previous 12 months was 0.33 mg/L. This is 37.1% of the Derived Concentration Guide (DOE Order 5400.5) for ingested water.

The total quantity of uranium discharged from the FEMP to the Great Miami River via South Plume/Stormwater Retention Basin (Outfall SP3) was 8.18 kilograms. The average uranium concentration for the previous 12 months was 0.056 mg/L. This is 6.3% of the Derived Concentration Guide (DOE Order 5400.5) for ingested water.

There was no discharge from the Storm Water Retention Basin Spillway (Outfall 11o00004002) to Paddy's Run via the Storm Sewer Outfall Ditch in March 1995. Based on 2.48 inches of rainfall in March 1995, the total quantity of uranium discharged to Paddy's Run from uncontrolled areas of the FEMP is estimated to be 7.05 kilograms.

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 11O00004001
001 Total Discharge
Manhole 175 (Effluent to Great Miami River)

DATE: MARCH 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.112	23	68	0.04	0.02	14
2	0.102	27	68	0.04	0.02	14
3	0.090	23	63	0.04	0.01	13
4	0.055	27	63	0.05	0.01	16
5	0.061	23	63	0.03	0.01	11
6	0.132	72	90	0.09	0.04	30
7	0.167	63	63	0.06	0.04	21
8	0.175	81	90	0.11	0.07	37
9	0.125	86	86	0.14	0.07	47
10	0.110	**	68	0.12	0.05	41
11	0.073	**	**	0.11	0.03	37
12	0.075	**	**	0.17	0.05	57
13	0.125	**	**	0.25	0.12	84
14	0.129	**	**	0.13	0.06	44
15	0.150	**	**	0.09	0.05	32
16	0.134	**	**	0.07	0.04	25
17	0.152	**	**	0.06	0.03	20
18	0.105	**	**	0.06	0.02	19
19	0.081	**	**	0.09	0.03	29
20	0.129	**	**	0.13	0.06	44
21	0.165	**	**	0.06	0.04	20
22	0.121	**	**	0.05	0.02	16
23	0.147	**	**	0.03	0.02	11
24	0.100	**	**	0.03	0.01	9
25	0.088	**	**	0.04	0.01	13
26	0.069	**	**	0.07	0.02	24
27	0.112	**	**	0.11	0.05	37
28	0.111	**	**	0.06	0.03	22
29	0.110	**	**	0.05	0.02	16
30	0.106	**	**	0.03	0.01	9
31	0.097	**	**	0.03	0.01	10
Total	3.508				1.06	

** Analytical results not yet available.

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**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 001 Total Discharge

DATE: MARCH 1995

	Flow (MGD)	Total Alpha (pCi/l)(2)	Total Beta (pCi/l)(2)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.113	**	**	0.08	0.03	27
Max.	0.175	**	**	0.25	0.12	84
Min.	0.055	**	**	0.03	0.01	9

The average uranium concentration for the previous twelve months was 0.33 mg/l. This is 37.1 percent of the Derived Concentration Guide(DOE Order 5400.5) for ingested water.

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

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**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 11O00004002
002 Discharge (Overflow) to Storm Sewer Outfall Ditch
Stormwater Retention Basin Spillway (Effluent to Paddy's Run)

DATE: MARCH 1995

There was no discharge to Paddy's Run from the Stormwater Retention Basin.

Based on 2.48 inches of rainfall for the month, the uranium discharge to Paddy's Run from uncontrolled areas of the FEMP is estimated to be 7.05 kgs.

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**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE
AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

PERIOD ENDING MARCH 31, 1995

ENCLOSURE B

**FFCA: INITIAL REMEDIAL MEASURES
AND OTHER OPEN ACTIONS**

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

INTRODUCTION

Enclosure B describes actions undertaken at the FEMP during the period March 1, through March 31, 1995 that are not covered by the reporting requirements of the Consent Agreement As Amended under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sections 120 and 106(a).

WORK ASSIGNMENTS AND PROGRESS

Descriptions of ongoing work progress are presented in the following sections of this report. The status of ongoing work in support of the Federal Facility Compliance Agreement (FFCA) is summarized in Table 1 of Enclosure B. Completed work previously reported upon has been eliminated for the sake of brevity. In this portion of the report and in Table 1, descriptions of actions are presented in a format consistent with that of the FFCA.

**COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND
LIABILITY ACT (CERCLA)**

1. Initial Remedial Measures

Section C

K-65 Silo Project - Status information on the K-65 Silo project normally reported in this section is being provided under Operable Unit 4: Silos 1-4.

2. Remedial Investigation/Feasibility Study (RI/FS)

Status information on the Remedial Investigation/Feasibility Study (RI/FS) normally reported in this section is being provided separately in accordance with the requirements of Section X of the Consent Agreement As Amended under CERCLA Sections 120 and 106(a).

3. Reports and Record Keeping

Section B

The RI/FS Monthly Technical Progress Report for February 1995 was transmitted to the U.S. EPA on March 16, 1995, as an integral part of the Consolidated Consent Agreement/Federal Facility Compliance Agreement/Federal Facility Agreement for Control and Abatement of Radon-222 Emissions (CA/FFCA/FFA-CARE) Monthly Progress Report in accordance with the requirements of Section X of the Consent Agreement As Amended.

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**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

INTRODUCTION

Enclosure B describes actions undertaken at the FEMP during the period February 1, through February 28, 1995 that are not covered by the reporting requirements of the Consent Agreement As Amended under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sections 120 and 106(a).

WORK ASSIGNMENTS AND PROGRESS

Descriptions of ongoing work progress are presented in the following sections of this report. The status of ongoing work in support of the Federal Facility Compliance Agreement (FFCA) is summarized in Table 1 of Enclosure B. Completed work previously reported upon has been eliminated for the sake of brevity. In this portion of the report and in Table 1, descriptions of actions are presented in a format consistent with that of the FFCA.

**COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND
LIABILITY ACT (CERCLA)**

1. Initial Remedial Measures

Section C

K-65 Silo Project - Status information on the K-65 Silo project normally reported in this section is being provided under Operable Unit 4: Silos 1-4.

2. Remedial Investigation/Feasibility Study (RI/FS)

Status information on the Remedial Investigation/Feasibility Study (RI/FS) normally reported in this section is being provided separately in accordance with the requirements of Section X of the Consent Agreement As Amended under CERCLA Sections 120 and 106(a).

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Section B

The RI/FS Monthly Technical Progress Report for February 1995 was transmitted to the U.S. EPA on March 16, 1995, as an integral part of the Consolidated Consent Agreement/Federal Facility Compliance Agreement/Federal Facility Agreement for Control and Abatement of Radon-222 Emissions (CA/FFCA/FFA-CARE) Monthly Progress Report in accordance with the requirements of Section X of the Consent Agreement As Amended.

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**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

CLEAN AIR ACT (CAA)

Section E

The Quarterly Particulate Emissions Report will now be incorporated into the Annual NESHAP Compliance Report.

RADIATION DISCHARGE INFORMATION

Section A

This information will now be submitted on an annual basis as part of the FEMP Site Environmental Report.

REPORTING REQUIREMENTS

Section B

The Federal Facility Compliance Agreement Monthly Progress Report for February 1995, was transmitted to the U.S. EPA on March 16, 1995 as Enclosure B of the Consolidated Consent Agreement/Federal Facility Compliance Agreement/Federal Facility Agreement for Control and Abatement of Radon-222 Emissions (CA/FFCA/FFA-CARE) Monthly Progress Report.

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TABLE 1

**STATUS OF ASSIGNMENTS FOR WORK REQUIRED ON
FEDERAL FACILITY COMPLIANCE AGREEMENT ACTIONS**

March 31, 1995

<u>ACTION</u>	<u>DESCRIPTION</u>	<u>COMPLETION TIME AFTER FFCA SIGNED</u>	<u>FY1995 STATUS</u>
CERCLA			
1.	INITIAL REMEDIAL MEASURES		
1.C	Implement radon control plan approved by the U.S. EPA.	-----	No longer applicable. Progress on actions to address radon emissions from the K-65 Silos are being reported separately under Section IX-Removal Actions of the Consent Agreement/FFCA Monthly Progress Report.
2.	REMEDIAL INVESTIGATION/FEASIBILITY STUDY		No action required.
2.A	RI/FS work is to be conducted in accordance with the U.S. EPA guidelines.	N/A	
2.B	--No Action Required--	-----	Status information on the RI/FS is being reported in accordance with the requirements of Section X of the Consent Agreement As Amended under CERCLA Sections 120 and 106(a).
2.E	Amend and submit revised RI/FS Work Plan to U.S. EPA if deficiencies are found.		Status information on the RI/FS is being reported in accordance with the requirements of Section X of the Consent Agreement As Amended under CERCLA Sections 120 and 106(a).
2.F	Implement tasks described in the approved RI/FS Work Plan		Status information on the RI/FS is being reported in accordance with the requirements of Section X of the Consent Agreement As Amended under CERCLA sections 120 and 106(a).
3.	REPORTS AND RECORD KEEPING		
3.B	Submit monthly RI/FS progress reports.	monthly	The RI/FS Monthly Progress Report for February 1995 was transmitted to the U.S. EPA on March 16, 1995.

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TABLE 1

**STATUS OF ASSIGNMENTS FOR WORK REQUIRED ON
FEDERAL FACILITY COMPLIANCE AGREEMENT ACTIONS**

March 31, 1995

CLEAN AIR ACT

B.4	Prepare annual progress report installation and replacement of emission control devices.	yearly	The Sixth Annual Progress Report on the installation and replacement of emission control devices was prepared by the Effluent Monitoring and Control Section of the ES&H Division. The report was transmitted to DOE on July 15, 1994.
C.	Provide annual reports to the U.S. EPA per 40 CFR 61.94(c).	yearly	The Annual NESHAP Compliance Report for CY1993 was transmitted to the U.S. EPA on June 10, 1994 (DOE-1907-94).
D.1	Provide U.S. EPA with yearly stack-testing schedule.	yearly	No stacks related to production were operating in 1994. A compliance demonstration was conducted on one CERCLA technology demonstration project, the Minimum Additive Waste program. Due to the permanent shutdown of metals production, resumption of the FFCA Stack Testing Program is unlikely. A proposal is being developed to substitute the NESHAP Subpart H testing/monitoring program for the FFCA Stack Testing. When this proposal is completed it will be formally submitted to U.S. EPA.
D.2	Provide U.S. EPA with stack-test results for stacks tested that year.	45 days	No stacks related to production were operated or tested in 1994.
E.1	Maintain records of monthly particulate matter emissions.	-----	Ongoing.

TABLE 1

**STATUS OF ASSIGNMENTS FOR WORK REQUIRED ON
FEDERAL FACILITY COMPLIANCE AGREEMENT ACTIONS**

March 31, 1995

RCRA

A.1	Conduct a hazardous waste determination on all waste streams.	30 days	Complete. Pursuant to the Proposed Amended Consent Decree, a RCRA waste evaluation was conducted on all identified waste streams pertaining to the PACD.
A.2	Commence a hazardous waste analysis program for materials in the landfill and going to the incinerator.	30 days	Complete. Operation of these units was discontinued and data on the waste which had gone to them was provided in a 30-day FFCA deliverable on August 17, 1986.
A.5	Update the facility closure plan to reflect the year the facility expects to begin closure.	30 days	The Facility closure date is dependent upon closure schedules for individual TSD units as presented most recently in Section I of the RCRA Part B Permit Application transmitted to the Ohio EPA and the U.S. EPA on March 26, 1993 (DOE-1471-93). Facility closure will be completed on a date the last TSD unit is closed.

REPORTING REQUIREMENTS

B.	Issue monthly progress report of actions taken to ensure compliance with FFCA requirements.	monthly	February's FFCA Monthly Progress Report was transmitted to the U.S. EPA on March 16, 1995.
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**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

PERIOD ENDING MARCH 31, 1995

ENCLOSURE C

**FEDERAL FACILITY AGREEMENT:
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS**

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

Introduction

The Federal Facility Agreement for Control and Abatement of Radon-222 Emissions (FFA-CARE) between the U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (U.S. EPA), signed November 19, 1991, requires that a monthly report be submitted to the U.S. EPA regarding all steps undertaken in the preceding month to implement Part V of the agreement and that all data generated as a result of those actions be submitted.

Enclosure C fulfills those requirements by describing steps taken at the FEMP during the period March 1, through March 31, 1995, to implement Part V, Radon-222 Control and Abatement Plan, paragraphs 19-33 of the FFA-CARE.

Work Assignments and Progress

In this section of Enclosure C, action descriptions and work progress are presented in a format consistent with that of the FFA-CARE. Immediately following this section are the K-65 Silos Report and the Selected Radon Data Report. Reporting this data is also a requirement included in the U.S. EPA approved Silos 1 and 2 Removal Action Work Plan (Removal Action No. 4).

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

<u>FFA Part, Paragraph(s)</u>	<u>Description of Commitment</u>	<u>FFA Due Date</u>	<u>Status of Commitment</u>
Part V, 19 & 21	Implement the K-65 Silos 1 and 2 Removal Action in accordance with the approved Silos 1 and 2 Removal Action Work Plan.	12/1/91	Completed.
Part V, 20	Reduce radon-222 to a level As-Low-As Reasonably Achievable (ALARA) with the goal as specified in the Silos 1 and 2 Removal Action Work Plan.	5/22/92	Completed.
Part V, 22	Submit proposed methodology for estimating radon-222 concentration reductions resulting from completion of the Silos 1 and 2 Removal Action.	Within 60 days of completing removal action; 1/27/92.	Completed.
Part V, 23	Evaluate performance of the removal action and determine whether or not additional actions are needed prior to final remediation.	None specified.	Completed.
Part V, 24, 25, and 33	Demonstrate compliance with NESHAP Subpart Q at the completion of final remediation using a methodology approved by the U.S. EPA. Applicable to: Silos 1, 2, and 3; Waste Pits 1, 2, 3, 4, and 5 and the Clearwell; and any newly discovered radon-222 emission sources.	None specified.	No information to report for March 1995.

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

<u>FFA Part, Paragraph(s)</u>	<u>Description of Commitment</u>	<u>FFA Due Date</u>	<u>Status of Commitment</u>
Part V, 26	Directly measure radon-222 flux from Waste Pits 1, 2, 3, 4, and 5 and the Clearwell in the RI/FS under the CERCLA Consent Agreement.	None specified.	Radon sampling is complete for Pits 1, 2, and 3. All measurements were below the criteria set by the U.S. EPA. A final report was issued to the U.S. EPA on 6/25/92. A letter was received from the U.S. EPA on 10/16/92 giving approval of the proposed method for measuring the radon flux from Pit 4. The letter also stated that since the Clearwell is water covered, and Pit 5 is nearly 100% water covered, the flux from Pit 5 and the Clearwell may be assumed to be zero.
Part V, 26	Include direct measurement data from Waste Pits 1, 2, 3, 4, and 5 and the Clearwell in the RI/FS under the CERCLA Consent Agreement.	None specified.	See above.
Part V, 27	Estimate radon-222 emissions from Silo 3 based upon characterization data; include the estimated radon-222 emission data from Silo 3 in the RI/FS that includes Silo 3 under the CERCLA Consent Agreement.	None specified.	Completed.
Part V, 28	Submit documentation or estimates of current radon-222 emissions from existing but newly discovered sources that contain radium-226 in sufficient concentrations to emit radon-222 in excess of NESHAP Subpart Q prior to final remediation.	Within 30 days of discovery.	No new sources identified.

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

<u>FFA Part, Paragraph(s)</u>	<u>Description of Commitment</u>	<u>FFA Due Date</u>	<u>Status of Commitment</u>
Part V, 30	Submit methodology for direct measurement or other appropriate means of characterization of the relevant emissions pursuant to paragraph 29 of the FFA.	Within 45 days of the U.S. EPA response pursuant to paragraph 29.	None required.
Part V, 31	Submit results of measurements pursuant to paragraph 30.	Within 30 days of U.S. EPA approval of characterization method.	None required.
Part VI, 31	Submit monthly report on steps undertaken to implement Part V of the FFA-CARE and the data obtained in the preceding month.	20th day of succeeding month.	The progress report being submitted herewith as an integral part of the CERCLA Consent Agreement Monthly Progress Report.

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

Data Reporting Requirements: RA No. 4: Silos 1 and 2

As defined in the Silos 1 and 2 Removal Action Work Plan and the Federal Facility Agreement, data associated with monitoring the effectiveness of the bentonite installation are included in the following tables: the K-65 Silos Report and the Selected Radon Data Report.

The K-65 Silos Report includes data on the following parameters:

- Ambient temperature and pressure near the silos.
- Silos 1 and 2 headspace temperature.
- Silos 1 and 2 differential pressure.
- Silos 1 and 2 radon headspace concentration.
- Silos 1 and 2 headspace humidity

The Selected Radon Data Report includes radon data from the following locations:

- Air monitoring station number 5 (AMS-5)
- Air monitoring station number 6 (AMS-6)
- Pilot Plant
- Background data
- K-65 Monitoring Data (K-65 NW, K-65 SW, K-65 NE, K-65 SE).

The radon data submitted in Enclosure C: Due to its high source strength, unique measurement methods had to be devised to measure radon emissions from this nonstandard source. The data that has been gathered since 1992 is collected by qualified technicians using detailed procedures. This data although not yet verified, serves as a very good qualitative indicator of the integrity of the bentonite sealant layer covering the residues in the silos. Activities have been initiated to enhance the quality and independently verify the data that is being collected.

**CONSOLIDATED CONSENT AGREEMENT / FEDERAL FACILITY COMPLIANCE AGREEMENT
FEDERAL FACILITY AGREEMENT MONTHLY PROGRESS REPORT**

MONTH: MARCH
YEAR: 1995

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 538704
Cincinnati, Ohio 45253 Hamilton

**K-65 SILO REPORT
RADON CONCENTRATIONS
(Daily Summary of Recorded Headspace Concentrations)**

REPORT GENERATED: 04/05/95

Daily Statistics	SILO 1				SILO 2			
	Average	Maximum	Minimum	Std. Dev.	Average	Maximum	Minimum	Std. Dev.
03/01/95	119,000	463,000	23,900	64,800	3,900,000	4,120,000	3,570,000	108,000
03/02/95	314,000	1,310,000	71,100	225,000	4,000,000	4,280,000	3,610,000	134,000
03/03/95	513,000	1,590,000	48,900	388,000	4,110,000	4,380,000	3,700,000	99,100
03/04/95	846,000	1,520,000	43,900	376,000	4,220,000	4,410,000	3,940,000	78,200
03/05/95	1,260,000	1,980,000	79,800	612,000	4,240,000	4,450,000	3,830,000	141,000
03/06/95	1,090,000	1,970,000	43,900	591,000	4,110,000	4,300,000	3,520,000	81,700
03/07/95	984,000	2,000,000	43,200	660,000	4,030,000	4,300,000	3,540,000	140,000
03/08/95	118,000	452,000	28,900	54,700	4,240,000	4,300,000	4,180,000	28,500
** 03/09/95	244,000	970,000	157,000	151,000	n/a	n/a	n/a	n/a
** 03/10/95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
** 03/11/95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
** 03/12/95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
** 03/13/95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
** 03/14/95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
** 03/15/95	941,000	1,870,000	44,800	623,000	n/a	n/a	n/a	n/a
03/16/95	1,220,000	1,960,000	71,800	617,000	3,890,000	4,120,000	3,570,000	79,800
03/17/95	536,000	1,610,000	40,400	428,000	3,740,000	4,180,000	3,390,000	162,000
03/18/95	691,000	1,860,000	18,200	649,000	3,610,000	3,900,000	3,030,000	192,000
03/19/95	1,370,000	2,020,000	370,000	481,000	3,730,000	3,920,000	3,210,000	148,000
03/20/95	970,000	2,020,000	48,100	601,000	3,420,000	3,900,000	1,810,000	437,000
03/21/95	225,000	1,420,000	20,400	255,000	3,180,000	3,670,000	2,560,000	259,000
03/22/95	790,000	1,820,000	22,500	533,000	3,510,000	3,670,000	2,870,000	98,400
03/23/95	352,000	1,860,000	11,100	519,000	3,210,000	3,610,000	1,810,000	225,000
03/24/95	194,000	1,240,000	11,800	240,000	3,350,000	3,590,000	3,070,000	95,100
03/25/95	557,000	1,520,000	40,400	436,000	3,400,000	3,650,000	3,030,000	94,400
03/26/95	617,000	1,640,000	35,400	465,000	3,350,000	3,590,000	2,990,000	124,000
03/27/95	773,000	2,010,000	30,400	611,000	3,320,000	3,610,000	2,480,000	207,000
03/28/95	407,000	1,630,000	46,800	423,000	3,390,000	3,540,000	2,960,000	93,500
03/29/95	675,000	1,590,000	47,500	383,000	3,430,000	3,610,000	2,940,000	116,000
03/30/95	435,000	1,650,000	60,400	372,000	3,460,000	3,610,000	2,960,000	113,000
03/31/95	569,000	1,610,000	88,900	341,000	3,580,000	3,740,000	3,410,000	55,500

Grab Samples of Headspace

Date:	SILO 1 Concentration	SILO 2 Concentration
03/01/95	124,000	3,005,000
03/03/95	209,000	3,256,000
03/07/95	240,000	3,302,000
03/09/95	231,000	3,301,000
03/13/95	2,213,000	1,994,000
03/16/95	2,434,000	3,284,000
03/20/95	460,000	2,850,000
03/23/95	38,000	2,641,000
03/27/95	493,000	2,797,000
03/30/95	1,070,000	3,115,000

- Notes:
1. All values reported in pCi/L
 2. Continuous data reported to three significant digits to remain consistent with the calibration data.
 - Partial data collected for Silo 2, due to pump replacement.
 - ** Partial or complete data loss due to DLS malfunction resulting from transmission wire failure.

**CONSOLIDATED CONSENT AGREEMENT / FEDERAL FACILITY COMPLIANCE AGREEMENT
FEDERAL FACILITY AGREEMENT MONTHLY PROGRESS REPORT**

MONTH: MARCH
YEAR: 1995

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 538704
Cincinnati, Ohio 45253 Hamilton

K-65 SILO REPORT

SILO 1

Daily Averages:	Ambient		Headspace			
	Temp * F	Press. In. Hg	Temp * F	Inter. Hum. %	Diff. Press. In. Hg	Radon (pCi/l)
03/01/95	29	29.75	39	*	-0.01	113,000
03/02/95	22	29.87	38	*	-0.01	314,000
03/03/95	27	29.80	37	*	-0.01	513,000
03/04/95	32	29.76	37	*	-0.01	646,000
** 03/05/95	43	29.45	38	*	0.00	1,260,000
** 03/06/95	44	29.46	38	*	-0.06	1,090,000
** 03/07/95	52	29.27	40	*	-0.02	984,000
03/08/95	26	29.65	39	*	0.07	118,000
*** 03/09/95	21	29.84	39	*	0.13	244,000
*** 03/10/95	n/a	n/a	n/a	n/a	n/a	n/a
*** 03/11/95	n/a	n/a	n/a	n/a	n/a	n/a
*** 03/12/95	n/a	n/a	n/a	n/a	n/a	n/a
*** 03/13/95	n/a	n/a	n/a	n/a	n/a	n/a
*** 03/14/95	n/a	n/a	n/a	n/a	n/a	n/a
*** 03/15/95	63	29.56	42	*	0.00	941,000
03/16/95	53	29.54	42	*	0.00	1,220,000
03/17/95	51	29.58	43	*	0.00	536,000
03/18/95	47	29.56	43	*	0.00	691,000
03/19/95	51	29.31	43	*	0.00	1,370,000
** 03/20/95	52	29.08	43	*	0.00	970,000
03/21/95	49	29.14	44	*	0.00	225,000
03/22/95	48	29.15	44	*	0.00	790,000
03/23/95	42	29.21	44	*	-0.02	352,000
03/24/95	40	29.51	43	*	0.00	194,000
03/25/95	41	29.64	43	*	0.00	557,000
03/26/95	46	29.56	43	*	0.00	617,000
03/27/95	48	29.36	43	*	0.00	773,000
03/28/95	41	29.49	43	*	0.00	407,000
03/29/95	38	29.52	43	*	0.00	675,000
03/30/95	40	29.51	43	*	0.00	435,000
03/31/95	35	29.50	43	*	-0.01	569,000

Monthly Statistics:	Ambient		Headspace			
	Temp * F	Press. In. Hg	Temp * F	Inter. Hum. %	Diff. Press. In. Hg	Radon (pCi/l)
ARITHMETIC MEAN:	41.5	29.50	41.4	*	0.002	638,615
MAXIMUM:	62.6	29.87	43.8	*	0.133	1,370,000
MINIMUM:	20.6	29.08	37.2	*	-0.056	113,000
MEDIAN:	42.4	29.52	42.7	*	-0.003	593,000

Note: * - Silo #1 Relative Humidity was inoperable.
 ** - Some Delta Pressure values were outside of range restrictions.
 *** - Partial or complete data loss due to DLS malfunction resulting from transmission wire failure.

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**CONSOLIDATED CONSENT AGREEMENT / FEDERAL FACILITY COMPLIANCE AGREEMENT
FEDERAL FACILITY AGREEMENT MONTHLY PROGRESS REPORT**

MONTH: MARCH
YEAR: 1995

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 538704
Cincinnati, Ohio 45253 Hamilton

K-65 SILO REPORT

SILO 2

Daily Averages:	Ambient		Headspace			
	Temp *F	Press. In. Hg	Temp *F	Inter. Hum. %	Diff. Press. In. Hg	Radon (pCi/l)
03/01/95	29	29.75	40	91	0.05	3,900,000
03/02/95	22	29.87	39	92	-0.01	4,000,000
03/03/95	27	29.80	39	92	-0.01	4,110,000
03/04/95	32	29.76	38	93	-0.01	4,220,000
** 03/05/95	43	29.45	39	93	-0.05	4,240,000
** 03/06/95	44	29.46	40	91	-0.03	4,110,000
** 03/07/95	52	29.27	40	91	-0.03	4,030,000
03/08/95	26	29.51	41	91	-0.02	4,240,000
*** 03/09/95	21	29.84	n/a	n/a	n/a	n/a
*** 03/10/95	n/a	n/a	n/a	n/a	n/a	n/a
*** 03/11/95	n/a	n/a	n/a	n/a	n/a	n/a
*** 03/12/95	n/a	n/a	n/a	n/a	n/a	n/a
*** 03/13/95	n/a	n/a	n/a	n/a	n/a	n/a
*** 03/14/95	n/a	n/a	n/a	n/a	n/a	n/a
*** 03/15/95	63	29.56	n/a	n/a	n/a	n/a
*** 03/16/95	53	29.54	43	90	-0.01	3,890,000
03/17/95	60	29.59	43	90	-0.01	3,740,000
03/18/95	47	29.56	43	90	-0.01	3,610,000
03/19/95	51	29.32	43	89	-0.01	3,730,000
03/20/95	52	29.08	44	89	-0.02	3,420,000
03/21/95	49	29.14	44	89	-0.01	3,180,000
03/22/95	48	29.15	44	89	-0.01	3,510,000
** 03/23/95	42	29.21	44	88	-0.02	3,210,000
03/24/95	40	29.51	44	88	-0.01	3,350,000
03/25/95	41	29.64	44	88	-0.01	3,400,000
03/26/95	46	29.56	43	87	-0.01	3,350,000
03/27/95	48	29.36	44	87	-0.01	3,320,000
03/28/95	41	29.49	44	88	-0.01	3,390,000
03/29/95	38	29.52	43	89	-0.01	3,430,000
03/30/95	40	29.51	43	89	-0.01	3,460,000
03/31/95	35	29.50	43	90	-0.01	3,580,000

Monthly Statistics:	Ambient		Headspace			
	Temp *F	Press. In. Hg	Temp *F	Inter. Hum. %	Diff. Press. In. Hg	Radon (pCi/l)
ARITHMETIC MEAN:	42.1	29.48	42.2	89.8	-0.011	3,684,167
MAXIMUM:	60.0	29.87	44.3	93.0	0.055	4,240,000
MINIMUM:	21.6	29.08	38.5	87.1	-0.049	3,180,000
MEDIAN:	42.4	29.51	43.3	89.7	-0.010	3,595,000

Note: ** - Some Delta Pressure values were outside of range restrictions
*** - Partial or complete data loss due to DLS malfunction resulting from transmission wire failure.

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**CONSOLIDATED CONSENT AGREEMENT / FEDERAL FACILITIES AGREEMENT
FEDERAL FACILITIES AGREEMENT MONTHLY REPORT**

MONTH: MARCH
YEAR: 1995

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 538704
Cincinnati, Ohio 45253 Hamilton

**SELECTED RADON DATA REPORT
(Monthly Summary of Selected Sampling Locations)**

Daily Averages	K65 - NW (pCi/L)	K65 - SW (pCi/L)	K65 - NE (pCi/L)	K65 - SE (pCi/L)
03/01/95	0.4	0.7	0.6	0.6
03/02/95	0.5	1.2	1.1	0.7
03/03/95	0.9	2.1	4.6	1.8
03/04/95	1.9	4.3	5.5	5.2
03/05/95	2.4	1.3	0.8	0.6
03/06/95	1.0	3.6	1.0	1.2
03/07/95	0.5	0.7	0.6	1.1
03/08/95	0.4	0.7	0.6	1.4
03/09/95	0.4	1.4	0.7	1.4
03/10/95	1.6	1.1	3.2	1.4
03/11/95	1.1	1.6	14.6	6.4
03/12/95	1.1	1.6	8.5	4.3
03/13/95	1.8	2.4	9.2	4.9
03/14/95	1.6	3.2	10.7	6.6
03/15/95	2.0	2.8	7.2	5.8
03/16/95	1.8	2.6	7.1	5.4
03/17/95	1.4	2.0	3.9	3.8
03/18/95	1.1	2.8	0.9	0.8
03/19/95	2.7	3.1	11.3	8.0
03/20/95	1.6	2.2	9.2	6.8
03/21/95	0.5	0.9	2.3	1.1
03/22/95	0.8	2.3	1.9	2.0
03/23/95	1.8	3.7	0.7	0.6
03/24/95	0.5	1.2	1.3	1.1
03/25/95	1.7	2.9 (b)	2.8	2.5
03/26/95	1.8	n/a (b)	1.5	1.2
03/27/95	1.5	n/a (b)	1.0	0.9
03/28/95	0.6	n/a (b)	1.8	1.2
03/29/95	0.9	n/a (b)	4.1	2.0
03/30/95	0.6	n/a (b)	2.4	1.5
03/31/95	1.2	n/a (b)	5.6	3.7

Monthly Statistics of Daily Averages:	K65 - NW (pCi/L)	K65 - SW (pCi/L)	K65 - NE (pCi/L)	K65 - SE (pCi/L)
AVERAGE	1.2	1.7	4.1	2.8
MAXIMUM	2.7	4.3	14.6	8.0
MINIMUM	0.4	0.7	0.6	0.6
MEDIAN	1.1	2.1	2.4	1.5
STD. DEV	0.6	1.2	3.8	2.2

STANDARD LEGEND: 1. "(a)" indicates censored data due to erroneous readings.
2. "(b)" indicates data loss due to monitor malfunction.

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**CONSOLIDATED CONSENT AGREEMENT / FEDERAL FACILITIES AGREEMENT
FEDERAL FACILITIES AGREEMENT MONTHLY REPORT**

MONTH: MARCH
YEAR: 1995

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 538704
Cincinnati, Ohio 45253 Hamilton

**SELECTED RADON DATA REPORT
(Monthly Summary of Selected Sampling Locations)**

Daily Averages	AMS #5 (pCi/L)	AMS #6 (pCi/L)	PILOT PLANT (pCi/L)	BKGD-1 (pCi/L)	BKGD-2 (pCi/L)
03/01/95	0.6	0.4	1.1	0.4	0.5
03/02/95	0.7	0.4	1.4	0.4	0.6
03/03/95	0.8	0.5	1.4	0.5	0.6
03/04/95	1.3	0.9	1.6	0.6	0.9
03/05/95	0.8	0.5	1.0	0.4	0.7
03/06/95	0.8	0.7	1.0	0.4 (a)	0.6
03/07/95	0.6	0.4	0.9	0.3	0.5
03/08/95	0.6	0.3	1.1	0.4	0.6
03/09/95	0.6	0.4	1.3	0.4	0.6
03/10/95	0.7	0.4	1.2	0.4	0.6
03/11/95	0.9	0.6	1.3	0.4	0.7
03/12/95	1.1	0.8	1.4	0.4	0.8
03/13/95	1.2	0.9	1.5	0.6	0.8
03/14/95	1.4	1.0	1.5	0.6	0.9
03/15/95	1.4	1.0	1.6	0.5	0.9
03/16/95	1.5	1.0	1.7	0.6	0.9
03/17/95	1.4	1.0	1.4	0.5	1.0
03/18/95	0.8	0.5	1.0	0.4	0.7
03/19/95	1.7	1.1	1.7	0.5	0.9
03/20/95	1.4	1.0	1.7	0.5	0.8
03/21/95	0.6	0.4	0.9	0.4	0.6
03/22/95	0.8	0.6	1.0	0.4	0.7
03/23/95	0.7	0.5	0.9	0.4	0.6
03/24/95	0.7	0.5	1.0	0.4	0.6
03/25/95	1.2	0.8	1.3	0.6	0.7
03/26/95	1.0	0.6	1.1	0.5	0.8
03/27/95	0.8	0.6	1.0	0.4	0.6
03/28/95	0.8	0.7	1.0	0.4	0.6
03/29/95	0.9	0.9	1.1	0.6	0.8
03/30/95	0.7	0.7	1.0	0.4	0.6
03/31/95	1.1	1.3	1.4	0.5	0.7

Monthly Statistics of Daily Averages:	AMS #5 (pCi/L)	AMS #6 (pCi/L)	PILOT PLANT (pCi/L)	BKGD-1 (pCi/L)	BKGD-2 (pCi/L)
AVERAGE	0.9	0.7	1.2	0.5	0.7
MAXIMUM	1.7	1.3	1.7	0.6	1.0
MINIMUM	0.6	0.3	0.9	0.3	0.5
MEDIAN	0.8	0.6	1.2	0.4	0.7
STD. DEV	0.3	0.2	0.3	0.1	0.1

STANDARD LEGEND: 1. "(a)" indicates censored data due to erroneous readings.
2. "(b)" indicates data loss due to monitor malfunction.

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**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

PERIOD ENDING MARCH 31, 1995

ENCLOSURE D

EFFLUENT RADIATION DISCHARGES TO THE GREAT MIAMI RIVER

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**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

Introduction

Enclosure D lists monthly discharges to the Great Miami River. This information is required by the DOE/U.S. EPA Agreement Resolving Dispute Concerning Denial of Request for Extension of Time to Submit Operable Unit 2 Document and discussed in the "Addendum No. 1 to the South Groundwater Contamination Plume Removal Action Parts 2 and 3 Work Plan."

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [SP1]
IAWWT - T108 (SWRB) Discharge
Interim Advanced Wastewater Treatment Effluent

DATE: FEBRUARY 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kgs)	TSS (mg/l)	pH (MIN) (S.U.)	pH (MAX) (S.U.)
1	0.000							
2	0.000							
3	0.000							
4	0.000							
5	0.000							
6	0.000							
7	0.000							
8	0.000							
9	0.000							
10	0.000							
11	0.000							
12	0.000							
13	0.000							
14	0.000							
15	0.000							
16	0.000							
17	0.000							
18	0.064	18.0	12.6	35.7	0.0086	2.6	7.2	7.7
19	0.079	14.4	10.8	23.4	0.0070	6.0	7.2	7.7
20	0.000							
21	0.029	13.5	11.3	22.2	0.0024	6.4	7.4	7.8
22	0.040	45.0	20.7	20.1	0.0030	6.8	7.6	8.6
23	0.136	6.3	8.6	12.4	0.0064	2.2	7.7	8.7
24	0.149	4.5	6.8	5.6	0.0032	2.2	8.0	8.4
25	0.134	3.2	6.8	4.9	0.0025	2.8	8.0	8.4
26	0.209	4.1	7.2	5.8	0.0046	2.6	8.1	8.2
27	0.136	3.2	6.3	6.0	0.0031	4.8	8.2	8.4
28	0.159	3.6	8.1	4.8	0.0029	6.4	8.4	8.6
Total	1.135				0.0437			

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**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: [SP1] IAWWT - T108

DATE: FEBRUARY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	0.041	7.3	8.4	10.2	0.0044
Max.	0.209	45.0	20.7	35.7	0.0086
Min.	0.000	3.2	6.3	4.8	0.0024

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [SP1]
IAWWT - T109 (SWRB) Discharge
Interim Advanced Wastewater Treatment Effluent

DATE: FEBRUARY 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kgs)	TSS (mg/l)	pH (MIN) (S.U.)	pH (MAX) (S.U.)
1	0.000							
2	0.000							
3	0.000							
4	0.000							
5	0.000							
6	0.000							
7	0.000							
8	0.000							
9	0.000							
10	0.000							
11	0.000							
12	0.000							
13	0.000							
14	0.000							
15	0.000							
16	0.000							
17	0.000							
18	0.053	14.4	12.6	37.8	0.0076	1.4	7.2	7.7
19	0.000							
20	0.000							
21	0.000							
22	0.064	49.5	24.3	43.2	0.0105	16.4	7.6	8.6
23	0.139	5.4	7.7	15.2	0.0080	2.8	7.7	8.7
24	0.109	3.6	7.2	5.3	0.0022	2.8	8.0	8.4
25	0.150	3.2	6.3	4.2	0.0024	2.8	8.0	8.4
26	0.000							
27	0.041	3.6	6.8	4.1	0.0006	3.4	8.2	8.4
28	0.190	2.3	8.1	3.7	0.0027	6.4	8.4	8.6

Total

0.746

0.0339

000067

04

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: [SP1] IAWWT - T109

DATE: FEBRUARY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	0.027	8.2	9.2	12.0	0.0048
Max.	0.190	49.5	24.3	43.2	0.0105
Min.	0.000	2.3	6.3	3.7	0.0006

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [606]
SWRB Pump Station Discharge
Stormwater Retention Basin Effluent

DATE: FEBRUARY 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)
1	0.213	378	207	0.62	0.50
2	0.337	356	158	0.63	0.80
3	0.220	383	149	0.71	0.59
4	0.171	441	131	0.73	0.47
5	0.175	410	207	0.71	0.47
6	0.096	41	59	0.08	0.03
7	0.000				
8	0.000				
9	0.000				
10	0.458	270	99	0.48	0.83
11	0.525	396	108	0.68	1.35
12	0.215	401	140	0.68	0.55
13	0.213	405	140	0.71	0.57
14	0.195	441	194	0.72	0.53
15	0.207	392	185	0.69	0.54
16	1.250	275	113	0.47	2.22
17	1.670	320	113	0.53	3.35
18	0.890	302	122	0.54	1.82
19	0.279	293	140	0.56	0.59
20	0.456	347	176	0.57	0.98
21	0.535	401	167	0.56	1.13
22	0.697	320	95	0.56	1.48
23	0.572	360	122	0.55	1.19
24	0.702	333	140	0.59	1.57
25	0.876	342	117	0.58	1.92
26	0.444	374	81	0.58	0.97
27	0.423	369	167	0.59	0.94
28	0.652	311	131	0.54	1.33

12.471

26.76

000069

06

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: (606) SWRB

DATE: FEBRUARY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (mg/l)(2)	Total U (kgs)
Avg.	0.445	336	129	0.57	1.07
Max.	1.670	441	207	0.73	3.35
Min.	0.000	41	59	0.08	0.03

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

006070

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [605]
Biodenitrification Tower
BDN Tower Effluent

DATE: FEBRUARY 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)
1	0.143	766	721	1.50	0.81
2	0.153	766	766	1.50	0.87
3	0.170	766	721	1.50	0.97
4	0.187	811	811	1.70	1.20
5	0.198	901	811	1.80	1.35
6	0.167	901	766	1.80	1.14
7	0.126	811	901	1.80	0.86
8	0.125	856	811	2.00	0.95
9	0.183	856	946	2.00	1.39
10	0.187	856	991	1.90	1.34
11	0.185	856	811	2.00	1.40
12	0.179	856	946	2.00	1.36
13	0.178	901	901	2.00	1.35
14	0.190	811	946	2.00	1.44
15	0.188	766	901	2.00	1.42
16	0.183	856	766	2.00	1.39
17	0.188	766	811	2.00	1.42
18	0.158	856	811	2.00	1.20
19	0.000				
20	0.047	766	856	1.90	0.34
21	0.187	766	676	2.00	1.42
22	0.184	811	676	2.10	1.46
23	0.130	946	766	2.10	1.03
24	0.128	946	856	2.20	1.07
25	0.126	901	766	2.10	1.00
26	0.186	991	676	2.10	1.48
27	0.188	901	901	1.90	1.35
28	0.189	946	811	1.90	1.36

Total 4.453

32.35

000071

09

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: (605) BDN/ETS

DATE: FEBRUARY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (mg/l)(2)	Total U (kgs)
Avg.	0.159	850	820	1.92	1.20
Max.	0.198	991	991	2.20	1.48
Min.	0.000	766	676	1.50	0.34

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

000072

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [605]
Biodenitrification Tower
BDN Tower Effluent

DATE: FEBRUARY 1995

Day	C-BOD5 (mg/l)	TSS (mg/l)	NH3-N (mg/l)	NO3-N (mg/l)	Chromium (ug/l)	Copper (ug/l)	Nickel (ug/l)	Hex-Chrom (ug/l)
1		2	0.25	10.3 <	6.0 <	14.0 <	17.0 <	6.0
2								
3								
4								
5								
6								
7	2.72							
8								
9								
10								
11								
12								
13								
14		4	0.30	10.1 <	6.0 <	14.0 <	17.0 <	6.0
15	1.96							
16								
17								
18								
19								
20		6 <	0.10	10.0 <	6.0 <	14.0 <	17.0 <	6.0
21	3.64							
22								
23								
24								
25								
26		4 <	0.10	14.7 <	6.0 <	14.0 <	17.0 <	6.0
27								
28	5.14							

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [SP2]
Stormwater Retention Basin Emergency Bypass
SWRB Bypass Effluent

DATE: FEBRUARY 1995

Day	Flow (MGD)
---	-----
1	0.000
2	0.000
3	0.000
4	0.000
5	0.000
6	0.000
7	0.000
8	0.000
9	0.000
10	0.000
11	0.000
12	0.000
13	0.000
14	0.000
15	0.000
16	1.180
17	1.670
18	0.058
19	0.000
20	0.000
21	0.000
22	0.000
23	0.000
24	0.000
25	0.000
26	0.000
27	0.000
28	0.000

Total	----- 2.908
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000074

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: Valve House
South Groundwater Contamination Plume

DATE: FEBRUARY 1995

Day	Flow (MGD)	Total U (ug/l)	Total U (kgs)
1	2.043	* 10.1	0.08
2	1.996	* 10.1	0.08
3	1.979	* 10.1	0.08
4	2.059	* 10.1	0.08
5	2.059	* 10.1	0.08
6	2.059	* 10.1	0.08
7	2.059	* 10.1	0.08
8	1.944	* 10.1	0.07
9	2.061	* 10.1	0.08
10	1.976	* 10.1	0.08
11	2.032	* 10.1	0.08
12	2.094	* 10.1	0.08
13	2.148	21.7	0.18
14	1.211	27.4	0.13
15	1.443	25.1	0.14
16	1.443	25.1	0.14
17	1.440	27.2	0.15
18	1.394	20.3	0.11
19	1.361	21.0	0.11
20	1.527	25.9	0.15
21	1.381	45.8	0.24
22	1.238	45.8	0.21
23	1.238	16.7	0.08
24	1.892	7.4	0.05
25	1.621	7.0	0.04
26	1.532	6.8	0.04
27	1.659	8.2	0.05
28	1.584	8.2	0.05
Total	48.473		2.79

* No sample collected; average monthly value used for calculations.

000075

012

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: South Plume

DATE: FEBRUARY 1995

	Flow (MGD)	Total U (ug/l)(2)	Total U (kgs)
Avg.	1.731	15.2	0.10
Max.	2.148	45.8	0.24
Min.	1.211	6.8	0.04

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

000076

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [SP3]
Valve House
South Plume/Stormwater Retention Basin *

DATE: FEBRUARY 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kgs)	TSS (mg/l)	pH (Grab (S.U.))
1	2.399	22.5 <	49.5	27	0.25		7.4
2	2.486	18.0 <	49.5	34	0.32	4.4	7.6
3	2.369	13.5 <	49.5	23	0.21		7.3
4	2.417	13.5 <	49.5	26	0.24		7.5
5	2.432	18.0 <	49.5	28	0.26		7.1
6	2.322	13.5 <	58.6	33	0.29		7.3
7	2.185	18.0 <	58.6	34	0.28		7.1
8	2.069 <	13.5 <	63.1	27	0.21		7.1
9	2.244	13.5 <	63.1	30	0.25	2.6	7.5
10	2.621	22.5 <	63.1	30	0.30		7.5
11	2.742	18.0 <	63.1	30	0.31		7.6
12	2.488	27.0 <	63.1	34	0.32		7.5
13	2.539 <	13.5 <	63.1	28	0.27		7.4
14	1.596	22.5 <	63.1	31	0.19		7.5
15	1.838	27.0 <	63.1	31	0.22		7.2
16	2.876	85.6 <	63.1	160	1.74	8.6	7.8
17	3.298	135.1	85.6	280	3.50		6.9
18	2.442	103.6 <	58.6	170	1.57		6.6
19	1.640	49.5 <	58.6	74	0.46		6.8
20	2.030	13.5 <	58.6	22	0.17		6.9
21	2.103 <	13.5 <	58.6	27	0.21		6.9
22	2.119	27.0 <	58.6	45	0.36		7.1
23	1.940	31.5 <	58.6	45	0.33	2.8	6.8
24	2.722	31.5 <	58.6	53	0.55		7.5
25	2.623	27.0 <	58.6	45	0.45		6.9
26	2.162	27.0 <	63.1	62	0.51		6.9
27	2.270	18.0 <	63.1	61	0.52		6.9
28	2.425	22.5 <	63.1	40	0.37		6.8

Total 65.397

14.64

* Effective 1/27/95, all wastewater streams, except the Sewage Plant(STP 601), were discharged to the Great Miami River via the Valve House(SP 3).

000077

014

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project
LOCATION: [SP3] Valve House
DATE: FEBRUARY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	2.336	32.8	60.2	59	0.52
Max.	3.298	135.1	85.6	280	3.50
Min.	1.596	13.5	49.5	22	0.17

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

000078

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending March 31, 1995

EFFLUENT REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [SP4]
Parshall Flume
Effluent Downstream of Manhole 176B

DATE: FEBRUARY 1995

Day	DO (mg/l)	IRON (mg/l)	MANGANESE (mg/l)
---	-----	-----	-----
1			
2	12.2	0.62	0.2
3			
4			
5			
6			
7			
8			
9	9.5	0.64	< 0.1
10			
11			
12			
13			
14			
15			
16	8.3	0.53	< 0.1
17			
18			
19			
20			
21			
22			
23	8.7	1.13	0.1
24			
25			
26			
27			
28			

000079

016