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**CONSENT AGREEMENT/FFCA/FFA AND REMEDIAL INVESTIGATION
FEASIBILITY STUDY MONTHLY PROGRESS REPORT FOR FEBRUARY
1995**

03/16/95

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

MAR 16 1995

DOE-0724-95

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 5th 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 FEBRUARY 1995

Enclosure 1 is the consolidated CA/FFCA/FFA and RI/FS Monthly Progress Report which describes the activities accomplished February 1-28, 1995, and planned actions for the period of March 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,

A handwritten signature in cursive script, appearing to read "Jack R. Craig".

for Jack R. Craig
Fernald Remedial Action
Project Manager

Enclosures: As Stated

cc w/enc:

K. A. Chaney, EM-423, QO
D. R. Kozlowski, EM-423, QO
J. Kwasniewski, OEPA-Columbus
P. Harris, OEPA-Dayton
S. Disbro, FERMCO/52-5
T. Hagen, FERMCO/52-1
AR Coordinator, FERMCO

cc w/o enc:

G. Jablonowski, USEPA-V, 5HRE-8J
M. Proffitt, OEPA-Dayton
S. McClellan, PRC
R. Cohan, GeoTrans
F. Bell, ATSDR
R. D. George, FERMCO/52-2
J. W. Thiesing, FERMCO/2
K. Varner, FERMCO/52-2
M. Yates, FERMCO/9

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**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
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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 February 1 through February 28, 1995, and planned actions for the period March 1 through March 31, 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 February 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.	Plants 2/3 & 6 Operational Plant 8 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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REMOVAL ACTION SUMMARY

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: 12/19/94
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

* Shading denotes completed actions

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REMOVAL ACTION SUMMARY

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: 12/94
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
31	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

*Shading denotes completed actions

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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 calibration of the hold tank level gauges. Attempts to restart the Plant 8 extraction well were unsuccessful due to additional mechanical problems. The Volatile Organic Compounds (VOC) treatment facility and the Plant 6 perched water system continue to operate.

Planned Activities:

- Maintenance activities to repair Plant 2, Plant 8, and Plant 9 systems are planned.

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. The Removal Site Evaluation (RSE) for this activity was approved on February 24, 1995. Construction mobilization of the meter installation (by Diaz Construction) began on February 21, 1995. The expected completion date is March 31, 1995.

It was determined that providing water to Delta Steel via a requisition similar to others presently receiving bottled water would be the most expeditious course.

The contractor for Project A of the Public Water Supply (PWS) was given a Notice-to-Proceed (NTP) to begin work on March 1, 1995. The contractor has 150 calendar days to complete this work.

The data recovery field work for Project B of the PWS was completed in February. The analysis of the cultural resources and final report are in progress.

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.
- Complete installation of Off-site Water Flow Meter.

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Removal Actions

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

- Continue to support Hamilton County Department of Public Works (HCDPW) on installation of the entire PWS including service connections.
- Provide cultural resource monitoring during construction of Project A.
- Continue work on cultural resources report for Project B along State Route 128.
- Complete requisition for Delta Steel regarding bottled water service.

Part 2 - Pumping and Discharge System

Current Month:

Recovery Wells (RW) 1 - 4 are pumping at a combined rate of 1400 gpm. RWs 1 and 3 are operating on a temporary basis until well repair or replacement can be completed. The well repair/replacement action was initiated in response to well damage identified in RWs 1 and 3 during pump replacement.

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(SWRB).

IAWWT Bionitrification Effluent Treatment System (BDN-ETS) Unit

Current Month:

Nothing to report.

Planned Activities:

- Continue to operate IAWWT(BDN-ETS) unit.

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Removal Actions

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

Part 4 - Groundwater Monitoring and Institution Controls

Current Month:

Replaced one ion exchange vessel on February 24, 1995 due to a drop in water pressure at one residence. The vessel had not yet reached breakthrough. The last ion exchange vessel changeout occurred in June 1994, also due to a drop in water pressure at the same residence.

Planned Activities:

- Continue to monitor performance of the ion exchange systems in use 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 know 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:

Start-up and operational activities continue; process treatment is being adjusted to maximize capacity.

Planned Activities:

- Continue to operate.

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

Step 3

Elimination of low uranium concentration streams.

Current Month:

Start-up and operational activities continue; process treatment is being adjusted to maximize capacity.

Planned Activities:

- Continue to operate.

Step 4

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

Current Month:

Began plans for modifications of the IAWWT.

Planned Activities:

- Install piping to divert the South Plume flow to the IAWWT.

RA No. 7, Plant 1 Pad Continuing Release

Current Month:

The repair process of the expansion joint material (weather permitting) will continue after an engineering evaluation of the repair is completed. The completion of the evaluation is anticipated by mid March 1995. The Final Report was submitted internally on December 16, 1994 and transmitted to U.S. EPA on February 21, 1995.

Planned Activities:

- Complete the repair (weather permitting) of the expansion joint material.

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Removal Actions

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 February 1995 was 13,123.68 drum equivalents (DEs) for a total of 31,580.3 DEs shipped to the NTS in FY-95. This volume includes 5,457 drums of residues removed from inventory and shipped to-date.

The FY 1995 volume shipped to the NTS is 2,269 DEs ahead of schedule, primarily due to release of ISO and large metal box shipments of process area scrap and Plant 7 demolition materials. 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 7,500 DEs of Plant 7 demolition debris to NTS in support of CRU3's milestone date of February 15, 1995. This task was conducted in conjunction with normal waste shipment activities.

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

<u>Waste Stream</u>	<u>DEs Shipped (2/28/95)</u>
Process Area Scrap	6,455.86
Thorium	775.72
Residues to NTS	5,517.03
Contaminated Trash	911.50
SEG Residues	2,095.40
Construction (Legacy)	2,801.08
Construction (Newly Generated)	13,022.78

Planned Activities:

- During March 1995, ship an additional 7,000 DEs of backlog low level waste to NTS.
- During March 1995, initiate preparation of Plant 4 process area scrap and trash packages and shipment to NTS.

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RA No. 9, Removal of Waste Inventories (continued)

- During March 1995, initiate disposition of Plant 7 structural steel to recycling facility in Pennsylvania.

RA No. 12, Safe Shutdown

Current Month:

Implementation planning continues for Plant 1. Plans are being reviewed and preparations are being made to commence removal activities within the next two weeks.

Removal activities continued in Plant 4 in support of the completion of the shutdown of the facility. Removal of hold-up from Reactor Banks 1-12 is complete. Removal of ancillary equipment associated with Banks 10-12 has been completed. Removal, inspection, and clean-out of ductwork and vacuum piping are consuming the majority of effort in this plant. In an effort to confirm the presence of hold-up, it is necessary to remove large quantities of ductwork, which is a slow and tedious process. Major cleanup and duct removal are being worked concurrently, rather than sequentially as originally planned. Plans are being changed to add the extra coordination needed to meet the March 31, 1995 completion date.

The following is the status of capital equipment: of an estimated 1,907 items, 1,225 have been or will be excessed, and 682 have been identified as "In Use/Future Use" items.

To-date, 1,423 maintenance work orders to isolate and disconnect all utilities/energy sources from equipment not in use have been prepared. Of these, 810 have been completed.

To-date, 322 task orders to remove the hold-up material from equipment have been prepared; of those, 183 have been completed.

A load of derbies was shipped to Manufacturing Sciences Corporation on February 23, 1995. Total shipped to-date is 175 metric tons uranium weight (MTU) of 440 MTU to be shipped.

On February 9, 1995 representatives of U. S. Enrichment Corporation (USEC) were on-site to discuss Fernald's enriched uranium materials. A Memorandum of Agreement is being developed with USEC to clarify roles and responsibilities in the sale of these materials. USEC foresees three categories for USEC's handling of Fernald's enriched materials: 1) material suitable for USEC's use, 2) material with a good opportunity for other use where USEC desires to serve as an active broker, and 3) material for which USEC does not have interest but would be willing to handle as a broker after an end user is located by the FEMP.

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RA No. 12, Safe Shutdown (continued)

Planned Activities:

- Continue to issue task orders to identify and/or remove hold-up materials from process equipment.
- Continue verification of equipment location in Plants 2 and 3 Refinery.
- Continue to prepare implementation packages and obtain appropriate approvals.
- Continue shipping depleted derbies to MSC in Oak Ridge, Tennessee.
- Continue to pursue other government interest in FEMP process equipment and nuclear materials.

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. 14, Contaminated Soils Adjacent to Sewage Treatment Plant Incinerator (STPI)

Current Month:

The revised Final Report was submitted to the U.S. EPA on February 2, 1995.

Discussions continue with Waste Management regarding on-site disposal options for the 350+ white metal boxes (WMBs) of soil.

Planned Activities:

- None to report - Removal Action complete.

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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

RA No. 17, Improved Storage of Soil and Debris

Current Month:

February activities included placement of formwork and reinforcing steel for the 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. In order to establish proper compacted graded, saturated soils were excavated out and recompactd in the north area of the pile - some areas with No. 310 stone. Formwork continues to be assembled (including rebar configuration) in the shop to expedite concrete installation of the drainage trench.

The removal and containerization of the residue/debris is the only remaining scope (as part of the RA 17 scope) for the Scrap Metal Pad (SMP) area. Frozen weather conditions and shortage of Heavy Equipment Operators' training inhibited this work in February.

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RA No. 17, Improved Storage of Soil and Debris (continued)

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.

RA No. 19, Plant 7 Dismantling

Current Month:

The D&D activity to package and ship offsite all debris and waste was completed by February 15, 1995. The schedule for final disposition of recycle material was submitted internally on February 15, 1995. Preparation of the final report began February 22, 1995. The contract for lead recycling was awarded to SEG in February 1995.

Planned Activities:

- Readiness Assessment of steel recycling vendors facility and post award conference at lead recycling vendors facility.

RA No. 20, Stabilization of UNH Inventories

Current Month:

Weekly telephone conferences between Ohio EPA, DOE-HQ, DOE-OH, DOE-FN, FERMC0, and the Defense Nuclear Safety Board (DNFSB) occurred on a regular basis throughout the month of February. These calls keep all parties aware of project events.

The engineering design review team formed to evaluate the piping joint which failed on December 28, 1994, and other issues which surfaced during start-up testing, issued their report on February 7, 1995. Based on the report findings, the following activities are taking place:

- The double diaphragm pumps have been removed and the progressive cavity pumps are being installed.
- Stainless steel piping has been ultrasonically tested - two faulty welds were found and repaired.
- Carbon steel piping has been inspected - two faulty welds were found and repaired.
- Waiver request for secondary containment of piping is being pursued.

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RA No. 20, Stabilization of UNH Inventories (continued)

- Documentation deficiencies on 267 material purchases are being completed. Initial review did not indicate reason for significant concern for actual material received.

Several alternatives to neutralizing in the event that the pipelines were determined to be defective were evaluated. The alternatives studied included:

- Offsite Treatment by NFS.
- Onsite Treatment (Cement Stabilization) by an outside vendor.
- Installation of a new pipe in a pipe (assumes stainless steel pipe is OK, but carbon steel no good).
- Trucking (instead of pipe).
- "Insitu" neutralization.

Reports on these were issued to EPA during February 1995.

In addition, a study is also being conducted to determine if measures can accelerate the operations schedule. This includes such items as bottom discharge installation by maintenance, reduction in the number of transfer pump movements, etc.

A new project schedule was prepared and issued to Ohio EPA. The schedule indicated that operation would not be expected to begin until July 1995.

Planned Activities:

- Continue to keep new scheduled activity commitments.
- A meeting with EPA is scheduled for March 1, 1995.

RA No. 26, Asbestos Removals (Asbestos Program)

Current Month:

Building 38 propane storage abatement was completed on February 2, 1995. Water Treatment Building Asbestos Abatement was completed February 28, 1995.

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RA No. 26, Asbestos Removals (Asbestos Program) (continued)

Planned Activities:

- Compilation of work packages continues.
- Reinstallation of water lines and valves are estimated to be completed the week of March 16, 1995.
- Completion of Water Treatment March 16, 1995.

RA No. 28, Contamination at the Fire Training Facility

Current Month:

Containerized wastes have been moved from the Fire Training Facility to site waste storage areas. Analytical data from the sampling that was conducted continues to be validated. Approximately 9,000 gallons of waste water will be processed by the end of April 1995. Preparation of the Fire Training Facility Final Report continues with an anticipated submittal date to the EPAs on July 5, 1995.

Planned Activities:

- Continue to work free release issues relative to the building debris.
- Continue work on the final report.

RA No. 31, Seepage Control at the South Field and Inactive Flyash Pile

Current Month:

Comments on the revised work plan have been received for the Ohio EPA and responses are being prepared. Awaiting comments from the U.S. EPA.

Planned Activities for March:

- Incorporate comments into revised work plan.

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RA No. 31, Seepage Control at the South Field and Inactive Flyash Pile (continued)

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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Period Ending February 28, 1995

Remedial Investigations/Feasibility Studies

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. Preparations are currently under way to conduct the three slurry tests in Waste Pits 1, 2, and 3. The slurry testing is scheduled to begin March 13, 1995, and last approximately 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.

Issues/Corrective Actions:

None to report.

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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, 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.

Issues/Corrective Actions:

None to report.

1.7 Planned Activities for March 1995

- Begin Phase II of the DEEP project (slurry testing) by March 13, 1995. This testing, scheduled to be completed March 27, 1995, will complete Phase II of the DEEP project.
- Submit Draft RD Work Plan to DOE.

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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 will be issued on the due date of March 1, 1995.

Issues/Corrective Actions:

None to report.

Planned activities for March

- Delivery of the Final OU 2 Feasibility Study 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

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2.4 Treatability Studies

Status:

None to report.

Issues/Corrective Actions:

None to report.

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:

The revised Draft Record of Decision (ROD) was submitted to DOE on December 13, 1994. The public comment period started October 26, 1994 and was scheduled to end November 25, 1994. However, the public twice requested additional time to comment and the comment period was extended first to December 30, 1994 and then to January 20, 1995. The Draft Responsiveness Summary was originally scheduled to be submitted on December 13, 1994. However, due to the public comment period extensions, the Draft Responsiveness Summary was submitted on January 13, 1995. The comment period extensions also necessitated an amendment to the Consent Agreement, which changed the submittal of the ROD with Responsiveness Summary to U.S. EPA from January 5, 1995 to February 4, 1995. All responses to public comment were incorporated into the revised ROD document and was delivered to EPA ahead of schedule on February 3, 1995.

SCOPE	DUE DATE OF DRAFT TO EPA	SUBMITTAL OF DRAFT TO EPA	SUBMIT TO EPA DRAFT FINAL
Presents the selected remedial action for OU 2 in accordance with CERCLA.	2/4/95	2/3/95	5/03/95

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2.7 Pre-Design Field Investigation

Status:

The Project-Specific Plan for Phases I and II of the Operable Unit 2 Pre-Design Field Investigation has been reviewed by U.S. EPA and Ohio EPA. U.S. EPA comments on the Project-Specific Plan were issued on December 6, 1994 and comment resolution began on December 13, 1994. Ohio EPA approval of the Project-Specific Plan was received on December 12, 1994. Verbal approval from U.S. EPA and Ohio EPA to proceed with the field investigation was received on December 5, 1994. Field drilling activities were completed in January and the drilling equipment was demobilized. Sampling of lysimeters continues, although, several have malfunctioned and need to be replaced. K_d studies, laboratory and geotechnical analyses will proceed. A draft report has been initiated.

2.8 Planned Activities for March

- Sampling activities at wells and lysimeters will continue. Laboratory analysis and studies will also continue through March. An outline for the Draft Pre-Design report has been developed and work will continue on the report development.

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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.

Samples for the laboratory studies to determine the leachability of OU 3 remediation wastes (concrete and paint) were collected at the end of February to support the lab work in March. Preliminary results for the leachability of uranium and technetium have been determined, but additional studies are required to validate these preliminary results.

Issues/Corrective Actions:

None to Report.

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3.2 Remedial Investigation/Feasibility Study Report (continued)

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:

Activities in February included: finalization of the test plan from Florida International University in support of the Surface Decontamination/Removal of Metal study. Paint chip samples were taken from structural steel in support of the K₁ study (solubility of specific materials). A sample was taken from T-2 (Pilot Plant Storage) for thorium nitrate studies. A draft Statement of Work (SOW) was prepared for procurement of treatability services for the decontamination and recycling of the scrap copper project. A final List of Treatability Data Requirements was developed for the Recycling of Plant 7 Metals Treatability study.

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

Status:

The Draft Final RD/RA Work Plan for the Interim Action and the Building 4A Implementation Plan was conditionally approved by Ohio EPA on January 20, 1995 and approved by the U.S. EPA on February 17, 1995. Both documents have been revised and the Final RD/RA Work Plan will be submitted to the agencies by March 17, 1995.

The draft Remedial Design Prioritization and Sequencing Report (PSR) and Material Balance Model (MBM), is being revised based on comments received from the DOE-HQ review on February 13, 1995. The PSR and MBM are scheduled to meet the submittal date of March 17, 1995 to U.S. EPA/Ohio EPA. This PSR is set up as specified to meet 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 defines the types of material that will be generated during the interim remedial action, addresses the rate of generation of those material types, and evaluates the impacts of the remedial action schedule to on-property storage availability.

A public meeting was held on February 21, 1995 on RD/RA efforts at the site, with a particular focus on upcoming OU 3 remedial action activities. For OU 3, this briefing emphasized some of the material presented in the RD/RA fact sheet and allowed the public the opportunity to ask questions about the RD/RA process.

Issues/Corrective Actions:

None to report.

3.6 Planned Activities for March 1995

- Initiate lab work on samples collected in February to determine the leachability of Uranium and Tc-99 for concrete and paint.
- Complete a draft of Appendix A, Characterization, of the RI/FS Report. This appendix will contain detailed text and tables summarizing the results of the OU 3 field characterization program.
- Complete a draft of Section 6, Detailed Analysis of Alternatives, of the RI/FS Report. This section will also contain the comparative analysis.
- Develop the CRARE approach and create the appendix for this information. This appendix will tier off the OU 5 Feasibility Study approach.
- Participate in a meeting with the U.S. EPA and Ohio EPA on March 14 to discuss OU 3 data issues and OU 3 risks.

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3.6 Planned Activities for March 1995 (continued)

- Continue to review the draft test plan to be submitted by NFS in support of the Thorium Nitrate study.
- Complete the draft final report summarizing Chemical Leaching of Concrete study results.
- Continue performing these additional studies: Chemical Leaching, Ultrasonic Decontamination of Strategic Metals, Recycling of Copper, EET Decontamination of Transite, Transite Characterization, and reevaluating the FEMP process of making RCRA determination on light gauge metal with lead-based paint.
- Continue writing final treatability reports for the following Treatability Studies: Chemical Leading of Concrete and the Kelly Decontamination of Concrete.
- Review procedures and other documents in preparation of a QC audit at ALARON in support of the Recycling of Plant 7 Metals.
- Complete the concrete core sampling in support of the K₁ Study.
- Visit NFS and Chem Nuclear to observe the testing of materials for the Treatment of Thorium Nitrate Study.
- Review letters of qualifications and requests for proposals from potential vendors to determine the qualifications of those vendors who have expressed an interest in participating in the Analysis of Potential Surface Blasting Decontamination Technologies for Structural Steel.
- Revise the PSR based on internal comments received for initial draft submittal to U.S. EPA/Ohio EPA on March 17, 1995.
- Submit the approved OU 3 RD/RA Work Plan for Interim Remedial Action and the approved Building 4A Implementation Plan to U.S. EPA and Ohio EPA as final documents.

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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 March 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. The U. S. EPA is continuing their review of the work plan for the OU 4 Remedial Design. U. S. EPA comments are expected to be received on or before March 27, 1995.

4.7 Planned Activities for March 1995

- Continue construction of the Phase I Pilot Plant facility.
- Receive U.S. EPA approval of the work plan for the OU 4 Remedial Design.
- 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:

Approval of the revised RI Report was received from the U.S. EPA on February 17, 1995. Preparation of covers, spines and title pages marked "Final" and "March 1995" began immediately upon receiving the approval. Changes to Volume 1 will include revised headers and the removal of redlined text changes, comment numbers in the margins, and line numbering. This cleaned-up volume will be submitted to the two Administrative Record sites on March 17, 1995. The remainder of the 18-volume document will become the final version by virtue of the approval letter from the U.S. EPA.

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

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5.2 Feasibility Study/Proposed Plan

Status:

Formal comments on the FS and Proposed Plan were received from the U.S. EPA on February 1, 1995. On February 15, proposed draft responses to all comments were sent to the U.S. and Ohio EPAs for preliminary review. Representatives from U.S. EPA, Ohio EPA, DOE and FERMCO staff met in Chicago on February 22 and 23, 1995 to discuss the major issues raised by the comments and to go over the draft responses and actions for acceptability. The results of these meetings indicated that OU 5 was on course with comment responses and revision of both documents.

A letter is being prepared to the U.S. EPA accepting the 20-day extension allowed under the Amended Consent Agreement. The draft final FS, Proposed Plan and the comment/response document will be submitted on March 23, 1995.

EPI Laboratory submitted the data from the K₁ sampling on February 21, 1995. Analysis of the data and work on the report was started upon receipt of this data.

Issues/Corrective Actions:

EPA's early conditional approval of the Proposed Plan is needed (by the end of March) in order for the public comment period to be initiated in time to meet the draft Record of Decision submittal date of July 3, 1995.

OPERABLE UNIT 5 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 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.	11/16/94 C 11/16/94 A	01/16/95 C	02/14/95

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5.3 RCRA Monitoring

Status:

The 1994 RCRA Annual Report has completed the review cycles. The report was finalized and is due to Ohio EPA on March 1, 1995.

5.4 Treatability Studies

Treatability activities in support of the OU 5 FS Report have been concluded.

5.5 Planned Activities for March 1995

- Formal closeout of OU 5 RI activities.
- Complete comment responses and actions on the FS and Proposed Plan and revise documents accordingly.
- Complete K₁ Sampling Report.
- Begin work on the draft Record of Decision (ROD).
- Prepare for public comment period on the Proposed Plan, including the public workshop tentatively scheduled for March 28, 1995.
- Submit 1994 RCRA Annual Report to the Ohio EPA.

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6.0 Community Relations

Status:

On February 2, 1995 the monthly meeting for the Fernald Envoy Program was conducted. About 45 envoys attended and were updated on:

- Ohio Comparative Risk Project - The project is an effort to identify the gaps between public perception of environmental problems and scientific perception of these problems, and the project will clear up any misconceptions that may occur.
- Operable Unit 5's alternative for cleanup remediation.
- New Technology - The technology program at Fernald is making a consistent effort to advocate technology as a better way to save money, time and reduce risk.

On February 18, 1995, the Fernald Citizens Task Force held its regularly scheduled meeting at the Joint Information Center in Fairfield, Ohio. The main topic of the meeting was to discuss and decide upon the future disposition of waste at the Fernald site. Approximately 25 spectators were in attendance representing FRESH, CLEAN, ODH, GCBCTC, ATSDR, Ross Township, local residents, FERMCO, DOE, U.S. EPA and Ohio EPA, and other interested parties. The issue for discussion at this meeting was: "Should any waste material stay at the site, and if so, what should stay, and what should go?" New information including risk, cell design, and issues relative to the transportation of waste off-site were presented. A motion was made and passed stating "The Fernald Citizens Task Force recommends the construction of an on-site disposal facility to accept, from the Fernald site only, materials solely with low levels of contamination."

On February 15, the *Fernald Environmental Management Project Work Force Restructuring Plan* was issued to salaried FERMCO employees. The plan outlines benefits offered to FERMCO salaried employees who are selected for voluntary or involuntary separation from the Fernald site, as part of the restructuring effort. The restructuring is focused upon positions and services which will not be included in future work. Stakeholder comments were considered as the final plan was developed; changes are included in the plan under the "Stakeholder Involvement" section. DOE estimates about 400 employees will be affected and the site's work force will be reduced to about 1800 people.

Copies of the U.S. EPA-approved *Community Relations Plan* have been made available to the public in the Public Environmental Information Center (PEIC), 10845 Hamilton-Cleves Highway, Harrison (phone: 513-738-0165). U.S. EPA approved the *Community Relations Plan* in January 1995, and Ohio EPA approved the document in December 1994. In addition, the 1994

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6.0 Community Relations (continued)

Community Assessment Feedback from Community Leader Interviews, which was used to revise the *Community Relations Plan*, is also at the PEIC for public inspection.

On February 21, DOE conducted a public workshop at the Plantation in Harrison, Ohio on the remedial design and remedial action (RD and RA) process. DOE provided an overview of the site's transition to RD and RA. Also discussed were the Operable Unit 3 RD and RA plans and activities for the interim remedial action. Although CERCLA only requires minimal public participation/involvement during the RD/RA phase, DOE explained their outline for public involvement opportunities which exceeds the requirements. DOE will continue using one-on-one meetings, public notices announcing documents placed in the Public Environmental Information Center, postcards, phone calls, etc. to keep the public updated. Workshops and public briefings will be used, as appropriate, depending on public needs or interests. Fifty-four people attended the meeting, including FRESH and local stakeholders; DOE; FERMCO; U.S. EPA and Ohio EPA.

On February 23, a ceremony was held to recognize the efforts of the Fernald employees who were involved in completing construction and implementing operation of the Advanced Waste Water Treatment (AWWT) facility. The facility was operational as of January 31, meeting an EPA milestone. The AWWT facility will reduce uranium discharges to the Great Miami River by more than 80 percent. Several local stakeholders involved with groundwater issues at the site attended the event and applauded the completion of the project. Speaking at the ceremony, along with DOE and FERMCO managers, was Edwa Yocum, secretary of FRESH and a local resident. Following the ceremony a tour of the facility was provided.

On February 25, the Centers for Disease Control and Prevention and the Agency for Toxic Substances and Disease Registry held a public meeting at the Plantation in Harrison, Ohio to discuss the establishment of a Fernald Health Effects Subcommittee to further involve the Fernald community in their work. About 20 people attended the day long meeting. The subcommittee will be made up of 12 to 20 members who represent a cross-section of the community and is expected to be fully operational by June 1995. The primary purpose of the subcommittee will be to advise the federal agencies on health effects in the Fernald community. A set of operational guidelines for the subcommittee was drafted at the meeting and will be sent to interested stakeholders within the next 30 days as well as a notice about the next meeting.

The regular monthly meeting of the Fernald Residents for Environmental Safety and Health (FRESH) was held on February 23, 1995 with about 35 in attendance. Guest speaker was Larry Zull from the Defense Nuclear Facilities Safety Board (DNFSB). The DNFSB is an

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Remedial Investigations/Feasibility Studies

6.0 Community Relations (continued)

independent agency, established by Congress, to review and evaluate standards, conduct investigations, analyze design and review facility construction and make recommendations to the DOE secretary. The DNFSB has made 21 visits to the Fernald site.

At the meeting, the DOE-FN Public Information Director's presentation included the following topics:

- Availability of the Operable Unit 5 Proposed Plan and explanation of the preferred alternative.
- Fernald Citizens Task Force's motion to recommend construction of an on-site disposal facility and their key considerations in making the recommendation.
- Revised Schedule for the UNH Project.
- Calendar of upcoming events and public involvement activities.

Issues/Corrective Action:

None.

6.1 Planned Activities for March 1995

- On March 11, the Fernald Citizens Task Force will conduct their monthly meeting at the Joint Information Center in Fairfield, Ohio. The meeting is scheduled from 8:30 - 12:30 and is open to the public.
- A DOE Community Meeting will be held on March 14, starting at 6:30 p.m. at the Plantation in Harrison, Ohio. The FY96 and FY97 budgets and cleanup priorities at the FEMP will be discussed.
- The regular monthly meeting of FRESH will be held on March 23, 1995 at the Venice Presbyterian Church in Ross, Ohio beginning at 7:30 p.m.
- On March 28, DOE will hold an informational meeting to discuss Operable Unit 5's preferred alternative at the Crosby Elementary School beginning at 7:00 p.m.
- DOE will submit the Proposed Site Treatment Plan to Ohio EPA on March 31. Ohio EPA will initiate a 60-day public comment period on the document.

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

PERIOD ENDING FEBRUARY 28, 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 February 28, 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 February 1995.

Summary - February 1995

The total quantity of uranium discharged from the FEMP to the Great Miami River via Manhole 175 (Outfall 11o00004001) was 0.97 kilograms. The average uranium concentration for the previous 12 months was 0.35 mg/L. This is 39.3% 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 12.58 kilograms. The average uranium concentration for the previous 12 months was 0.058 mg/L. This is 6.7% 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 January 1995. Based on 1.52 inches of rainfall in February 1995, the total quantity of uranium discharged to Paddy's Run from uncontrolled areas of the FEMP is estimated to be 4.32 kilograms.

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

Period Ending February 28, 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: 11000004001
001 Total Discharge
Manhole 175 (Effluent to Great Miami River)

DATE: FEBRUARY 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	0.113	95 <	54	0.13	0.06	44
2	0.123	41	72	0.07	0.03	24
3	0.114	32 <	54	0.06	0.03	21
4	0.087	36	81	0.06	0.02	19
5	0.041	41 <	54	0.07	0.01	25
6	0.073	**	68	0.17	0.05	57
7	0.110	** <	54	0.10	0.04	33
8	0.145	**	**	0.05	0.03	18
9	0.140	**	**	0.04	0.02	14
10	0.155	**	**	0.03	0.02	11
11	0.112	**	**	0.03	0.01	8
12	0.099	**	**	0.03	0.01	9
13	0.160	**	**	0.05	0.03	18
14	0.152	**	**	0.06	0.03	20
15	0.224	**	**	0.07	0.06	23
16	0.227	**	**	0.12	0.10	41
17	0.165	**	**	0.14	0.09	47
18	0.137	**	**	0.06	0.03	19
19	0.128	**	**	0.05	0.02	17
20	0.110	**	**	0.09	0.04	31
21	0.171	**	**	0.10	0.06	34
22	0.169	**	**	0.04	0.03	15
23	0.155	**	**	0.03	0.02	10
24	0.117	**	**	0.03	0.01	9
25	0.084	**	**	0.04	0.01	15
26	0.087	**	**	0.12	0.04	41
27	0.121	**	**	0.09	0.04	30
28	0.116	**	**	0.06	0.03	21
Total	3.635				0.97	

** 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 February 28, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 001 Total Discharge

DATE: FEBRUARY 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.	0.130	7	11	0.07	0.03	24
Max.	0.227	95	81	0.17	0.10	57
Min.	0.041	**	**	0.03	0.01	8

The average uranium concentration for the previous twelve months was 0.35 mg/l. This is 39.3 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.

**CONSOLIDATED CONSENT AGREEMENT FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
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Period Ending February 28, 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: 11000004002
002 Discharge (Overflow) to Storm Sewer Outfall Ditch
Stormwater Retention Basin Spillway (Effluent to Paddy's Run)

DATE: FEBRUARY 1995

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

Based on 1.52 inches of rainfall for the month, the uranium discharge to Paddy's Run from uncontrolled areas of the FEMP is estimated to be 4.32 kgs.

000043

Attached are revised data for the month of January 1995 for the Effluent Radiation Reports.

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 January 1995.

Summary - January 1995

The total quantity of uranium discharged from the FEMP to the Great Miami River via Manhole 175 (Outfall 11o00004001) was 8.27 kilograms. The average uranium concentration for the previous 12 months was 0.46 mg/L. This is 51.7% 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 January 1995. Based on 3.13 inches of rainfall in January 1995, the total quantity of uranium discharged to Paddy's Run from uncontrolled areas of the FEMP is estimated to be 8.89 kilograms.

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: 11000004001
 001 Total Discharge
 Manhole 175 (Effluent to Great Miami River)

DATE: JANUARY 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	0.099	329	392	0.62	0.23	209
2	0.089	293	419	0.62	0.21	209
3	0.133	261	***	0.56	0.28	189
4	0.135	176	***	0.34	0.17	115
5	0.115	216	***	0.47	0.20	159
6	0.084	189	***	0.38	0.12	128
7	0.078	45	***	0.11	0.03	37
8	0.032	77	***	0.12	0.01	41
9	0.065	63	***	0.11	0.03	37
10	0.087	54	***	0.10	0.03	33
11	0.120	81	***	0.10	0.05	34
12	0.227	171	***	0.32	0.27	108
13	0.227	212	***	0.48	0.41	162
14	0.204	266	***	0.50	0.39	169
15	0.210	230	***	0.54	0.43	182
16	0.225	279	***	0.57	0.49	193
17	0.199	***	***	0.56	0.42	189
18	0.214	***	***	0.39	0.32	132
19	0.238	***	***	0.42	0.38	142
20	0.277	***	***	0.48	0.50	162
21	0.221	***	***	0.61	0.51	206
22	0.175	***	***	0.75	0.50	253
23	0.207	***	***	0.58	0.45	196
24	0.211	***	***	0.55	0.44	186
25	0.207	***	***	0.55	0.43	186
26	0.206	***	***	0.54	0.42	182
27	0.172	***	***	0.56	0.36	189
28	0.069	***	***	0.13	0.03	44
29	0.056	***	***	0.16	0.03	54
30	0.101	***	***	0.17	0.06	57
31	0.090	***	***	0.14	0.05	47
Total	4.773				8.27	

*** Analytical results not yet available.

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EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 001 Total Discharge

DATE: JANUARY 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.	0.154	91	16	0.46	0.27	155
Max.	0.277	329	419	0.75	0.51	253
Min.	0.032	***	***	0.10	0.01	33

The average uranium concentration for the previous twelve months was 0.46 mg/l. This is 51.7 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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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: JANUARY 1995

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

Based on 3.13 inches of rainfall for the month, the uranium discharge to Paddy's Run from uncontrolled areas of the FEMP is estimated to be 8.89 kgs.

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE
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CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
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PERIOD ENDING FEBRUARY 28, 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 February 28, 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).

3. Reports and Record Keeping

Section B

The RI/FS Monthly Technical Progress Report for January 1994 was transmitted to the U.S. EPA on February 17, 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.

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
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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 January 1995, was transmitted to the U.S. EPA on February 17, 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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**STATUS OF ASSIGNMENTS FOR WORK REQUIRED ON
FEDERAL FACILITY COMPLIANCE AGREEMENT ACTIONS**

February 28, 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 January 1995 was transmitted to the U.S. EPA on February 17, 1995.

TABLE 1

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

February 28, 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.

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

February 28, 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	January's FFCA Monthly Progress Report was transmitted to the U.S. EPA on February 17, 1995.
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**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
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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 February 28, 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 February 1, through February 28, 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
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Period Ending February 28, 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 February 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 February 28, 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.

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Period Ending February 28, 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.

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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 FACILITIES COMPLIANCE AGREEMENT
FEDERAL FACILITIES AGREEMENT MONTHLY REPORT**

MONTH: FEBRUARY
YEAR: 1995

FACILITY: Fernald Environmental Management Project
U. S. Department of Energy
7400 Willey Road, P.O. Box 398753
Cincinnati, Ohio 45253 Hamilton

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

Daily Averages:	K-65, NW (pCi/L)	K-65, SW (pCi/L)	K-65, NE (pCi/L)	K-65, SE (pCi/L)
02/01/95	1.0 (b)	1.1	2.4 (b)	1.4
02/02/95	1.2	2.7	1.5	1.5
02/03/95	0.7	6.3	0.7	0.6
02/04/95	0.5	1.0	3.2	3.0
02/05/95	0.6	1.3	3.7	3.4
02/06/95	1.2	1.4 (a)	9.1 (a)	2.8 (a)
02/07/95	1.3	1.8 (a)	6.9 (a)	1.8 (a)
02/08/95	0.6	1.4	3.9	2.3
02/09/95	0.9	1.6	3.5	1.6
02/10/95	0.6	0.8	1.5 (b)	0.7
02/11/95	0.5	1.1	2.8	2.2
02/12/95	0.6	1.7	3.8 (a)	2.7 (a)
02/13/95	1.1	1.9	12.3	5.7
02/14/95	2.0	6.0	5.0	3.5
02/15/95	5.0	1.6	2.8	1.5
02/16/95	0.7	1.6	2.8	2.8
02/17/95	1.9	2.4	9.7	7.5
02/18/95	3.4	3.0	12.0	9.6
02/19/95	2.4	3.5	27.7	11.3
02/20/95	2.1	2.2	16.2	9.4
02/21/95	0.5	1.0	2.4	2.5
02/22/95	1.5	1.4	3.0	1.7
02/23/95	0.9	1.2	2.7	1.8
02/24/95	0.6	1.0	4.8	3.5
02/25/95	1.1	1.8	9.0	5.7
02/26/95	1.1	1.7	2.8	2.4
02/27/95	2.9	2.3	2.3	2.1
02/28/95	0.5	0.9	1.2	0.9

Monthly Statistics of Daily Averages:	K-65, NW (pCi/L)	K-65, SW (pCi/L)	K-65, NE (pCi/L)	K-65, SE (pCi/L)
AVERAGE	1.3	2.0	5.7	3.4
MAXIMUM	5.0	6.3	27.7	11.3
MINIMUM	0.5	0.8	0.7	0.6
MEDIAN	1.0	1.6	3.2	2.4
STD. DEV.	1.0	1.3	5.7	2.8

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

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

MONTH: FEBRUARY
YEAR: 1995

FACILITY: Fernald Environmental Management Project
U. S. Department of Energy
7400 Willey Road, P.O. Box 398753
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)
02/01/95	0.5	0.5	1.3	0.4	0.2 (b)
02/02/95	0.7	0.7	1.2	0.5	0.8
02/03/95	0.4	0.6	1.3	0.4	0.6
02/04/95	0.4	0.5	1.5	0.5	0.6
02/05/95	0.8 (a)	0.7	3.0	0.5	0.5
02/06/95	0.2 (a)	0.8 (a)	1.9 (a)	0.5	0.7
02/07/95	0.3 (a)	0.5 (a)	1.4 (a)	0.7	0.7
02/08/95	0.7 (a)	0.8 (a)	4.9 (a)	0.5 (a)	0.7
02/09/95	0.4 (a)	0.9	2.8 (a)	0.5	1.0
02/10/95	0.4	0.4	1.2	0.4	0.6
02/11/95	0.7 (a)	0.6	2.5 (a)	0.4	0.6
02/12/95	0.6 (a)	0.8 (a)	3.9 (a)	0.6	0.6
02/13/95	1.1 (a)	1.0	3.2 (a)	0.6	0.7
02/14/95	0.8	0.9	2.0	0.5	0.8
02/15/95	0.7	0.5	1.1	0.4	0.7
02/16/95	0.7	0.5	1.2	0.4	0.7
02/17/95	0.9	0.6	1.5	0.5	0.8
02/18/95	1.0	0.7	1.6	0.5	0.8
02/19/95	1.1	0.7	1.7	0.6	0.8
02/20/95	1.1	0.7	1.7	0.6	0.8
02/21/95	0.6	0.4	1.1	0.4	0.6
02/22/95	0.7	0.4	1.1	0.4	0.6
02/23/95	0.8	0.5	1.0 (b)	0.4	0.7
02/24/95	0.6	0.4	1.2	0.4	0.6
02/25/95	1.0	0.7	1.5	0.6	0.6
02/26/95	0.9	0.6	1.1	0.4	0.7
02/27/95	1.0	0.7	1.2	0.5	0.8
02/28/95	0.7	0.5	1.1	0.4	0.6

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	0.7	0.6	1.8	0.5	0.7
MAXIMUM	1.1	1.0	4.9	0.7	1.0
MINIMUM	0.2	0.4	1.0	0.4	0.2
MEDIAN	0.7	0.6	1.4	0.5	0.7
STD. DEV.	0.2	0.2	0.9	0.1	0.1

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

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

MONTH: FEBRUARY
 YEAR: 1995

FACILITY: Fernald Environmental Management Project
 U.S. Department of Energy
 7400 Willey Road, P.O. Box 398753
 Cincinnati, Ohio 45253 Hamilton

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

REPORT GENERATED: 03/08/95

Daily Statistics	SILO 1				SILO 2			
	Average	Maximum	Minimum	Std. Dev.	Average	Maximum	Minimum	Std. Dev.
02/01/95	701,000	1,820,000	87,500	479,000	*	*	*	*
02/02/95	457,000	1,730,000	58,900	426,000	*	*	*	*
02/03/95	582,000	1,690,000	50,400	433,000	*	*	*	*
02/04/95	180,000	1,520,000	21,100	245,000	*	*	*	*
02/05/95	127,000	365,000	31,100	59,700	*	*	*	*
02/06/95	292,000	827,000	48,900	79,800	*	*	*	*
02/07/95	548,000	1,750,000	83,200	420,000	*	*	*	*
02/08/95	276,000	1,360,000	43,200	247,000	*	*	*	*
02/09/95	531,000	1,360,000	48,200	349,000	*	*	*	*
02/10/95	485,000	1,720,000	50,400	445,000	*	*	*	*
02/11/95	269,000	1,330,000	40,400	177,000	*	*	*	*
02/12/95	546,000	1,360,000	284,000	161,000	*	*	*	*
02/13/95	654,000	1,560,000	273,000	297,000	*	*	*	*
02/14/95	719,000	1,840,000	46,800	468,000	*	*	*	*
02/15/95	1,290,000	2,040,000	81,800	602,000	*	*	*	*
02/16/95	650,000	1,700,000	45,400	398,000	*	*	*	*
02/17/95	826,000	1,710,000	126,000	457,000	*	*	*	*
02/18/95	1,260,000	1,940,000	348,000	526,000	*	*	*	*
02/19/95	1,330,000	1,950,000	438,000	477,000	*	*	*	*
02/20/95	1,060,000	1,940,000	68,900	593,000	*	*	*	*
02/21/95	171,000	1,690,000	13,200	329,000	*	*	*	*
02/22/95	1,060,000	1,990,000	47,500	470,000	*	*	*	*
02/23/95	883,000	2,030,000	26,100	650,000	*	*	*	*
02/24/95	228,000	1,550,000	21,800	308,000	*	*	*	*
02/25/95	1,090,000	1,840,000	445,000	372,000	*	*	*	*
02/26/95	927,000	1,860,000	36,800	611,000	*	*	*	*
02/27/95	1,420,000	1,960,000	387,000	445,000	*	*	*	*
02/28/95	210,000	1,920,000	17,500	438,000	*	*	*	*

Grab Samples of K-65 Silo Headspace

Date:	SILO 1 Concentration	SILO 2 Concentration
**n/a	No grab samples taken.	No grab samples taken.

Notes:

1. All values reported in pCi/L
 2. Continuous data reported to three significant digits to remain consistent with the calibration data.
- * Silo 2 continuous data unavailable due to radon sample pump failure. - pump has been replaced; during February a working level monitor was placed in the OU4 area.
- ** Due to weather related health and safety requirements, grab samples were not taken this month.

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

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 398704
Cincinnati, Ohio 45239 Hamilton

K-65 SILO REPORT

LOCATION: Silo # 1

DATE: February 1995

Day	Ambient Temp °F	Press In. Hg.	Temperature Head Space °F	Inter. Hum. %	Diff. Press In. HG	Head Space Radon (pCi/l)
1	34	29.17	38	*	0	701,000
2	32	29.33	38	*	-0.01	457,000
3	25	29.31	38	*	-0.01	582,000
4	22	29.28	38	*	-0.01	180,000
5	9	29.52	38	*	-0.01	127,000
6	1	29.59	37	*	-0.01	292,000
7	5	29.44	36	*	-0.01	548,000
8	9	29.67	36	*	-0.01	276,000
9	18	29.54	35	*	0.02	531,000
10	29	29.2	36	*	-0.01	485,000
11	15	29.46	36	*	-0.01	269,000
12	2	29.82	35	*	-0.01	546,000
13	13	29.8	34	*	-0.01	654,000
14	24	29.71	34	*	-0.01	719,000
** 15	36	29.33	35	*	0	1,290,000
** 16	31	29.59	35	*	0.08	650,000
** 17	28	29.81	35	*	0.05	826,000
18	33	29.71	35	*	0	1,260,000
19	36	29.56	36	*	0	1,330,000
20	38	29.27	36	*	0	1,060,000
21	30	29.47	36	*	-0.01	171,000
22	38	29.46	36	*	0	1,060,000
23	46	29.31	37	*	0	883,000
24	31	29.67	37	*	-0.01	226,000
25	34	29.59	37	*	0	1,090,000
26	51	29.49	38	*	0	927,000
27	47	29.46	39	*	0	1,420,000
28	35	29.57	39	*	-0.01	210,000
ARITHMETIC MEAN	26.9	29.50	36.4	*	0.000	670,357
MAXIMUM	51.0	29.82	39.0	*	0.080	1,420,000
MINIMUM	1.0	29.17	34.0	*	-0.010	127,000
MEDIAN	30.5	29.51	36.0	*	-0.010	616,000

Note: * - Silo #1 Relative Humidity was inoperable.
** - Some Delta Pressure values were outside of range restrictions.

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

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 398704
Cincinnati, Ohio 45239 Hamilton

K-65 SILO REPORT

LOCATION: Silo # 2.

DATE: February 1995

Day	Ambient Temp °F	Press In. Hg.	Temperature Head Space °F	Inter. Hum. %	Diff. Press In. HG	Head Space Radon (pCi/l)
1	34	29.17	39	98	-0.01	***
2	32	29.33	39	98	-0.01	***
3	25	29.31	39	98	-0.01	***
4	22	29.28	39	99	-0.01	***
5	9	29.52	39	*	-0.01	***
6	1	29.59	38	*	-0.01	***
7	5	29.44	37	*	-0.01	***
8	8	29.67	37	*	-0.01	***
9	18	29.54	37	*	-0.01	***
10	29	29.2	37	*	-0.01	***
11	15	29.46	37	*	-0.01	***
12	2	29.82	36	*	-0.01	***
13	13	29.8	36	*	-0.01	***
14	24	29.71	36	*	-0.01	***
** 15	36	29.33	36	*	-0.07	***
** 16	31	29.59	37	*	0.03	***
** 17	28	29.81	37	*	-0.02	***
18	33	29.71	37	98	-0.01	***
19	36	29.56	37	97	-0.01	***
20	38	29.27	37	96	-0.01	***
21	30	29.47	38	95	-0.01	***
22	38	29.46	38	95	-0.01	***
23	46	29.31	39	94	-0.01	***
24	30	29.56	39	92	-0.01	***
25	34	29.59	38	93	-0.01	***
26	51	29.49	39	93	-0.01	***
27	47	29.46	40	91	-0.01	***
28	35	29.57	40	91	0.12	***
ARITHMETIC MEAN	26.8	29.50	37.8	95.2	-0.006	***
MAXIMUM	51.0	29.82	40.0	99.0	0.120	***
MINIMUM	1.0	29.17	36.0	91.0	-0.070	***
MEDIAN	30.0	29.51	37.5	91.0	-0.010	***

Note: * - Silo #2 Relative Humidity values were outside of range restrictions.
** - Some Delta Pressure values were outside of range restrictions.
*** - Silo #2 continuous data unavailable due to radon sample pump failure.

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

PERIOD ENDING FEBRUARY 28, 1995

ENCLOSURE D

EFFLUENT RADIATION DISCHARGES TO THE GREAT MIAMI RIVER

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

Period Ending February 28, 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 February 28, 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: JANUARY 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	0.007	***	***	12.5	0.0003	1.8	6.7	7.0
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	0.000							
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							
29	0.000							
30	0.000							
31	0.000							
Total	0.007				0.0003			

*** 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 February 28, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: [SP1] IAWWT - T108

DATE: JANUARY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	0.000	***	***	12.5	0.0003
Max.	0.007	***	***	12.5	0.0003
Min.	0.000	***	***	12.5	0.0003

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 February 28, 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: JANUARY 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	0.030	***	***	9.0	0.0010	3.4	7.7	8.8
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							
29	0.000							
30	0.000							
31	0.000							
Total	0.030				0.0010			

*** 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 February 28, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: [SP1] IAWWT - T109

DATE: JANUARY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	0.001	***	***	9.0	0.0010
Max.	0.030	***	***	9.0	0.0010
Min.	0.000	***	***	9.0	0.0010

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 February 28, 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: JANUARY 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)
1	0.000				
2	0.000				
3	0.000				
4	0.000				
5	0.000				
6	0.303	261	113	0.49	0.56
7	1.137	302	90	0.51	2.19
8	0.870	284	81	0.51	1.68
9	1.400	261	162	0.44	2.33
10	1.694	203	54	0.36	2.31
11	0.536	225	126	0.36	0.73
12	0.000				
13	0.230	324	113	0.54	0.47
14	0.542	324	113	0.54	1.11
15	0.307	324	113	0.54	0.63
16	0.700	324	113	0.54	1.43
17	0.623	324	113	0.54	1.27
18	0.470	324	144	0.53	0.94
19	1.432	338	113	0.63	3.41
20	1.826	441	113	0.63	4.35
21	2.290	405	117	0.63	5.46
22	1.350	450	117	0.65	3.32
23	0.000				
24	0.000				
25	0.000				
26	0.000				
27	0.937	351	***	0.64	2.27
28	0.891	351	***	0.60	2.02
29	0.877	306	***	0.56	1.86
30	0.883	351	***	0.59	1.97
31	0.779	342	***	0.56	1.65
	20.077				41.98

* No sample collected; average monthly value used for calculations.
*** Analytical results not yet available.

000073

116

6734

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

Period Ending February 28, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: (606) SWRB

DATE: JANUARY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (mg/l)(2)	Total U (kgs)
Avg.	0.648	336	86	0.55	2.00
Max.	2.290	450	162	0.65	5.46
Min.	0.000	203	54	0.36	0.47

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.

000074

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

Period Ending February 28, 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: JANUARY 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)
1	0.104	441	586	0.80	0.31
2	0.050	378	541	0.81	0.15
3	0.110	423	450	0.80	0.33
4	0.097	410	450	0.80	0.29
5	0.130	676	766	1.60	0.79
6	0.037	68	153	0.17	0.02
7	0.043	45	131	0.08	0.01
8	0.028	59	113	0.09	0.01
9	0.000				
10	0.000				
11	0.000				
12	0.054	441	495	0.90	0.18
13	0.109	419	414	0.79	0.33
14	0.105	392	365	0.79	0.31
15	0.109	360	405	0.79	0.33
16	0.113	392	450	0.81	0.35
17	0.101	369	369	0.78	0.30
18	0.104	369	410	0.78	0.31
19	0.119	495	414	0.89	0.40
20	0.134	541	450	0.92	0.47
21	0.122	495	495	1.00	0.46
22	0.133	495	541	0.98	0.49
23	0.102	428	541	0.95	0.37
24	0.130	586	631	1.10	0.54
25	0.131	541	586	1.10	0.55
26	0.117	495	495	1.10	0.49
27	0.129	766	676	1.50	0.73
28	0.133	856	676	1.60	0.81
29	0.145	766	***	1.50	0.82
30	0.135	811	***	1.50	0.77
31	0.142	721	***	1.50	0.81
Total	2.966				11.73

*** Analytical results not yet available.

000075

05

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

6734

Period Ending February 28, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: (605) BDN/VETS

DATE: JANUARY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (mg/l)(2)	Total U (kgs)
Avg.	0.096	525	429	1.04	0.42
Max.	0.145	856	766	1.60	0.82
Min.	0.000	45	113	0.08	0.01

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 February 28, 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: JANUARY 1995

Day	C-BOD5 (mg/l)	TSS (mg/l)	NH ₃ -N (mg/l)	NO ₃ -N (mg/l)	Chromium (ug/l)	Copper (ug/l)	Nickel (ug/l)	Hex-Chrom (ug/l)
1								
2								
3	1.88							
4		5	0.21	9.4 <	6.0 <	14.0 <	17.0 <	6.0
5								
6								
7								
8								
9								
10								
11								
12	4.78 <	2	0.60	9.3 <	6.0 <	14.0 <	17.0 <	6.0
13								
14								
15								
16	<	2	0.20	8.6 <	6.0 <	14.0 <	17.0 <	6.0
17	1.39							
18								
19								
20								
21								
22	<	2	AE	8.9 <	6.0 <	14.0 <	17.0 <	6.0
23								
24	1.40							
25								
26								
27								
28								
29								
30								
31	3.83							

AE Analytical results invalid due to improper sample preservation.

000077

110

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

Period Ending February 28, 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: JANUARY 1995

Day	Flow (MGD)
1	0.000
2	0.000
3	0.000
4	0.000
5	0.000
6	0.296
7	1.137
8	0.870
9	1.400
10	1.694
11	0.536
12	0.000
13	0.230
14	0.542
15	0.307
16	0.700
17	0.623
18	0.411
19	1.432
20	1.826
21	2.290
22	1.350
23	0.000
24	0.000
25	0.000
26	0.000
27	0.000
28	0.000
29	0.000
30	0.000
31	0.000
Total	15.644

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

Period Ending February 28, 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: JANUARY 1995

Day	Flow (MGD)	Total U (ug/l)	Total U (kgs)
1	0.000		
2	0.000		
3	0.000		
4	0.000		
5	0.000		
6	0.000		
7	1.192	11.4	0.05
8	1.385	11.2	0.06
9	1.415	• 18.2	0.10
10	1.407	• 18.2	0.10
11	1.314	• 18.2	0.09
12	1.383	• 18.2	0.10
13	1.343	• 18.2	0.09
14	1.227	• 18.2	0.08
15	1.272	• 18.2	0.09
16	1.331	• 18.2	0.09
17	1.279	• 18.2	0.09
18	1.540	22.8	0.13
19	0.990	22.2	0.08
20	1.442	14.0	0.08
21	1.189	19.4	0.09
22	1.256	19.1	0.09
23	1.524	• 18.2	0.10
24	1.378	• 18.2	0.09
25	1.634	• 18.2	0.11
26	2.044	18.8	0.15
27	2.033	19.1	0.15
28	2.160	20.2	0.17
29	2.160	19.1	0.16
30	2.160	18.8	0.15
31	2.160	• 18.2	0.15
Total	38.218		2.63

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

000079

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

6734

Period Ending February 28, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: South Plume

DATE: JANUARY 1995

	<u>Flow</u> <u>(MGD)</u>	<u>Total U</u> <u>(ug/l)(2)</u>	<u>Total U</u> <u>(kgs)</u>
Avg.	1.233	18.2	0.11
Max.	2.160	22.8	0.17
Min.	0.000	11.2	0.05

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.

000080

013

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

Period Ending February 28, 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: JANUARY 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	0.000						
2	0.000						
3	0.000						
4	0.000						
5	0.000						
6	0.303	112.6 <	58.6	190	0.22		**
7	2.329	121.6 <	58.6	220	1.94		7.6
8	2.255	108.1 <	58.6	190	1.62		7.6
9	2.815	117.1 <	58.6	180	1.92		7.5
10	3.101	130.6 <	58.6	210	2.46		7.7
11	1.850	58.6 <	54.1	100	0.70		7.3
12	1.383	22.5 <	54.1	41	0.21	**	7.3
13	1.573	13.5 <	54.1	19	0.11		7.1
14	1.769	18.0 <	54.1	19	0.13		7.9
15	1.579	18.0 <	54.1	19	0.11		7.4
16	2.031 <	13.5 <	54.1	12	0.09		7.6
17	1.902	18.0 <	54.1	12	0.09		7.6
18	2.010	49.5 <	54.1	110	0.84		7.7
19	2.422	184.7 <	54.1	350	3.21	8.2	7.8
20	3.268	229.7 <	54.1	350	4.33		7.6
21	3.479	292.8	54.1	420	5.53		7.6
22	2.606	211.7 <	54.1	330	3.26		7.7
23	1.524	72.1 <	54.1	150	0.87		7.7
24	1.378	22.5 <	54.1	15	0.08		7.5
25	1.634 <	13.5 <	49.5	14	0.09		7.8
26	2.044 <	13.5 <	49.5	10	0.07	1.0	7.8
27	3.006	18.0 <	49.5	11	0.13		7.9
28	3.184 <	13.5 <	49.5	16	0.19		7.2
29	3.182 <	13.5 <	49.5	13	0.16		7.2
30	3.178	13.5 <	49.5	15	0.18		7
31	3.081	18.0 <	49.5	36	0.42		7.1
Total	58.886				28.95		

* Effective 3/11/94, the SWRB discharges were combined with the South Plume.

** No sample collected.

000081

014

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

Period Ending February 28, 1995.

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: [SP3] Valve House

DATE: JANUARY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	1.900	82.8	53.4	130	1.11
Max.	3.479	292.8	58.6	420	5.53
Min.	0.000 <	13.5 <	49.5	10	0.07

The average uranium concentration for the previous twelve months was 0.057 mg/l. This is 6.4 % 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.

000082

015

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

Period Ending February 28, 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: JANUARY 1995

Day	DO (mg/l)	IRON (mg/l)	MANGANESE (mg/l)
1			
2			
3			
4			
5	**	**	**
6			
7			
8			
9			
10			
11			
12	8.1	0.50	0.2
13			
14			
15			
16			
17			
18			
19	14.3	0.34	< 0.1
20			
21			
22			
23			
24			
25			
26	9.1	0.25	0.1
27			
28			
29			
30			
31			

** No flow.

000083

016