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

05/16/95

DOE-0981-95
DOE-FN EPAS
8576
REPORT



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

MAY 18 1995

DOE-0981-95

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 APRIL 1995

Enclosure 1 is the consolidated CA/FFCA/FFA and RI/FS Monthly Progress Report, which describes the activities accomplished April 1 through 31, 1995, and planned actions for the period of May 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,
for Johnny Rosing
Jack R. Craig
Fernald Remedial Action
Project Manager

Enclosures: As Stated

cc w/encs:

K. H. Chaney, EM-423/GTN
D. R. Kozlowski, EM-423/GTN
J. Kwasniewski, OEPA-Columbus
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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 April 1 through April 30, 1995, and planned actions for the period May 1 through May 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 April 1995. Information is presented for each of the Removal Actions identified in the Consent Agreement As Amended.

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REMOVAL ACTION SUMMARY

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

* Shading denotes completed actions

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NO.	TITLE	SCOPE	STATUS
5	Decant Sump Tank	Periodically remove liquid from K-65 decant sump tank.	Ongoing
6	Waste Pit 6 Residues	Eliminate potential airborne contamination by resubmerging exposed pit material.	Completed: 12/18/90
7	Plant 1 Pad Continuing Release	Stage I - Implement run-on/off control measures.	Completed: 1/17/92
		Stage II - Install new pad.	Completed: 12/4/92
		Stage III - Upgrade existing Plant 1 Storage Pad	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.	Completed: 8/28/92
		Phase II - Complete active flyash pile controls.	Maintenance: Ongoing
11	Pit 5 - Experimental Treatment Facility	Remove contents, structure, and filter material. Backfill and cap with clay cover.	Completed: 3/20/92
12	Safe Shutdown	Remove uranium and other material from former processing equipment and ship material and equipment off-site.	Ongoing
13	Plant 1 Ore Silos	Dismantle fourteen ore silos and their support structures.	Completed: 11/18/94
14	Contaminated Soil Adjacent to Sewage Treatment Plant Incinerator	Isolate or remove and dispose of contaminated soils from the vicinity of the sewage treatment plant.	Final Report Submitted 11/18/94
15	Scrap Metal Piles	Phase I - Disposition LLW ferrous/non-ferrous scrap metal	Ongoing
		Phase II - IIA - Containerization of scrap copper	Completed: 8/29/92
		IIB - Disposition of scrap copper	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: 11/18/94
20	Stabilization of UNH Inventories	Neutralize, filter and package UNH inventory.	Ongoing
21	Expedited Silo 3	Mitigate the potential release of hazardous waste material by covering and sealing dust collector hopper, removing dust collector, and capping and covering obvious release pathways.	Completed: 2/24/93
22	Waste Pit Area Containment Improvement	Stabilize south berm of Pit 4; regrade drainage ditches along Pits 3, 4, 5, and 6; and resurface road between Pits 3, 4, 5, and 6.	Completed: 7/30/93
23	Inactive Flyash Pile	Conduct field investigation to identify locations requiring material removal.	Completed: 4/30/92
24	Pilot Plant Sump	Remove liquid and sludge from the sump.	Completed: 10/15/93
25	Nitric Acid Tank Car and Surrounding Area	Remove residual contents from tank car and decontaminate and dispose of tank car.	Completed: 10/11/93
26	Asbestos Removals (Asbestos Program)	Mitigate the potential for contaminant and migration of asbestos fibers.	Ongoing
27	Management of Contaminated Structures at the FEMP	Submit an Engineering Evaluation/Cost Analysis for managing contaminated structures. Identify alternatives for managing contaminated structures.	Final EE/CA Approved 8/16/93
28	Contamination at the Fire Training Facility	Remove, decontaminate, dispose, treat or store contaminated structures, equipment, and soil from the former Fire Training Facility.	Ongoing
29	Erosion Control at Inactive Flyash Pile	Mitigate the threat of erosion-induced slope failure and discharge of flyash to Paddy's Run.	Final Report Submitted to DOE 2/94 Maintenance: Ongoing
30	Seepage Control at the South Field and Inactive Flyash Pile	Minimize future groundwater contamination by intercepting contaminated seeps that drain from the South Field and Inactive Flyash Pile and infiltrate to the GMA.	Ongoing

*Shading denotes completed actions

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Removal Actions

RA No. 1, Contaminated Water Under FEMP Buildings

Current Month:

Repairs have been completed on the Plant 8 extraction well, and the system is operational. The Plant 2 extraction wells remain down awaiting replacement of the hold tank level gauges while the Plant 9 system is awaiting functional testing. The Volatile Organic Compounds (VOC) Treatment Facility and the Plant 6 perched water system continue to operate.

Planned Activities:

- Repair Plant 2 system.

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 requisition for providing bottled water to Delta Steel was completed and became effective April 1, 1995.

The contractor for Project A of the Public Water Supply (PWS) continues work and is preparing to bore under U.S. Route 27.

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

A public hearing for Project C of the PWS as well as a second hearing for Project B were held on April 19, 1995.

Planned Activities:

- Continue proceedings to transfer ownership of the pumping and piping equipment as well as the easement rights to Albright and Wilson in accordance with the agreement of 1990.
- Continue to support 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.

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Removal Actions

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

- Complete work on cultural resources report for Project B along State Route 128.
- Advertise Projects B and C for PWS—expect awards to be made in early June.

Part 2 - Pumping and Discharge System

Current Month:

Efforts to compile the Design, Monitoring, and Evaluation Program Plan (DMEPP) for the period beginning March 1994 and ending December 1994 were completed, and the report was submitted to the U.S. EPA and Ohio EPA on April 1, 1995. This report summarizes the operation and effectiveness of the five-well extraction system south of the FEMP.

Planned Activities:

- Perform sample collection and data validation for the DMEPP report for the period beginning January 1995 and ending July 1995.

Part 3 - Interim Advanced Waste Water Treatment (IAWWT)

IAWWT Storm Water Retention Basin (SWRB) Unit

Current Month:

Nothing to report.

Planned Activities:

- Continue to operate.

IAWWT Bionitrification Effluent Treatment System (BDN-ETS) Unit

Current Month:

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

Planned Activities:

- None.

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Part 4 - Groundwater Monitoring and Institutional Controls

Current Month:

Nothing to report.

Planned Activities:

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

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

Step 1

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

Current Month:

Nothing to report.

Planned Activities:

- Continue to operate.

Step 2

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

Current Month:

Nothing to report.

Planned Activities:

- Continue to operate.

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Step 3

Elimination of low uranium concentration streams.

Current Month:

Nothing to report.

Planned Activities:

- Continue to operate.

Step 4

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

Current Month:

Action is complete.

Planned Activities:

- Change out ion exchange resin within the vessels.

RA No. 7, Plant 1 Pad Continuing Release

Current Month:

April activities included obtaining cost estimates from material suppliers for repairs of the expansion joint material. A contract is being prepared for the expansion joint repairs.

Planned Activities:

- Start the repair process of the expansion joint material by mid-May.
- Plug the remaining four monitoring wells located on the pad by July 31, 1995.
- Complete the repair (weather permitting) of the expansion joint material by mid-June.

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Removal Actions

RA No. 9, Removal of Waste Inventories

Current Month:

The volume of waste shipped off-site in April 1995 was 6,504 drum equivalents (DEs) for a total of 46,870 DEs dispositioned to NTS and SEG in FY-95. This volume includes approximately 10,000 drums of residues removed from inventory and shipped to-date. These volumes do not include approximately 61 roll-off bins and 17 Top Load containers of Plant 7 steel materials shipped to the ALARON recycling facility in Pennsylvania.

The FY 1995 volume shipped to NTS and SEG is 5,009 DEs ahead of schedule, primarily due to release of ISO and large metal box shipments of process area scrap materials, and an additional level of effort of residue material packaging operations. Lastly, an additional 5,100 DEs of construction waste is being held pending development of a compaction plan. The compaction plan will reduce the volume of material shipped for disposal by 3,570 DEs.

Plant 7 recyclable steel materials (as previously described) were dispositioned in conjunction with "Spring Clean" and routine 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 (4/30/95)</u>
Process Area Scrap	13,116
Thorium	776
Residues to NTS	9,425
Contaminated Trash	1,823
SEG Residues	2,095
Construction (Legacy)	5,019
Construction (Newly Generated)	14,617

Planned Activities:

- During May 1995 ship an additional 3,800 DEs of backlog low level waste to NTS.
- Continue preparation of Plant 4 and "Spring Clean" process area scrap and trash packages and shipment to NTS.
- Complete disposition of Plant 7 structural steel to the ALARON recycling facility in Pennsylvania.
- Revise waste shipment operational policies and procedures to reflect significant programmatic changes and include a "graded-approach" for total quality and continuous process improvement.

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Removal Actions

RA No. 12, Safe Shutdown

Current Month:

Plant 1 rabbit hutch material relocation was delayed pending further review. Preparatory activities for relocating the rabbit hutch material are complete and several dry runs have been conducted. Plant 1 hold-up removal has been initiated from two dust collectors and one sump.

A radiological control point and break trailer have been established for the Pilot Plant facility. The Pilot Plant utility disconnects continue. The Building 54 overhead crane is being prepared for service in the Pilot Plant.

A Plant 9 walkthrough was conducted. A schedule for removal of holdup material is being prepared with a beginning work date of August 1, 1995.

A preliminary walkthrough was conducted in Plant 5.

Continued pursuing alternatives for interim storage of enriched restricted material stored in facilities scheduled for safe shutdown activities.

Of the 1917 items under consideration, approximately 1,225 items have been excessed and 692 have been identified as "In-Use/Future Use" items.

To date, 1545 Maintenance Work Orders to isolate and disconnect all utilities/energy sources from equipment not in use have been prepared. Of these, 853 have been completed.

Planned Activities:

Continue to issue task orders to identify and/or remove hold-up materials from process equipment in the Pilot Plant and Plant 9.

Continue to remove holdup material in Plant 1.

Continue to write Implementation Plans for the Pilot Plant and Plant 9.

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.

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RA No. 13, Plant 1 Ore Silos (continued)

Planned Activities:

- Continue preparation of the Final Report.

RA No. 15, Scrap Metal Piles

Current Month:

Phase I: None to report.

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

Planned Activities:

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

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

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RA No. 17, Improved Storage of Soil and Debris

Current Month:

April activities included the completion of the concrete curb and gutter placed at the perimeter base of the pile North of Third Street. This curb and gutter, along with a new catch basin connected into the existing stormwater sewer, will serve as the controlled run-on/run-off system for the controlled stockpile. Final grading and seeding was also completed atop the pile. All of the chain-link fencing (removed prior to initial regrading) has been re-installed in April with the exception of the installation of a new gate for vehicle access to the pile.

The removal and containerization of this residue/debris is the only remaining scope (as part of the RA 17 scope) for this Scrap Metal Pad (SMP) area. One specific labor crew will be dedicated to complete this removal and containerization effort.

Planned Activities:

- Complete final grading and seeding of the outlying adjacent areas of the Soil & Rubble Pile.
- Complete placement of rip-rap material for protection of new and existing catch basins within the jobsite area.
- Re-seed specific areas atop the pile and outlying areas where the seed may have not taken to ensure consistent grass growth.
- Restart and continue containerization and removal of the remaining debris/residue at the Scrap Metal Pad.

RA No. 19, Plant 7 Dismantling

Current Month:

Shipments of the Plant 7 steel to the decontamination facility increased from two loads/day to four or five loads/day during April. The loading and blocking of all containers was completed by April 29, 1995.

Planned Activities:

- Complete shipments of Plant 7 steel by May 1, 1995.
- Start processing Plant 7 steel on May 22, 1995.
- Prepare final report for transmittal to EPA by June 15, 1995.

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RA No. 20, Stabilization of UNH Inventories

Current Month:

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

The "insitu" magnesium oxide neutralization process started on March 24, 1995 continues. By agreement with the Ohio EPA this action constitutes start-up for the UNH project and halts further potential fines and penalties which started when the January 17, 1995 date was missed. Tank F1-302 neutralization was completed on April 3, 1995. The seven bag quantity of MgO added was more nearly the calculated value (five bags) for usage than the projected laboratory quantity of ten bags. An explanation for this perceived 40% error in quantity of MgO addition was prepared and issued to Ohio EPA. The 40% variance was deemed not to be representative of other tank addition quantities. The second tank neutralized, F1-303, was completed on April 18, 1995. A total of 18 bags was required. This correlates very well with the 17 bags calculated and the 19 bags projected from the laboratory. Tank F1-308 neutralization began on April 11 and tank F1-2 is scheduled to begin in early May.

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

The start-up on July 20, 1995 is on schedule at this time. The following major scheduled activities were completed during April:

- During the Systems Operability Testing (SOT) the instrumentation on pump skid J105 was found to require modification. This delayed the start of the SOT for four days. However, by moving forward the procedural review with the operators, the lost time was regained.
- System Operability Testing (SOT) was completed on all six pump skids, valve controls, and most other equipment. SOT remains on the scrubber.
- All major process operating procedures are being revised to reflect review comments and are near completion.
- The Safety Analysis Report (SAR) and the Technical Safety Requirements (TSR) were approved and signed by the DOE Ohio Field office.
- The secondary containment waiver was approved by DOE.
- Simulation of operations is ongoing.

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

- Classroom training for the second round of operators was completed. Make-up classes for personnel who missed any training class is ongoing.
- Work continues to configure each of the tanks for bottom discharge. This will allow acceleration of the processing schedule by eliminating the need for recycle piping and more complicated pump priming.
- The temporary spool pieces and hoses were assembled to connect the first four tank bottom discharge hookups.

Progress on obtaining a sole source vendor for treating some of the UNH material by neutralization/solidification and treating the site's Thorium Nitrate RCRA waste, continued throughout April. Proceeding with this effort, in parallel with the ongoing neutralization and filtration effort, would help the site in trying to meet the September 25 completion date for UNH processing specified in the Ohio EPA Director's Findings and Orders. UNH samples shipped to the vendor for testing in their lab in early March demonstrated the processing to be successful. Thorium Nitrate samples were tested and indicated a little more difficulty in processing. It was necessary to add flyash to the mix. During the first tests the mixture had a phase for premature solidification around pH 6. The mass was like a gel which went back into solution after sitting for a time. The impact of the processing condition is not understood at this time. Additional samples are being sent to Chem Nuclear Systems, Inc. (DNSI) for additional process evaluations. A scope of work, workplan, cost estimate, schedule, health and safety plan, quality plan, and change proposal for the stabilization process were completed. DNSI, DOE-FN, and FERMCO personnel met with the Washington Office of the NRC to officially submit documents, answer questions, etc. on April 12, 1995. Of major interest was the request amended to their license to allow for processing of UNH at a higher level than their current limit of 350 grams. All documentation was left with the NRC and we expect some ruling from them by May 12, 1995 (30 days from meeting).

Planned Activities:

- Continue to keep new scheduled activity commitments.
- Continue pursuing the parallel neutralization/solidification effort.
- Start FERMCO ORR on May 17, 1995.
- Start UNH Neutralization project operation by July 20, 1995.

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RA No. 26, Asbestos Removals (Asbestos Program)

Current Month:

Radiologically clean asbestos waste was released for removal to a sanitary disposal site. The Asbestos Program update was provided internally on April 5, 1995.

Planned Activities:

- Continue to estimate quantities of outside pipe line insulation.
- Continue compilation of work packages.

RA No. 28, Contamination at the Fire Training Facility

Current Month:

April activities included treatment of the final volume (5000 gallons) of surface waters that were removed from the FTF and excavation of the final portion of the asphalt pad that had surrounded the FTF block building.

Planned Activities:

- Size reduction of the open top tank.
- Continue to work free release issues relative to the block building debris.
- Continue work on the final report.
- Validation of the remaining analytical data.

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

Formal comment responses were incorporated into a final report and submitted ahead of schedule on April 7, 1995. The CFC package was completed on April 19, and construction began on April 25, 1995.

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

Planned Activities:

- Begin construction surveying and material procurement process.
- Continue construction activities.

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	Began Construction April 25, 1995	October 17, 1995

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Removal Actions

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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Removal Actions

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:

Slurry testing for the Dewatering and Excavation Evaluation Program (DEEP) was completed on April 25, 1995. This completes Phase II, Wet Excavation, of the program. A kickoff meeting for Phase III, Dewatering activities has been set for May 9, 1995.

Issues/Corrective Actions:

None to report.

1.5 Record of Decision

Status:

Complete.

Issues/Corrective Actions:

None to report.

1.6 RD/RA Work Plan

The Remedial Design Work Plan identifies the design deliverables and presents the schedule for their submittal to U.S. EPA (in coordination with Ohio EPA) 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.

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1.6 RD/RA Work Plan (continued)

Status:

Revisions to the Draft RD Work Plan were distributed on April 7, 1995, and April 19, 1995, for DOE internal review. These revisions reflected responses to comments received from DOE-FN and DOE-HQ, as well as a refinement of the design strategy based on funding projections for OU 1. The Draft RD Work Plan was submitted to U.S. EPA and Ohio EPA on April 25, 1995 for review, approximately one week ahead of the required submittal date of May 1, 1995. Based on a receipt date of April 26, 1995, by U.S. EPA and Ohio EPA, their reviews should be completed by June 26, 1995.

Issues/Corrective Actions:

None to report.

1.7 Planned Activities for May 1995

- Begin Dewatering well design activities in May with well installation to follow in early June.

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Removal Actions

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/VFS Work Plan Addendum

Status:

Complete.

2.1.1 RI Field Investigation

Status:

Complete.

2.2 Remedial Investigation

Status:

Complete.

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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Removal Actions

2.3 Feasibility Study/Proposed Plan

Status:

Complete.

Issues/Corrective Actions:

None to report.

OPERABLE UNIT 2 FEASIBILITY STUDY/PP REPORT

PRIMARY MILESTONES

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

C = Consent Agreement Date

2.4 Treatability Studies

Status:

None to report.

Issues/Corrective Actions:

None to report.

2.5 RD/RA Work Plan

Status:

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

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Removal Actions

2.6 Record of Decision

Status:

Comments were received on the February submittal of the Record of Decision from U.S.EPA on March 9, 1995 (and from OEPA on March 27, 1995). Response to comments and the revised ROD document including the Responsiveness Summary were submitted to U.S.EPA on April 7, 1995, ahead of schedule. Anticipated approval of the ROD document is within 30 days of that submittal with U.S. EPA signature and finalization of the ROD document by May 31, 1995.

2.7 Pre-Design Field Investigation

Status:

Field Investigation activities and laboratory analysis are almost complete. A majority of the analytical data has been received and is being evaluated. The draft Pre-Design Investigation report is being developed. Results of the field investigation activities indicated the presence of some contaminated perched groundwater. A Change Proposal has been prepared to investigate this issue.

2.8 Geotechnical Field Investigation

The Geotechnical Phase III borings have been completed.

2.9 Planned Activities for May:

- Submit Draft Remedial Design Work Plan internally.
- Distribute the Final ROD.
- Continue analysis and evaluation of the Pre-Field Investigation data, and the development of the draft report.
- Submit the Geotechnical Sampling & Testing Plan for Phase III of the Site-Wide Disposal Facility Field Investigation.

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Removal Actions

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 completed an internal peer review process. Final changes for all RI/FS Report sections and appendices are being incorporated based on peer review comments. 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 or reassessment.

Issues/Corrective Actions:

None to Report.

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Removal Actions

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:

Work continues on the Statement of Work (SOW) for scrap copper recycling treatability testing. Preliminary sampling data for the Kelly Decontamination Study is in the process of being analyzed for the final report. The inventory and categorization of all containerized materials is continuing and the information will be included in the CRUs' Waste Information Manual. RI/FS Sample Location Maps are being generated and, upon completion will include floor plans for 137 sampled components and their respective sample locations. The final transite sample for the EET Decontamination of Transite Study was taken on April 6, 1995. Shipments of structural steel continue to be shipped to ALARON as part of the Recycling of Structural Steel from Plant 7 Metals Project.

Issues/Corrective Actions:

None to report.

3.4 Interim Action - Record of Decision

Status:

Complete.

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Removal Actions

3.5 Interim Action RD/RA Work Plan

Status:

On April 17, 1995 the Ohio EPA provided eighteen comments on the March 1995 draft OU 3 Remedial Design Prioritization and Sequencing Report (PSR) and Material Balance Model (MBM). U.S. EPA comments have not yet been received but are expected before May 16, 1995. The PSR and MBM will be revised and submitted to the U.S. EPA and Ohio EPA along with comment responses thirty days from receipt of U.S. EPA comments.

Issues/Corrective Actions:

None to report.

3.6 Planned Activities for May 1995

- Revise OU 3 Remedial Design Prioritization and Sequencing Report and Material Balance Model following receipt of EPA comments. Prepare documents for June 1995 submittal.
- Chem Nuclear to start test work on the Thorium Nitrate Study.
- Complete analytical sample results on transite for the EET Decontamination of Transite Study.
- Statement of Work (SOW) to be issued to potential vendors on the Copper Metal Pile.
- Complete Plant 7 structural steel shipments to ALARON in early May and start decontamination process by May 22, 1995.
- Continue lab work on samples collected to determine the leachability of uranium and Tc-99 on concrete and paint.
- Continue writing final treatability reports for the following Treatability Studies: Chemical Leaching of Concrete and the Kelly Decontamination of Concrete.
- Continue analyzing samples in support of the FEMP reevaluation of making RCRA determinations on light gauge metal with lead based paint.
- Complete the Certified for Construction (CFC) Package and Construction Work Package for the Thorium Complex.
- Complete final draft of the External Complex Implementation Plan and send out for review.

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Removal Actions

3.6 Planned Activities for May 1995 (continued)

- Complete the final draft of the Thorium/Plant 9 Complex Implementation Plan.
- Begin vendor testing at Florida International University (FIU) on May 8, 1995 as part of the Surface Decontamination/Removal of Metal Treatability Study.

- Start interior dismantlement and removal of asbestos containing material (ACM) in Plant 4.
- Start construction of the new electrical distribution substation at Plant 1.
- Participate in a meeting with the U.S. EPA and Ohio EPA on May 23 to discuss FS alternatives, characterization, waste acceptance criteria, short-term risks, and the CRARE.
- Continue revision to the RI/FS Report based on peer review comments and develop a complete first draft of the document for internal submittal by early May.
- Initiate and complete the second round of the K_d Leaching Study to determine leachate characteristics of Total Uranium and Technicium-99 from concrete and paint matrices.

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Removal Actions

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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Removal Actions

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 May 1995.

Issues/Corrective Actions:

None to report.

4.5 Record of Decision

Status:

Complete.

4.6 RD Work Plan

Status:

The revised submittal date for the Final Remedial Design Work Plan is May 16, 1995. A 20-day extension request was issued to the U.S. EPA for the submittal of the Final Remedial Design Work Plan. The extension was needed to revise the remedial design schedule to coordinate with the schedule for the Pilot Plant Treatability Study program.

4.7 Planned Activities for May 1995

- Continue construction of the Phase I Pilot Plant facility.
- Submit Phase II work plan to the U. S. EPA for approval.
- Submit Final Remedial Design Work Plan on May 16, 1995.

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Removal Actions

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:

The Remedial Investigation Report is complete. A final review of references is underway to ensure that the Administrative Record for the document is complete.

Issues/Corrective Actions:

None to report.

OPERABLE UNIT 5 REMEDIAL INVESTIGATION REPORT

PRIMARY MILESTONES

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

C = Consent Agreement Date

A = Actual Date

5.2 Feasibility Study/Proposed Plan (FS/PP)

Status:

On April 20, 1995, U.S. EPA conditionally approved the draft final FS Report and Proposed Plan Reports pending responses to and incorporation of comments. Ohio EPA submitted four comments on the FS and 19 on the Proposed Plan. Change pages to the FS Report will be issued on or before May 19 to make this document final.

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Removal Actions

5.2 Feasibility Study/Proposed Plan (FS/PP) (continued)

The Proposed Plan was finalized so the public comment period could begin. The Notices of Availability were sent to area newspapers to be posted on the first day of the comment period, May 1, 1995. The public meeting on the Operable Unit 5 Proposed Plan will be held on May 23, 1995, and the comment period will close on May 31, 1995. Distribution of the final Proposed Plan began on April 28, 1995.

The K₁ Sampling Report was revised as a result of internal reviews.

Issues/Corrective Actions:

None to report.

OPERABLE UNIT 5 FEASIBILITY STUDY/PROPOSED PLAN

PRIMARY MILESTONES

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

C = Consent Agreement Date
A = Actual Date

5.3 RCRA Monitoring

Status:

Ohio EPA gave conditional approval of the "Summary of Monitoring Well Integrity Investigation (Grout Contamination)" on March 9, 1995. These comments will be addressed through a May revision of the FEMP Sitewide CERCLA Quality Assurance Project Plan (SCQ).

Issues/Corrective Actions:

None to report.

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5.4 Treatability Studies

Complete.

5.5 Record of Decision (ROD)

Status:

A draft of the ROD document is in progress to facilitate its submittal when the Responsiveness Summary is prepared following the public comment period.

Issues/Corrective Actions:

None to report.

5.6 Planned Activities for May 1995

- Prepare responses to agency comments on the draft final FS Report and issue change pages and new covers, spines and title pages to all holders of the three-volume document.
- Ensure the Proposed Plan receives wide distribution, and that the public has every suitable opportunity to submit comments. Arrange for and publicize the public meeting to be held on May 23, 1995.
- Continue preparation of the draft Record of Decision.
- Complete review of K₁ Sampling and Analysis Results Report for submittal to EPA.
- Continue inputs to the Administrative Record for Operable Unit 5 documents.

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Removal Actions

6.0 Community Relations

Status:

On April 5, 1995 the monthly meeting for the Fernald Envoy Program was conducted. About 45 envoys attended and were updated on:

- Fernald Citizens Task Force: Dr. John Applegate spoke about the Fernald Citizens Task Force. Dr. Applegate is a professor of law at University of Cincinnati and is Chair of the Fernald Citizens Task Force as well. The Task Force has accomplished the following to date: (1) made recommendations for future use of the site and cleanup levels, and (2) agreed to on-site waste disposal for some of the waste. The task force is not the final decision maker in policies that are instituted at Fernald. They are not a mini-legislature, it is simply a group of leaders drawn from several neighboring communities that gather information and make recommendations based on the information that has been compiled. The recommendations that the task force makes are very specific and also usually unanimous.
Envoy Program Assessment: The results of the Envoy Program assessment conducted by the University of Cincinnati were presented. The specific functions of the Envoy Program as seen by the assessors were to provide feedback to management and to be a source of information to the groups. Overall, the impact of the Envoy Program should be that the attitudes of the groups/organizations about Fernald are improving and that DOE is dedicated to an open process of communication. A more detailed summary of the results can be found in a handout entitled Fernald Envoy Assessment, a complete summary of the process, findings, and results.

DOE submitted the Proposed Site Treatment Plan (PSTP) to Ohio EPA on March 31, 1995. In accordance with the Federal Facilities Compliance Act, Ohio EPA initiated a 90-day public comment period on the PSTP which began April 6, and will continue through July 6, 1995.

The application process for the 1995 Work Force Restructuring Plan Voluntary Reduction in Force (VRIF) is complete. The final summary of applicants approved/denied follows:

Table with 2 columns: Application Status and Count. Rows: VRIF applications accepted: 475; VRIF applications denied: 164; Total VRIF applications: 639.

Separation of employees whose applications were accepted began April 28, 1995, and extends until May 1, 1996, in accordance with the 1995 DOE Workforce Restructuring Plan.

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Removal Actions

6.0 Community Relations (continued)

On April 8, the Fernald Citizens Task Force held their monthly meeting at the Joint Information Center in Fairfield, Ohio. Approximately 25 spectators were in attendance representing FRESH, ODH, ATSDR, Ross Township, local residents, FERMCO, DOE, U.S. EPA and Ohio EPA, and other interested parties. At this meeting, the task force unanimously approved its recommendation for establishing priorities for the Fernald site. The amended recommendation was transmitted to Secretary O'Leary and Assistant Secretary Grumbly on April 11 with a request for a response by May 1, 1995. The meeting concluded with a discussion on future use of the site. A future use recommendation will be drafted for the Task Force to review at their May meeting.

In late March; the DOE Field Office sponsored a summit meeting in West Valley, New York, for Ohio Field Office contractors (Mound, West Valley, and Fernald). This was the first in a series of meetings scheduled to take place to share best work processes, develop innovations to improve overall efficiency, and work together to reduce costs. The next meeting will be held on May 1 and 2 in Miamisburg, Ohio. Contractor employees from each Ohio Field Office site are participating in the Ohio Summit meetings.

Fernald hosted DOE's seventh annual National Technology Information Exchange (TIE) Workshop, April 18 through April 20, at the Cincinnati Marriott, Springdale. Several members of FRESH attended the session called "Focus on Fernald." After the TIE workshop, more than 109 participants toured the Fernald site.

The regular monthly meeting of the Fernald Residents for Environmental Safety and Health (FRESH) was held on April 27, 1995 with about 35 in attendance. At the meeting, the DOE-FN Public Affairs representative's presentation included the following:

- An update on several documents submitted recently from all operable units.
- The status of the Federal Facility Compliance Act requirements and notification of a 90-day public comment period on the *Proposed Site Treatment Plan*.
- A new Fernald Cleanup Report videotape entitled "Shaping Tomorrow Together" focusing on Fernald public involvement was shown at the meeting.

Issues/Corrective Action:

None.

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Removal Actions

6.1 Planned Activities for May 1995

- The formal public comment period for the Operable Unit 5 Feasibility Study /Proposed Plan will begin on May 1, 1995. A Notice of Availability announcing the comment period will be published in *The Cincinnati Enquirer*, the *Journal-News* and the *Harrison Press* newspapers.
- The next Fernald Citizens Task Force meeting date has been changed from May 13 to May 6. The meeting will be held from 8:30 a.m. to 12:30 p.m. at the Joint Information Center, Fairfield.
- Ohio EPA will hold a public briefing on the OU 5 FS/PP document on Monday, May 15, at 7:00 p.m. at the Venice Presbyterian Church. Neither DOE or FERMCO will be represented at this meeting.
- Ohio EPA will hold a public workshop on May 17, at 7:00 p.m. at the Crosby Elementary School to discuss and answer questions on the *Proposed Site Treatment Plan*. All comments on the Plan should be submitted to the Ohio EPA.
- The formal public meeting for the Operable Unit 5 FS/PP is planned for May 23, from 7 to 9 p.m. at the Plantation in Harrison, Ohio. Comments on the *Proposed Plan* will be taken at this meeting.
- The regular monthly meeting of FRESH will be held on May 25 at the Venice Presbyterian Church in Ross, Ohio, beginning at 7:30 p.m. Representatives from the Agency for Toxic Substances and Disease Registry (ATSDR) have been invited to attend and discuss their studies on milk and the K-65 Silos emissions.

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PERIOD ENDING APRIL 30, 1995

ENCLOSURE A

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

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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 April 1995.

Summary - April 1995

The total quantity of uranium discharged from the FEMP to the Great Miami River via Manhole 175 (Outfall 11o00004001) was 1.65 kilograms. The average uranium concentration for the previous 12 months was 0.29 mg/L. This is 32.6% of the Derived Concentration Guide (DOE Order 5400.5) for ingested water.

The total quantity of uranium discharged from the FEMP to the Great Miami River via South Plume/Stormwater Retention Basin (Outfall SP3) was 8.75 kilograms. The average uranium concentration for the previous 12 months was 0.050 mg/L. This is 5.6% 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 April 1995. Based on 4.94 inches of rainfall in April 1995, the total quantity of uranium discharged to Paddy's Run from uncontrolled areas of the FEMP is estimated to be 14.03 kilograms.

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

DATE: APRIL 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	0.070	14	61	0.03	0.01	10
2	0.081	21	61	0.04	0.01	14
3	0.112	46	81	0.09	0.04	31
4	0.106	**	75	0.08	0.03	28
5	0.096	**	**	0.05	0.02	17
6	0.117	**	**	0.03	0.01	9
7	0.118	**	**	0.03	0.01	10
8	0.097	**	**	0.03	0.01	10
9	0.103	**	**	0.08	0.03	28
10	0.142	**	**	0.06	0.03	20
11	0.148	**	**	0.06	0.04	21
12	0.160	**	**	0.05	0.03	16
13	0.117	**	**	0.05	0.02	16
14	0.096	**	**	0.04	0.02	15
15	0.110	**	**	0.03	0.01	11
16	0.114	**	**	0.07	0.03	24
17	0.162	**	**	0.11	0.07	37
18	0.156	**	**	0.07	0.04	25
19	0.153	**	**	0.06	0.04	21
20	0.130	**	**	0.03	0.02	11
21	0.312	**	**	0.18	0.21	61
22	0.111	**	**	0.14	0.06	47
23	0.081	**	**	0.16	0.05	54
24	0.271	**	**	0.40	0.41	135
25	0.128	**	**	0.21	0.10	71
26	0.137	**	**	0.17	0.09	57
27	0.131	**	**	0.16	0.08	54
28	0.114	**	**	0.16	0.07	54
29	0.068	**	**	0.11	0.03	37
30	0.075	**	**	0.12	0.03	41
Total	3.816				1.65	

** Analytical results not yet available.

000040

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

Period Ending April 30, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 001 Total Discharge

DATE: APRIL 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.	0.127	**	**	0.11	0.05	39
Max.	0.312	**	**	0.40	0.41	135
Min.	0.068	**	**	0.03	0.01	9

The average uranium concentration for the previous twelve months was 0.29 mg/l. This is 32.6 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.

1800

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

Period Ending April 30, 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: APRIL 1995

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

Based on 4.94 inches of rainfall for the month, the uranium discharge to Paddy's Run from uncontrolled areas of the FEMP is estimated to be 14.03 kgs.

000042

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

PERIOD ENDING APRIL 30, 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 April 30, 1995

INTRODUCTION

Enclosure B describes actions undertaken at the FEMP during the period April 1, through April 30, 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 March 1995 was transmitted to the U.S. EPA on April 19, 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
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending April 30, 1995

CLEAN AIR ACT (CAA)

Section E

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

RADIATION DISCHARGE INFORMATION

Section A

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

REPORTING REQUIREMENTS

Section B

The Federal Facility Compliance Agreement Monthly Progress Report for March 1995, was transmitted to the U.S. EPA on April 19, 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.

TABLE 1

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

April 30, 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 March 1995 was transmitted to the U.S. EPA on April 19, 1995.

TABLE 1

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

April 30, 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	<p>No stacks related to production were operating in 1994.</p> <p>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.</p>	
D.2	Provide U.S. EPA with stack-test results for stacks tested that year.	45 days	<p>No stacks related to production were operated or tested in 1994.</p> <p>May 9 Test contractor tests Laundry stack (6 hour test)</p> <p>May 10 Test contractor test Eimco stack (3 hour test)</p>	
E.1	Maintain records of monthly particulate matter emissions.	-----	Ongoing.	

TABLE 1

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

April 30, 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	March's FFCA Monthly Progress Report was transmitted to the U.S. EPA on April 19, 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 APRIL 30, 1995

ENCLOSURE C

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

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

Period Ending April 30, 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 April 1, through April 30, 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 AGREEMENTS FOR
 CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
 MONTHLY PROGRESS REPORT**

Period Ending April 30, 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 April 1995.

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

Period Ending April 30, 1995

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

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

Period Ending April 30, 1985

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

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

Period Ending April 30, 1995

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

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

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

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

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

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

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

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

MONTH: APRIL
YEAR: 1995

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

K-65 SILO REPORT
RADON CONCENTRATIONS

(Daily Summary of Recorded Headspace Concentrations)

REPORT GENERATED: 05/03/95

Daily Statistics	SILO 1				SILO 2			
	Average	Maximum	Minimum	Std. Dev.	Average	Maximum	Minimum	Std. Dev.
04/01/95	618,000	1,560,000	50,400	377,000	3,600,000	3,740,000	3,230,000	80,800
04/02/95	548,000	1,610,000	24,600	428,000	3,550,000	3,780,000	2,880,000	174,000
04/03/95	654,000	1,680,000	41,100	448,000	3,330,000	3,880,000	1,720,000	438,000
04/04/95	184,000	1,530,000	11,800	295,000	3,280,000	3,590,000	2,760,000	173,000
04/05/95	873,000	1,820,000	47,500	551,000	3,620,000	3,960,000	3,270,000	99,400
04/06/95	954,000	1,890,000	46,100	506,000	3,630,000	3,850,000	2,920,000	202,000
04/07/95	1,440,000	2,010,000	43,200	712,000	3,590,000	3,700,000	3,360,000	69,800
04/08/95	1,210,000	2,020,000	373,000	497,000	3,510,000	3,780,000	2,940,000	218,000
04/09/95	756,000	2,020,000	11,800	731,000	3,180,000	3,780,000	2,140,000	489,000
04/10/95	285,000	1,680,000	11,800	348,000	3,010,000	3,810,000	2,010,000	381,000
04/11/95	978,000	1,940,000	43,200	580,000	3,320,000	3,630,000	2,480,000	184,000
04/12/95	578,000	1,740,000	26,100	497,000	3,010,000	3,590,000	1,740,000	377,000
04/13/95	181,000	1,280,000	22,500	189,000	3,190,000	3,520,000	2,500,000	211,000
04/14/95	539,000	1,680,000	17,500	439,000	3,440,000	3,810,000	3,210,000	69,500
04/15/95	1,110,000	1,910,000	85,400	528,000	3,480,000	3,830,000	3,190,000	75,900
04/16/95	1,450,000	1,990,000	313,000	479,000	3,480,000	4,030,000	3,270,000	88,900
04/17/95	1,540,000	2,010,000	520,000	438,000	3,440,000	3,940,000	2,850,000	98,100
04/18/95	1,010,000	1,970,000	84,800	801,000	3,150,000	3,560,000	2,320,000	305,000
04/19/95	177,000	1,320,000	12,500	218,000	3,180,000	3,560,000	2,480,000	213,000
04/20/95	1,110,000	1,970,000	88,200	536,000	3,480,000	3,880,000	2,700,000	128,000
04/21/95	637,000	2,180,000	20,400	759,000	3,110,000	3,870,000	2,030,000	487,000
04/22/95	543,000	1,680,000	36,800	476,000	3,340,000	3,580,000	2,520,000	164,000
04/23/95	672,000	1,740,000	17,500	516,000	3,250,000	3,810,000	2,080,000	356,000
04/24/95	139,000	380,000	16,100	100,000	3,440,000	3,630,000	3,030,000	110,000
04/25/95	269,000	1,640,000	16,800	357,000	3,400,000	3,870,000	2,850,000	161,000
04/26/95	943,000	1,930,000	102,000	495,000	3,390,000	3,720,000	2,790,000	204,000
04/27/95	1,290,000	1,980,000	427,000	481,000	3,420,000	3,560,000	2,880,000	130,000
04/28/95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
04/29/95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
04/30/95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Grab Samples of Headspace

Date:	SILO 1 Concentration	SILO 2 Concentration
04/03/95	112,000	2,547,000
04/06/95	274,000	3,078,000
04/10/95	329,000	2,876,000
04/13/95	72,000	2,190,000
04/18/95	377,000	2,823,000
04/24/95	149,000	690,000

- Notes:
1. All values reported in pCi/L.
 2. Continuous data reported to three significant digits to remain consistent with the calibration data.
 3. "a" indicates partial data loss, 04/06/95 (14:30) to 04/07/95 (09:40), due to power outage.
 4. "b" indicates partial data loss, 04/18/95 (02:22 to 08:31 and 08:33 to 10:00), due to DLS malfunction.
 5. "c" indicates partial data loss, Silo 1, 04/24/95 (11:00) to 04/26/95 (08:40), due to DLS malfunction.
 6. "d" indicates partial or complete data loss, 04/27/95 to EOM, due to disk failure in DLS resulting from power outage.

1800

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

MONTH: APRIL
YEAR: 1995

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

K-65 SILO REPORT

SILO 1

Daily Averages:	Ambient		Headspace			
	Temp. °F	Press. in. Hg	Temp. °F	Inter. Hum. %	Diff. Press. in. Hg	Radon (pCi/l)
04/01/95	39	29.44	42	(a)	0.00	618,000
04/02/95	41	29.48	43	(a)	0.00	648,000
04/03/95	49	29.39	43	(a)	0.00	654,000
04/04/95	42	29.44	44	(a)	0.00	184,000
04/05/95	32	29.58	43	(a)	0.00	878,000
04/06/95	42	29.88	43	(a)	0.00	954,000
04/07/95	61	29.38	44	(a)	0.00	1,440,000
04/08/95	58	29.18	45	(a)	0.01	1,210,000
04/09/95	52	29.18	48	(a)	0.00	756,000
04/10/95	43	29.43	45	(a)	-0.01	285,000
04/11/95	61	29.87	45	(a)	0.00	978,000
04/12/95	52	29.36	46	(a)	0.03	578,000
04/13/95	44	29.41	48	(a)	0.00	181,000
04/14/95	43	29.50	48	(a)	0.00	539,000
04/15/95	47	29.49	48	(a)	0.00	1,110,000
04/16/95	62	29.37	48	(a)	0.00	1,450,000
04/17/95	66	29.34	48	(a)	-0.05	1,540,000
04/18/95	74	29.14	49	(a)	0.00	1,010,000
04/19/95	58	29.29	50	(a)	0.00	177,000
04/20/95	54	29.82	49	(a)	-0.04	1,110,000
04/21/95	64	29.19	50	(a)	0.00	697,000
04/22/95	48	29.49	50	(a)	0.00	549,000
04/23/95	40	29.40	48	(a)	0.00	672,000
04/24/95	38	29.26	48	(a)	0.04	139,000
04/25/95	51	29.50	48	(a)	-0.02	269,000
04/26/95	53	29.49	48	(a)	0.00	949,000
04/27/95	58	29.31	49	(a)	0.00	1,290,000
04/28/95	n/a	n/a	n/a	n/a	n/a	n/a
04/29/95	n/a	n/a	n/a	n/a	n/a	n/a
04/30/95	n/a	n/a	n/a	n/a	n/a	n/a

Monthly Statistics:	Ambient		Headspace			
	Temp. °F	Press. in. Hg	Temp. °F	Inter. Hum. %	Diff. Press. in. Hg	Radon (pCi/l)
ARITHMETIC MEAN	51	29.37	48	n/a	-0.00	768,000
MAXIMUM	74	29.58	50	n/a	0.04	1,540,000
MINIMUM	32	29.14	42	n/a	-0.05	139,000
MEDIAN	51	29.37	48	n/a	0.00	672,000

- Notes:
1. "a" indicates that Silo #1 relative humidity transmitter was inoperable.
 2. "b" indicates that some "Diff. Press." values were outside of range restrictions.
 3. "c" indicates partial data loss, 04/06/95 (14:30) to 04/07/95 (09:40), due to power outage.
 4. "d" indicates partial data loss, 04/18/95 (02:22 to 08:31 and 08:33 to 10:00), due to DLS malfunction.
 5. "e" indicates partial data loss, Silo 1, 04/24/95 (11:00) to 04/26/95 (08:40), due to DLS malfunction.
 6. "f" indicates partial or complete data loss, 04/27/95 to EOM, due to disk failure in DLS resulting from power outage.

000057

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

MONTH: APRIL
YEAR: 1995

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

K-65 SILO REPORT

SLO 2

Daily Averages:	Ambient		Headspace			
	Temp. °F	Press. In. Hg.	Temp. °F	Inter. Hum. %	Diff. Press. In. Hg.	Radon (pCi/l)
04/01/95	39	29.44	43	90	-0.01	3,600,000
04/02/95	41	29.46	43	90	-0.01	3,550,000
04/03/95	49	29.39	43	89	-0.01	3,330,000
04/04/95	42	29.44	44	87	0.01	3,280,000
04/05/95	33	29.58	43	88	-0.01	3,620,000
04/06/95	42	29.36	43	89	-0.01	3,635,000
04/07/95	61	29.36	44	87	-0.01	3,590,000
04/08/95	58	29.19	45	87	0.00	3,510,000
04/09/95	52	29.18	46	87	0.00	3,180,000
04/10/95	43	29.43	45	87	-0.02	3,010,000
04/11/95	61	29.37	46	86	-0.01	3,820,000
04/12/95	52	29.36	48	86	0.02	3,010,000
04/13/95	44	29.41	48	87	-0.01	3,190,000
04/14/95	43	29.50	48	87	-0.01	3,440,000
04/15/95	47	29.49	48	86	-0.01	3,480,000
04/16/95	62	29.37	46	85	-0.01	3,480,000
04/17/95	66	29.34	48	85	-0.06	3,440,000
04/18/95	74	29.14	49	85	-0.01	3,150,000
04/19/95	58	29.29	49	85	-0.01	3,180,000
04/20/95	54	29.32	49	85	-0.01	3,480,000
04/21/95	64	29.19	49	85	-0.01	3,110,000
04/22/95	48	29.49	50	86	-0.01	3,340,000
04/23/95	40	29.40	48	87	-0.01	3,250,000
04/24/95	44	29.29	48	88	0.00	3,440,000
04/25/95	46	29.46	48	86	-0.02	3,400,000
04/26/95	53	29.49	48	86	-0.01	3,390,000
04/27/95	58	29.31	48	86	-0.01	3,420,000
04/28/95	n/a	n/a	n/a	n/a	n/a	n/a
04/29/95	n/a	n/a	n/a	n/a	n/a	n/a
04/30/95	n/a	n/a	n/a	n/a	n/a	n/a

Monthly Statistics:	Ambient		Headspace			
	Temp. °F	Press. In. Hg.	Temp. °F	Inter. Hum. %	Diff. Press. In. Hg.	Radon (pCi/l)
ARITHMETIC MEAN	51	29.37	46	87	-0.01	3,360,000
MAXIMUM	74	29.58	50	90	0.02	3,635,000
MINIMUM	33	29.14	43	85	-0.06	3,010,000
MEDIAN	49	29.37	46	87	-0.01	3,400,000

- Notes: 1. "a" indicates that some "Diff. Press." values were outside of range restrictions.
 2. "b" indicates partial data loss, 04/06/95 (14:30) to 04/07/95 (09:40), due to power outage.
 3. "c" indicates partial data loss, 04/18/95 (02:22 to 06:31 and 08:33 to 10:00), due to DLS malfunction.
 4. "d" indicates partial or complete data loss, 04/27/95 to EOM, due to disk failure in DLS resulting from power outage.

4800-

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

MONTH: APRIL
YEAR: 1995

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

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

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

Monthly Statistics of Daily Averages:	AMS #5 (pCi/L)	AMS #6 (pCi/L)	PILOT PLANT (pCi/L)	BKGD-1 (pCi/L)	BKGD-2 (pCi/L)
AVERAGE:	0.9	0.6	1.0	0.4	0.7
MAXIMUM:	1.6	1.1	1.7	0.6	1.0
MINIMUM:	0.6	0.3	0.6	0.3	0.6
MEDIAN:	0.8	0.6	1.0	0.4	0.7
STD. DEV:	0.3	0.2	0.2	0.1	0.1

STANDARD LEGEND: 1. "(a)" indicates partial or complete data loss due to monitor malfunction.

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

MONTH: APRIL
 YEAR: 1995

FACILITY: Fernald Environmental Management Project
 U.S. Department of Energy
 7400 Willey Road, P.O. Box 638704
 Cincinnati, Ohio 45253 Hamilton

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

Daily Averages	K65-NW (pCi/L)	K65-SW (pCi/L)	K65-NE (pCi/L)	K65-SE (pCi/L)
04/01/95	1.0	n/a (a)	3.7	2.7
04/02/95	1.4	n/a (a)	3.9	3.4
04/03/95	2.6 (a)	n/a (a)	8.9	5.8
04/04/95	n/a (a)	n/a (a)	1.7	1.6
04/05/95	n/a (a)	n/a (a)	3.1	2.7
04/06/95	n/a (a)	n/a (a)	7.1	5.2
04/07/95	n/a (a)	5.2 (a)	3.8	2.7
04/08/95	n/a (a)	2.9	5.9	5.5
04/09/95	n/a (a)	5.4	1.2	0.9
04/10/95	n/a (a)	0.8	0.8	0.5
04/11/95	0.6 (a)	0.6	0.5	0.5
04/12/95	0.4	0.7	1.6	0.7
04/13/95	0.4	0.7	2.3	1.3
04/14/95	1.1	1.8	3.0	2.3
04/15/95	2.7	2.4	3.5	2.5
04/16/95	1.8	2.8	3.4	3.1
04/17/95	2.1	2.8	4.5	2.3
04/18/95	2.0	2.3	1.8	1.5
04/19/95	0.4	0.7	0.9	0.8
04/20/95	1.5	1.8	0.7	0.7
04/21/95	2.1	1.1	1.5	1.4
04/22/95	0.5	0.8	1.5	1.7
04/23/95	1.1	4.0	5.2	3.9
04/24/95	0.4	0.9	0.9	1.0
04/25/95	0.8	1.2	2.6	2.2
04/26/95	1.1	1.2	3.8	2.9
04/27/95	0.5	0.7	1.2	0.8
04/28/95	0.9	1.2	3.0	2.4
04/29/95	1.6	2.5	5.2	2.9
04/30/95	0.5	1.8	0.6	0.8

Monthly Statistics of Daily Averages:	K65-NW (pCi/L)	K65-SW (pCi/L)	K65-NE (pCi/L)	K65-SE (pCi/L)
AVERAGE:	1.2	1.9	2.9	2.2
MAXIMUM:	2.7	5.4	8.9	5.8
MINIMUM:	0.4	0.6	0.5	0.5
MEDIAN:	1.1	1.2	2.6	2.2
STD. DEV	0.7	1.3	2.0	1.4

STANDARD LEGEND: 1. "(a)" indicates partial or complete data loss due to monitor malfunction.

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

PERIOD ENDING APRIL 30, 1995

ENCLOSURE D

EFFLUENT RADIATION DISCHARGES TO THE GREAT MIAMI RIVER

000061

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

Period Ending April 30, 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."

4888

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

Period Ending April 30, 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: MARCH 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	TSS (mg/l)	Total U (ug/l)	Total U (kgs)	pH (MIN) (S.U.)	pH (MAX) (S.U.)
1	0.154	4.1	7.7	7.0	4.8	0.0028	9.6	9.8
2	0.147	3.6	9.5	3.4	3.2	0.0018	9.8	10.0
3	0.097	2.7	6.8	5.2	5.2	0.0019	9.6	9.8
4	0.173	2.7	6.3	5.0	4.5	0.0029	9.5	9.6
5	0.006
6	0.000							
7	0.000							
8	0.000							
9	0.000							
10	0.081	11.7	9.9	9.2	26.7	0.0082	9.2	9.6
11	0.114	3.6	8.1	4.6	3.6	0.0016	8.4	9.4
12	0.138	3.2	6.3	5.6	4.8	0.0025	8.6	8.7
13	0.082	3.6	6.8	4.4	4.6	0.0014	8.5	8.7
14	0.186	3.2	11.3	2.4	4.1	0.0029	7.7	8.6
15	0.212	2.7	9.9	2.4	4.7	0.0038	7.9	8.1
16	0.190	3.2	8.6	1.2	4.8	0.0035	8.1	8.3
17	0.089	2.7	8.1	3.0	4.9	0.0017	8.1	8.5
18	0.121	1.8	7.7	9.2	3.0	0.0014	8.0	8.6
19	0.178	0.9	6.3	3.6	1.1	0.0007	8.0	8.3
20	0.046	0.9	5.9	5.4	1.2	0.0002	7.9	8.9
21	0.198	0.9	5.0	5.2	1.8	0.0013	8.1	8.8
22	0.164	1.4	5.4	4.8	3.2	0.0020	8.8	9.0
23	0.092	1.8	6.3	4.0	3.2	0.0011	8.0	8.9
24	0.113	2.3	7.2	3.6	3.8	0.0016	8.1	8.7
25	0.214	2.7	7.7	4.0	4.6	0.0037	8.6	8.7
26	0.215	3.3	6.9	6.0	4.5	0.0037	8.7	8.9
27	0.197	2.6	6.9	5.4	5.1	0.0038	8.7	8.9
28	0.194	1.8	5.8	4.6	2.7	0.0020	8.8	8.9
29	0.184	1.5	5.8	3.4	1.6	0.0011	8.7	8.8
30	0.179	1.7	5.6	4.0	2.2	0.0015	8.6	8.9
31	0.172	1.4	7.1	6.0	3.7	0.0024	8.6	8.8
Total	3.936					0.0615		

No sample collected.

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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 April 30, 1995

EFFLUENT RADIATION REPORT (cont.)

Fernald Environmental Management Project

∇: [SP1] IAWWT - T108

MARCH 1995

Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
0.127	2.6	7.2	4.1	0.0023
0.215	11.7	11.3	9.2	0.0082
0.000	0.9	5.0	1.2	0.0002

-
- ∴ (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 April 30, 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: MARCH 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	TSS (mg/l)	Total U (ug/l)	Total U (kgs)	pH (MIN) (S.U.)	pH (MAX) (S.U.)
1	0.150	4.1	9.0	8.0	4.1	0.0023	9.6	9.8
2	0.196	2.3	9.9	3.8	2.6	0.0019	9.8	10.0
3	0.110	2.7	6.8	5.4	4.3	0.0018	9.6	9.8
4	0.198	3.2	9.5	6.2	3.8	0.0028	9.5	9.6
5	0.137	2.3	6.3	4.4	3.1	0.0016	9.5	9.6
6	0.000							
7	0.000							
8	0.000							
9	0.000							
10	0.108	8.6	9.0	9.4	20.3	0.0083	9.2	9.6
11	0.184	9.9	9.9	8.4	24.6	0.0171	8.4	9.4
12	0.190	3.6	7.2	6.0	4.3	0.0031	8.6	8.7
13	0.184	3.2	11.7	2.8	3.6	0.0025	8.5	8.7
14	0.155	3.6	10.8	1.6	3.5	0.0021	7.7	8.6
15	0.209	3.6	9.0	9.8	4.2	0.0033	7.9	8.1
16	0.205	2.7	9.5	2.8	4.2	0.0033	8.1	8.3
17	0.183	2.3	7.7	3.2	3.7	0.0026	8.1	8.5
18	0.176	1.8	6.3	4.0	1.0	0.0007	8.0	8.6
19	0.206	0.9	5.9	3.2	1.0	0.0008	8.0	8.3
20	0.169	0.9	5.4	4.4	1.0	0.0006	7.9	8.9
21	0.209	1.4	5.9	7.4	1.4	0.0011	8.1	8.8
22	0.202	1.4	5.9	5.8	2.7	0.0021	8.8	9.0
23	0.126	1.4	5.9	10.6	98.6	0.0470	8.0	8.9
24	0.086	1.8	7.7	10.0	3.6	0.0012	8.1	8.7
25	0.155	2.7	6.3	3.8	4.3	0.0025	8.6	8.7
26	0.150	2.4	9.3	6.6	4.7	0.0027	8.7	8.9
27	0.097	3.2	7.3	9.8	4.6	0.0017	8.7	8.9
28	0.191	1.8	6.1	6.2	3.5	0.0025	8.8	8.9
29	0.206	1.5	5.9	5.8	2.5	0.0019	8.7	8.8
30	0.200	1.6	5.5	6.0	2.7	0.0020	8.6	8.9
31	0.182	1.7	6.5	7.2	3.0	0.0021	8.6	8.8
Total	4.564					0.1217		

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

Period Ending April 30, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: [SP1] IAWWT - T109

DATE: MARCH 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	0.147	2.7	7.6	7.0	0.0045
Max.	0.209	9.9	11.7	98.6	0.0470
Min.	0.000	0.9	5.4	1.0	0.0006

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

(2) Average values presented are flow-weighted.

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

Period Ending April 30, 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: MARCH 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)
1	0.669	347	90	0.44	1.11
2	0.480	306	72	0.44	0.80
3	0.416	324	153	0.50	0.79
4	0.743	333	135	0.51	1.43
5	0.590	356	122	0.46	1.03
6	0.377	405	135	0.59	0.84
7	0.289	495	149	0.58	0.63
8	0.296	495	113	0.54	0.60
9	0.298	338	104	0.61	0.69
10	0.430	419	90	0.61	0.99
11	0.725	423	77	0.62	1.70
12	0.500	419	99	0.63	1.19
13	0.266	405	104	0.63	0.63
14	0.342	414	144	0.68	0.88
15	0.421	446	72	0.69	1.10
16	0.395	450	113	0.64	0.96
17	0.272	383	77	0.56	0.58
18	0.297	257	90	0.38	0.43
19	0.752	279	113	0.40	1.14
20	0.811	293	68	0.41	1.26
21	0.650	252	117	0.39	0.96
22	0.366	36	72	0.38	0.53
23	0.218	261	81	0.45	0.37
24	0.198	347	99	0.53	0.40
25	0.370	342	117	0.50	0.70
26	0.365	347	90	0.52	0.72
27	0.490	356	135	0.52	0.96
28	0.770	300	90	0.45	1.31
29	0.761	210	79	0.41	1.18
30	0.724	210	64	0.41	1.12
31	0.736	230	100	0.41	1.14
	15.017				28.19

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

Period Ending April 30, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: (606) SWRB

DATE: MARCH 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (mg/l)(2)	Total U (kgs)
Avg.	0.484	326	100	0.50	0.91
Max.	0.811	495	153	0.69	1.70
Min.	0.198	36	64	0.38	0.37

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 April 30, 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: MARCH 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)
1	0.196	901	856	1.80	1.34
2	0.187	856	676	2.00	1.42
3	0.198	856	811	1.80	1.35
4	0.189	946	766	1.80	1.29
5	0.185	811	721	1.70	1.19
6	0.179	901	676	1.70	1.15
7	0.194	811	676	1.60	1.17
8	0.192	811	631	1.60	1.16
9	0.189	856	586	1.50	1.07
10	0.201	766	541	1.50	1.14
11	0.192	766	423	1.50	1.09
12	0.199	721	450	1.50	1.13
13	0.199	721	432	1.50	1.13
14	0.199	***	***	1.80	1.36
15	0.000				
16	0.000				
17	0.000				
18	0.201	766	495	1.40	1.07
19	0.200	766	631	1.40	1.06
20	0.200	811	631	1.50	1.14
21	0.200	721	766	1.30	0.98
22	0.210	676	901	1.20	0.95
23	0.208	550	980	1.20	0.94
24	0.114	460	1040	1.10	0.47
25	0.134	490	1230	1.00	0.51
26	0.154	510	1160	1.00	0.58
27	0.174	540	1090	0.99	0.65
28	0.193	540	1180	1.10	0.80
29	0.213	490	1090	1.00	0.81
30	0.233	460	1040	0.98	0.86
31	0.122	460	1080	0.99	0.46
Total	5.255				28.28

*** No sample collected.

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

Period Ending April 30, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: (605) BDN/ETS

DATE: MARCH 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (mg/l)(2)	Total U (kgs)
Avg.	0.170	683	755	1.42	1.01
Max.	0.233	946	1230	2.00	1.42
Min.	0.000	460	423	0.98	0.46

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 April 30, 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: MARCH 1995

Day	C-BOD5 (mg/l)	TSS (mg/l)	NH3-N (mg/l)	NO3-N (mg/l)	Chromium (ug/l)	Copper (ug/l)	Nickel (ug/l)	Hex-Chrom (ug/l)
1								
2								
3								
4								
5								
6								
7	2.18 <	2	0.13	12.4 <	6.0 <	14.0 <	17.0 <	6.0
8								
9								
10								
11								
12		3 <	0.10	10.4	6.8 <	14.0 <	17.0 <	6.0
13								
14								
15								
16								
17								
18								
19	6.88							
20		9 <	0.10	10.0 <	6.0 <	14.0 <	17.0 <	6.0
21	8.10							
22								
23								
24								
25								
26								
27								
28	4.51	11	0.11	13.4 <	6.0 <	14.0 <	17.0 <	6.0
29								
30								
31								

000071

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

Period Ending April 30, 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: MARCH 1995

Day	Flow (MGD)	Total U (ug/l)	Total U (kgs)
1	1.544	8.4	0.05
2	1.607	5.4	0.03
3	1.600	7.2	0.04
4	1.609	7.6	0.05
5	1.682	17.4	0.11
6	1.927	12.9	0.09
7	1.884	• 13.0	0.09
8	2.086	• 13.0	0.10
9	2.039	• 13.0	0.10
10	2.297	15.3	0.13
11	1.745	10.8	0.07
12	1.973	14.7	0.11
13	2.066	20.8	0.16
14	1.998	17.2	0.13
15	2.236	18.4	0.16
16	1.835	18.0	0.13
17	1.903	14.5	0.10
18	2.188	14.4	0.12
19	1.990	14.5	0.11
20	2.008	28.8	0.22
21	2.008	18.2	0.14
22	2.096	17.5	0.14
23	1.935	2.7	0.02
24	2.093	13.9	0.11
25	1.944	5.3	0.04
26	1.978	12.6	0.09
27	2.048	19.7	0.15
28	2.058	17.8	0.14
29	2.149	19.7	0.16
30	1.856	3.9	0.03
31	2.048	17.2	0.13
Total	60.430		3.26

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

3800 -

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

Period Ending April 30, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: South Plume

DATE: MARCH 1995

	Flow (MGD)	Total U (ug/l)(2)	Total U (kgs)
	-----	-----	-----
Avg.	1.949	14.3	0.05
Max.	2.297	28.8	0.22
Min.	1.544	2.7	0.02

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 April 30, 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: MARCH 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kgs)	TSS (mg/l)	pH (Grab (S.U.))
1	2.409	31.5 <	63.1	31	0.28		7.5
2	2.274	22.5 <	63.1	31	0.27	2.4	6.8
3	2.214	13.5 <	63.1	31	0.26		7.2
4	2.541	13.5 <	63.1	29	0.28		7.2
5	2.457	22.5 <	63.1	41	0.38		7.2
6	2.483	22.5 <	63.1	25	0.23		6.8
7	2.367	13.5 <	67.6	18	0.16		6.7
8	2.574 <	13.5 <	67.6	17	0.17		6.6
9	2.526 <	13.5 <	67.6	17	0.16	2.2	6.3
10	2.928	13.5 <	67.6	16	0.18		6.7
11	2.662	27.0 <	67.6	36	0.36		7.1
12	2.672 <	13.5 <	67.6	21	0.21		7.1
13	2.531	13.5 <	67.6	32	0.31		7
14	2.539	31.5 <	67.6	42	0.40		6.9
15	2.657	22.5 <	67.6	50	0.50		6.9
16	2.230	36.0 <	67.6	52	0.44	2.2	6.9
17	2.175	27.0 <	67.6	53	0.44		6.2
18	2.686	36.0 <	72.1	45	0.46		7.5
19	2.942	18.0 <	72.1	31	0.35		6.7
20	3.019	40.5 <	72.1	37	0.42		6.2
21	2.858	18.0 <	72.1	21	0.23		6.4
22	2.672 <	13.5 <	67.6	18	0.18		6.1
23	2.361 <	13.5 <	67.6	23	0.21	2.2	6.1
24	2.405	18.0 <	67.6	28	0.25		6.8
25	2.448	18.0 <	67.6	33	0.31		7
26	2.497	22.5 <	67.6	34	0.32		6.7
27	2.712	22.5 <	67.6	35	0.36		6.7
28	3.021 <	13.5 <	67.6	25	0.29		6.8
29	3.123 <	13.5 <	67.6	22	0.26		7.4
30	2.813 <	13.5 <	67.6	25	0.27	3.2	7.5
31	2.906 <	13.5 <	67.6	26	0.29		6.7

Total 80.702 9.21

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

00007A

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

Period Ending April 30, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: [SP3] Valve House

DATE: MARCH 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
	-----	-----	-----	-----	-----
Avg.	2.603	20.1	67.4	30	0.30
Max.	3.123	40.5	72.1	53	0.50
Min.	2.175	13.5	63.1	16	0.16

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.

000075

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

Period Ending April 30, 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: MARCH 1995

Day	DO (mg/l)	IRON (mg/l)	MANGANESE (mg/l)
1			
2	8.6	0.41	< 0.1
3			
4			
5			
6			
7			
8			
9	8.2	0.52	< 0.1
10			
11			
12			
13			
14			
15			
16	6.9	0.60	0.2
17			
18			
19			
20			
21			
22			
23	8.6	0.75	0.2
24			
25			
26			
27			
28			
29			
30	9.0	0.46	< 0.1
31			

000076