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

10/18/95

**DOE-0073-96
DOE-FN EPAS
45
REPORT**



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

OCT 18 1995

DOE-0073-96

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 SEPTEMBER 1995

Enclosure 1 is the consolidated CA/FFCA/FFA and RI/FS Monthly Progress Report, which describes the activities accomplished September 1 through 30, 1995, and planned actions for the period of October 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) 648-3139.

Sincerely,

A handwritten signature in black ink that reads "Johnny W. Reising".

Johnny W. Reising
Fernald Remedial Action
Project Manager

Enclosure: As Stated

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cc w/enc:

K. H. Chaney, EM-423/GTN
B. Skokan, EM-423/GTN
Manager, TSPP/DERR, OEPA-Columbus
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D. Carr, FERMCO/52-5
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AR Coordinator, FERMCO

cc w/o enc:

G. Jablonowski, USEPA-V, 5HRE-8J
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D. S. Ward, GeoTrans
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M. Yates, FERMCO

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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 September 1 through September 30, 1995, and planned actions for the period October 1 through October 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 September 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.	All Plants Temp. Inoperable due to groundwater sampling to comply with Removal Action 1
2	Waste Pit Area Run-off Control	Collect and treat contaminated storm water run-off from the waste pit area.	Operational: 7/30/92 Operation Ongoing
3	South Groundwater Contamination Plume	Part 1 - Install new alternate water supply and transfer to industrial user.	Operational: 12/7/92 Operation Ongoing
		Part 2 - Pump and discharge groundwater from South Plume.	Operational: 8/27/93 Operation RW 5 offline indefinitely
		Part 3 - Install and operate Interim Advanced Waste Water Treatment system to reduce uranium contaminant loading to the Great Miami River.	Operational: 7/30/92 Operation Ongoing
		Part 4 - Conduct groundwater monitoring and institutional controls by sampling private and existing RI/FS wells in the South Plume area and installing homeowner treatment systems.	Ongoing
		Part 5 - Conduct groundwater modeling and geochemical investigation to define the extent of the groundwater plume contaminated with uranium.	Completed: 2/25/94
		OU 2 Dispute Resolution Supplemental Project - Provide for partial treatment of the South Plume discharge to further reduce uranium flow to the Great Miami River.	Operational: 3/31/94 Operation Ongoing
4	Silos 1 & 2	Install bentonite cap to reduce and monitor radon emissions. Provide follow-on monitoring.	Cap Completed: 11/28/91 Monitoring: Ongoing

• Shading denotes completed actions

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REMOVAL ACTION SUMMARY

NO.	TITLE	SCOPE	STATUS
5	Decant Sump Tank	Periodically remove liquid from K-65 decant sump tank.	Ongoing
6	Waste Pit 6 Residues	Eliminate potential airborne contamination by resubmerging exposed pit material.	Completed: 12/19/90
7	Plant 1 Pad Continuing Release	Stage I - Implement run-on/off control measures.	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: 6/29/92
		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: 9/29/92
		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 6/18/93
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:

Pumps were removed from designated perched water wells in Plants 2/3, 6, 8, and 9 in anticipation of groundwater sampling as required by Removal Action No. 1 and the Amended Consent Agreement. The sampling was completed September 24 and the last pump returned to Well 1661 on September 25, 1995, one week ahead of schedule.

Planned Activities:

- Complete repair of the Plant 2 hold tank level gauges (presently in process).

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).

Project A of the Public Water Supply (PWS) is complete pending final acceptance by Hamilton County Department of Public Works (HCDPW)/Cincinnati Water Works (CWW).

The analysis of cultural resources and final report for data recovery field work for Project B of the PWS is in progress. Field work has been completed. The final report which includes analysis of the findings will be completed in December 1995.

Construction of all work under Projects B and C is underway and is currently on schedule.

Grant modification request has been completed and forwarded to the DOE Ohio Field Office.

Bids have been received and opened for Project D of the PWS 500,000-gallon reservoir and the remaining water line to the reservoir on Crosby Road. Contract awards are expected to occur in early October 1995.

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Removal Actions

RA No. 3, South Groundwater Contamination Plume

Part 1 - Alternate Water Supply (continued)

Planned Activities:

- Continue proceedings to transfer ownership of the pumping and piping equipment as well as the easement rights to Albright and Wilson in accordance with the agreement of 1990.
- Continue to support HCDPW on installation of the entire PWS, including service connections.
- Assist HCDPW with bid proposal for service connections.
- Coordinate tie-in of PWS with the FEMP on Willey Road.

Part 2 - Pumping and Discharge System

Current Month:

The South Plume Removal Action Design Monitoring Evaluation Program Plan System Evaluation Report (DMEPP) for January 1, 1995 - June 30, 1995 was prepared in anticipation of submittal to the U.S. and Ohio EPAs on October 2, 1995. This biannual report documents the performance of the monitoring and capture systems of the South Groundwater Contamination Plume Removal Action No. 3.

Planned Activities:

- Submit the DMEPP to the U.S. and Ohio EPAs on October 2, 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.

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Removal Actions

RA No. 3, South Groundwater Contamination Plume

Part 3 - Interim Advanced Waste Water Treatment (IAWWT) (continued)

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 1995.

Planned Activities:

- None.

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:

Operations continued.

Planned Activities:

- Continue to operate.

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RA No. 3, South Groundwater Contamination Plume

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

Step 2

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

Current Month:

An optimum flow of 660 gpm has been achieved at the AWWT using the current configuration. Operational goals have been established whereby the 400 gpm system uses available capacity to routinely process South Plume water daily and the 700 gpm system along with the IAWWT will change over to exclusively process South Plume water during those times when the SWRB is at a low level.

Planned Activities:

- Continue operational goals as described.

Step 3

Elimination of low uranium concentration streams.

Current Month:

Reduced flow occurred due to filtration problems at the AWWT.

Planned Activities:

- Continue to operate.

Step 4

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

Current Month:

Operations continue.

Planned Activities:

- Treat storm water as needed.

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Removal Actions

RA No. 7, Plant 1 Pad Continuing Release

Current Month:

The subcontractor continues to sawcut/remove deteriorated concrete and install patch compound in joints. This is scheduled to be completed the week of November 6, 1995.

Planned Activities:

- Subcontractor to continue sawcutting/removing deteriorated concrete and installing patch compound in joints.

RA No. 9, Removal of Waste Inventories

Current Month:

The volume, in cubic feet (cf), of low-level waste shipped to the Nevada Test Site (NTS) in September 1995 was 31,257 (external) and 26,682 (internal). As of September 1, 1995, the FEMP has shipped 722,000 cf (external) and 593,730 cf (internal) to NTS for Fiscal Year (FY) 1995. NTS has received 722,000 cf (external) and 593,730 cf (internal) of FEMP-generated low level waste for burial as of September 29, 1995.

Low level waste volume reduction includes approximately 20,000 drums of residues; 239 boxes and 204 International Shipping Organization (ISO) containers of process area scrap; 17 ISO containers of contaminated trash; 620 boxes and 105 ISO containers of construction debris; and 36 boxes of thorium materials. Inventory reduction volumes include 5,732 containers of legacy trash materials and 1,365 containers of residues shipped to SEG for compaction prior to burial at NTS. Lastly, low level waste disposition volumes do not include approximately 61 roll-off bins and 17 ISO containers of Plant 7 steel materials shipped to the ALARON recycling facility in Pennsylvania.

The FY 1995 volume (in cf) dispositioned to NTS was completed two weeks ahead of schedule, primarily due to release of ISO and large metal box shipments of process area scrap materials, and additional resources applied in support of residue material packaging operations.

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Removal Actions

RA No. 9, Removal of Waste Inventories

Current Month: (continued)

The volume of low level waste materials shipped to NTS in FY95 per waste stream is described in the following table.

WASTE STREAM	INTERNAL VOL. (cf)	EXTERNAL VOL. (cf)
Process Area Scrap	255,328	295,538
Thorium	5,334	6,622
Residues to NTS (FEMP + SEG)	149,240	200,577
Contaminated Trash	19,941	22,933
Construction (Legacy)	49,201	60,554
Construction (Newly Generated)	120,112	141,278

Note : 1 drum equivalent = 7.4 cubic feet

Three shipments of Liquid Mixed Waste were sent to the TSCA Incinerator during September 1995. Shipment of this waste emptied batch 4 and exceeded the Performance Objective Criteria (POC) which required 1500 containers processed and shipped by September 30, 1995. At this time 3 of the 5 batches that were bulked have been shipped to the TSCA Incinerator. The remaining two batches will be blended to reduce the Total Activity of batch 1 which is currently 2290 pCi/g, to less than 2000 pCi/g. A letter from TSCA Operations offering guidance on the volume of each batch to be blended was received on October 2, 1995 and our site blending document is being prepared.

The Project Specific Work Plan for the Mixed Waste Stabilization Project was transmitted to the U.S. and Ohio EPAs by DOE-FN on September 1, 1995. On September 7, 1995, the project team hand carried the Work Plan to OEPA and provided an overview of the project and how the substantive permit requirements were being met. Conditional Approval of the Work Plan was received from OEPA on September 29, 1995.

A Work Plan for the Chemical Treatment Project is being developed to comply with the Amended Consent Agreement, Removal Action No. 9, and the Proposed Site Treatment Plan. The Work Plan will be submitted to the U.S. and Ohio EPAs in November 1995. This is being done per a DOE-FN commitment for submitting Work Plans for projects being performed under Removal Action No. 9.

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Removal Actions

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

Planned Activities:

- Continue shipment of uranium drosses to Oak Ridge, Tennessee.
- Continue shipment of normal uranium process materials to Allied Signal.
- Initiate FY-1996 LLW waste material disposition to NTS.
- Blend the remaining two batches of Liquid Mixed Waste reduce the Total Activity of batch 1.

RA No. 12, Safe Shutdown

Current Month:

The removal of holdup material from Plant 9 continues with work in the Zimlo/water treatment area. Lathes and machining equipment were cleaned including three ingot saws as well as various equipment in the re-mill area. Work on the redistribution of electrical power that runs through the Plant 9 complex is in progress.

Approximately eighty mass restricted red drums in the Pilot Plant still await relocation to an interim on site storage location.

Utility disconnections in Plant 5 were continued. 500 drums of mass restricted material were removed and relocated to an interim on site storage location. Approximately 1000-1100 additional red drums still need to be relocated. Several pieces of salvageable equipment have been identified for removal and redistribution. Work continues on the design of the redistribution of power feeding through Plant 5.

Advance planning has commenced to support Safe Shutdown activities in Plant 2/3 following the completion of UNH work. Some of the personnel who have facility knowledge and experience will become part of the Safe Shutdown effort in Plant 2/3.

Planned Activities:

- Continue holdup material removal and utility disconnections in Plant 9.
- Complete the relocation of stored enriched restricted material from the Pilot Plant.
- Continue utility disconnections in Plant 5.
- Continue holdup material removal plan development for Plant 5 and the Pilot Plant.

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Removal Actions

RA No. 13, Plant 1 Ore Silos

Current Month:

Review responses to OEPA's comments on the Final Report. No comments were received from U.S. EPA on the Final Report.

Planned Activities:

- Transmit responses to OEPA's comments on the Final Report by October 31, 1995.

RA No. 15, Scrap Metal Piles

Current Month:

Phase I: None to report.

Phase II: Proposals have been received and evaluations were nearly completed.

Planned Activities:

- Phase I: Final disposition of the waste streams continues to be determined.
- Phase II: It is anticipated that the Engineering Study of the Phase II waste streams will be managed by Waste Programs Management.
- Close out RA No. 15 and prepare and submit a Final Report.

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:

September 1995 activities included movement of the 115 small white metal boxes to the Plant 1 pad area. The filled boxes (boxes all filled on August 4, 1995) contained the total volume of all the residue/debris of the former Scrap Metal Pile (SMP) area (as part of the RA 17 scope). A radiological survey of the newly cleaned pad area was conducted in September 1995 to confirm that the radiological airborne contamination concern has been eliminated. Results of the survey indicated that the SMP area no longer presented a radiological airborne hazard and that the area can now be "down-posted" from a High-Contamination Area to a Contamination Area.

The final report/closeout documentation was finalized this month for the two completed field activities (Third St. Dirt Pile and the Removal/Containerization of the SMP residues) and was presented internally within the new Revision No. 3 of the RvA 17 Work Plan on September 26, 1995.

Planned Activities:

- Submit RvA 17 Work Plan (Revision 3) to the U.S. and Ohio EPAs by October 16, 1995.

RA No. 19, Plant 7 Dismantling

Current Month:

Processing of the Plant 7 steel continues at ALARON's decontamination facility for unrestricted reuse of the 761 tons of structural steel to achieve free release in the range of 40% to 50%. About 277 tons have been free released to date. It was determined that steel staged for spin blast and chemical decontamination processing will be processed through the descaler. This reduces the amount of secondary waste.

FERMCO sampling and analysis indicates that the descaler process does not generate hazardous waste.

ALARON shipped 16 roll off boxes of the primary waste that cannot be processed back to FERMCO during the week of September 18, 1995.

Processing of the Plant 7 lead began at SEG's Central Volume Reduction Facility for unrestricted reuse of about 7 tons of lead. About 5 tons have been free released to date.

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RA No. 19, Plant 7 Dismantling (continued)

Planned Activities:

- Ongoing processing of Plant 7 steel.
- Ship 32 containers of primary waste from ALARON to FEMP by October 31, 1995.
- Consolidate containers of primary waste at Plant 7 Pad.
- Process 100% of the Plant 7 lead at SEG and issue the SEG Final Report.
- Approve SEG's plans and procedures by the Plant 7 Lead Recycling Team.

RA No. 20, Stabilization of UNH Inventories

Current Month:

The processing of UNH and rinsing of all tanks except the neutralization/dilution Tanks F1-25 and F1-26 was completed in August. These tanks are being used for processing of materials in the scope of the Nitric Acid/Residual Waste project, and will likely continue to be used for processing other miscellaneous materials for the next several months.

Processing of the nitric acid began on September 8, 1995. On September 13, 1995 all four batches of material had been removed from Tanks F1-23 and F1-24. Because the drainage nozzles from the tanks turned down to the floor of the tanks, an unexpected benefit, the "heel" of material existing in the tanks was minimal. Therefore, only water rinsing of the tanks was required and this was completed on September 15, 1995. Three of the four batches of nitric acid were neutralized by September 15, 1995 and transferred to Plant 8 and filtered by September 20, 1995. The fourth batch is being held for processing of Tanks D1-7 and D1-11.

The Readiness Assessment (RA) for Tank D1-7 was completed the week of September 18, 1995. Permission to operate was received from DOE-OFO on September 19, 1995. Draining of the 1000 gallons of the existing aqueous phase was completed on September 20, 1995 and removal of the organics in the overflow line occurred shortly thereafter. Sodium carbonate was added to the tank on September 20, 1995 and the tank contents were allowed to resegment. After sampling and analysis it was determined that the desired removal of uranium from the organic phase was not achieved. After an additional sodium carbonate was added it was, it was decided on September 28, 1995 that the uranium equilibrium between the organic and the aqueous phases had been achieved, and therefore, the aqueous layer would be transferred to D1-11 and the tank refilled with fresh water, and a second carbonate addition performed. This was performed on September 28, 1995. The aqueous addition to Tank D1-11 has successfully removed the crystals contained therein.

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

Planned Activities:

- Continue processing of material within scope of the Nitric/Residual Waste Project.

RA No. 26, Asbestos Removals (Asbestos Program)

Current Month:

Plans are underway to get the asbestos abatement work started in Plant 6. Plant 6 was given top priority due to the large number of maintenance work orders for this facility. There is also a project in progress to clean up bird droppings in the Plant 6 area.

Asbestos abatement work in the Boiler Plant started in September 1995. Out of the twelve maintenance work orders, six were completed. The remaining six maintenance work orders involve encapsulation work which is scheduled to be completed the week of October 9, 1995.

The cafeteria renovation is in progress which involves removing approximately 300 square feet of asbestos floor tile.

Planned Activities:

- Continue to remove asbestos floor tile from the cafeteria.
- Continue plans to start asbestos abatement work in Plant 6.
- Complete the remaining six maintenance work orders in the Boiler Plant by the week of October 9, 1995.

RA No. 28, Contamination at the Fire Training Facility

Current Month:

The open top tank sized-reduced components were transferred to the site storage area in September 1995. Responses to OEPA's comments on the Final Report were completed.

Planned Activities:

- Transmit responses to OEPA's comments on the Final Report by October 31, 1995.

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Removal Actions

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

Current Month:

Start up activities for the seepage control were completed on August 16, 1995, corresponding with the construction schedule and systems are operational. A final "walk through" was conducted on September 27, 1995. As-built drawings were completed September 29, 1995.

Planned Activities:

- Completion of punch list items.
- Seeding after grading is completed.
- Issue Seepage Control Report to DOE by October 26, 1995.

KEY MILESTONES	STATUS	DUE DATE
Submit RSE	Completed	October 11, 1994
Submit work plan to DOE	Completed	December 22, 1994
Submit work plan to EPAs	Completed	January 20, 1995
Complete Removal Action	Began Construction April 25, 1995	October 17, 1995

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Remedial Investigations/Feasibility Studies

1.0 Operable Unit 1

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

1.1 R/FS Work Plan

Status:

Complete.

1.2 Remedial Investigation

Status:

Complete.

1.3 Feasibility Study/Proposed Plan

Status:

Complete.

1.4 Treatability Studies

Status:

The Dewatering Excavation Evaluation Program (DEEP) Phase III, Stage 1, Dewatering Well Testing, was completed in Waste Pits 1 and 3 on August 18, 1995. B&B Drilling Company prepared a report for this activity and submitted it to FERMCO September 5, 1995. Based upon the results summarized in this report, OU 1 has determined further, detailed dewatering studies would be of marginal benefit, therefore it will not proceed with Stage 2 dewatering efforts. Phase IV, dry excavation activities, will be initiated and completed in October 1995.

Issues/Corrective Actions:

None to report.

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1.5 Record of Decision

Status:

Complete.

Issues/Corrective Actions:

None to report.

1.6 RD Work Plan

The Remedial Design (RD) Work Plan identifies the design deliverables, and presents the schedule for their submittal to U.S. EPA (in coordination with OEPA) for the implementation of the selected remedy described in the OU 1 Record of Decision.

Status:

The draft RD Work Plan was submitted to the U.S. and Ohio EPAs on April 25, 1995 for review, approximately one week ahead of the required submittal date of May 1, 1995. On May 30, 1995 OEPA conditionally approved of the plan. On June 21, 1995, U.S. EPA approved the RD Work Plan without comment. Responses to the OEPA comments and a Final RD Work Plan reflecting changes made to address these comments were prepared and submitted to the U.S. and Ohio EPAs on July 7, 1995, two weeks ahead of the required submittal date of July 21, 1995.

The RD Work Plan identifies the following preliminary design deliverables for submittal to U.S. and Ohio EPAs by October 24, 1995: Plant Facilities Design Criteria Package, Plant Facilities Engineering, Equipment Specifications, Site Improvement Plan, Construction Schedule, Excavation Plan, Site Restoration Plan, and Transportation and Disposal Plan. An internal review was completed in September on conceptual design packages for many of these deliverables. The deliverables are subsequently being revised to reflect comments received, and to finalize them for one last DOE review prior to the October 24, 1995, submittal to the EPAs.

In a letter to the U.S. and Ohio EPAs dated August 18, 1995, providing a proposal for integration of site-wide remedial planning, DOE requested that the OU 1 Site Restoration Plan be deleted as an OU 1 remedial design deliverable. The letter also stated that the scope of this deliverable would be addressed in a site-wide plan as discussed in the proposal enclosed therein. In letters of September 8, and September 15, 1995, OEPA and U.S. EPA, respectively, expressed support of this proposal for site-wide integration, although both Agencies stated that additional detail is needed and needs to be reflected in the respective RD/RA planning documents. DOE is in the process of developing a response, with the requested clarifications.

Issues/Corrective Actions:

None to report.

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1.7 RA Work Plan

The Remedial Action (RA) Work Plan provides the basis for implementation of the Remedial Design Work Plan and includes, but is not limited to, the following: Sampling and Analysis Plan, Quality Assurance Project Plan, Health & Safety/Contingency Plan, Operations and Maintenance Plan, and a plan for meeting permitting requirements.

Status:

The Remedial Action Work Plan is scheduled for submittal to the U.S. and Ohio EPAs by October 22, 1996, as stated in the Remedial Design Deliverable Schedule submitted as part of the RD Work Plan.

Issues/Corrective Actions:

None to report.

1.8 Planned Activities for October 1995:

- Initiate and complete Phase IV, dry excavation activities, in October 1995. This will complete the DEEP project.
- Finalize the preliminary design deliverables and submit to U.S. and Ohio EPAs by October 24, 1995.

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2.0 Operable Unit 2

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

2.1 R/FS 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 _s	RECEIVE FROM EPA _s	FINAL DUE DATE TO EPA _s	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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Remedial Investigations/Feasibility Studies

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

C = Consent Agreement Date

2.4 Treatability Studies

Status:

None to report.

Issues/Corrective Actions:

None to report.

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Remedial Investigations/Feasibility Studies

2.5 RD/RA Work Plan

Status:

The Operable Unit 2 Draft Remedial Design Work Plan report was submitted to the U.S. EPA for review and approval and the OEPA for review on August 4, 1995. The document was transmitted three days ahead of schedule. Conditional Approval was received from U.S. EPA on September 18, 1995.

Planned Activities for October 1995:

- Incorporate responses to comments received on OU 2 Remedial Design Work Plan.
- Issue Final Remedial Design Work Plan Report.

2.6 Record of Decision

Status:

The Record of Decision (ROD) was signed by DOE and submitted to the EPAs on May 12, 1995. Formal approval was received June 8, 1995 and the Final Operable Unit 2 ROD was submitted to the EPAs and general distribution was completed.

2.7 Pre-Design Field Investigation

Status:

A draft Predesign Investigation Report was submitted to DOE for review on June 12, 1995. DOE comments were incorporated into the report and the document was transmitted to the U.S. and Ohio EPAs ahead of schedule on July 28, 1995. The OEPA comments to the document were received September 11, 1995 and U.S. EPA approved the report on September 14, 1995.

Planned Activities for October 1995:

- Finalize responses to OEPA comments on Draft Predesign Investigation Report.
- Resubmit Predesign Investigation Report.

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2.8 Geotechnical Field Investigation

Status:

All field investigative activities related to the Phase III of the Site-Wide Disposal Facility Field Investigation have been completed. Ninety percent of laboratory results was received from PARSONS on September 6, 1995.

A draft Geotechnical Work Plan for on-site clay borrow material, off-site material sources and the OU 2 waste units was conditionally approved by OEPA on August 30, 1995 and approved by U.S. EPA on August 31, 1995. Field work began on September 5, 1995.

Planned Activities for October 1995:

- Field work is to be completed during October 1995.

2.9 Disposal Facility

Status:

GeoSyntec was awarded the Disposal Facility Engineering Design Contract on August 11, 1995.

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3.0 Operable Unit 3

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

3.1 Remedial Investigation/Feasibility Study Report

Status:

A streamlined and combined Draft RI/FS Report and the Proposed Plan was submitted to the U.S. and Ohio EPAs and DOE on September 11, 1995. DOE and FERMCO are awaiting comments from the EPAs, scheduled by the ACA to be received not later than 80 days after draft document submission.

Issues/Corrective Actions:

None to report.

OPERABLE UNIT 3 REMEDIAL INVESTIGATION/FEASIBILITY STUDY

PRIMARY MILESTONES

SCOPE	SUBMIT TO EPAs	RECEIVE FROM EPAs	SUBMIT TO EPAs 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

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3.2 Engineering Studies

Status:

Comments from the internal review of the draft final EET Decontamination of Transite Engineering Study are being incorporated. The report will go out for blue sheet review and be issued in October 1995. The Kelly Decontamination of Concrete Engineering Study Chemical Leaching of Concrete Engineering Study, and the Surface Decontamination/Removal Metal Engineering Study Final Reports have been issued. The Transite Characterization Engineering Study draft final report will be reviewed internally in October 1995.

OU 3 continues to assist Technology Programs in supporting the Electro Hydraulic Scabbling demonstration that started in September 1995. This project is being funded by EM-50 and is being performed by Textron Defense Systems. The demonstration will consist of concrete scabbling in several radiologically contaminated areas within Building 6. The objective is to remove a 1/4 inch layer from contaminated concrete by displacing electrical discharges between two electrodes submerged in water and in contact with the concrete. Representatives from DOE Morgantown Energy Technology Center (METC) and Lockheed Martin Energy Systems in Oak Ridge are expected to participate in this demonstration.

Issues/Corrective Actions:

None to report.

3.3 Interim Remedial Action

Status:

Prioritization and Sequencing Report - In a September 19, 1995 letter, the U.S. EPA has requested an update to the OU 3 D&D schedule presented in the approved OU 3 Remedial Design Prioritization and Sequencing Report. This updated schedule is to reflect the accelerated remediation schedule (i.e., the \$276 Million Case). A draft response letter, with a revised schedule, is currently being prepared for internal review.

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Dismantlement of MAWS Equipment - The project kick-off for the dismantlement of the Lockheed-owned MAWS soil washing system has been indefinitely postponed, pending contractual resolution between Argonne National Lab and GTS Duratek over the purchase of the MAWS vitrification and water treatment systems. A letter is being prepared to formally notify DOE-FN and DOE-HQ of this delay and the potential repercussions to the Plant 9 D&D schedule.

Currently, negotiations are underway for the purchase of the Duratek vitrification and water treatment systems by DOE-HQ. FERMCO has requested a notice to proceed with the dismantlement of these systems by Safe Shutdown as salvageable equipment, pending contractual agreement.

Issues/Corrective Actions:

None to report.

3.4 Planned Activities for October 1995:

- Final report for the Transite Characterization Engineering Study to be reviewed by the end of October 1995.
- The EET Decontamination of Transite Engineering Study to be completed by mid-October 1995.
- Complete validation of a small percentage of unvalidated RI/FS radiological data, validate results from the OU 3 leachability study, quality control check all data, and recalculate baseline values.
- Prepare a presentation for DOE-FN and the U.S. and Ohio EPAs on the RI/FS document to facilitate review by the regulators.
- Initiate development of an approach for incorporation into the RI/FS Report the sitewide strategy for disposal of RCRA listed and characteristic wastes within the on-property disposal facility.
- Coordinate issues between the remedial strategy for construction debris disposal with the construction and waste management divisions to allow effective performance of the D&D operations.
- Develop an Environmental ALARA Evaluation plan to support the safe and effective storage of construction debris, including both containerized and non-containerized configurations.

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4.0 Operable Unit 4

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

4.1 RI/FS Work Plan

Status:

Complete.

4.2 Remedial Investigation

Status:

Complete.

4.3 Feasibility Study/Proposed Plan

Status:

Complete.

4.4 Treatability Studies

4.4.1 Bench Scale Treatability Studies

Status:

Complete.

4.4.2 Pilot Plant Treatability Studies

Status:

The Phase I and Draft Final Phase II Work Plan was submitted to the DOE-FN on August 18, 1995. Currently addressing comments on the Phase I Work Plan and awaiting DOE approval on the Draft Final Pilot Plant Phase II Work Plan prior to transmittal to the U.S. EPA for review and approval, respectively.

Issues/Corrective Actions:

None to report.

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4.5 Record of Decision

Status:

Complete.

4.6 RD Work Plan

Status:

Complete.

4.7 Planned Activities for October 1995:

- Continue construction of the Phase I Pilot Plant facility.
- Address comments on the Phase I Work Plan.
- Obtain DOE approval on the Draft Final Pilot Plant Phase II Work Plan.

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5.0 Operable Unit 5

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

5.1 Remedial Investigation

Status:

Complete.

Issues/Corrective Actions:

None to report.

OPERABLE UNIT 5 REMEDIAL INVESTIGATION REPORT

PRIMARY MILESTONES

SCOPE	SUBMIT TO EPA _s	RECEIVE FROM EPA _s	SUBMIT TO EPA _s 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:

The Feasibility Study Report was completed on July 21, 1995.

Issues/Corrective Actions:

None to report.

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OPERABLE UNIT 5 FEASIBILITY STUDY/PROPOSED PLAN

PRIMARY MILESTONES

SCOPE	SUBMIT TO EPA _s	RECEIVE FROM EPA _s	SUBMIT TO EPA _s 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:

Fourth quarter RCRA groundwater sampling was conducted September 5 through 18, 1995.

Issues/Corrective Actions:

None to report.

5.4 Treatability Studies

Complete.

5.5 Record of Decision (ROD)

Status:

The draft ROD was submitted to the U.S. and Ohio EPA's on August 2, 1995. Comments were received from the agencies on September 22, 1995; responses and a draft final ROD are due for resubmittal to the agencies on October 23, 1995.

Issues/Corrective Actions:

None to report.

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5.6 Other Studies/Reports

Status:

On September 19, 1995, the U.S. EPA approved the OU 5 K₁ Sampling and Analysis Results Report.

Issues/Corrective Actions:

None to report.

5.7 RD/RA Activities

Status:

Initiated draft of the Remedial Design (RD) Work Plan. The RD Work Plan is due 60 days after the ROD is finalized by the regulatory agencies.

Issues/Corrective Actions:

None to report.

5.8 Planned Activities for October 1995:

- Prepare responses to agency comments on the draft ROD; responses and draft final ROD are due October 23, 1995.
- Begin testing activities under the approved Project-Specific Plan for the South Field Injection Test on October 9, 1995.
- Continue preparation of the draft Remedial Design Work Plan.
- Continue preparation of the Groundwater Reinjection - Great Miami Aquifer Remediation Strategy Report.

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Remedial Investigations/Feasibility Studies

6.0 Community Relations

Status:

On September 6, 1995 the monthly meeting for the Fernald Envoy Program was conducted. About 50 envoys attended and were briefed on:

- Economic Impact Study -- Researchers from the University of Cincinnati are conducting the study to provide local community leaders with information on Fernald's impact for the purpose of stimulating economic development planning by interested community groups or organizations. A report containing study findings will be available in October 1995.
- Fernald Radium Initiative -- A representative from DOE spoke to the envoys about investigating the potential for the safe, successful and cost effective recovery of radium from the K-65 silos. DOE will evaluate the potential processes for recovery and determine what impacts, if any, there would be on the remediation schedule.

On September 11, DOE-HQ conducted a teleconference with Fernald concerning the radium in the K-65 silos and the steps being taken by HQ. An intensive search of all possible sources of radioactive materials that might be valuable for medical research is underway. DOE also indicated the review should not affect the Fernald site cleanup progress. Thomas Grumbly, Assistant Secretary for Environmental Management, said DOE is committed to conducting the necessary research on developing radium extraction methods if the medical research is approved and the results are promising. Grumbly reinforced DOE's cleanup schedule of the Fernald site in accordance with agreements with the regulators and the community. He stressed the cleanup decision will only be reconsidered after any alternative proposals are fully evaluated based on feasibility, cost-effectiveness, and potential health and environmental impacts. Proposals to deviate from a signed Record of Decision would have to be approved by the U.S. and Ohio EPAs and would be subject to public review.

On September 11, DOE submitted the draft *Operable Unit 3 Remedial Investigation and Feasibility Study and the Proposed Plan (RI/FS-PP)* to the U.S. and Ohio EPAs for review and comment. Because the RI and FS were combined into one streamlined report, the regulatory review process is expected to be extended from 60 days to 80 days. DOE will inform stakeholders of future public involvement opportunities.

DOE's national cleanup budget for FY97 -- including the amount requested for Fernald -- is being reviewed by the Office of Management and Budget (OMB) which will send DOE's cleanup budget to Congress in November 1995. Congress is expected to appropriate FY97 funding for DOE cleanup initiatives in January or February 1996 to allow time for planning remedial activities at various DOE sites. DOE is requesting Congressional approval of an accelerated plan to complete Fernald cleanup at \$276 million a year over 10 years, beginning in FY97. This request comes after consensus between DOE, U.S. EPA, and OEPA that with unconstrained funding, Fernald cleanup can be done in less time with reduced environmental risks and significant long-term savings for taxpayers.

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Within the next couple months, Fernald plans to relocate the Public Environmental Information Center (PEIC), which contains the Administrative Record and the Public Reading Room, from its current location to a larger facility a few hundred yards down the road. The relocation is to accommodate the need for more space.

The public comment period on DOE's *1995 Baseline Environmental Management Report* (BEMR) ends November 1, 1995. The BEMR provides life-cycle cost estimates, tentative schedules and projected activities necessary to complete DOE's Environmental Management (EM) Program. Required by Congress, the BEMR is the first annual report on the activities and potential costs required to address facilities under DOE's EM Program. EM's primary focus is to reduce health and safety risks from radioactive waste and contamination resulting from production, development and testing of nuclear weapons. It is also responsible for the environmental legacy and ongoing waste management resulting from nuclear energy research and development and basic science research. The BEMR and its Executive Summary are available to the public at the PEIC.

DOE is making the Waste Management Programmatic Environmental Impact Statement (WM PEIS) available for public comment for 90 days with a scheduled starting date of September 22, 1995 and a closing date of December 21, 1995. DOE-FN sent notifications of its release to about 60 key stakeholders. DOE-HQ will use the WM PEIS to make decisions on where to treat, store, and dispose of its wastes from 17 major sites around the country. The WM PEIS contains estimates on the proposed health effects to the public and workers, impacts on the environment, and the costs to the taxpayers for the different options. It is important to note that the provisions of the WM PEIS will not impact DOE's obligations to fully comply with the requirements of the Fernald Site Treatment Plan. Fernald will be conducting a public hearing via video conference on October 26, 1995 from 2 - 4:00 p.m. at the Fernald Site. Residents can comment on the PEIS during the conference or by mail. The PEIS and related documents are available at the PEIC.

Plans are underway for interviewers from the University of Cincinnati Center for Environmental Communication Studies to conduct a telephone survey of Fernald stakeholders. The telephone interviews are being conducted as a follow-up to the Community Assessment conducted in May 1994. Results of this survey will help Fernald site management evaluate the effectiveness of its public involvement program and plan future public involvement activities.

The Federal Facility Compliance Act (FFCA) directs DOE to prepare plans for developing mixed waste treatment capacities and technologies for each DOE site which generates or stores mixed waste. All involved DOE sites have submitted site treatment plans (STP) to the appropriate agency (Ohio EPA for Fernald) for approval. The Approved STPs for 40 DOE sites, including Fernald, will be released on October 6, 1995. The approved STP for Fernald will be available for public review at the PEIC around mid-October 1995. The Ohio EPA is responsible for making the Compliance Orders available for public review.

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On September 28, 1995 the Fernald Residents for Environmental Safety and Health (FRESH) held their monthly meeting. Eighteen people attended the meeting. A representative from FERMCO reported on Cultural Resource Management activities in the area, especially concerning the route of the public waste system. Five skeletal remains, perhaps 1,000 years old, have been discovered along the path of the pipeline construction. All archeological sites are investigated to assure that no cultural resources are destroyed in cleanup activities. The DOE representative reported on the:

- Waste Shipping Status,
- Public Comment Periods on two DOE-HQ documents, and
- Accelerated Cleanup Plan.

On September 30, 1995 the Fernald Citizens Task Force held its first meeting since the submittal of its *Final Report* on August 1, 1995. At this meeting they discussed membership issues and the radium extraction issue. The Task Force agreed to add another member to the board, and to have someone from CDC and/or ATSDR participate as an "ex officio member." The task force can add one member without having to amend its charter. Also discussed was the radium extraction issue. The Task Force agreed to adopt a path forward of writing a letter to Secretary O'Leary expressing the need for stakeholder input on this issue.

On September 30, 1995 the revised *Strategic Plan* was submitted to DOE. Comments from external stakeholders and employees had been incorporated. The document will be given to employees and made available to the public at the PEIC.

Issues/Corrective Action:

None to report.

6.1 Planned Activities for October 1995:

- DOE, complex-wide, will release the approved Site Treatment Plans on October 6, 1995.
- DOE, complex-wide, will conduct several public hearings, via video conferences, in October and November 1995 on the WM PEIS. Fernald's hearing is scheduled for Thursday, October 26, 1995 at the site from 2 - 4:00 p.m. The public has been notified and arrangements made for attendance.
- No meetings will be held in October and November 1995 for the Fernald Citizens Task Force. The next meeting is scheduled for 6:00 p.m. on Thursday, December 7, 1995. Agenda items include: selecting new members; review of the work plan; and discussion of the radium issue.

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PERIOD ENDING SEPTEMBER 30, 1995

ENCLOSURE A

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

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

Period Ending September 30, 1995

ENCLOSURE A

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 September 1995.

Summary - September 1995

The total quantity of uranium discharged from the FEMP to the Great Miami River via Manhole 175 (Outfall 11o00004001) was 0.27 kilograms. The average uranium concentration for the previous 12 months was 0.18 mg/L. This is 20.2% 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/BDN-ETS (Outfall SP3) was 5.49 kilograms. The average uranium concentration for the previous 12 months was 0.052 mg/L. This is 5.8% of the Derived Concentration Guide (DOE Order 5400.5) for ingested water.

There were no discharges from the Storm Water Retention Basin Spillway (Outfall 11o00004002) to Paddy's Run via the Storm Sewer Outfall Ditch in September 1995.

Based on 2.32 inches of rainfall in September 1995, the total quantity of uranium discharged to Paddy's Run from uncontrolled areas of the FEMP is estimated to be 6.59 kilograms.

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
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Period Ending September 30, 1995

ENCLOSURE A

EFFLUENT RADIATION REPORT

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

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

DATE: SEPTEMBER 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kgs)
1	0.130	8	37	12	0.006
2	0.066	6	34	11	0.003
3	0.078	4	47	10	0.003
4	0.076	8	32	12	0.003
5	0.147	17	44	29	0.016
6	0.171	11	37	18	0.012
7	0.123	11	42	15	0.007
8	0.134	8	25	15	0.008
9	0.104	9	40	13	0.005
10	0.081	14	46	14	0.004
11	0.126	11	40	22	0.010
12	0.179	11	33	20	0.014
13	0.155	5	42	9	0.006
14	0.159	13	39	22	0.013
15	0.151	9	33	25	0.014
16	0.119	5	32	14	0.006
17	0.106	11	35	19	0.008
18	0.132	34	68	43	0.021
19	0.180	24	44	36	0.025
20	0.177	**	**	18	0.012
21	0.170	**	**	15	0.010
22	0.135	12	34	11	0.006
23	0.089	11	40	12	0.004
24	0.056	26	53	25	0.005
25	0.145	**	**	24	0.013
26	0.159	**	**	22	0.013
27	0.140	**	**	12	0.006
28	0.134	**	**	11	0.006
29	0.178	**	**	12	0.008
30	0.119	**	**	10	0.005
Total	3.919				0.27

** Analytical results not yet available.

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

Period Ending September 30, 1995

ENCLOSURE A

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 001 Total Discharge

DATE: SEPTEMBER 1995

	Flow (MGD)	Total Alpha (pCi/l)(2)	Total Beta (pCi/l)(2)	Total U (ug/l)(2)	Total U (kgs)
Avg.	0.131	9	27	18	0.009
Max.	0.180	34	68	43	0.025
Min.	0.056	**	**	9	0.003

The average uranium concentration for the previous twelve months was 0.18 mg/l. This is 20.2 percent of the Derived Concentration Guide(DOE Order 5400.5) for ingested water.

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

(2) Average values presented are flow-weighted.

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
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ENCLOSURE A

EFFLUENT RADIATION REPORT

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

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

DATE: SEPTEMBER 1995

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

Based on 2.32 inches of rainfall for the month, the uranium discharge to Paddy's Run from uncontrolled areas of the FEMP is estimated to be 6.59 kgs.

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

PERIOD ENDING SEPTEMBER 30, 1995

ENCLOSURE B

FFCA: INITIAL REMEDIAL MEASURES

AND OTHER OPEN ACTIONS

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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 September 30, 1995

ENCLOSURE B

INTRODUCTION

Enclosure B describes actions undertaken at the FEMP during the period September 1, through September 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 AS AMENDED (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 August 1995 was transmitted to the U.S. EPA and OEPA on September 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.

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**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
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Period Ending September 30, 1995

ENCLOSURE B

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 August 1995, was transmitted to the U.S. EPA and OEPA on September 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.

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**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
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ENCLOSURE B

TABLE 1

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

ACTION	DESCRIPTION	COMPLETION TIME AFTER FFCA SIGNED	FY1995 STATUS
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 August 1995 was transmitted to the U.S. EPA and OEPA on September 19, 1995.

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
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ENCLOSURE B

TABLE 1

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

ACTION	DESCRIPTION	COMPLETION TIME AFTER FFCA SIGNED	FY1995 STATUS
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 29, 1995.
D.1	Provide U.S. EPA with yearly stack-testing schedule.	yearly	No stacks related to production were operating in 1994 or to this date in 1995. Due to the permanent shutdown of metals production, resumption of the FFCA Stack Testing Program is unlikely. A proposal is being developed to substitute the NESHAP Subpart H testing/monitoring program for the FFCA Stack Testing. When this proposal is completed it will be formally submitted to U.S. EPA.
D.2	Provide U.S. EPA with stack-test results for stacks tested that year.	45 days	The following test were conducted in May 1995: May 9 Test contractor tests Laundry stack (6 hour test) May 10 Test contractor test EIMCO stack (3 hour test) The results of the stack tests were sent to the U.S. EPA at the address listed in the FFCA. These reports were returned, address unknown. Contact with U.S. EPA will be initiated to determine; 1) Does the U.S. EPA want these reports and if so then, 2) Where should they be mailed.
E.1	Maintain records of monthly particulate matter emissions.	-----	Ongoing.

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E 7231

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

Period Ending September 30, 1995

ENCLOSURE B

TABLE 1

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

ACTION	DESCRIPTION	COMPLETION TIME AFTER FFCA SIGNED	FY1995 STATUS
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	August's CA/FFCA Monthly Progress Report was transmitted to the U.S. EPA and OEPA on September 19, 1995.

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
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ENCLOSURE C

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

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**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
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ENCLOSURE C

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 September 1, through September 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).

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ENCLOSURE C

FFA Part, Paragraph(s)	Description of Commitment	FFA Due Date	Status of Commitment
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 July 1995.
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 June 25, 1992. A letter was received from the U.S. EPA on October 16, 1992 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.

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**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
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ENCLOSURE C

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

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ENCLOSURE C

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, and
- 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, and
- K-65 Monitoring Data (K-65 NW, K-65 SW, K-65 NE, K-65 SE).

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
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ENCLOSURE C

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.

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ENCLOSURE C

MONTH: SEPTEMBER
YEAR: 1995

FACILITY: Femald 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	AMS #6	PILOT PLANT	BKGD-1	BKGD-2
	(pCi/L)	(pCi/L)	WAREHOUSE	(Fairfield)	(Miamitown)
09/01/95	1.2	0.6	1.0	0.6	0.8
09/02/95	2.1	1.3	1.4	0.8	1.0
09/03/95	2.2	1.4	1.7	1.1	1.1
09/04/95	2.4	1.6	1.7	1.1	1.2
09/05/95	2.5	1.6	1.2 (c)	1.0	1.2
09/06/95	2.6	1.6	n/a (c)	1.1	1.2
09/07/95	2.6	1.7	n/a (c)	1.2	1.2
09/08/95	1.6	1.1	n/a (c)	0.9	1.1
09/09/95	1.0	0.7	n/a (c)	0.7	0.9
09/10/95	1.1	0.8	n/a (c)	0.7	0.8
09/11/95	1.5	0.9	0.5 (a)(c)	0.7	1.0
09/12/95	2.0	1.3	1.6	0.9	1.1
09/13/95	0.8	0.5	1.0	0.5	0.8
09/14/95	1.4	1.0	1.2	0.7	0.9
09/15/95	1.7	1.1	1.3	0.8	1.1
09/16/95	1.9	1.3	1.5	1.0	1.2
09/17/95	1.3	0.9	1.2	0.7	1.0
09/18/95	1.2	0.7	1.1	0.7	0.9
09/19/95	1.9	1.2	1.4	0.8	1.1
09/20/95	1.7	1.2	1.4	0.6	1.0
09/21/95	1.7	1.2	1.4	0.9	1.1
09/22/95	0.8	0.5	0.9	0.5	0.7
09/23/95	1.8	1.2	1.3	0.8	1.0
09/24/95	2.0	1.1	1.4	0.7	1.1
09/25/95	2.2	1.5	0.4 (b)	1.1	1.3
09/26/95	2.2	1.4	0.4 (b)	1.0	1.3
09/27/95	2.4	1.6	1.7	1.0	1.3
09/28/95	2.6	1.7	1.8	1.1	1.3
09/29/95	2.8	1.9	1.9	1.1	1.3
09/30/95	2.1	1.3	1.5	0.6	1.1

Monthly Statistics of Daily Averages:	AMS #5	AMS #6	PILOT PLANT	BKGD-1	BKGD-2
	(pCi/L)	(pCi/L)	WAREHOUSE	(Fairfield)	(Miamitown)
AVERAGE:	1.8	1.2	1.3	0.9	1.1
MAXIMUM:	2.8	1.9	1.9	1.2	1.3
MINIMUM:	0.8	0.5	0.4	0.5	0.7
MEDIAN:	1.9	1.2	1.3	0.8	1.1
STD. DEV:	0.5	0.4	0.6	0.2	0.2

STANDARD LEGEND: 1. "(a)" indicates censored data due to erroneous readings from the monitoring equipment.
2. "(b)" indicates partial or complete data loss due to monitor malfunction.
3. "(c)" indicates partial or complete data loss due programming error in monitor.

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ENCLOSURE C

MONTH: SEPTEMBER
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	K85-NW	K85-SW	K85-NE	K85-SE
	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)
09/01/95	1.0	1.6	2.8	1.8
09/02/95	1.8	2.3	4.1	3.3
09/03/95	1.7	2.2	6.1	4.3
09/04/95	1.7	2.3	5.9	4.1
09/05/95	1.9	2.6	7.2	5.1
09/06/95	2.2	3.0	11.3	7.7
09/07/95	3.3	3.1	14.4	9.3
09/08/95	1.8	2.8 (b)	3.9	2.3
09/09/95	0.8	n/a (b)	1.0	1.0
09/10/95	1.1	n/a (b)	1.4	1.3
09/11/95	1.6	0.8 (b)	3.0	2.4
09/12/95	1.9	1.5	6.7	4.9
09/13/95	0.8	0.8	1.7	1.1
09/14/95	1.4	1.6	4.5	2.8
09/15/95	1.8	2.4	3.8	2.8
09/16/95	2.7	3.0	9.2	5.9
09/17/95	1.5	2.1	3.0	2.5
09/18/95	1.2	1.9	1.9	1.8
09/19/95	2.6	2.9	5.9	4.6
09/20/95	1.6	1.9	7.2	4.6
09/21/95	1.5	1.8	4.4	3.1
09/22/95	0.6	1.0	2.5	2.4
09/23/95	1.7	3.0	5.0	3.0
09/24/95	2.9	3.5	10.1	6.7
09/25/95	2.5	3.7	12.2	8.0
09/26/95	2.1	2.6	12.5	8.3
09/27/95	1.9	2.5	7.3	4.0
09/28/95	2.3	2.6	7.0	4.4
09/29/95	3.0	3.4	9.2	6.1
09/30/95	1.8	2.1	6.4	4.9

Monthly Statistics	K85-NW	K85-SW	K85-NE	K85-SE
	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)
of Daily Averages:				
AVERAGE:	1.8	2.3	6.1	4.2
MAXIMUM:	3.3	3.7	14.4	9.3
MINIMUM:	0.6	0.8	1.0	1.0
MEDIAN:	1.8	2.3	5.9	4.0
STD. DEV	0.7	0.9	3.5	2.2

STANDARD LEGEND2. *(b)* 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 September 30, 1995

ENCLOSURE C

MONTH: SEPTEMBER
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: 10/06/95

Daily Statistics	SILO 1				SILO 2			
	Average	Maximum	Minimum	Std. Dev.	Average	Maximum	Minimum	Std. Dev.
09/01/95	6.15E+05	1.41E+06	7.44E+04	3.68E+05	5.19E+06	5.42E+06	4.50E+06	1.97E+05
09/02/95	9.92E+05	2.33E+06	1.35E+05	8.26E+05	5.24E+06	5.43E+06	5.08E+06	1.20E+05
09/03/95	1.20E+06	2.70E+06	1.68E+05	8.69E+05	5.22E+06	5.45E+06	5.01E+06	1.58E+05
09/04/95	1.22E+06	2.74E+06	2.69E+05	9.39E+05	5.14E+06	5.34E+06	4.91E+06	1.48E+05
09/05/95	1.33E+06	2.63E+06	1.32E+05	9.66E+05	5.08E+06	5.28E+06	4.77E+06	1.51E+05
09/06/95	1.76E+06	2.81E+06	1.95E+05	8.62E+05	5.14E+06	5.37E+06	4.86E+06	1.73E+05
09/07/95	1.76E+06	2.69E+06	8.75E+05	5.22E+05	5.22E+06	5.32E+06	4.89E+06	9.40E+04
09/08/95	7.27E+05	1.69E+06	1.37E+05	4.72E+05	5.20E+06	5.36E+06	4.86E+06	1.08E+05
09/09/95	6.48E+05	1.49E+06	1.51E+05	4.03E+05	5.18E+06	5.28E+06	5.04E+06	7.74E+04
09/10/95	3.24E+05	9.02E+05	7.83E+03	2.18E+05	4.87E+06	5.13E+06	4.53E+06	2.07E+05
09/11/95	1.18E+06	2.68E+06	5.73E+04	8.24E+05	4.93E+06	5.16E+06	4.26E+06	1.81E+05
09/12/95	1.79E+06	2.74E+06	6.38E+05	5.43E+05	4.93E+06	5.07E+06	4.76E+06	1.17E+05
09/13/95	1.62E+06	2.27E+06	8.29E+05	4.27E+05	4.85E+06	5.18E+06	4.53E+06	1.52E+05
09/14/95	8.88E+05	1.89E+06	2.52E+05	4.56E+05	4.73E+06	4.95E+06	4.55E+06	1.52E+05
09/15/95	1.12E+06	2.12E+06	1.73E+05	6.81E+05	4.73E+06	4.81E+06	4.65E+06	5.84E+04
09/16/95	2.08E+06	2.84E+06	8.07E+05	5.27E+05	4.84E+06	4.92E+06	4.78E+06	3.97E+04
09/17/95	9.30E+05	2.08E+06	9.84E+04	6.24E+05	4.75E+06	4.86E+06	4.57E+06	7.34E+04
09/18/95	6.33E+05	1.21E+06	9.42E+04	3.06E+05	4.60E+06	4.82E+06	4.31E+06	1.30E+05
09/19/95	1.81E+06	2.69E+06	7.31E+05	6.81E+05	4.70E+06	4.92E+06	4.47E+06	1.35E+05
09/20/95	1.26E+06	2.56E+06	3.36E+05	5.74E+05	4.61E+06	4.69E+06	4.49E+06	5.64E+04
09/21/95	1.70E+06	2.67E+06	5.67E+05	6.65E+05	4.54E+06	4.62E+06	4.40E+06	5.22E+04
09/22/95	4.99E+05	9.83E+05	1.30E+05	2.11E+05	4.50E+06	4.64E+06	4.36E+06	8.14E+04
09/23/95	8.52E+05	1.24E+06	1.69E+05	3.09E+05	4.50E+06	4.67E+06	4.27E+06	9.69E+04
09/24/95	1.44E+06	2.60E+06	5.00E+05	5.54E+05	4.58E+06	4.71E+06	4.44E+06	9.09E+04
09/25/95	1.72E+06	2.51E+06	8.33E+05	4.12E+05	4.58E+06	4.74E+06	4.42E+06	8.78E+04
09/26/95	1.23E+06	2.58E+06	2.88E+05	6.87E+05	4.58E+06	4.75E+06	4.38E+06	1.27E+05
09/27/95	1.08E+06	2.70E+06	1.71E+05	8.51E+05	4.50E+06	4.68E+06	4.28E+06	1.35E+05
09/28/95	1.41E+06	2.93E+06	2.04E+05	1.08E+06	4.46E+06	4.67E+06	4.24E+06	1.26E+05
09/29/95	1.73E+06	2.90E+06	5.51E+05	8.48E+05	4.49E+06	4.67E+06	4.28E+06	1.20E+05
09/30/95	1.80E+06	2.94E+06	4.43E+05	8.42E+05	4.51E+06	4.70E+06	4.28E+06	1.21E+05

Grab Samples of Headspace

Date:	SILO 1 Concentration	SILO 2 Concentration
09/05/95	2.71E+06	3.89E+06
09/07/95	1.52E+06	3.30E+06
09/11/95	4.45E+05	3.74E+06
09/14/95	2.56E+05	3.00E+06
09/18/95	9.90E+04	3.67E+06
09/21/95	3.53E+06	3.08E+06
09/25/95	3.13E+06	3.69E+06
09/28/95	4.49E+05	2.89E+06

Notes: 1. All values reported in pCi/L.
2. Continuous data reported to three significant digits to remain consistent with the calibration data.

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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 SEPTEMBER 30, 1995

ENCLOSURE D

EFFLUENT RADIATION DISCHARGES TO THE GREAT MIAMI RIVER

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

Period Ending September 30, 1995

ENCLOSURE D

Introduction

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

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

Period Ending September 30, 1995

ENCLOSURE D

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: AUGUST 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kgs)	TSS (mg/l)	pH (MIN) (S.U.)	pH (MAX) (S.U.)
1	0.000							
2	0.000							
3	0.000							
4	0.000							
5	0.000							
6	0.000							
7	0.000							
8	0.000							
9	0.000							
10	0.000							
11	0.000							
12	0.000							
13	0.000							
14	0.000							
15	0.000							
16	0.000							
17	0.000							
18	0.000							
19	0.000							
20	0.000							
21	0.000							
22	0.000							
23	0.000							
24	0.000							
25	0.000							
26	0.000							
27	0.000							
28	0.000							
29	0.000							
30	0.000							
31	0.000							
Total	0.000							

System not in service due to delay in receiving replacement parts.

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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 September 30, 1995

ENCLOSURE D

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: [SP1] IAWWT - T108

DATE: AUGUST 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	0.000	0.0	0.0	0.0	0.0000
Max.	0.000	0.0	0.0	0.0	0.0000
Min.	0.000	0.0	0.0	0.0	0.0000

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.

Note: The system was not in operation during the month of August 1995.

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

Period Ending September 30, 1995

ENCLOSURE D

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: AUGUST 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kgs)	TSS (mg/l)	pH (MIN) (S.U.)	pH (MAX) (S.U.)
1	0.183	2.8	9.6	4.1	0.0028 <	2.0	8.5	9.3
2	0.174	3.1	7.6	6.6	0.0043 <	2.0	9.2	9.3
3	0.181	2.6	8.0	3.6	0.0025	2.2	9.2	9.5
4	0.081	2.1	8.4	2.6	0.0008	3.2	8.5	9.8
5	0.181	2.7	6.5	3.4	0.0023 <	2.0	9.3	9.5
6	0.165 <	0.6	2.7 <	1.0	0.0006 <	2.0	9.1	9.3
7	0.146	0.6	2.6 <	1.0	0.0006 <	2.0	8.5	9.1
8	0.163	0.7	4.7 <	1.0	0.0006 <	2.0	8.3	9.0
9	0.171	1.0	5.7	1.5	0.0010 <	2.0	8.0	8.3
10	0.186	1.3	5.8	1.0	0.0007 <	2.0	7.8	8.5
11	0.162	0.8	5.4 <	1.0	0.0006 <	2.0	8.0	8.0
12	0.180	0.9	6.3 <	1.0	0.0007 <	2.0	8.0	8.3
13	0.171	3.2	9.8	5.8	0.0038 <	2.0	8.4	8.9
14	0.159	2.4	8.1	5.8	0.0035 <	2.0	9.0	9.5
15	0.186	1.9	7.9	3.1	0.0022 <	2.0	9.2	9.4
16	0.155	3.8	9.2	7.9	0.0046 <	2.0	8.7	8.9
17	0.155	2.1	7.7	17.1	0.0100 <	2.0	9.5	9.7
18	0.170	5.6	6.4	10.6	0.0068 <	2.0	8.0	9.4
19	0.182	6.3	7.1	10.6	0.0073 <	2.0	8.0	8.0
20	0.189	4.2	6.0	10.3	0.0074 <	2.0	8.0	8.0
21	0.192	6.6	7.1	10.8	0.0078 <	2.0	8.0	8.0
22	0.198	6.5	8.1	11.2	0.0084 <	2.0	8.0	8.0
23	0.190	2.0	8.1	2.7	0.0019 <	2.0	7.9	8.7
24	0.171	3.2	10.0	10.7	0.0069 <	2.0	8.6	9.0
25	0.151	4.1	11.0	5.8	0.0033	2.8	9.5	9.7
26	0.169	7.7	9.9	12.8	0.0082 <	2.0	8.3	9.5
27	0.186	7.7	8.2	10.3	0.0073 <	2.0	8.0	8.0
28	0.174	6.8	9.0	10.3	0.0068 <	2.0	8.0	8.0
29	0.155	7.4	8.8	11.0	0.0065 <	2.0	8.0	8.0
30	0.193	8.1	9.5	12.2	0.0089 <	2.0	8.0	8.2
31	0.196	7.6	8.2	10.5	0.0078 <	2.0	8.0	8.2
Total	5.315				0.1369			

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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 September 30, 1995

ENCLOSURE D

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: [SP1] IAWWT - T109

DATE: AUGUST 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	0.171	3.9	7.5	6.8	0.0044
Max.	0.198	8.1	11.0	17.1	0.0100
Min.	0.081 <	0.6	2.6 <	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/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS
MONTHLY PROGRESS REPORT**

Period Ending September 30, 1995

ENCLOSURE D

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: AUGUST 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kgs)
1	0.807	190	95	290	0.89
2	0.898	180	120	310	1.05
3	1.039	150	94	300	1.18
4	0.690	160	110	290	0.76
5	1.172	99	47	140	0.62
6	2.285	48	33	70	0.61
7	2.283	77	50	110	0.95
8	2.306	100	60	170	1.48
9	2.378	180	84	320	2.88
10	1.736	150	70	280	1.84
11	0.964	160	72	270	0.99
12	1.039	110	42	180	0.71
13	1.040	200	91	330	1.30
14	1.036	150	84	310	1.22
15	1.032	220	120	340	1.33
16	1.012	160	100	280	1.07
17	0.850	180	97	220	0.71
18	0.000				
19	0.000				
20	0.000				
21	0.000				
22	0.000				
23	0.905	130	93	230	0.79
24	1.036	140	100	250	0.98
25	1.026	120	85	150	0.58
26	0.000				
27	0.000				
28	0.000				
29	0.000				
30	0.000				
31	0.000				
	25.534				21.92

000065

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

Period Ending September 30, 1995

ENCLOSURE D

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: (606) SWRB

DATE: AUGUST 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	0.824	136	76	227	1.10
Max.	2.378	220	120	340	2.88
Min.	0.000	48	33	70	0.58

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

Period Ending September 30, 1995

ENCLOSURE D

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: AUGUST 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kgs)
1	0.195	440	2900	840	0.62
2	0.206	410	2500	790	0.62
3	0.210	340	3000	830	0.66
4	0.206	220	3000	800	0.62
5	0.210	310	2900	800	0.64
6	0.223	340	2400	770	0.65
7	0.152	390	2000	770	0.44
8	0.218	320	2300	790	0.65
9	0.203	350	2300	800	0.61
10	0.205	270	2300	790	0.61
11	0.216	380	2100	800	0.65
12	0.222	340	2400	850	0.71
13	0.205	350	2100	880	0.68
14	0.197	410	2000	840	0.63
15	0.189	400	2100	760	0.54
16	0.199	350	1900	700	0.53
17	0.249	230	3500	790	0.74
18	0.178	390	4600	700	0.47
19	0.206	390	5100	720	0.56
20	0.205	390	5300	780	0.61
21	0.211	380	5500	730	0.58
22	0.205	420	5200	780	0.61
23	0.213	430	5400	730	0.59
24	0.220	370	5000	700	0.58
25	0.213	390	4700	680	0.55
26	0.219	370	5700	670	0.56
27	0.220	350	6400	690	0.57
28	0.217	390	6000	720	0.59
29	0.219	420	6300	740	0.61
30	0.217	320	6900	740	0.61
31	0.211	260	7300	720	0.58
Total	6.459				18.68

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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 September 30, 1995

ENCLOSURE D

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: (605) BDN/ETS

DATE: AUGUST 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	0.208	357	3945	764	0.60
Max.	0.249	440	7300	880	0.74
Min.	0.152	220	1900	670	0.44

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

Period Ending September 30, 1995

ENCLOSURE D

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: AUGUST 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	8.70							
2	<	2	0.38	28.1 <	6.0 <	14.0 <	17.0	6.0
3								
4								
5								
6								
7								
8	6.42 <	2	0.20	12.0 <	6.0 <	14.0 <	17.0	6.0
9								
10								
11								
12								
13								
14								
15	4.56							
16								
17								
18								
19								
20								
21		19	0.12	42.3 <	6.0	14.2 <	17.0 <	6.0
22	6.80							
23								
24								
25								
26								
27		7 <	0.10	52.0	6.9 <	14.0 <	17.0 <	6.0
28								
29	39.66							
30								
31								

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**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
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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: [SP2]
Stormwater Retention Basin Emergency Bypass
SWRB Bypass Effluent

DATE: AUGUST 1995

Day	Flow (MGD)
1	0.000
2	0.000
3	0.000
4	0.000
5	0.169
6	1.481
7	1.499
8	1.624
9	1.576
10	0.743
11	0.000
12	0.000
13	0.000
14	0.000
15	0.000
16	0.000
17	0.000
18	0.000
19	0.000
20	0.000
21	0.000
22	0.000
23	0.000
24	0.000
25	0.000
26	0.000
27	0.000
28	0.000
29	0.000
30	0.000
31	0.000
Total	7.092

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ENCLOSURE D

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: AUGUST 1995

Day	Flow (MGD)	Total U (ug/l)	Total U (kgs)
1	1.977	26.7	0.20
2	1.605	14.8	0.09
3	1.353	17.4	0.09
4	1.961	13.2	0.10
5	1.061	17.5	0.07
6	2.067	8.8	0.07
7	2.076	17.4	0.14
8	2.891	17.2	0.19
9	1.150	16.8	0.07
10	1.988	17.2	0.13
11	2.005	19.7	0.15
12	2.062	20.8	0.16
13	2.057	18.6	0.14
14	1.999	17.8	0.13
15	2.016	20.2	0.15
16	1.922	16.7	0.12
17	2.091	17.7	0.14
18	1.970	16.5	0.12
19	2.023	15.8	0.12
20	2.064	16.5	0.13
21	2.039	17.6	0.14
22	2.092	8.0	0.06
23	2.030	16.1	0.12
24	2.079	16.7	0.13
25	1.963	16.6	0.12
26	1.994	16.6	0.13
27	2.147	16.7	0.14
28	1.978	18.1	0.14
29	1.928	16.9	0.12
30	2.190	16.6	0.14
31	1.923	17.3	0.13
Total	60.701		3.88

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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 September 30, 1995

ENCLOSURE D

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: South Plume

DATE: AUGUST 1995

	Flow (MGD)	Total U (ug/l)(2)	Total U (kgs)
Avg.	1.958	16.9	0.13
Max.	2.891	26.7	0.20
Min.	1.061	8.0	0.06

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/FEDERAL FACILITY
COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR
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MONTHLY PROGRESS REPORT**

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ENCLOSURE D

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 */BDN-ETS **

DATE: AUGUST 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	2.979	15	67	34	0.38		7.2
2	2.709	25	79	41	0.42		7.3
3	2.602	21	81	35	0.34 <	2.0	7.4
4	2.857	15	83	26	0.28		7.3
5	2.443	11	110	21	0.19		7.3
6	4.575	20	53	48	0.83		7.1
7	4.511	33	61	55	0.94		7.2
8	5.415	37	56	61	1.25		7.3
9	3.731	49	53	70	0.99		7.3
10	3.929	28	39	60	0.89	2.8	7.4
11	3.185	20	47	44	0.53		7.2
12	3.323	23	40	38	0.48		7.0
13	3.302	36	57	35	0.44		7.1
14	3.232	19	54	32	0.39		7.0
15	3.237	27	68	35	0.43		7.1
16	3.133	22	64	27	0.32		7.2
17	3.190	16	80	23	0.28 <	2.0	7.2
18	2.148	17	120	19	0.15		7.2
19	2.229 <	9	130	18	0.15		6.3
20	2.269	17	180	17	0.15		6.9
21	2.250 <	9	240	17	0.14		7.2
22	2.297	10	230	21	0.18		7.3
23	3.148	11	190	26	0.31		7.4
24	3.335	17	170	26	0.33 <	2.0	7.2
25	3.202	19	180	26	0.32		7.3
26	2.213	15	260	21	0.18		7.6
27	2.367	16	260	20	0.18		7.5
28	2.195	32	650	63	0.52		7.3
29	2.147	18	480	63	0.51		7.3
30	2.407	36	590	79	0.72		7.5
31	2.134	20	620	56	0.45 <	2.0	7.3
Total	92.694				13.68		

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

** Effective 1/27/95, the BDN-ETS discharges were routed from MH #175 to the AWWT.

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MONTHLY PROGRESS REPORT**

Period Ending September 30, 1995

ENCLOSURE D

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: [SP3] Valve House

DATE: AUGUST 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	2.990	23	149	39	0.44
Max.	5.415	49	650	79	1.25
Min.	2.134 <	9	39	17	0.14

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

(2) Average values presented are flow-weighted.

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EFFLUENT 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: AUGUST 1995

<u>Day</u>	<u>DO (mg/l)</u>	<u>IRON (mg/l)</u>	<u>MANGANESE (mg/l)</u>
1			
2			
3	6.4	0.05	< 0.1
4			
5			
6			
7			
8			
9			
10	5.9	0.08	< 0.1
11			
12			
13			
14			
15			
16			
17	5.1	0.06	< 0.1
18			
19			
20			
21			
22			
23			
24	7.6	0.06	< 0.1
25			
26			
27			
28			
29			
30			
31	9.6	0.05	< 0.1

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