



Department of Energy

**Ohio Field Office
Fernald Area Office**

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MAR 07 2002

Mr. Christopher Jones, Director
Ohio Environmental Protection Agency
Lazarus Government Center
122 South Front Street
Columbus, Ohio 43215

DOE-0367-02

Dear Mr. Jones:

**RESOURCE CONSERVATION AND RECOVERY ACT ANNUAL TREATABILITY
STUDY REPORT**

Pursuant to the Ohio Administrative Code (OAC) 3745-51-04(F)(9), enclosed is a report describing the Fernald Environmental Management Project's (FEMP) treatability study activities for Calendar Year (CY) 2001 and the status of these activities for CY 2002.

If you have any questions regarding this information, please contact Ed Skintik at (513) 648-3151.

Sincerely,

Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP:Skintik

Enclosure: As Stated

cc w/enclosure:

E. Skintik, OH/FEMP
A. Meyer, Fluor Fernald, Inc./MS35
T. Poff, Fluor Fernald, Inc./MS65-2
RCRA Operating Record, Fluor Fernald, Inc./MS65-2

cc w/o enclosure:

D. Lewis, OH/FEMP

MAR 07 2002

Mr. Christopher Jones

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bcc w/enclosure:

R. Greenberg, EM-31/CLOV

J. Saric, USEPA, Region V-SRF-5J

T. Schneider, OEPA-Dayton

ENCLOSURE

CALENDAR YEAR 2001 RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)
TREATABILITY STUDY REPORT FOR THE FERNALD ENVIRONMENTAL MANAGEMENT
PROJECT (FEMP)

This report summarizes the information required to be reported under OAC 3745-51-04(F)(9) for treatability studies conducted at the FEMP in CY 2001 and addresses reporting requirements for treatability studies that are planned for CY 2002. Each required item and a response are provided below.

I. TREATABILITY STUDIES CONDUCTED DURING CY 2001

1. The name, address and U.S. EPA identification number of the facility conducting the treatability studies:

The FEMP conducted one treatability study involving hazardous waste in CY 2001. This study was performed on-site at the following address:

Fernald Environmental Management Project
7400 Willey Road
Hamilton, Ohio 45013-9402

The U. S. EPA identification number for the FEMP is OH6890008976.

2. The types (by process) of treatability studies conducted:

The treatability study involved the use of Gubka blocks to stabilize mixed radioactive laboratory standards (characterized as D002). The blocks are comprised of glass microspheres formed with a silicate binder and have a high surface area. The block has a density of less than 1 g/cm² and is placed on the surface of an open container of the radioactive solution. The Gubka block floats and behaves similar to a wick, pulling the liquid into the interstitial voids via capillary action. The radioactive standard evaporates, leaving the radio-metal and salts deposited in the pores of the Gubka.

In CY 2001, this technology was used to treat laboratory standards comprised of Barium-133 and/or Cesium-137.

3. The names and addresses of persons for whom studies have been conducted.

The treatability study was conducted to treat laboratory standards generated at the FEMP. See #1 above for additional information.

4. The total quantity of waste in storage each day.

DATES	TREATABILITY STUDY PHASE	VOLUME OF WASTE IN STORAGE (LITERS)
11/06/01	Initiation of Treatability Study	25.0
11/29/01	Completion of Batch 1 (2.0 liters of Barium-133/Cesium-137 standards)	23.0
12/20/01	Completion of Batch 2 (1.0 liters) of Barium-133/Cesium-137 laboratory standards)	22.0
12/31/01	Batch 3 is in process (begun on 12/18/01). This Batch contains 2.7 liters of Barium-133/Cesium-137 laboratory standards.	20.5

5. The quantity and types of waste subjected to treatability studies:

In CY 2001, the FEMP completed treatment of 3.0 liters of Barium-133/Cesium-137 laboratory standards. These standards were preserved with 2 Molar Nitric Acid and were characterized as D002. The FEMP initiated treatment of an additional 2.7 liters of these laboratory standards. The treatment of these standards has not yet been completed.

6. When each treatability study was conducted:

The Gubka treatability study was initiated on 11/06/01. It has not yet been completed.

7. The final disposition of residues and unused sample from each treatability study:

The loaded Gubka blocks will be shipped to the Nevada Test Site in Mercury, Nevada for disposition as low-level waste. No unused samples have been generated from this treatability study.

II. TREATABILITY STUDY ACTIVITIES PLANNED FOR CY 2002

1. Provide an estimate of the number of treatability studies expected to be conducted:

The FEMP will complete the Gubka treatability study in CY 2002. No additional treatability studies are planned to be conducted.

2. Provide an estimate of the amount of waste expected to be used in treatability studies:

The FEMP will complete treatment of the remaining 20.5 liters of mixed radioactive laboratory standards associated with the Gubka treatability study during CY 2002.