



# Fernald · FACT SHEET

Environmental Management Project

March 2001

## Waste Pits Remedial Action Project



*Fernald's six waste pits range in size from one to five acres and vary in depth from 10 - 40 feet (6471-1).*

surrounding contaminated soils, preparing and treating the waste as necessary to remove excess moisture, and transporting the waste by rail to Envirocare, a commercial disposal facility in Utah. In 1997, DOE's cleanup contractor, Fluor Fernald, awarded a subcontract to the IT Group to excavate the pits, treat the waste and load the waste into railcars for off-site shipment.

### Waste Shipping

In late February 1999, the IT Group began loading railcars with stockpiled materials from two

### Description

The Waste Pits Remedial Action Project (WPRAP) at the U.S. Department of Energy's (DOE) Fernald Environmental Management Project is one of five areas designated by the U.S. Environmental Protection Agency as requiring remediation. The Waste Pits Project area is located in the northwest portion of the site on a 37-acre tract containing six waste pits, a burn pit, the clearwell, miscellaneous structures, facilities and soil. Waste pit materials are low-level radioactive wastes derived from the refining and metallurgical processing of uranium ore concentrates and thorium over a 37-year period.

### Cleanup Plan

The project involves the cleanup of approximately one million tons of waste stored in the pits. Fernald's cleanup plan involves excavating the pits and

contaminated soil piles near the waste pit area.

Commercial rail carrier CSX Transportation ships the trains from Fernald to East St. Louis, IL, where transport responsibility transfers to Union Pacific Railroad. Union Pacific then transports the unit trains to Envirocare. The trains remain at Envirocare for about five days. The cars are emptied and the exterior of each car is cleaned before the return trip back to Fernald. Fernald plans to ship about 60 railcars in one unit train every two to three weeks through 2004. Fernald's waste shipping operations are in full compliance with Department of Transportation requirements.

### Full-Scale Operations

IT Group initiated excavation of material from the waste pits in the summer of 1999. The first pits to be fully remediated will be 1, 2 and 3. The material in these three pits represents about 2/3 of the total waste



*A unit train of 60 gondola cars carrying approximately 6000 tons of pit material is scheduled to leave the site for Envirocare about every three weeks through 2004 (6944-D794).*

volume in the pits. Excavation will conclude with the remediation of pits 6 and 4, the Burn Pit, pit 5 and the clearwell. Excavation of the pits is being performed with standard construction equipment: bull dozers and long-reach excavators dig the material out and load it onto dump trucks that haul the material to the Material Handling Building. There, the material is evaluated for moisture content and radiological levels. Based upon the information gathered through this evaluation, the material is then blended and/or

treated by thermal drying, as necessary, to meet the Envirocare Waste Acceptance Criteria.

If the material needs to be dried, it is fed into one of two dryers. These indirect rotary dryers use heat to remove moisture. Off-gas from the drying process is treated prior to release into the atmosphere to ensure that air emissions criteria are met, with such emissions continuously monitored. Water generated through this process, from excavation activities, or from any other WPRAP activity, is managed through the project's Wastewater Treatment System, prior to being discharged into the

Advanced Wastewater Treatment System.

After processing, the waste material is sampled to ensure that it meets Envirocare specifications, then loaded into a 110-ton gondola car. In addition to a permanent lining installed in each railcar, a disposable liner designed to contain the material is placed into each railcar prior to the loading of waste. Once loading of the railcar is complete, the disposable liner is folded over the waste, and a lid is placed on the railcar and secured.



*Pit 1 has a clay liner and is covered with soil; excavation began in April 2000 (6944-D1127, D1128).*

## Summary

Since the first unit train was shipped in April 1999, the project has remained on schedule. The complete schedule calls for sending approximately 100 unit trains to Envirocare. As of March 2001, with the shipment of Unit Train #35, over 213,000 tons of material had been shipped.

The project is scheduled to complete excavation, processing and loadout of waste pit materials by September 2004, with shipping completed shortly thereafter. The above-ground decontamination and dismantlement of equipment and treatment facilities is scheduled for completion by May 2005.

## For more information . . .

**Visit** the Public Environmental Information Center at 10995 Hamilton-Cleves Highway (Delta Building);  
**Attend** a Cleanup Progress Briefing (second Tuesday of every month at 6:30 p.m. on site);  
**Contact** Dave Lojek, DOE-Fernald at 513-648-3127 or at [dave.lojek@fernald.gov](mailto:dave.lojek@fernald.gov); or  
**View** the Fernald Web site (<http://www.fernald.gov>).