



Fernald · FACT SHEET

Environmental Management Project

March 2001

Soil and Disposal Facility Project



Remediation at the Southern Waste Units was completed in 2000 (6734-D1153).

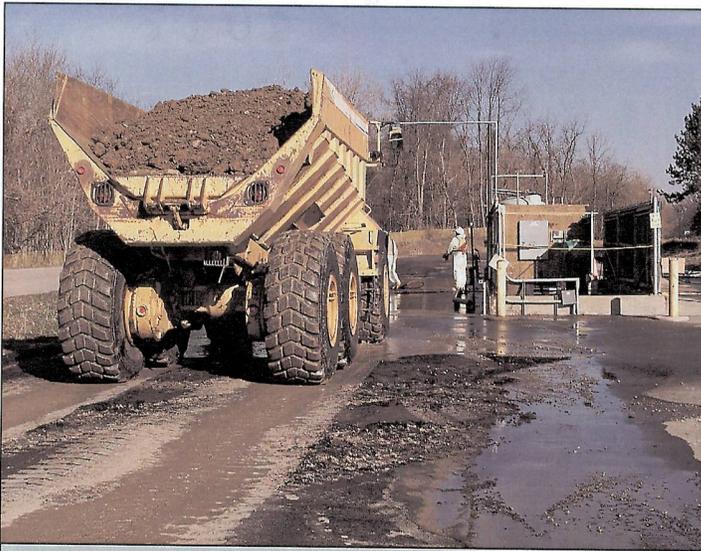
Description

The Soil and Disposal Facility Project (SDFP) covers ten remediation areas at the U.S. Department of Energy's (DOE) Fernald Environmental Management Project and also includes the On-Site Disposal Facility (OSDF). The project contains components of Operable Units (OU) 2, 3 and 5, three of the five U.S. EPA-designated areas at Fernald requiring remediation. OU2 includes remediation of the solid waste landfill, lime sludge ponds, South Field, flyash piles, berms, liners and soils within these areas. OUs 3 and 5 include excavation of at-or-below grade debris and structures and remediation of soils not included in other operable units.

The OSDF is an engineered disposal facility designed to hold 2.5 million cubic yards of soil and debris and is located in the northeastern portion of the site.

Cleanup Plans

Cleanup activities include soil sampling, analysis, design, excavation, segregation and treatment, transportation, disposal, certification, and restoration of potentially contaminated and contaminated areas. Excavated soil and debris will be transported to the OSDF or, when soil doesn't meet the acceptance criteria, to an off-site disposal facility. The OSDF is a result of the "balanced approach" to waste management at Fernald. Through the Records of



Trucks hauling soil from the Southern Waste Units to the On-Site Disposal Facility will go through two wheel wash facilities to keep the road free from the spread of contamination (6734-D1118).

Decision for each of the five operable units, it was decided that the smaller volume of more highly-contaminated material would be transported off site for disposal and the larger volume of material with low levels of contamination that could be safely contained would be disposed on site. Approximately 85 percent of the material destined for the OSDF will be soil and soil-like material and the remaining 15 percent will be debris from the demolition of site buildings. Only material from Fernald will be placed in the OSDF.

Operations

The project follows a general soil remediation process for each of the defined areas. These steps include pre-design investigation, remedial design, site preparation, excavation and segregation, pre-certification activities, certification and restoration. Each area will be excavated using one of six general approaches based on the nature, location and concentration of contamination. With these six options, soil can be excavated with little impact on surrounding areas, and excavation can address specific challenges at each location.

When completed, the OSDF will be approximately 800 feet wide, 3700 feet long, and 65 feet high. Construction of the OSDF will proceed in phases from north to south with eight waste cells originally planned. However, compaction of the material has

been better than anticipated and this could result in needing only six or seven cells. The 8.75-foot thick cap and the 5-foot thick liner will be constructed of both natural materials (such as clay and gravel) and man-made materials (such as plastic liners). The OSDF has a leak detection system and a leachate collection system situated within the layers of the liner. Leachate is transported to the Bionitrification Surge Lagoon for eventual treatment at the Advanced Wastewater Treatment facility.

Project Documents

The *Site-Wide Excavation Plan* defines the management strategy and technical guidelines to direct soil remediation at Fernald. This plan ensures consistent application of methods and protocols during each phase of remediation. A design package will be developed for each area, specifying the methods used for each, including an implementation plan, design drawings and specifications.

The *Waste Acceptance Criteria Attainment Plan* defines the OSDF's requirements for materials generated by restoration, decontamination and dismantlement efforts. To ensure that on-site disposal requirements are met, this plan will be used as the technical and managerial basis for developing procedures and personnel training requirements for material handling, tracking and reporting activities.



Roll-off boxes containing debris from the demolition of the buildings are emptied in the On-Site Disposal Facility. Approximately 15% of the OSDF will be debris while 85% will be soil and soil-like materials (6319-D2296).

The *Natural Resource Restoration Plan* defines the strategy for restoring natural resources after site remediation. It includes site-wide surface grading, vegetation, surface water management and institutional controls.

The *Final Design Package* for the OSDF includes a design criteria package, a specifications package, support plans and construction drawings that detail how the OSDF is to be built.

SDFP Activities

In 1997, the Southern Waste Units (SWU) area, which includes the flyash piles and the South Field, was among the first remediation areas selected for excavation.

Excavation of the SWU is a priority in order to control runoff into Paddys Run Creek and direct infiltration through impacted material, both of which were major sources of contamination to the Great Miami Aquifer.

Approximately 400,000 cubic yards of soil and flyash have been



The On-Site Disposal Facility was designed to hold 2.5 million cubic yards of contaminated soil and debris (7381-9).

excavated from the SWU and placed in the OSDF. Once the area has been certified as meeting cleanup levels, it will be restored as defined in the *Natural Resource Restoration Plan*.

In 1997, Cell 1 of the OSDF received its first waste placement.

In 1998, Cell 2 was opened and in 1999, Cell 3 began receiving waste. Cell 1 reached 100% of its designed capacity in 2000 and will be capped in 2001. More than 500,000 cubic yards of soil and debris had been placed in the OSDF by the end of 2000.

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** Rob Janke, DOE-Fernald project manager at 513-648-3124 or at robjanke@fernald.gov; or
- View** the Fernald Web site (<http://www.fernald.gov>).