U.S. Department of Energy Interim Mixed Waste Inventory Report: Waste Streams, Treatment Capacities and Technologies

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April 1993

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MASTER

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**TECHNOLOGY
DEVELOPMENT
SUMMARIES**

**Fernald Environmental Management
Project**

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FEMP-TDS-2

April 1993

Target Site: Fernald
Location site: Fernald

Programs/Facilities Supported:

This project is intended to be the bench/pilot scale demonstration of vitrification technology.

ID: 56

Program Title: Minimum Additive Waste Stabilization (MAWS)

Summary Description:

The MAWS technology demonstration program is an integrated waste treatment system. Vitrification is the core technology which will be used for stabilization of waste sludges and other contaminated material. The process technology is integrated with soil washing to reduce the overall volume of the waste to be vitrified. Ion exchange will be used to treat contaminated water from the soil washing process. Another potential benefit of the integrated approach is to use the soil waste stream and other treatment residues as a raw material additive for the vitrification process. The ultimate goal of the MAWS program is to demonstrate the cost-effectiveness and feasibility of waste volume reduction by the integrated treatment process. The initial MAWS Bench-Scale Unit will treat Pit 5 sludges with FEMP soils.

Summary Purpose/Need:

Goals of this process are to minimize additives thereby reducing cost and volume as well as to produce a glass form that as a minimum passes the EPA leach test. In addition, it is expected that the vitrification process will be proven to effectively remove or render non-leachable organics for which the waste is listed, in order to allow delisting of the final glass form. The process is expected to handle the ranges of constituents anticipated. The amount of organic that can be destructed will be determined during delisting runs by spiking organic into materials to be vitrified. Destruction and removal efficiency (DRE) has not been discussed in detail, however, since the goal of vitrification is to provide a "delistable" final form, it is anticipated that DRE will be required to be greater than 99 percent.

Summary Result/Endpoint/Deliverable:

The end-point is a demonstration of the 300 Kg melter system at the Fernald site in FY 93. If chosen as the best treatment, additional funding for scaleup will be allocated.

BDAT: HLVIT

Functional Areas: waste destruction & stabilization
thermal treatment unit - high residue
final form glass

Target Site: Fernald
Location site: Fernald

Programs/Facilities Supported:
CERCLA ROD

ID: 410

Program Title: Soil Washing Treatability Study

Summary Description:

A soil washing treatability study is currently being conducted under the guidance of OU5. The guidelines for this study, contained in the Treatability Study Work Plan for Operable Unit 5: Soil Washing, adhere to EPA's Guidelines for Conducting Treatability Studies under CERCLA. The study, in support of evaluating remedial alternatives for soil as part of OU5's RI/FS, is designed to conduct both remedy-screening and remedy-selection testing.

Soil washing is a physical/chemical treatment process that initially involves the separation of soil into different particle-size fractions. Reagent formulations in the washing solutions are used in the extraction of radionuclides and organic and inorganic compounds from these different size fractions. The contaminants may be separated from the wash stream into a concentrated residue for further treatment (eg., stabilization or vitrification).

Remedy-screening tests consist of bench-scale studies designed to evaluate individual treatment process potentially applicable for soil washing. Results from this testing aid in selecting specific treatment processes that can be tested on a pilot-scale level during remedy-selection testing.

Remedy-selection testing consist of combining physical separation techniques with chemical extraction processes into a single treatment process. The testing of this process on a pilot-plant level enables both the processes and results to be directly scalable to full size soil washing operating system.

Summary Purpose/Need:

The purpose of this treatability study is to generate data for the detailed analysis of alternatives in the FS. A primary consideration is to integrate the soil washing treatability technology being evaluated in this study with other technology evaluations being conducted for on-site remediation of OU5.

Summary Result/Endpoint/Deliverable:

All design work for the soil washing process system and support utilities has been completed. The fabrication of all skids has also been completed by a local Cincinnati construction company. All project related documentation and startup support activities are on schedule. The installation of the soil washing pilot-plant is scheduled for completion by the later part of March. Anticipated system startup of the system is projected for the first week in April, 1993. The requirements of the Treatability Study Work Plan will be satisfied during the initial operation of the process. A phased approach for operation of the pilot system is currently being developed for the next twelve (12) months. Priorities during this period include batch process optimization, ID Program requirements, and the conversion of the process to a continuous operating mode.

BDAT: NEUTR PRECP RMETL

Functional area: Chemical physical treatment - radionuclide removal

23.0 OHIO

There are five Ohio facilities that generate, expect to generate, and/or store DOE-managed mixed waste.

- 23.1 Battelle Columbus Laboratories
- 23.2 Fernald Environmental Management Project
- 23.3 Mound Plant
- 23.4 Portsmouth Gaseous Diffusion Plant
- 23.5 RMI, Titanium Company

Figure 23-1 shows the location of these facilities.

Figure 23-1. Ohio Facilities that Generate, Expect to Generate, and/or Stores DOE-managed Mixed Waste.

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23.1 Battelle Columbus Laboratories

Battelle Columbus Laboratories consists of 2 major research complexes, 1 in the city of Columbus and 1 about 24 km west of Columbus in rural Madison County, Ohio (Figure 23-1). Atomic energy research and development activities have been performed at Battelle for the DOE and its predecessor agencies (the Atomic Energy Commission and Manhattan Engineer District) since 1943. The King Avenue (Columbus) site houses corporate offices and general research laboratories. Portions of the site contain radioactively contaminated research facilities and equipment. Most of the contamination consists of small amounts of naturally occurring radioisotopes (uranium and thorium) and activation products. The West Jefferson (Madison County) site contains a number of facilities formerly dedicated to nuclear research. In addition to contamination similar to that at the Columbus site, the West Jefferson site contains a number of hot cells that are highly contaminated. The bulk of transuranic, mixed-fission-product, and activation-product contamination is confined to 1 area of that site.

23.1.1 Mixed Waste

As of December 1992, no mixed wastes were being stored at Battelle Columbus. The only mixed waste generated at the site will be produced during the environmental restoration activities. Recently, the restoration activity has resulted in the generation of a small quantity of mixed waste. There is no high level or mixed Transuranic (MTRU) waste at Battelle Columbus. Small amounts of MTRU could be generated during remediation of the hot cell.

23.1.2 Treatment Facilities

There are no treatment facilities at Battelle Columbus.

23.1.3 Technology Development

There is no site-specific technology development for Battelle Columbus.

23.1.4 Environmental Restoration Program

Portions of 15 buildings and associated soil areas are radioactively contaminated as a result of previous work under government contract. These areas are expected to be decontaminated and released to Battelle for other use without radiological restrictions. Environmental restoration accomplishments to date include completing the decontamination of 4 buildings including Building 9 on the King Avenue campus and 3 buildings at the West Jefferson site; completing 7 low-level waste shipments to Hanford, Washington and upgrading the project radiation protection program to meet the requirements of the DOE Radcon Manual. Decontamination and decommissioning of the facilities is ongoing, and plans include removing waste (including water in the hot cell storage/transfer pool and sump sludge), equipment, and fixtures from the contaminated buildings and remediating sewer lines. A relatively modest amount of mixed waste is expected to be generated by these activities. More detailed information on the contaminated media associated with environmental restoration activities is in Chapter 2.

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23.2 Fernald Environmental Management Project

The Fernald Environmental Management Project (FEMP) is located in southwestern Ohio, approximately 17 miles northwest of downtown Cincinnati, near the communities of Miamitown and Ross (Figure 23-1). Of the total site area of 1050 acres, 850 acres are in Crosby Township of Hamilton County and 200 acres are in Morgan and Ross Townships of Butler County, Ohio. The site is owned by the DOE, and is currently operated by Fernald Environmental Restoration Management Corporation. The site employs over 2000 people.

The FEMP facility was built to process uranium ore concentrates into high purity uranium-metal products. A wide variety of chemical and metallurgical process steps supported manufacturing of uranium-metal products for use at other DOE sites. Because of a sharp reduction in demand for uranium-metal products by user sites beginning in late 1988, the Fernald site steadily reduced its production. On July 10, 1989, after more than 36 years of manufacturing uranium-metal products for U.S. defense programs, production operations were suspended to refocus site resources on environmental restoration. The mission of the FEMP site is now environmental restoration and waste management.

Because of the change in site mission from production to clean up, the management and financial responsibility for the FEMP site was transferred from the DOE Defense Programs (DP) to the Office of Environmental Restoration and Waste Management (EM) in October 1990.

In July 1990, the EPA and the DOE entered into a Consent Agreement establishing milestone schedules for the completion of necessary studies to support the CERCLA cleanup process. The agreement also established schedules for implementing near term cleanup actions while final cleanup solutions were being evaluated and selected. In September 1991, the DOE and EPA jointly signed the Amended Consent Agreement establishing revised milestones for the completion of the required studies and identifying a series of new, near-term actions for implementation by DOE.

A Consent Decree was signed by the State of Ohio and the DOE in December 1988, establishing milestones to bring the FEMP into full compliance with RCRA and other regulatory requirements. In January 1993 amendments establishing additional requirements regarding the management of hazardous waste were made to the Consent Decree.

23.2.1 Mixed Waste

23.2.1.1 High-Level Waste

There is no high-level waste currently stored at FEMP and none will be generated in the next 5 years.

23.2.1.2 Mixed Transuranic (MTRU) Waste

There is no MTRU waste currently stored at FEMP and none will be generated in the next 5 years.

23.2.1.3 Mixed Low-Level Waste

Most of the waste currently stored at the FEMP facility is the result of the uranium processing operations conducted over a 36-year period. Some waste streams have been generated as a result of environmental restoration activities. FEMP mixed low-level waste (MLLW) consists of process residues, solvents, construction rubble, grit blast residues, and miscellaneous liquid and solid waste. The FEMP has

completed waste characterization activities for the majority of waste that is stored on site. When possible wastes have been characterized based on knowledge of the process from which they were derived; although sampling and analysis have also been used to characterize waste.

All of the mixed waste stored at the FEMP is low-level waste. No transuranic or high-level waste has been generated at Fernald. The FEMP waste is classified as contact-handled, containing low concentrations of alpha-emitting radionuclides in the waste matrix. As a result of the FEMP mission, the radionuclide most predominantly found in the FEMP mixed waste is uranium.

The FEMP has 283 waste streams making up the approximately 3,500,000 kg (about 3,100 m³) of MLLW in storage as of December 31, 1992 (Table 23.2-1). Approximately 54 percent of the waste in storage consists primarily of sludges and residues generated from the uranium metal production processes. Approximately 32 percent of the waste currently in storage at the FEMP can be classified as aqueous or organic liquids. About 65 percent of the mass and 68 percent of the volume of waste stored at the FEMP is subject to RCRA Land Disposal Restrictions and requires treatment before disposal.

Since production activities at the Fernald facility have been halted, future generation of waste will be due solely to the environmental restoration activities that will be conducted at the site. No waste will be generated from the process operations. In all cases, increased effort has been devoted to minimizing hazardous and radioactive wastes at FEMP.

23.2.2 Treatment Facilities and Technologies

Treatment technologies for mixed wastes stored on site have been identified for all FEMP waste streams based on RCRA LDR requirements. The following is a summary of the LDR treatment technologies assigned for the FEMP mixed waste streams currently in storage.

FEMP reports a current waste volume of approximately 1700 m³ requiring incineration. Some of this waste will be sent to the Toxic Substances Control Act (TSCA) Incinerator at the K-25 site outside of Oak Ridge Tennessee. Incineration facilities for the remaining waste have not been identified. Ten percent of the waste to be incinerated is estimated to require further stabilization before disposal.

Approximately 700 m³ of the FEMP waste currently in storage requires stabilization. Stabilization could be vitrification, cementation, polymer fixation, or some sort of chemical fixation. A small amount of the FEMP wastes requires metals recovery before disposal and about 20 m³ requires wastewater treatment. Specific facilities have not been identified to perform these treatments.

It is important to note that mixed waste stored on site is included in the environmental restoration program governed by CERCLA. As part of the CERCLA RI/FS process, the prescribed RCRA LDR technologies will be evaluated along with other potential technologies and general response actions (institutional controls, containment, disposal). The preferred technologies will be selected for the final remedial action.

Table 23.2.1
Mixed Wastes at Fernald Environmental Management Project

Waste Type/Matrix	Number of Waste Streams	Inventory		Number of Waste Streams	Five-Year Projection	
		(m ³)	(kg)		(m ³)	(kg)
WASTE TYPE -- MLLW						
CH, Organic Liquids	75	160.77	130,070.65	19	76.45	36,661.00
CH, Aqueous Liquid	17	832.40	1,154,405.00	3	23.80	19,318.00
CH, Organic Sludges/particulates	47	958.76	845,372.00	1	1.40	795.00
CH, Inorganic Sludges/particulates	44	726.74	1,056,211.00	1	1.04	1,136.00
CH, Soils	17	33.30	44,316.00	0	0.00	0.00
CH, Organic Debris	10	4.80	2,887.00	2	2.50	341.00
CH, Inorganic Debris	31	311.60	250,305.30	3	11.47	2,545.00
CH, Heterogeneous Debris	30	40.60	26,043.00	7	32.16	4,318.00
CH, Lab Packs Without Metals	2	0.40	23.00	0	0.00	0.00
CH, Reactive Metals	3	37.70	14,279.00	0	0.00	0.00
CH, Compressed Gases	1	0.20	13.60	0	0.00	0.00
CH, Liquid Mercury	1	<0.10	20.00	1	<0.10	91.00
CH, Elemental Lead	1	<0.10	8.00	0	0.00	0.00

Table 23.2.1 (page 2)
Mixed Wastes at Fernald Environmental Mangement Project

Waste Type/Matrix	Number of Waste Streams	Inventory		Number of Waste Streams	Five-Year Projection	
		(m ³)	(kg)		(m ³)	(kg)
WASTE TYPE -- MLLW						
CH, Batteries (lead Acid, Cadmium)	3	0.60	528.00	2	2.20	1,591.00
CH, Other	1	0.20	9.00	0	0.00	0.00
Sub-Total MLLW:	283	3,108.10	3,524,490.55	39	151.11	66,796.00
TOTAL:	283	3,108.10	3,524,490.55	39	151.11	66,796.00

23.2.2.1 Existing Treatment Facilities

One mixed waste treatment process is currently in operation at FEMP (Table 23.2-2). This is a batch treatment operation to process approximately 200,000 gallons of uranyl nitrate hydrate (UNH) stored in a variety of tanks at the FEMP as a CERCLA removal action. The UNH will be converted to a stable filter cake that can be stored in drums. UNH is a liquid with a low pH and high levels of uranium resulting from the processing of high grade uranium ores using nitric acid and a filtering operation in preparation to extract the uranium in the form of solid, uranium oxide. UNH was declared a hazardous waste because of the characteristic of corrosivity and the presence of chromium and barium. During treatment, the solution will be blended to a uniform mixture, pH adjusted and precipitation accomplished using magnesium hydroxide and filtering the slurry through a rotary vacuum filter press. The solid material from this process will be drummed. The liquid will be sampled and if acceptable discharged through FEMP water treatment system if the levels are below National Pollutant Discharge Elimination System permit criteria.

Processing of UNH began in 1992 and will continue in 1993. The conversion to solid form will be conducted in a series of 10 or more batches, each of which will be designed to mix solutions from 2 or more batch tanks that will satisfy the enrichment criteria of less than 1 percent uranium-235 and concentration standards. The solid material generated from this treatment will be a LLW, not a MLLW.

FEMP has a decontamination and decommissioning operation and a wastewater treatment facility designed to handle low-level, radioactive waste. These facilities are not intended to treat mixed waste.

23.2.2.2 Planned Treatment Facilities

FEMP is currently planning 2 pilot-scale treatment facilities for mixed waste, the Minimum Additive Waste Stabilization (MAWS) facility and the Soil Washing Process Facility (Table 23.2-3). Both facilities are part of the CERCLA restoration activities being conducted at the site and are discussed below.

23.2.2.3 Treatment Facility Summary

Tables 23.2-2 and 23.2-3 provide a comprehensive summary of the existing and planned mixed waste treatment facilities at the FEMP. One process, the UNH batch treatment operation, is currently in use and 2 facilities, the MAWS and the Soil Washing Process Facility, are planned. Table 23.2-4 provides a summary of the waste acceptance parameters for these facilities.

23.2.3 Technology Development

23.2.3.1 General

A large part of the work that will be performed under CERCLA at FEMP is technology development. Currently, technologies are being evaluated in support of records of decision for remedial action at the FEMP site. Some technology demonstrations and feasibility studies are already being conducted including the MAWS and the soil washing process. These activities are discussed below and are also presented in Appendix B.

Table 23.2-2
Fernald Environmental Management Project
Mixed Waste Treatment Facilities
Currently in Use for Mixed Wastes

Facility/System	Treatment Type(s)	Allowable Waste		Ident. Of MW Streams To Be Treated	Normal Operating Capacity (m3/yr)
		Radioactive Type(s) *	Physical/Chemical Matrix		
UNH Treatment Facility	Neutralization, Chemical Precipitation, Filtration	MLLW, CH	Liquid	844	795.0

*

ALPHA refers to transuranic alpha greater than 10 nCi/g

Table 23.2-3
Fernald Environmental Management Project
Mixed Waste Treatment Facilities
Planned or Under Construction for Mixed Wastes

Facility/System	Treatment Type(s)	Allowable Waste		Ident. Of MW Streams To Be Treated	Design Capacity (m3/yr) **	Date Avail. For Treating MW **
		Radioactive Type(s) *	Physical/Chemical Matrix			
Minimum Additive Waste Stabilization Facility (1)	Vitrification	MLLW, CH	Soil, Sludges	OU1 Sludges, FEMP Soils	To Be Determined	Year To Be Determined
Soil Washing Process Facility (2)	Soil Washing	MLLW, CH	Soil	OU5 Soils	To Be Determined	Year To Be Determined

* ALPHA refers to transuranic alpha greater than 10 nCi/g

** Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

Note (1): The overall design capacities for the MAWS system are: bench test=55 m3/yr, pilot test=4,414 m3/yr, and full scale=40,200 m3/yr.
Date available for the MAWS system is 6/93 for the bench test. Dates available for the pilot test and full scale operation are to be determined.
Bench test 6/93.

Note (2): Design capacity: Batch-1 continuous-441. Date available: Batch-4/93 continuous-1994.
Planned: Batch 4/93, continuous 1994.

Table 23.2-4
Fernald Environmental Management Project
Current and Planned Facilities - Treatment Category
Mixed Waste Treatment Facilities

Facility/System	Operating Status *	Feed Types	Final Waste Form	HLW MTRU MLLW	Alpha **	RH CH	Hg	Other Toxic Metals	Toxic Organics
Minimum Additive Waste Stabilization Facility	Planned, Year To Be Determined	Soil, Sludges	Vitrified waste	MLLW		CH		✓	✓
Soil Washing Process Facility	Planned, Year To Be Determined	Soil	To Be Determined	MLLW		CH		✓	✓
UNH Treatment Facility	Operating	Liquid	filter cake water	MLLW		CH			

* Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

** Transuranic alpha greater than 10 nCi/g.

23.2.3.2 Site Specific Technology Development Activities

The MAWS technology demonstration program is an integrated waste treatment system. Vitrification is the core technology which will be used for stabilization of waste sludges and other contaminated material. The process technology is integrated with soil washing and a water treatment system. Ion exchange will be used to treat contaminated water from the soil washing process. Concentrated residual contaminated soils from the soil washing unit are used as the silica source for the vitrification process. This reduces the operational costs of the vitrification unit and yields a net reduction in waste form volume. The ultimate goal of the MAWS program is to demonstrate the cost-effectiveness and feasibility of waste volume reduction by the integrated treatment process. The initial MAWS Bench-scale Unit will treat sludges, FEMP soils, and contaminated water resulting from soil washing and vitrification. Additional information on the source materials for these demonstrations can be found in the Environmental Restoration (ER) Program section.

Goals of this process are to effectively wash soil and treat water to specified levels as well as to produce a glass form that, at a minimum, passes the EPA TCLP test. In addition, it is expected that the vitrification process will be proven to effectively remove organics (1,1,1-trichloroethane) for which some of the ER Program waste is currently listed as a hazardous (mixed) waste.

A demonstration of the 300 kg melter system will be performed at the Fernald site in FY 93 to support ER Program record of decision documents due in December 1994. If chosen as best treatment, additional funding for scale-up will be allocated. The pilot plant, if chosen is planned to startup in 1996.

The Soil Washing Process Facility is currently being constructed for a treatability study as part of the ER Program Remedial Investigation/Feasibility Study (RI/FS) for Operable Unit 5 (OU5). This is a separate facility and study from the MAWS soil washing described above. The purpose of this study is to generate data for the RI/FS detailed analysis of remediation alternatives. A primary consideration is to integrate the soil washing treatability technology being evaluated in this study with the other technology evaluations being conducted for on-site remediation of OU5.

Soil washing is a physical-chemical treatment process that initially involves the separation of soil into different particle-size fractions. Reagent formulations in the washing solutions are used in the extraction of radionuclides and organic compounds from these different size fractions. The contaminants may be separated from the wash stream into a concentrated residue for further treatment (e.g., stabilization or vitrification).

All design work for the Soil Washing Process Facility and support utilities has been completed. All project related documentation and startup support activities are on schedule. The installation of the soil washing pilot plant is also on schedule. Anticipated system startup is projected for April, 1993.

23.2.3.3 Site Specific Technology Development Summaries

Site-specific technology development activities with numerically indexed narrative descriptions (following the waste profile sheets) and tables of titles are presented in the following sections of this chapter as well as in Appendix B. The following site-specific technology development activities lists site-specific technology development activities which are potentially applicable to the treatability groups and BDATs identified in Chapter 6.0 are listed below. Additionally, crosscutting technology development activities not assigned to treatability groups are included. Where BDAT is indicated as NA, or is blank, the

technology development activity does not link to specific BDAT RCRA treatment functions, but is intended to provide other supporting functions.

Site-Specific Technology Development Activities

(by BDAT:

by Summary Technology (Tech) Area ID:

by ID number: (references numerically indexed narrative descriptions presented later in this chapter and Appendix B)

by Title:)

BDAT: HLVIT

Summary Tech Area ID: waste destruction & stabilization

56 Minimum Additive Waste Stabilization (MAWS)

BDAT: NEUTR

Summary Tech Area ID: chemical physical treatment

410 Soil Washing Treatability Study

BDAT: PRECP

Summary Tech Area ID: chemical physical treatment

410 Soil Washing Treatability Study

BDAT: RMETL

Summary Tech Area ID: chemical physical treatment

410 Soil Washing Treatability Study

23.2.4 Environmental Restoration Program

The current mission of the FEMP is environmental restoration. The goal of environmental restoration is to protect human health by limiting potential exposures to radioactive and hazardous materials. The RI/FS process along with the waste management program are the 2 main FEMP activities geared toward site cleanup. The RI/FS process is regulated by CERCLA legislation and is conducted according to U.S. EPA guidance and regulations and the provisions of the Amended Consent Agreement. The waste management program remains a key element in preventing the release of pollutants into the environment. Generally, the program seeks to characterize, store, treat (as necessary) and dispose of radioactive, hazardous, mixed and sanitary waste from the site in a safe and environmentally sound manner while complying with all applicable regulations. The management of hazardous waste is regulated by the state of Ohio; the FEMP has submitted a RCRA Part B application to the state seeking a RCRA permit for on-site storage.

In order to remediate facilities such as waste pits, sludge ponds, groundwater, storage silos, and process buildings, the FEMP began its RI/FS in 1986. The RI/FS divides facilities to be cleaned up into "Operable Units". The FEMP has 5 operable units that will ultimately require remediation. The first, Operable Unit (OU) 1, includes some of the low-level radioactive waste storage areas used during uranium-metal production. OU1 covers approximately 37 acres and consists of 6 waste pits, a burn pit, the clear well, berms, liners, and soil within the operable unit boundary. OU2 includes other FEMP waste storage areas such as the Flyash piles, Lime Sludge Ponds, Solid Waste Landfill, and the Southfield Disposal Area. OU3 is the former production area and production-associated facilities and equipment. OU3 includes, but is not limited to, all above- and below-ground structures, equipment, utilities, drums,

OU3 includes, but is not limited to, all above- and below-ground structures, equipment, utilities, drums, tanks, solid waste, waste product, thorium, effluent line, K-65 transfer line, wastewater treatment facilities, fire-training facilities, scrap metal piles, feedstocks, and the coal pile. OU4 consists of 4 silos, a decant sump system, a buried concrete trench, and the surrounding soils. Two silos contain residues from the processing of pitchblende uranium ores at the FEMP and at St. Louis (Mallinckradt Chemical Works). One silo contains dried uranium-bearing refinery raffinates generated from Fernald production operations. One silo has not been used and remains empty. OU5 encompasses environmental media: groundwater (including perched groundwater), surface water, sediments, soils (not included in the other operable units), flora, and fauna. In particular, OU5 includes a uranium contamination plume that is slowly spreading south from the site.

The amount of MLLW to be generated over the next 5 years due to environmental restoration activities was estimated by the site as 170,000 m³. It is estimated that the largest volume of waste will be soils contaminated with uranium, heavy metals, and organic contaminants. Additional information on Environmental Restoration activities is included in Chapter 2.

During the restoration process, the FEMP is implementing an active waste minimization program to reduce the volume of waste generated. Motivation for waste reduction is found in both federal and state regulations, U.S. DOE policies and guidelines. Increased costs and liabilities associated with the management of wastes and limited disposal options have been a strong impetus for minimizing waste generation. The restoration program is being conducted according to "Good Operating Practices".

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23.2-12

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WASTE

PROFILE

SHEETS

**Fernald Environmental Management
Project**

ROADMAP TO WASTE PROFILE SHEETS (WPS)

Waste Profile Sheets (WPS) have been compiled in this report for each of the mixed waste streams identified at the different DOE sites. Each WPS is a concise summary of the information required by the FFCAct-1992, with waste stream specific data primarily derived from the Waste Management Information System (WMIS) database. Each WPS consists of the following items:

Header: The information in the header in each WPS includes the State, the official name of the site, an identification number, an identifying waste stream name, the waste type, and the waste matrix. The identification number is either a number assigned by the WMIS database or a number assigned by the site. The waste stream name is a unique identifier which corresponds to the name used in the WMIS database, or is assigned by the site. The waste type is either HLW, MTRU, or MLLW. The waste matrix corresponds to the categories (or their further subdivisions) defined earlier based on the physical and chemical form of the waste.

Waste Stream Description and Source: This section of the WPS presents a short description of the source of the waste and the waste stream characteristics.

Inventory Table: The inventory table in each WPS reports the volume (m³) and/or mass (kg) of each waste stream currently in storage, and projected to be generated in the next five years. The table also indicates the date assumed in calculating the current and projected inventories. As required by the FFCAct-1992, the table also differentiates between waste not subject to LDR and that subject to LDR for the current inventory.

Treatability Group: This section lists the name of the treatability group to which the waste stream belongs.

Treatment Status, Technology Status: This section of the WPS lists the status of the technology that could be applied to the waste stream for compliance with the LDR. This section provides information on if the waste stream is currently being treated, and if technology options and facilities for the treatment exist.

Radiation Characteristics Section: This section of the WPS provides additional information on the radiological characteristics of the waste (in addition to characterizing the waste stream as HLW, MTRU, or MLLW). This section of the WPS specifies whether the waste stream is contact handled or remote handled, if the radionuclides are alpha or beta/gamma emitters, and if they contain activation products.

Radiation Effects Section: As required by the FFCAct-1992, this section of the WPS lists possible effects of the radiological characteristics of the waste stream on treatment technologies that could be applicable to that waste stream. For example, radiation levels may require remote handling of the waste and affect the design and operation of the treatment facility. The presence of volatile radionuclides may require the containment of all off-gases from the treatment system.

Waste Minimization Activities: As required by the FFCAct-1992, this section of the WPS provides information on the waste minimization practices being used for the waste stream. This section provides information on if the waste minimization practices include good operating practices, technology changes, raw material changes, product changes, etc.

EPA Code: This table of the WPS reports the EPA hazardous waste codes applicable to the waste stream, the basis for assigning the codes (process knowledge or sampling/analysis), the LDR basis (which is either technology based or concentration based), and the BDAT for each of the EPA hazardous waste codes.

In summary, the WPS for each waste stream, along with the site sections in the report for each State (Section B), summarize the site-specific information required by the FFCAct-1992.

State: Ohio

ID #: 0000000091

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: MERCURY SPILL CLEANUP RESIDUE

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Mercury spill cleanup residue; 749 Maintenance Section, Instrument Shop.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	6.0	0.000	0.000	0.200	6.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams. Suggested technologies include metals recovery and chemical fixation.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000091

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: MERCURY SPILL CLEANUP RESIDUE

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U151	Tech.	Amalgamation

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000180

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: RAGS SOLVENT

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Non-recoverable trash for storage or shipment from maintenance section, paint shop.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	25.0	0.000	0.000	0.200	25.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio	ID #: 0000000180
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: RAGS SOLVENT	
Matrix: Organic Debris	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000194

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGES, SOLVENT - TRICHLOR, PERCHLOR

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Sludges, solvent - trichlor, perchlor, etc., ; Building 45, water treatment.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	195.0	0.200	195.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D037		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000376

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY RAGS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Oily rags; 503 Plant 5, General, Oil Storage Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	43.0	0.200	43.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams. Suggested treatment processes include thermal treatment using a rotary kiln incinerator and chemical treatment using chemical fixation.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000376

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY RAGS

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000379

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SPENT 1,1,1-TRICHLOROETHANE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Spent 1,1,1-trichloroethane; 502 Plant 5, General, Maintenance Shop.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	77.0	0.200	77.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams. Suggested treatment processes include using liquid injection incinerator and chemical fixation.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000379

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SPENT 1,1,1-TRICHLOROETHANE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio	ID #: 0000000380
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: RAGS WITH 1,1,1-TRICHLOROETHANE	
Matrix: Heterogeneous Debris	Waste Type: MLLW

Waste Stream Description and Source:

Rags with 1,1,1-trichloroethane; 502 Plant 5, General, Maintenance Shop.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	6.0	0.000	0.000	0.200	6.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams. Suggested treatment processes include thermal treatment using a rotary kiln incinerator, and chemical treatment using chemical fixation.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000380

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: RAGS WITH 1,1,1-TRICHLOROETHANE

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000382

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DRY CELL BATTERIES

Matrix: Batteries (lead acid, cadmium)

Waste Type: MLLW

Waste Stream Description and Source:

Dry cell batteries; 500.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	220.0	0.000	0.000	0.200	220.0	0.000	0.000

Treatability Group:

MLLW CH, Batteries (lead acid, cadmium), Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams. Suggested technologies include metals recovery and chemical fixation.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000382

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DRY CELL BATTERIES

Matrix: Batteries (lead acid, cadmium)

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002B	Tech.	Deactivation
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration

State: Ohio

ID #: 0000000383

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: X-RAY FIXER & DEVELOPER, CLEAR LIQUID

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

X-ray fixer & developer, clear liquid moderate acidic solution; 755 Maintenance Section, Quality & Safety Department.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	123.0	0.200	123.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams. Suggested treatment includes silver recovery.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000383

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: X-RAY FIXER & DEVELOPER, CLEAR LIQUID

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D011	Conc.	Stabilization

State: Ohio

ID #: 0000000385

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SPENT SOLVENTS

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Spent solvents; 738 Service Bldg. and Admin. Bldg., Garage.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	108.0	0.200	108.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams. Suggested treatment processes include liquid injection incinerator.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000385

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SPENT SOLVENTS

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio

ID #: 0000000387

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OIL SOAKED RAGS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Oil soaked rags; 738 Service Bldg. and Admin. Bldg., Garage.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.2	269.0	1.2	269.0	8.4	1,818.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000387

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OIL SOAKED RAGS

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D010	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio	ID #: 0000000388
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: USED OIL	
Matrix: Organic Liquids	Waste Type: MLLW

Waste Stream Description and Source:

Used oil; 739 Service Bldg. and Admin. Bldg., Garage Oil.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	6.7	5,320.0	6.7	5,320.0	22.8	18,182.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams. Suggested treatment processes include using liquid injection incinerator and chemical fixation.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000388

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: USED OIL

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D010	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

State: Ohio

ID #: 0000000389

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY RAGS FROM WATER TREATMENT AREA

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Non-recoverable trash for storage or shipment from Plant 6, Water Treatment Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	25.0	0.200	25.0	2.3	273.0

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000389

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY RAGS FROM WATER TREATMENT AREA

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008A	Tech.	Secondary Lead Smelting
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D010	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000390

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SEMI-SOLID

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Oily semi-solid; 655 Plant 6, Water Treatment Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.800	470.0	0.800	470.0	1.4	795.0

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000390

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SEMI-SOLID

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

State: Ohio

ID #: 0000000393

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LUBRICATING OIL FROM REDUCTION REMELT

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated insoluble oil; Plant 5, General, Oil Storage Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	317.0	0.400	317.0	2.1	1591.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000393

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LUBRICATING OIL FROM REDUCTION REMELT

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008A	Tech.	Secondary Lead Smelting

State: Ohio

ID #: 0000000396

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PAINT THINNER RAGS

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Paint thinner rags; 748 Maintenance Section, Paint Shop.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	71.0	0.400	71.0	1.3	227.0

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000396

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PAINT THINNER RAGS

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration
F003	Conc.	Incineration
F005A	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio	ID #: 0000000397
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: 1,1,1,-TRICHLOROETHANE (CLEANING SOLVENT)	
Matrix: Organic Liquids	Waste Type: MLLW

Waste Stream Description and Source:

1,1,1,-trichloroethane (cleaning solvent); 768 Building 45, Boiler Plant.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	103.0	0.200	103.0	1.000	455.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000397

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: 1,1,1,-TRICHLOROETHANE (CLEANING SOLVENT)

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio

ID #: 0000000398

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SOLVENT RAGS

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Solvent rags; 768 Building 45, Boiler Plant.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	19.0	0.200	19.0	1.2	114.0

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000398

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SOLVENT RAGS

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio	ID #: 0000000399
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: OILY RAGS, PADS AND TRASH FROM BOILER	
Matrix: Heterogeneous Debris	Waste Type: MLLW

Waste Stream Description and Source:

Non-recoverable trash for storage or shipment; Building 45, Boiler Plant Oil Storage.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	49.0	0.200	49.0	0.963	227.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000399

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY RAGS, PADS AND TRASH FROM BOILER

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008A	Tech.	Secondary Lead Smelting
D039		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000400

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: USED OIL FROM MAINTENANCE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Used oil from maintenance; 769 Building 45, Boiler Plant Oil Storage.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	105.0	0.200	105.0	1.1	568.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000400

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: USED OIL FROM MAINTENANCE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D008B	Conc.	Stabilization
F001	Conc.	Incineration

State: Ohio

ID #: 0000000402

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: USED OIL

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Used oil; 203 Plants 2 & 3, General, Oil Storage Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.800	404.0	0.800	404.0	6.7	682.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000402

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: USED OIL

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio

ID #: 0000000404

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY RAGS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Oily rags; 203 Plants 2 & 3, General, Oil Storage Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	59.0	0.400	59.0	1.6	227.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000404

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY RAGS

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000405

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DRY CELL BATTERIES

Matrix: Batteries (lead acid, cadmium)

Waste Type: MLLW

Waste Stream Description and Source:

Dry cell batteries; 241.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	134.0	0.200	134.0	1.1	682.0

Treatability Group:

MLLW CH, Batteries (lead acid, cadmium), Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000405

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DRY CELL BATTERIES

Matrix: Batteries (lead acid, cadmium)

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002B	Tech.	Deactivation
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration

State: Ohio

ID #: 0000000408

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: USED OIL

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Used oil; 747 Maintenance Section, Machine Shop Oil Storage.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	146.0	0.200	146.0	1.000	682.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000408

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: USED OIL

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization
F001	Conc.	Incineration

State: Ohio

ID #: 0000000410

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY RAGS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Oily rags; 747 Maintenance Section, Machine Shop Oil Storage.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	130.0	0.400	130.0	10.5	682.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000410

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY RAGS

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000412

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: 1,1,1-TRICHLOROETHANE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

1,1,1-trichloroethane; 775 Building 45, Lab Maintenance Shop.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	10.0	0.200	10.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000412

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: 1,1,1-TRICHLOROETHANE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D006B	Conc.	Stabilization
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio

ID #: 0000000413

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: 1,1,1,-TRICHLORETHANE RAGS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

1,1,1,-trichloroethane rags; 775 Building 45, Lab Maintenance Shop.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	5.0	0.200	5.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000413

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: 1,1,1,-TRICHTHORETHANE RAGS

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D039		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio	ID #: 0000000414
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: USED OIL	
Matrix: Organic Liquids	Waste Type: MLLW

Waste Stream Description and Source:

Used oil; 776 Building 45, Lab Oil Storage Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	199.0	0.400	199.0	9.2	909.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000414

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: USED OIL

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D039		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio

ID #: 0000000415

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY RAGS AND ABSORBENTS WD-40 AND VARIOUS OILS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Oily rags and absorbents WD-40 and various oils; 776 Building 45, Lab Oil Storage Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	36.0	0.200	36.0	6.3	227.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000415

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY RAGS AND ABSORBENTS WD-40 AND VARIOUS OILS

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000417

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WIPES, RESINS, SOLIDS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Wipes, resins, solids; 733 Analytical Laboratory Hazardous Waste.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	88.0	0.200	88.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000417

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WIPES, RESINS, SOLIDS

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D008B	Conc.	Stabilization
D022		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration
F003	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000418

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SPENT ACETONE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Spent acetone; 733 Analytical Laboratory Hazardous Waste.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.700	607.0	0.700	607.0	1.2	1,023.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000418

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SPENT ACETONE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
F003	Conc.	Incineration

State: Ohio

ID #: 0000000419

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: XYLENE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Xylene; 733 Analytical Laboratory Hazardous Waste.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	114.0	0.200	114.0	1.000	455.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000419

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: XYLENE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
F003	Conc.	Incineration

State: Ohio

ID #: 0000000421

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: METHANOL

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Methanol; 733 Analytical Laboratory Hazardous Waste.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	704.0	0.200	704.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000421

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: METHANOL

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
F003	Conc.	Incineration

State: Ohio	ID #: 0000000422
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: SPENT METHYLENE CHLORIDE	
Matrix: Organic Liquids	Waste Type: MLLW

Waste Stream Description and Source:

Spent methylene chloride; 733 Analytical Laboratory Hazardous Waste.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.019	15.0	0.000	0.000	0.019	15.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000422

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SPENT METHYLENE CHLORIDE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

State: Ohio

ID #: 0000000423

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: ELEMENTAL MERCURY

Matrix: Liquid Mercury

Waste Type: MLLW

Waste Stream Description and Source:

Elemental mercury; 733 Analytical Laboratory Hazardous Waste.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.019	20.0	0.019	20.0	0.084	91.0

Treatability Group:

MLLW CH, Liquid Mercury, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009D	Tech.	Amalgamation

State: Ohio

ID #: 0000000425

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LABORATORY ACIDS (NITRIC AND CYCLOHEXANE)

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Laboratory acids (nitric and cyclohexane); 733 Analytical Laboratory Hazardous Waste.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.500	345.0	0.500	345.0	0.098	68.0

Treatability Group:

MLLW CH, Organic Liquids

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000425

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LABORATORY ACIDS (NITRIC AND CYCLOHEXANE)

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D002A	Tech.	Deactivation

State: Ohio

ID #: 0000000426

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: METHANOL AND CYCLOHEXANE MIXTURE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Methanol and cyclohexane mixture; 733 Analytical Laboratory Hazardous Waste.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	2.9	2,065.0	2.9	2,065.0	5.6	4,091.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000426

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: METHANOL AND CYCLOHEXANE MIXTURE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
F003	Conc.	Incineration

State: Ohio

ID #: 0000000428

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: ACETONITRILE IN WATER

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Acetonitrile in water; 733 Analytical Laboratory Hazardous Waste.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.019	0.454	0.019	0.454	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000428

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: ACETONITRILE IN WATER

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration

State: Ohio

ID #: 0000000432

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: ELEMENTAL MERCURY (SPILL CLEAN-UP)

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Elemental mercury (spill clean-up materials); 733 Analytical Laboratory Hazardous Waste.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.2	255.0	1.2	255.0	5.6	1,136.0

Treatability Group:

MLLW CH, Inorganic Debris

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U151B	* not specified	* not specified

State: Ohio

ID #: 0000000432

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: ELEMENTAL MERCURY (SPILL CLEAN-UP)

Matrix: Inorganic Debris

Waste Type: MLLW

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000433

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: AEROSOL SPRAY CANS PROPELLANT

Matrix: Compressed Gases

Waste Type: MLLW

Waste Stream Description and Source:

Non-recoverable trash for storage or shipment; Analytical Laboratory Hazardous Waste.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	13.6	0.000	0.000	0.200	13.6	0.000	0.000

Treatability Group:

MLLW CH, Compressed Gases, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio	ID #: 0000000433
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: AEROSOL SPRAY CANS PROPELLANT	
Matrix: Compressed Gases	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001D	Tech.	Deactivation

State: Ohio

ID #: 0000000434

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SOLIDS CONTAMINATED BY LAB SAMPLES & MATERIALS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Solids contaminated by lab samples & materials; 733 Analytical Laboratory Hazardous Waste.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.000	238.0	1.000	238.0	2.4	682.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000434

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SOLIDS CONTAMINATED BY LAB SAMPLES & MATERIALS

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D022		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration
F003	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000438

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: HYDRAULIC OIL FROM BALER IN DRUM RECONDITIONING

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Hydraulic oil from baler in drum reconditioning; 137 Plant 1, Drum Reconditioning, Drum Baler.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	177.0	0.000	0.000	0.200	177.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000447

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: HYDRAULIC FLUID FROM FREIGHT ELEV. AT LAB BASEMENT

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Liquid hydraulic fluid from freight elev. at lab basement; 730 Laboratory.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.400	207.0	0.000	0.000	0.400	207.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000448

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGE, HYDRAULIC OIL FROM FREIGHT ELEVATOR

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Sludge, hydraulic oil from freight elevator; 730 Laboratory.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	260.0	0.000	0.000	0.200	260.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000448

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGE, HYDRAULIC OIL FROM FREIGHT ELEV. AT LAB BASEM.

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000456

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGE-LIKE, VERY STRONG SOLVENT ODOR

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Sludge-like, very strong solvent odor; 100 Plant 1.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.400	508.0	0.000	0.000	0.400	508.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000456

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGE-LIKE, VERY STRONG SOLVENT ODOR

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000457

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OIL

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Oil; 100 Plant 1.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	224.0	0.000	0.000	0.200	224.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio	ID #: 0000000457
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: OIL	
Matrix: Organic Liquids	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000459

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PAINT

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Paint; 135 Plant 1, Drum Reconditioning, Drum Painting Booth.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	205.0	0.200	205.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000459

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PAINT

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
F001	Conc.	Incineration
F002	Conc.	Incineration
F003	Conc.	Incineration
F005A	Conc.	Incineration

State: Ohio

ID #: 0000000460

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LIQUID & SOLID WASTE SAMPLES

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Liquid & solid waste samples; 700 Waste Management.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	11.0	0.200	11.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000460

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LIQUID & SOLID WASTE SAMPLES

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D010	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000471

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PRESSURE TREATED WOOD IN 8 DRUMS

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Pressure treated wood in 8 drums; 705 Construction.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.000	241.0	1.000	241.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000471

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PRESSURE TREATED WOOD IN 8 DRUMS

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000478

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED OIL, SOLUBLE, FROM LATHE ON PLANT 64 PAD

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated oil, soluble, from lathe on plant 64 pad; 742 Procurement, Decontamination.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	144.0	0.000	0.000	0.200	144.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000478

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED OIL, SOLUBLE, FROM LATHE ON PLANT 64 PAD

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000479

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: USED PAINT THINNER

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Used paint thinner; 705 Construction.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	436.0	0.400	436.0	1.1	1,136.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000479

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: USED PAINT THINNER

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D011	Conc.	Stabilization
D035		Not currently prohibited under the LDR Program.
F003	Conc.	Incineration
F005A	Conc.	Incineration

State: Ohio

ID #: 0000000485

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: KEROSENE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Kerosene; 200 Plants 2 & 3.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	92.0	0.000	0.000	0.200	92.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000485

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: KEROSENE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000493

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: STENCILED GASOLINE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Stenciled gasoline; 100 Plant 1.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	58.3	0.200	58.3	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000493

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: STENCILED GASOLINE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000507

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: GASOLINE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Gasoline; 300 Plants 2 & 3, Pilot Plant.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	112.0	0.200	112.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000507

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: GASOLINE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000508

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PAINT THINNER

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Paint thinner; 300 Plants 2 & 3, Pilot Plant General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	220.0	0.200	220.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA. Thermal Treatment - Liquid injection incinerator

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000508

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PAINT THINNER

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration

State: Ohio

ID #: 0000000514

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BAD PAINT FROM PAINT BOOTH

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Bad paint from paint booth; 135 Plant 1, Drum Reconditioning, Drum Painting Booth.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.2	573.0	1.2	573.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000514

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BAD PAINT FROM PAINT BOOTH

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
F001	Conc.	Incineration
F002	Conc.	Incineration
F003	Conc.	Incineration
F005A	Conc.	Incineration

State: Ohio

ID #: 0000000517

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OIL DRY CONTAMINATED WITH OIL FROM BALER

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Oil dry contaminated with oil from baler; 137 Plant 1, Drum Reconditioning, Drum Baler.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.400	426.0	0.000	0.000	0.400	426.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000517

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OIL DRY CONTAMINATED WITH OIL FROM BALER

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000527

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY RAGS, CLEAN UP MATERIAL, GLASS JAR

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Oily rags clean up material, glass jar; 742 Procurement, Decontamination.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	38.0	0.200	38.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000527

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY RAGS, CLEAN UP MATERIAL, GLASS JAR

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000533

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PAINT (POSSIBLY GRAY EPOXY PAINT)

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Paint (possibly gray epoxy paint); 742 Procurement, Decontamination.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	130.0	0.200	130.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000533

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PAINT (POSSIBLY GRAY EPOXY PAINT)

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration

State: Ohio

ID #: 0000000538

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING # 1508

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Boring # 1508; ASI.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	296.0	0.200	296.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000538

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING # 1508

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000000539

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING # 1509

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Boring # 1509; ASI.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	692.0	0.400	692.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio	ID #: 0000000539
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: BORING # 1509	
Matrix: Soils	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000000540

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING # 1512

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Boring # 1512; ASI.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	331.0	0.200	331.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000540

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING # 1512

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D011	Conc.	Stabilization

State: Ohio

ID #: 0000000541

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING # 1513

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Boring # 1513; ASI.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	570.0	0.400	570.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000541

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING # 1513

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000000542

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING # 1514

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Boring # 1514; ASI.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	305.0	0.200	305.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000542

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING # 1514

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000000543

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING #1515, FROM THE FIRE TRAINING COURSE GROUNDS

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Boring #1515, from the fire training grounds; ASI.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	259.0	0.200	259.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000543

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING #1515, FROM THE FIRE TRAINING COURSE GROUNDS

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000000545

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING # 1511

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Boring # 1511; ASI.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	305.0	0.200	305.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000545

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING # 1511

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization

State: Ohio

ID #: 0000000549

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CUTTING FLUID, ABSORBANT

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Cutting fluid, absorbant; 730 Laboratory.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	25.0	0.000	0.000	0.200	25.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000549

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CUTTING FLUID, ABSORBANT

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000580

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SOIL CONTAMINATED WITH OIL AND WATER

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Soil contaminated with oil and water; 742 Procurement, Decontamination.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.400	382.0	0.000	0.000	0.400	382.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000580

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SOIL CONTAMINATED WITH OIL AND WATER

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000584

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: KEROSENE (DIESEL FUEL)/SLUDGE/WATER FROM PUMP TEST

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Kerosene (diesel fuel)/sludge/water from pump UST #3; 741 Procurement, Garage.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.7	1,117.0	0.000	0.000	1.7	1,117.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000584

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: KEROSENE (DIESEL FUEL)/SLUDGE/WATER FROM PUMP TEST UST3

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000587

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: GREASE AND WATER

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Grease and water; 100 Plant 1.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	113.0	0.200	113.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000587

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: GREASE AND WATER

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation

State: Ohio

ID #: 0000000588

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: MERCO DRY AND OILY MERCO DRY

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Non-recoverable trash for storage or shipment; Plant I, Drum Reconditioning, Drum Baler.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.7	1,599.0	0.000	0.000	1.7	1,599.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000588

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: MERCO DRY AND OILY MERCO DRY

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

State: Ohio

ID #: 0000000594

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SODIUM HYPOSULFIDE - DEVELOPING SOLUTION (CONTAMINATED)

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Sodium hyposulfide - developing solution (contaminated); 743 Procurement, Stores-Receiving.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.600	240.0	0.600	240.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000594

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SODIUM HYPOSULFIDE - DEVELOPING SOLUTION (CONTAMINATED)

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D011	Conc.	Stabilization

State: Ohio

ID #: 0000000627

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: 5-GAL CAN W/ SPILL CLEANOUT MATERIAL

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

5-gal can w/ spill cleanout material; 300 Plants 2 & 3, Pilot Plant.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	6.0	0.200	6.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000627

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: 5-GAL CAN W/ SPILL CLEANOUT MATERIAL

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000628

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SPILL CLEAN-UP MATERIALS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Spill clean-up materials; 300 Plants 2 & 3, Pilot Plant.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	65.0	0.200	65.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000628

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SPILL CLEAN-UP MATERIALS

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000632

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: HYDRAULIC FLUID FROM BALER

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Hydraulic fluid from baler; 137 Plant 1, Drum Reconditioning, Drum Baler.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.600	318.0	0.000	0.000	0.600	318.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000632

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: HYDRAULIC FLUID FROM BALER

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000633

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OIL UNKNOWN GENERATION

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Oil unknown generation; 100 Plant 1.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
2.5	1,292.0	0.000	0.000	2.5	1,292.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000633

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OIL UNKNOWN GENERATION

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000638

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: USED OIL

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Used oil; 400 Plant 4.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	142.0	0.000	0.000	0.200	142.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000638

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: USED OIL

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000644

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH, PADS, RAGS, WATER

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Non-recoverable trash, pads, rags, water; 100 Plant 1.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.600	242.0	0.000	0.000	0.600	242.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000644

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH, PADS, RAGS, WATER

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000658

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CODED AS OIL - STRONG SOLVENT ODOR

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Coded as oil - strong solvent odor; YAQ.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	40.0	0.000	0.000	0.200	40.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Plan to treat at an existing facility. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000658

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CODED AS OIL - STRONG SOLVENT ODOR

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000659

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LEAD AND WOOD SHAVINGS - UNKNOWN ORIGIN

Matrix: Other

Waste Type: MLLW

Waste Stream Description and Source:

Lead and wood shavings - unknown origin; 100 Plant 1.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	9.0	0.200	9.0	0.000	0.000

Treatability Group:

MLLW CH, Other, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000659

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LEAD AND WOOD SHAVINGS - UNKNOWN ORIGIN

Matrix: Other

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000000661

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING # 1594 - FROM NORTHWEST CORNER OF BLDG 12

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Boring # 1594 - from northwest corner bldg. 12; ASI.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	216.0	0.200	216.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000661

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING # 1594 - FROM NORTHWEST CORNER OF BLDG 12

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000000668

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OIL DRY CONTAMINATED WITH OIL AND WATER FROM BALER

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Oil dry contaminated with oil and water from baler; 137 Plant 1, Drum Reconditioning, Drum Baler.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.600	460.0	0.000	0.000	0.600	460.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000668

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OIL DRY CONTAMINATED WITH OIL AND WATER FROM BALER

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000000676

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DRY CELL BATTERIES, BUILDING 12

Matrix: Batteries (lead acid, cadmium)

Waste Type: MLLW

Waste Stream Description and Source:

Dry cell batteries, building 12; 746 Maintenance Section, Machine Shop.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	174.0	0.200	174.0	1.1	909.0

Treatability Group:

MLLW CH, Batteries (lead acid, cadmium), Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000676

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DRY CELL BATTERIES, BUILDING 12

Matrix: Batteries (lead acid, cadmium)

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002A	Tech.	Deactivation
D006A	Tech.	Thermal Recovery of Metals
D008A	Tech.	Secondary Lead Smelting
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration

State: Ohio

ID #: 0000000700

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: MAGNESIUM FLAKE AND OILY RAGS

Matrix: Reactive Metals

Waste Type: MLLW

Waste Stream Description and Source:

Magnesium flake and oily rags; 511 Plant 5, Metal Reduction Area Blenders.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	75.0	0.200	75.0	0.000	0.000

Treatability Group:

MLLW CH, Reactive Metals, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000700

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: MAGNESIUM FLAKE AND OILY RAGS

Matrix: Reactive Metals

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D003E	Tech.	Deactivation

State: Ohio

ID #: 0000000716

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WASTE OILS

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Waste oils; 769 Building 45, Boiler Plant Oil Storage.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.600	443.0	0.600	443.0	1.6	1,136.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

General Comments:

The waste characterization basis is a combination of sampling/analysis and process knowledge.

State: Ohio

ID #: 0000000716

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WASTE OILS

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000000720

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING #1261

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Boring #1261; ASI.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	250.0	0.200	250.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000720

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING #1261

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000000743

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAINER OF PUMP OIL AND RAGS

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Container of pump oil and rags; 100 Plant 1.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	18.0	0.200	18.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000743

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAINER OF PUMP OIL AND RAGS

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000000768

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DAAP/SOLVENT MIXTURE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Daap/solvent mixture from storage tanks.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	6.4	6,545.0	6.4	6,545.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000768

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DAAP/SOLVENT MIXTURE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation

State: Ohio

ID #: 0000000776

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING #1674, LOCATED INSIDE PILOT PLT

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Boring #1674, located inside pilot plt on northwest side; ASI.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	155.0	0.200	155.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000776

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING #1674, LOCATED INSIDE PILOT PLT

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000000777

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: AGITENE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Agitene; 768 Building 45, Boiler Plant.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	268.0	0.400	268.0	5.1	682.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000777

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: AGITENE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
D008B	Conc.	Stabilization
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio

ID #: 0000000817

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PAINT CHIPS FROM SAND FILTERS AT WATER PLANT

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

MEF 817; PAINT CHIPS FROM SAND FILTERS AT WATER PLANT; 768 Building 45, Boiler Plant RCRA

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	177.0	0.200	177.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA. Chemical Treatment - Chemical fixation;

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000817

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PAINT CHIPS FROM SAND FILTERS AT WATER PLANT

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000000819

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING #1251

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Boring #1251; ASI.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	414.0	0.400	414.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000000819

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BORING #1251

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000000844

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: URANYL NITRATE SOLUTION IN TANKS

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Uranyl or thorium nitrate solution; Plants 2 and 3, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	765.0	1,031,484.0	765.0	1,031,484.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA. Wastestream is currently undergoing treatment for D002.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000000844

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: URANYL NITRATE SOLUTION IN TANKS

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002C	Tech.	Deactivation
D005	Conc.	Chemical Precipitation; or Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization

State: Ohio

ID #: 0000000870

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: VARNISH - UNUSED

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Varnish - unused; 135 Plant 1, Drum Reconditioning, Drum Painting Booth.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	90.0	0.200	90.0	5.1	455.0

Treatability Group:

MLLW CH, Organic Liquids, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation

State: Ohio

ID #: 0000000873

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SPENT FIXER

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Spent fixer; 730 Laboratory.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.2	612.0	1.2	612.0	4.6	2,273.0

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D011	Conc.	Stabilization

State: Ohio

ID #: 0000001080

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CADMIUM SPRINGS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Cadmium springs; 927.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	26.0	0.200	26.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000001080

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CADMIUM SPRINGS

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000001178

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: GROUNDWATER FROM WELL #2649

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Groundwater from well #2649; RGW.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.600	460.0	0.000	0.000	0.600	460.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000001178

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: GROUNDWATER FROM WELL #2649

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization
F002	Conc.	Incineration

State: Ohio

ID #: 0000001180

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: GROUNDWATER FROM WELL # 1031

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Groundwater from well # 1031; RGW.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	46.0	0.000	0.000	0.200	46.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000001180

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: GROUNDWATER FROM WELL # 1031

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

State: Ohio

ID #: 0000001182

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CLEAR DISPERSANT,TYPE (H)

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Clear dispersant type (h) premix-black, cyan, yellow & magenta; 735 Service Bldg. and Admin. Bldg.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.000	89.0	1.000	89.0	5.2	455.0

Treatability Group:

MLLW CH, Organic Liquids, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation

State: Ohio	ID #: 0000001185
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: TYPE 028 FIX; CD-5 DEVELOPER	
Matrix: Aqueous Liquid	Waste Type: MLLW

Waste Stream Description and Source:

Type 028 fix; cd-5 developer; 735 Service Bldg. and Admin. Bldg.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	229.0	0.200	229.0	1.1	1,136.0

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D011	Conc.	Stabilization

State: Ohio

ID #: 0000001199

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: MERCURY CONTAMINATED FLOOR TILE & PIPE INSULATION

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Mercury contaminated floor tile & pipe insulation; 730 Laboratory.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
3.5	1,111.0	0.000	0.000	3.5	1,111.0	3.6	1,136.0

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration

State: Ohio

ID #: 0000001199

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: MERCURY CONTAMINATED FLOOR TILE & PIPE INSULATION

Matrix: Inorganic Debris

Waste Type: MLLW

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000001229

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SUMP WATER

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated sump water; 300 Plants 2 & 3, Pilot Plant.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	3.5	3,107.0	3.5	3,107.0	18.1	15,909.0

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001229

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SUMP WATER

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
D019		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration
F003	Conc.	Incineration

State: Ohio

ID #: 0000001271

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LEAD SOLDER JOINTS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Lead solder joints; 730 Laboratory.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	7.7	6,676.0	7.7	6,676.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000001271

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LEAD SOLDER JOINTS

Matrix: Inorganic Debris

Waste Type: MLLW

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000001297

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PC 49896 ITEK UNIVERSAL DEVELOPER

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

PC 49896 Itek universal developer.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	5.7	509.0	5.7	509.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D011	Conc.	Stabilization

State: Ohio

ID #: 0000001337

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED WATER NON CHLORIDE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated water non chloride; 765 Building 45, Water Treatment.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	170.0	0.200	170.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation

State: Ohio

ID #: 0000001412

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name CONTAMINATED ORGANIC CHEMICAL OR

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated organic chemical or solvent; 768 Building 45, Boiler Plant.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.208	188.0	0.208	188.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001412

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED ORGANIC CHEMICAL OR

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio

ID #: 0000001427

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON RECOVERABLE TRASH

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Non recoverable trash; 655 Plant 6, Water Treatment Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	41.0	0.000	0.000	0.200	41.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001427

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON RECOVERABLE TRASH

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000001432

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON CHLORIDE CONTAMINATED WATER OR SUMP

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Non chloride contaminated water or sump liquor; 100 Plant 1.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.0	671.0	1.0	671.0	5.3	3409.0

Treatability Group:

MLLW CH, Organic Liquids, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation

State: Ohio

ID #: 0000001501

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SPILL CLEANUPS OF OIL AND GAS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Spill cleanups of oil and gas from gasoline engines; 700 Waste Management.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.000	230.0	0.000	0.000	1.000	230.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000001501

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SPILL CLEANUPS OF OIL AND GAS FROM

Matrix: Inorganic Debris

Waste Type: MLLW

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio	ID #: 0000001532
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: BIODENITRIFICATION SURGE LAGOON SLUDGE	
Matrix: Organic Sludges/Particulates	Waste Type: MLLW

Waste Stream Description and Source:

Biodenitrification surge lagoon sludge; 721 Waste Management, Chemical Pits.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	423.0	386,391.0	423.0	386,391.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000001532

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BIODENTRIFICATION SURGE LAGOON SLUDGE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio

ID #: 0000001536

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: RAINWATER FROM WASTE PIT AREA

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Rainwater from waste pit area; 721 Waste Management, Chemical Pits.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	32.4	30,113.0	32.4	30,113.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001536

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: RAINWATER FROM WASTE PIT AREA

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio

ID #: 0000001537

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: FILTER MATERIAL - SAND, GRAVEL, FLYASH

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Filter material - sand, gravel, flyash; 721 Waste Management, Chemical Pits.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	239.2	186,537.0	239.2	186,537.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001537

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: FILTER MATERIAL - SAND, GRAVEL, FLYASH

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000001691

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: HYDROFLUORIC ACID

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:
Hydrofluoric acid.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
16.7	80,818.0	0.000	0.000	16.7	80,818.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000001691

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: HYDROFLUORIC ACID

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002A	Tech.	Deactivation
U134	Tech.	Adsorption followed by Neutralization; or Neutralization

State: Ohio

ID #: 0000001692

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NITRIC ACID

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:
Nitric acid.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	145.0	0.400	145.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000001692

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NITRIC ACID

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002A	Tech.	Deactivation

State: Ohio

ID #: 0000001706

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LAB WASTE, TCLP EXTRACT

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Samples, non-metallic, miscellaneous; CNL.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.4	1,466.0	1.4	1,466.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001706

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LAB WASTE, TCLP EXTRACT

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration
F005A	Conc.	Incineration

State: Ohio	ID #: 0000001707
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: LAB GENERATED WASTE, ACID DIGTSTATES	
Matrix: Aqueous Liquid	Waste Type: MLLW

Waste Stream Description and Source:

Samples, non-metallic, miscellaneous; CNL.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.3	1,317.0	0.000	0.000	1.3	1,317.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001707

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LAB GENERATED WASTE, ACID DIGTSTATES

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002C	Tech.	Deactivation
D007	Conc.	Chemical Reduction followed by Stabilization
D008A	Tech.	Secondary Lead Smelting
D019		Not currently prohibited under the LDR Program.
D028		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio

ID #: 0000001708

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LAB GENERATED WASTE, METHYLENE CHLORIDE EXTRACTS

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Samples, non-metallic, miscellaneous; CNL.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	58.0	0.000	0.000	0.200	58.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001708

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LAB GENERATED WASTE, METHYLENE CHLORIDE EXTRACTS

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

State: Ohio	ID #: 0000001709
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: LAB GENERATED WASTE FLAMMABLE ORGANIC EXTRACTS	
Matrix: Organic Liquids	Waste Type: MLLW

Waste Stream Description and Source:
 Samples, non-metallic, miscellaneous; CNL.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	161.9	0.000	0.000	0.200	161.9	1.000	455.0

Treatability Group:
 MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:
 Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:
 Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:
 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:
 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:
 All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001709

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LAB GENERATED WASTE FLAMMABLE ORGANIC EXTRACTS

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D002A	Tech.	Deactivation
F003	Conc.	Incineration
F005A	Conc.	Incineration

State: Ohio

ID #: 0000001716

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LAB GENERATED WASTE, CONTACT WASTE SOLID

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Samples, non-metallic, miscellaneous; CNL.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.400	397.3	0.000	0.000	0.400	397.3	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001716

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LAB GENERATED WASTE, CONTACT WASTE SOLID

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration
F002	Conc.	Incineration
F005A	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000001725

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LUBRICATING OILS

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Lubricating oils; 739 Service Bldg. and Admin. Bldg., Garage Oil.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.600	468.0	0.000	0.000	0.600	468.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001725

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LUBRICATING OILS

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000001751

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SPENT FIXER

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Spent fixer.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.600	57.0	0.600	57.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001751

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SPENT FIXER

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D011	Conc.	Stabilization

State: Ohio

ID #: 0000001841

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SOIL

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:
Soil with Organics and Inorganics.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.2	1,514.0	1.2	1,514.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001841

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SOIL

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio

ID #: 0000001842

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: GRASS ON THE SOIL

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Grass on the soil.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	19.0	0.200	19.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001842

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: GRASS ON THE SOIL

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio

ID #: 0000001987

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LEAD/LEAD SEALS

Matrix: Elemental Lead

Waste Type: MLLW

Waste Stream Description and Source:

Lead/lead seals; 700 Waste Management.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.019	8.0	0.019	8.0	0.000	0.000

Treatability Group:

MLLW CH, Elemental Lead, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001987

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LEAD/LEAD SEALS

Matrix: Elemental Lead

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000001998

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: METHANOL AND CYCLOHEXANE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Methanol and cyclohexane from 732 Laboratory General, Analytical.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.380	34.0	0.380	34.0	0.285	227.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000001998

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: METHANOL AND CYCLOHEXANE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
F003	Conc.	Incineration

State: Ohio

ID #: 0000010002

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Scrap salts; FTA RMI Company, Inc..

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
6.9	7,683.0	0.000	0.000	6.9	7,683.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010002

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization
D008C	Tech.	Macroencapsulation

State: Ohio

ID #: 0000010003

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY OXIDATION SLUDGES

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Oily oxidation sludges with high free metal; 800 Plant 8, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	2.9	2,593.0	2.9	2,593.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010003

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY OXIDATION SLUDGES WITH HIGH FREE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D039		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

State: Ohio

ID #: 0000010004

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOLVENT

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated solvent - trichlor, perchlor; 735 Service Building and Admin. Building.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	4.6	3,483.0	4.6	3,483.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010004

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOLVENT - TRICHLOR,

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization
D018		Not currently prohibited under the LDR Program.
D019		Not currently prohibited under the LDR Program.
D021		Not currently prohibited under the LDR Program.
D029		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

State: Ohio

ID #: 0000010005

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOIL, ROCKS, BRICKS AND CERAMICS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated soil, rocks, bricks, and ceramics; 700 Waste Management.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.7	2,393.0	0.000	0.000	1.7	2,393.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010005

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOIL, ROCKS, BRICKS AND CERAMICS

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010006

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED OIL - INSOLUBLE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated oil - insoluble; 730 Laboratory General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	122.0	0.200	122.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010006

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED OIL - INSOLUBLE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008C	Tech.	Macroencapsulation
D009A	Tech.	Incineration; or Mercury Roast/Retort
D039		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

State: Ohio

ID #: 0000010007

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SLUDGES

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Oily sludges; 965 Plant 9, Sump Liquor Processing.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.600	430.0	0.600	430.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010007

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SLUDGES

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization
F001	Conc.	Incineration

State: Ohio

ID #: 0000010009

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGES - SOLVENT (TRICHLOR, PERCHLOR,

Mat: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Sludges - solvent (trichlor, perchlor, etc.); 135 Plant 1, Drum Reconditioning, Drum Painting Booth.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	133.0	0.400	133.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010009

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGES - SOLVENT (TRICHLOR, PERCHLOR,

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D008C	Tech.	Macroencapsulation
D035		Not currently prohibited under the LDR Program.
F005A	Conc.	Incineration

State: Ohio

ID #: 0000010010

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGES, OILY

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Sludges, oily; 655 Plant 6, Water Treatment Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
36.2	25,911.0	73.4	51,860.0	109.6	77,771.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010010

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGES, OILY

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D029		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

State: Ohio

ID #: 0000010011

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED BURNABLES

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:
Contaminated burnables; Building 362.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	51.0	0.000	0.000	0.200	51.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010011

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED BURNABLES

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010012

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED BURNABLES

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated burnables; 200 Plants 2 & 3, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	6.0	2,649.0	6.0	2,649.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010012

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED BURNABLES

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D029		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010013

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SUMP CAKE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:
Sump cake; Building 362.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
5.0	6,556.0	0.000	0.000	5.0	6,556.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010013

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SUMP CAKE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization

State: Ohio

ID #: 0000010014

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: U-CONTAMINATED WATER

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

U-contaminated water; 200 Plants 2 & 3, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
3.0	2,644.0	0.000	0.000	3.0	2,644.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010014

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: U-CONTAMINATED WATER

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D039		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000010016

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SLUDGE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:
Oily sludge; 351.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.2	1,353.0	1.2	1,353.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010016

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SLUDGE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D010	Conc.	Stabilization
D035		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

State: Ohio

ID #: 0000010017

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LINERS/GLOVES CONTAM. WITH ROOFING CPD

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Liners/gloves contaminated with roofing CPD and diesel fuel; 745 Maintenance Section.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.600	77.0	0.000	0.000	0.600	77.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010017

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: LINERS/GLOVES CONTAM. WITH ROOFING CPD

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization
D010	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010018

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOIL AND ROCKS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated soil and rocks; 500.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.600	843.0	0.000	0.000	0.600	843.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010018

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOIL AND ROCKS

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008C	Tech.	Macroencapsulation
D009B	Tech.	Mercury Roast/Retort

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010021

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGES, OILY

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Sludges, oily; 200 Plants 2 & 3, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	311.0	0.400	311.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010021

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGES, OILY

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008C	Tech.	Macroencapsulation
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

State: Ohio

ID #: 0000010022

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: GRIT BLAST

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Grit blast; 700 Waste Management.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
179.7	284,951.0	0.000	0.000	179.7	284,951.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio	ID #: 0000010022
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: GRIT BLAST	
Matrix: Inorganic Sludges/Particulates	Waste Type: MLLW

EPA CODES
Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008C	Tech.	Macroencapsulation

State: Ohio

ID #: 0000010023

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Non-recoverable trash; 200 Plants 2 & 3, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	4.0	3,047.0	4.0	3,047.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010023

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008C	Tech.	Macroencapsulation
F001	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010024

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: TRASH CONT. TO SOLVENT

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Trash Cont. to solvent; 741 Procurement, Garage.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	100.0	0.400	100.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010024

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: TRASH CONT. TO SOLVENT

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010025

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOIL AND ROCKS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated soil and rocks; FTA RMI Company, Inc..

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
30.6	34,450.0	0.000	0.000	30.6	34,450.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010025

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOIL AND ROCKS

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio	ID #: 0000010026
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: 1,1,1-TRICHLOROETHANE STILL BOTTOMS	
Matrix: Organic Liquids	Waste Type: MLLW

Waste Stream Description and Source:
 1,1,1-Trichloroethane still bottoms; YAQ.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	9.6	7,792.0	9.6	7,792.0	0.000	0.000

Treatability Group:
 MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:
 Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:
 Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:
 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:
 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:
 1) Not Applicable.

 The waste stream is no longer being generated.

State: Ohio	ID #: 0000010026
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: 1,1,1-TRICHLOROETHANE STILL BOTTOMS	
Matrix: Organic Liquids	Waste Type: MLLW

EPA CODES
Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
F001	Conc.	Incineration

State: Ohio

ID #: 0000010027

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED OIL, INSOLUBLE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated oil, insoluble; 600 Plant 6, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	2.9	2,507.0	2.9	2,507.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio	ID #: 0000010027
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: CONTAMINATED OIL, INSOLUBLE	
Matrix: Organic Liquids	Waste Type: MLLW

EPA CODES
Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

State: Ohio

ID #: 0000010028

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGES, OILY

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:
Sludges, oily; 800 Plant 8, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	2.1	1,478.0	2.1	1,478.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010028

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGES, OILY

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008C	Tech.	Macroencapsulation
F001	Conc.	Incineration

State: Ohio

ID #: 0000010029

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED INSOLUBLE OIL

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated insoluble oil; 921 Plant 9, Casting, N-R Furnace.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.7	1,389.0	1.7	1,389.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010029

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED INSOLUBLE OIL

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008C	Tech.	Macroencapsulation
D019		Not currently prohibited under the LDR Program.
D029		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

State: Ohio

ID #: 0000010030

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOLVENTS (METHANOL)

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated solvents (methanol); 732 Laboratory General, Analytical.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.600	82.0	0.600	82.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010030

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOLVENTS (METHANOL)

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
F003	Conc.	Incineration

State: Ohio

ID #: 0000010031

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: FLOOR SUMP CLEANOUT SLUDGE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Floor sump cleanout sludge; 738 Service Bldg. and Admin. Bldg., Garage RCRA.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.600	595.0	0.600	595.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010031

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: FLOOR SUMP CLEANOUT SLUDGE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D029		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

State: Ohio

ID #: 0000010032

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED OIL, INSOLUBLE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated oil, insoluble; 901 Plant 9, General, Plant 9 Maintenance.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	123.0	0.200	154.0	0.400	277.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010032

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED OIL, INSOLUBLE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000010034

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BENZENE (LABPACKED)

Matrix: Lab Packs without Metals

Waste Type: MLLW

Waste Stream Description and Source:

Benzene (labpacked); 732 Laboratory General, Analytical.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	3.0	0.000	0.000	0.200	3.0	0.000	0.000

Treatability Group:

MLLW CH, Lab Packs without Metals, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010034

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: BENZENE (LABPACKED)

Matrix: Lab Packs without Metals

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D018		Not currently prohibited under the LDR Program.
U019	Conc.	Incineration

The alternate LDR treatment standards for labpacks is incineration as a method of treatment and a requirement for the incinerator residues to meet the treatment standards for the TC toxic metals (i.e., D004-D008, and D010-D011).

State: Ohio

ID #: 0000010035

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CARBON TETRACHLORIDE (LABPACKED)

Matrix: Lab Packs without Metals

Waste Type: MLLW

Waste Stream Description and Source:

Carbon tetrachloride (labpacked); 732 Laboratory General, Analytical

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	20.0	0.000	0.000	0.200	20.0	0.000	0.000

Treatability Group:

MLLW CH, Lab Packs without Metals, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000010035

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CARBON TETRACHLORIDE (LABPACKED)

Matrix: Lab Packs without Metals

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D019		Not currently prohibited under the LDR Program.
U211	Conc.	Incineration

The alternate LDR treatment standards for labpacks is incineration as a method of treatment and a requirement for the incinerator residues to meet the treatment standards for the TC toxic metals (i.e., D004-D008, and D010-D011).

State: Ohio

ID #: 0000020003

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DEGREASING SOLVENT

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Degreasing solvent from YAQ.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
21.9	21,468.0	36.3	35,432.0	58.2	56,900.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020003

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DEGREASING SOLVENT

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D019		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.
D028		Not currently prohibited under the LDR Program.
D029		Not currently prohibited under the LDR Program.
D035		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F003	Conc.	Incineration

State: Ohio

ID #: 0000020006

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OIL CONTAMINATED WET SUMP OR FILTER CAKE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Oil contaminated wet sump or filter cake from VXB.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	26.4	16,417.0	26.4	16,417.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020006

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OIL CONTAMINATED WET SUMP OR FILTER CAKE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

State: Ohio

ID #: 0000020007

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OIL CONTAMINATED WET SUMP OR FILTER CAKE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Oil contaminated wet sump or filter cake from HXA United Nuclear Corp., Hanford, WA.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
64.7	31,763.0	0.000	0.000	64.7	31,763.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020007

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OIL CONTAMINATED WET SUMP OR FILTER CAKE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D011	Conc.	Stabilization

State: Ohio

ID #: 0000020015

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS AND FLOOR SWEEPINGS

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Scrap salts and floor sweepings - low fluoride from 643 Plant 6, Heat Treating, NU Sal Furnace

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
4.6	2,643.0	0.400	223.0	5.0	2,866.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020015

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS AND FLOOR SWEEPINGS - LOW

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

State: Ohio

ID #: 0000020021

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED INSOLUBLE OIL

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated insoluble oil;137 Plant 1, Drum Reconditioning, Drum Baler.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	3.1	2,640.0	3.1	2,640.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020021

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED INSOLUBLE OIL

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D019		Not currently prohibited under the LDR Program.
D029		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

State: Ohio

ID #: 0000020024

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS AND FLOOR SWEEPINGS

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Scrap salts and floor sweepings - high fluoride from FYC Paducah Plant.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.9	1,015.0	0.000	0.000	1.9	1,015.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020024

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS AND FLOOR SWEEPINGS - HIGH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization
D008C	Tech.	Macroencapsulation

State: Ohio

ID #: 0000020027

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR RESIDUES - HIGH FLUORIDE

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Dust collector residues - high fluoride from 732 Laboratory General, Analytical.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	229.0	0.200	16.0	0.400	245.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020027

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR RESIDUES - HIGH FLUORIDE

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D011	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000020028

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED OIL - INSOLUBLE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated oil - insoluble from 351.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	10.0	2,743.0	10.0	2,743.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020028

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED OIL - INSOLUBLE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

State: Ohio

ID #: 0000020031

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED OIL, INSOLUBLE GEAR OIL,

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated oil, insoluble gear oil, lubricating oil from 100 Plant 1, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.9	1,264.0	1.9	1,264.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020031

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED OIL, INSOLUBLE GEAR OIL,

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
D019		Not currently prohibited under the LDR Program.
D028		Not currently prohibited under the LDR Program.
D029		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

State: Ohio

ID #: 0000020033

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PROCESS RESIDUES, TRAILER CAKES.

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Process residues, trailer cakes, slurries, raffinates from 620 Plant 6, Machining.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.000	384.0	0.000	0.000	1.000	384.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020033

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PROCESS RESIDUES, TRAILER CAKES.

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000020035

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR RESIDUES - HIGH FLUORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Dust collector residues - high fluoride from 332 Plants 2 & 3, Green Salt Production, Spencer Vacuum.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.800	560.0	0.000	0.000	0.800	560.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020035

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR RESIDUES - HIGH FLUORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

State: Ohio

ID #: 0000020036

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS AND FLOOR SWEEPINGS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Scrap salts and floor sweepings - low fluoride from 660 Plant 6, Degreasing and Pickling.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.800	388.0	0.800	388.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020036

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS AND FLOOR SWEEPINGS - LOW

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000020037

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PROCESS RESIDUES, TRAILER CAKES,

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Process residues, trailer cakes, slurries, raffinates from 900 Plant 9, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.600	363.0	0.000	0.000	0.600	363.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020037

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PROCESS RESIDUES, TRAILER CAKES,

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D029		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000020038

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED OIL - INSOLUBLE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated oil - insoluble from 301 Plants 2 & 3, Pilot Plant General, Pilot Plant Maintenance.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	288.0	0.400	288.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020038

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED OIL - INSOLUBLE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
D019		Not currently prohibited under the LDR Program.
D028		Not currently prohibited under the LDR Program.
D029		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration
F005A	Conc.	Incineration

State: Ohio

ID #: 0000020045

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED TBP AND/OR KEROSENE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated TBP and/or kerosene mixtures and sludges from 732 Laboratory General, Analytical.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	50.0	0.200	50.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020045

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED TBP AND/OR KEROSENE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D019		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

State: Ohio

ID #: 0000020046

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-METALLIC MISCELLANEOUS SAMPLES

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Non-metallic miscellaneous samples from 731 Laboratory General, Operations & Engineering Services.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.400	35.0	0.000	0.000	0.400	35.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020046

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-METALLIC MISCELLANEOUS SAMPLES

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

State: Ohio

ID #: 0000020047

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS AND FLOOR SWEEPINGS - LOW

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Scrap salts and floor sweepings - low fluoride from 610 Plant 6, Rolling.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.400	230.0	0.000	0.000	0.400	230.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020047

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS AND FLOOR SWEEPINGS - LOW

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D008C	Tech.	Macroencapsulation

State: Ohio

ID #: 0000020048

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PROCESS RESIDUES, TRAILER CAKES.

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Process residues, trailer cakes, slurries, raffinates, from 731 Laboratory General, Operations & Engineering Services.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	9.0	0.000	0.000	0.200	9.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020048

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PROCESS RESIDUES, TRAILER CAKES.

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F005A	Conc.	Incineration

State: Ohio

ID #: 0000020054

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOLVENT - TRICHLOR, PERCHLR

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated solvent - trichlor, perchlor from 530 Plant 5, Casting Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	171.0	0.000	0.000	0.200	171.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020054

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOLVENT - TRICHLOR, PERCHLOR

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D019		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.
D028		Not currently prohibited under the LDR Program.
D029		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F005A	Conc.	Incineration

State: Ohio

ID #: 0000020055

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED OIL - INSOLUBLE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated oil - insoluble from 300 Plants 2 & 3, Pilot Plant General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	188.0	0.200	188.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020055

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED OIL - INSOLUBLE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D029		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

State: Ohio

ID #: 0000020058

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR RESIDUES - HIGH FLUORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Dust collector residues - high fluoride from 101 Plant 1, General, Maintenance.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	3.0	0.000	0.000	0.200	3.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020058

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR RESIDUES - HIGH FLUORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000020094

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED BURNABLES, RAGS, FILTER

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated burnables, rags, filter, cloth from 310 Plants 2 & 3, Green Salt Production.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.7	395.0	0.000	0.000	1.7	395.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020094

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED BURNABLES, RAGS, FILTER

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D011	Conc.	Stabilization
F001	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000020095

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED BURNABLES - RAGS, PAPER

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated burnables - rags, paper, polyethylene; HXA United Nuclear Corp., Hanford, WA.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.800	120.0	0.400	167.0	1.2	287.0	2.0	455.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000020095

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED BURNABLES - RAGS, PAPER

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D011	Conc.	Stabilization
F001	Conc.	Incineration
F005A	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000020107

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED NON-BURNABLES

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated non-burnables; 600 Plant 6, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	273.0	0.000	0.000	0.200	273.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020107

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED NON-BURNABLES

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000020114

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED BURNABLES

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated burnables; 620 Plant 6, Machining.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.400	185.0	0.000	0.000	0.400	185.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020114

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED BURNABLES

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000020120

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR BAGS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Dust collector bags; 900 Plant 9, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.400	190.0	0.000	0.000	0.400	190.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020120

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR BAGS

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000020139

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SAMPLES, NON-METALLIC

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Samples, non metallic; FTA RMI Company, Inc.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	84.0	0.200	84.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020139

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SAMPLES, NON-METALLIC

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000020142

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED TBP-KEROSENE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated TBP-kerosene; 732 Laboratory General, Analytical.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	15.0	0.400	15.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020142

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED TBP-KEROSENE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D019		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration
F003	Conc.	Incineration

State: Ohio

ID #: 0000020145

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WET SUMP OR FILTER CAKE, OIL

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Wet sump or filter cake, oil contaminated; HXA United Nuclear Corp., Hanford, WA.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	271.0	0.400	271.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020145

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WET SUMP OR FILTER CAKE, OIL

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002A	Tech.	Deactivation
D007	Conc.	Chemical Reduction followed by Stabilization

State: Ohio

ID #: 0000020151

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED BRICKS, SOIL, ROCKS, SAND

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated bricks, soil, rocks, sand, etc.; 530 Plant 5, Casting Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.600	466.0	0.000	0.000	0.600	466.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000020151

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED BRICKS, SOIL, ROCKS, SAND

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D008B	Conc.	Stabilization
D011	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000030004

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: INCINERATOR CINDERS

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Incinerator cinders; 240 Plants 2 & 3, Hot Raffinate Bldg., Trash Baler.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
112.3	66,404.0	0.000	0.000	112.3	66,404.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030004

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: INCINERATOR CINDERS

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000030005

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SLUDGES

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Oily sludges; 853 Plant 8, Oxidation System, Oil Decantation.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	16.4	15,563.0	16.4	15,563.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030005

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SLUDGES

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D019		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F003	Conc.	Incineration
F005A	Conc.	Incineration

State: Ohio

ID #: 0000030009

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS AND FLOOR SWEEPINGS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Scrap salts and floor sweepings - high fluoride; 100 Plant 1, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
10.4	7,532.0	0.000	0.000	10.4	7,532.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030009

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS AND FLOOR SWEEPINGS - HIGH

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000030010

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WET SUMP OR FILTER CAKE - OIL

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Wet sump or filter cake - oil contaminated; 735 Service Bldg. and Admin. Bldg.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
7.5	7,554.0	3.5	3,070.0	11.0	10,624.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030010

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WET SUMP OR FILTER CAKE - OIL

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

State: Ohio

ID #: 0000030018

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WET SUMP OR FILTER CAKE - NON-OILY

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Wet sump or filter cake - non oily, non halide; 381 Plants 2 & 3, Pilot Plant Sump, Sump Catch Basin.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	4.4	3,235.0	4.4	3,235.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030018

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WET SUMP OR FILTER CAKE - NON-OILY

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D039		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

State: Ohio

ID #: 0000030026

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-OILY CLEANOUT SLUDGES FOR ROASTING

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Non-oily cleanout sludges for roasting; 200 Plants 2 & 3, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	5.4	3,972.0	5.4	3,972.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030026

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-OILY CLEANOUT SLUDGES FOR ROASTING

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D039		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

State: Ohio

ID #: 0000030027

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOIL, ROCKS, BRICKS

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated soil, rocks, bricks and ceramics; 212 Plants 2 & 3, Digestion, North Side Digestors.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.9	2,870.0	0.000	0.000	1.9	2,870.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030027

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOIL, ROCKS, BRICKS AND

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D010	Conc.	Stabilization
D011	Conc.	Stabilization

State: Ohio

ID #: 0000030033

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOLVENT - TRICHLOR, PERCHLR

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated solvent - trichlor, perchlor; 745 Maintenance Section.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	3.5	2,547.0	3.5	2,547.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030033

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOLVENT - TRICHLOR, PERCHLOR

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D039		Not currently prohibited under the LDR Program.
F003	Conc.	Incineration
F005A	Conc.	Incineration

State: Ohio

ID #: 0000030034

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OIL CONTAMINATED WITH SOLVENTS (TANK 5)

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Oil contaminated with solvents (tank 5); 741 Procurement, Garage.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.400	282.0	17.2	12,199.0	17.6	12,481.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030034

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OIL CONTAMINATED WITH SOLVENTS (TANK 5)

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

State: Ohio

ID #: 0000030036

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR RESIDUES - HIGH FLUORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Dust collector residues - high fluoride; 665 Plant 6, Inspection.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.000	551.0	0.000	0.000	1.000	551.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030036

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR RESIDUES - HIGH FLUORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000030037

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PROCESS RESIDUES, TRAILER CAKES,

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Process residues, trailer cakes, slurries, raffinates; 381 Plants 2 & 3, Pilot Plant Sump, Sump Catch Basin.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.800	455.0	0.000	0.000	0.800	455.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030037

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PROCESS RESIDUES, TRAILER CAKES,

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D039		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

State: Ohio

ID #: 0000030039

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED ROCKS, SOIL, ETC., WITH NO

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated rocks, soil, etc., with no free liquids; 211 Plants 2 & 3, Digestion, South Side Digestors.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.600	450.0	0.000	0.000	0.600	450.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030039

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED ROCKS, SOIL, ETC., WITH NO

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D011	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000030042

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WET SUMP OR FILTER CAKE - NON-OILY,

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Wet sump or filter cake - non-oily, non-halide; 380 Plants 2 & 3, Pilot Plant Sump.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.800	593.0	0.800	593.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030042

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WET SUMP OR FILTER CAKE - NON-OILY,

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D039		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

State: Ohio

ID #: 0000030045

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SLUDGES, HIGH FREE METAL

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Oily sludges, high free metal; 655 Plant 6, Water Treatment Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.600	423.0	0.000	0.000	0.600	423.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030045

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SLUDGES, HIGH FREE METAL

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration

State: Ohio

ID #: 0000030046

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-OILY CLEANOUT SLUDGES FOR ROASTING

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Non-oily cleanout sludges for roasting; 741 Procurement, Garage.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	2.1	1,866.0	2.1	1,866.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030046

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-OILY CLEANOUT SLUDGES FOR ROASTING

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D019		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

State: Ohio

ID #: 0000030047

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SOLVENT SLUDGE, TRICHLOR, PERCHLOR, ETC.

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Solvent sludge, trichlor, perchlor, etc., from 732 Laboratory General, Analytical.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.000	79.0	0.000	0.000	1.000	79.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030047

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SOLVENT SLUDGE, TRICHLOR, PERCHLOR, ETC.

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization
D011	Conc.	Stabilization

State: Ohio

ID #: 0000030051

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-METALLIC MISCELLANEOUS SAMPLES

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Non-metallic miscellaneous samples; 140 Plant 1, Sampling.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	20.0	0.000	0.000	0.200	20.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030051

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-METALLIC MISCELLANEOUS SAMPLES

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001E	Tech.	Deactivation
D003D	Tech.	Deactivation

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000030053

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PROCESS RESIDUES, TRAILER CAKES,

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Process residues, trailer cakes, slurries, raffinates; 660 Plant 6, Degreasing and Pickling.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	78.0	0.200	78.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030053

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PROCESS RESIDUES, TRAILER CAKES,

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration
F005A	Conc.	Incineration

State: Ohio

ID #: 0000030060

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WET SUMP OR FILTER CAKE - NON-OILY,

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Wet sump or filter cake - Non-oily, non-halide; 362.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.400	246.0	0.000	0.000	0.400	246.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030060

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WET SUMP OR FILTER CAKE - NON-OILY,

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization

State: Ohio

ID #: 0000030065

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED NON-BURNABLES

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated non-burnables; 200 Plants 2 & 3, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
6.4	6,855.0	0.000	0.000	6.4	6,855.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030065

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED NON-BURNABLES

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008C	Tech.	Macroencapsulation

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000030074

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED NON-BURNABLES

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated non-burnables; 100 Plant 1, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	4.0	0.800	1,136.0	1.000	1,140.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030074

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED NON-BURNABLES

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000030075

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED NON-BURNABLES

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated non-burnables; 210 Plants 2 & 3, Digestion.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	14.0	0.000	0.000	0.200	14.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030075

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED NON-BURNABLES

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000030080

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOIL, ROCKS, DEBRIS,

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated soil, rocks, debris, with free liquids; 211 Plants 2 & 3, Digestion, South Side Digestors.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	229.0	0.000	0.000	0.200	229.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030080

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOIL, ROCKS, DEBRIS, W/

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002B	Tech.	Deactivation
D004	Conc.	Vitrification
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D011	Conc.	Stabilization

State: Ohio

ID #: 0000030081

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DISCARD PROCESS RESIDUES, TRAILER CAKES,

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Discard process residues, trailer cakes, slurries, raffinates; 235 Plants 2 & 3, Hot Raffinate Bldg.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	387.0	0.000	0.000	0.200	387.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000030081

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DISCARD PROCESS RESIDUES, TRAILER CAKES,

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002A	Tech.	Deactivation

State: Ohio

ID #: 0000040122

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: THORIUM TRAILER CAKES; WASTE SLURRIES

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Thorium trailer cakes; waste slurries; 732 Laboratory General Analytical.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	183.0	0.200	183.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000040122

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: THORIUM TRAILER CAKES; WASTE SLURRIES

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002C	Tech.	Deactivation
D005	Conc.	Chemical Precipitation; or Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration

State: Ohio

ID #: 0000040137

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: UNFIRED REDUCTION CHARGES PLUS CaF₂

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Unfired reduction charges plus CaF₂; Building 320.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	1.000	0.200	1.000	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000040137

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: UNFIRED REDUCTION CHARGES PLUS CaF₂

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000040152

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP THO2 HIGH IN FLUORIDE

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Scrap ThO2 high in fluoride; building 362.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	58.0	0.400	58.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000040152

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP THO2 HIGH IN FLUORIDE

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000040181

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: THORIUM NITRATE SOLUTION

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Thorium nitrate solution; FAK.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	2,283.0	0.400	2,283.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000040181

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: THORIUM NITRATE SOLUTION

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002A	Tech.	Deactivation
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000040185

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: IMPURE THORIUM NITRATE (SOLID)

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Impure thorium nitrate (solid); CBH.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	839.0	0.200	839.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000040185

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: IMPURE THORIUM NITRATE (SOLID)

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000040186

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: IMPURE THORIUM NITRATE (SOLID)

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Impure thorium nitrate (solid); FZC.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	3.7	2,002.0	3.7	2,002.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000040186

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: IMPURE THORIUM NITRATE (SOLID)

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000050002

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Non-recoverable trash; 732 Laboratory General, Analytical.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.400	25.0	0.200	35.0	0.600	60.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050002

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
F003	Conc.	Incineration
F005A	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000050008

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SUMP CAKE - COPPER CONTAMINATED

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Sump cake copper contaminated; 761 Building 45, general sump.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
31.4	36,156.0	0.800	731.0	32.2	36,887.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050008

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SUMP CAKE - COPPER CONTAMINATED

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation

State: Ohio

ID #: 0000050010

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Non-recoverable trash; 100 Plant 1, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	212.0	0.200	212.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050010

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration
F005A	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000050014

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Non-recoverable trash; 530 Plant 5, Casting Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.000	455.0	1.000	455.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050014

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D019		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000050022

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED WATER

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated water; 140 Plant 1, sampling.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	11.0	0.200	11.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050022

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED WATER

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
F003	Conc.	Incineration

State: Ohio

ID #: 0000050025

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED GRAPHITE

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated graphite; 824 Plant 8, Oxidation System, Box Furnace.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	414.0	0.400	414.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050025

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED GRAPHITE

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000050031

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED METALLIC FILTER ELEMENTS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated metallic filter elements; 900 Plant 9, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
3.3	1,295.0	0.000	0.000	3.3	1,295.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050031

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED METALLIC FILTER ELEMENTS

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D010	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000050036

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED BURNABLE

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated burnable; 824 Plant 8, Oxidation System, Box Furnace.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.9	1,169.0	1.9	1,169.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050036

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED BURNABLE

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization
F002	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000050058

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR BAGS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Dust collector bags; 732 Laboratory General Analytical.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	12.0	0.000	0.000	0.200	12.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050058

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR BAGS

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000050061

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR BAGS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Dust collector bags; 965 Plant 9, Sump Liquor Processing.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	50.0	0.000	0.000	0.200	50.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050061

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR BAGS

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000050063

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: ROASTED MgF₂/OTHER MATERIAL

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Roasted MgF₂/other material; 826 Plant 8, Oxidation System, Rotary Kiln.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.5	2,352.0	0.000	0.000	1.5	2,352.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050063

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: ROASTED MgF₂/OTHER MATERIAL

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D008B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000050068

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-OILY SLUDGE FOR ROASTING

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Non-oily sludge for roasting; 761 Building 45, General Sump.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.8	1,637.0	12.2	12,400.0	14.0	14,037.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050068

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-OILY SLUDGE FOR ROASTING

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation

State: Ohio

ID #: 0000050070

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-OILY SLUDGE FOR ROASTING

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Non-oily sludge for roasting; 824 Plant 8, Oxidation System, Box Furnace.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	333.0	0.400	333.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050070

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-OILY SLUDGE FOR ROASTING

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio	ID #: 0000050072
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: CONTAMINATED SUMP WATER	
Matrix: Organic Liquids	Waste Type: MLLW

Waste Stream Description and Source:

Contaminated sump water and hydraulic oil; 137 Plant 1, Drum Reconditioning, Drum Baler.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.600	672.0	0.600	672.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050072

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SUMP WATER AND HYDRAULIC

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
D008B	Conc.	Stabilization
D019		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration
F003	Conc.	Incineration
F005A	Conc.	Incineration

State: Ohio

ID #: 0000050079

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: INCINERATOR CINDERS

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:
Incinerator cinders; 762.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
4.4	2,771.0	0.000	0.000	4.4	2,771.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050079

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: INCINERATOR CINDERS

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

State: Ohio

ID #: 0000050085

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WET CAKE, NON-OILY/HALIDE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Wet cake, non-oily halide; 100 Plant 1, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	56.0	0.200	56.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050085

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: WET CAKE, NON-OILY/HALIDE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
F002	Conc.	Incineration
F003	Conc.	Incineration
F005A	Conc.	Incineration

State: Ohio

ID #: 0000050089

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED MAGNESIUM

Matrix: Reactive Metals

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated magnesium; 510 Plant 5, Metal Reduction Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
35.1	13,192.0	0.100	46.0	35.2	13,238.0	0.000	0.000

Treatability Group:

MLLW CH, Reactive Metals

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050089

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED MAGNESIUM

Matrix: Reactive Metals

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
D003E	Tech.	Deactivation

State: Ohio

ID #: 0000050090

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED MAGNESIUM

Matrix: Reactive Metals

Waste Type: MLLW

Waste Stream Description and Source:
Contaminated magnesium; 500.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
2.3	966.0	0.000	0.000	2.3	966.0	0.000	0.000

Treatability Group:

MLLW CH, Reactive Metals

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050090

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED MAGNESIUM

Matrix: Reactive Metals

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001F	Tech.	Deactivation
D003E	Tech.	Deactivation

State: Ohio

ID #: 0000050091

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR RESIDUES - PYROPHORIC

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Dust collector residues - pyrophoric; 900 Plant 9, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	63.0	0.000	0.000	0.200	63.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050091

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR RESIDUES - PYROPHORIC

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000050095

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED INSOLUBLE OIL

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated insoluble oil; 900 Plant 9, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	168.0	0.000	0.000	0.200	168.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050095

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED INSOLUBLE OIL

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

State: Ohio

ID #: 0000050096

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NONRECOVERABLE TRASH

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Nonrecoverable trash; 765 Building 45, Water Treatment.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	153.0	0.200	153.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050096

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NONRECOVERABLE TRASH

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
D007	Conc.	Chemical Reduction followed by Stabilization
F003	Conc.	Incineration

State: Ohio

ID #: 0000050098

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOIL, ROCKS, BRICKS

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated soil, rocks, bricks, and ceramics; 100 Plant 1.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
26.6	35,720.0	0.000	0.000	26.6	35,720.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050098

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED SOIL, ROCKS, BRICKS AND

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000050100

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: COPPER CONTAMINATED SUMP CAKE - LOW U

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Copper contaminated sump cake - low U; 811 Plant 8, Wet-Chemical System, Primary Calciner.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.800	525.0	0.800	525.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050100

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: COPPER CONTAMINATED SUMP CAKE - LOW U

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000050101

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DISCARD PROCESS RESIDUES

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Discard process residues; 765 Building 45, Water Treatment.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	145.4	160,076.0	145.4	160,076.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050101

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DISCARD PROCESS RESIDUES

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
D043		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

State: Ohio

ID #: 0000050102

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PROCESS RESIDUES, TRAILER CAKES,

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Process residues, trailer cakes, slurries, raffinates; 610 Plant 6, Rolling.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.400	54.0	0.000	0.000	0.400	54.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050102

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: PROCESS RESIDUES, TRAILER CAKES,

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000050113

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: ROASTED CALCIUM-PRECIPITATED SUMP AND FILTER CAKES

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Roasted calcium-precipitated sump and filter cakes; 825 Plant 8, Oxidation Furnace Number 1.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	4.0	1,489.0	4.0	1,489.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050113

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: ROASTED CALCIUM-PRECIIPITATED SUMP AND

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000050129

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP U3O8 - LOW F

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Scrap U3O8 - low F; 825 Plant 8, Oxidation System, Oxidation Furnace Number 1.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	7.9	6,159.0	7.9	6,159.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050129

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP U3O8 - LOW F

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000050131

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP U3O8 - LOW F

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Scrap U3O8 - low F; 732 Laboratory.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.500	56.0	0.500	56.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050131

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP U3O8 - LOW F

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

State: Ohio

ID #: 0000050148

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP U3O8 HIGH F

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Scrap U3O8 high F; 534 Plant 5, Casting Area, Crucible Burnout

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
113.2	399,257.0	0.600	522.0	113.8	399,779.0	-	5,000.0

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

All future waste generated is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000050148

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP U3O8 HIGH F

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification

State: Ohio

ID #: 0000050152

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP U3O8 OR THO2, HIGH FLUORIDE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Scrap U3O8 or THO2, high Fluoride; 822 Plant 8, Oxidation System, Rotex Screening.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	8.7	13,663.0	8.7	13,663.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050152

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP U3O8 OR THO2, HIGH FLUORIDE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

State: Ohio

ID #: 0000050154

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: ROASTED CALCIUM-PRECIPITATED SUMP OR

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Roasted Calcium-precipitated sump or filter cakes; 811 Plant 8, Wet-Chemical System, Primary Calcliner.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	33.9	21,092.0	33.9	21,092.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050154

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: ROASTED CALCIUM-PRECIPITATED SUMP OR

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000050165

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: ROASTED OFF-SITE SUMP CAKE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Roasted off-site sump cake; 826 Plant 8, oxidation system, Rotary Kiln.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
11.5	14,409.0	0.400	553.0	11.9	14,962.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050165

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: ROASTED OFF-SITE SUMP CAKE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

State: Ohio

ID #: 0000050169

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-OILY SLUDGE FOR ROASTING

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Non-oily sludge for roasting; 920 Plant 9, Casting

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	202.0	0.200	202.0	1.0	1,136.0

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000050169

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-OILY SLUDGE FOR ROASTING

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

State: Ohio

ID #: 0000050170

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SALT SLUDGE FOR PLANT 8

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Salt sludge for plant 8; 400 Plant 4.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.800	602.0	0.000	0.000	0.800	602.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050170

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SALT SLUDGE FOR PLANT 8

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D019		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

State: Ohio

ID #: 0000050173

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SALT SLUDGE, CHLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Salt sludge, chloride; 642 Plant 6, Heat Treating, Salt-Oil Furnace.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
3.3	4,805.0	0.000	0.000	3.3	4,805.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050173

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SALT SLUDGE, CHLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

State: Ohio

ID #: 0000050174

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SALT SLUDGE, CHLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Salt sludge, chloride; 643 Plant 6, Heat Treating, NU Sal Furnace.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
5.4	20,042.0	0.000	0.000	5.4	20,042.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050174

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SALT SLUDGE, CHLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

State: Ohio

ID #: 0000050175

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SALT SLUDGE, CHLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Salt sludge, chloride; 920 Plant 9, Casting.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.000	500.0	0.000	0.000	1.000	500.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050175

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SALT SLUDGE,CHLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

State: Ohio

ID #: 0000050177

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: FURNACE SALT, NON CHLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Furnace salt, non chloride; 914.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.800	835.0	0.000	0.000	0.800	835.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050177

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: FURNACE SALT, NON CHLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
D004	Conc.	Vitrification
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000050180

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: FURNACE SALT, NON-CHLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Furnace salt, non-chloride; 620 Plant 6, Machining.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
7.7	10,733.0	0.200	222.0	7.9	10,955.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050180

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: FURNACE SALT, NON-CHLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D010	Conc.	Stabilization

State: Ohio

ID #: 0000050183

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS,LOW F

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Scrap salts, low f; 661 Plant 6, Degreasing and Pickling, Derby Pickling.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.320	59.0	0.100	157.0	0.420	216.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050183

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS,LOW F

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000050185

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALT,HIGH F

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Scrap salt, high f; fxa Piketon Plant.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	5.0	0.000	0.000	0.200	5.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050185

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALT,HIGH F

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration

State: Ohio

ID #: 0000050188

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS,HIGH F

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Scrap salts, high f; 407 Plant 4, General, Bank 7.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
2.5	1,888.0	0.000	0.000	2.5	1,888.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050188

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS,HIGH F

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D010	Conc.	Stabilization

State: Ohio

ID #: 0000050200

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SLUDGE FOR OXIDATION

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Oily sludge for oxidation; 610 Plant 6, Rolling.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	90.0	0.200	90.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050200

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SLUDGE FOR OXIDATION

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001F	Tech.	Deactivation
F001	Conc.	Incineration

State: Ohio

ID #: 0000050202

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SLUDGE FOR OXIDATION

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Oily sludge for oxidation; 920 Plant 9, Casting.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	88.0	0.200	88.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

State: Ohio

ID #: 0000050202

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SLUDGE FOR OXIDATION

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001F	Tech.	Deactivation
D010	Conc.	Stabilization

State: Ohio

ID #: 0000050204

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SLUDGE FOR OXIDATION

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Oily sludge for oxidation; 951 Plant 9, Machining, Le Blond Rapid Borer.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	153.0	0.000	0.000	0.200	153.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050204

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SLUDGE FOR OXIDATION

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001F	Tech.	Deactivation
D010	Conc.	Stabilization

State: Ohio

ID #: 0000050293

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: U3O8 FOR REOXIDATION

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

U3O8 for reoxidation; hxa United Nuclear Corp., Handford, WA.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
5.0	3,564.0	0.000	0.000	5.0	3,564.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050293

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: U3O8 FOR REOXIDATION

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification

State: Ohio

ID #: 0000050314

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SCRAP SALTS AND FLOOR SWEEPINGS

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Scrap salts and floor sweepings - high fluoride ; 341 Plants 2 & 3, Pilot Plant Remelt and Casting, Remelt Furnace.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	114.0	0.000	0.000	0.200	114.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio	ID #: 0000050314
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: SCRAP SALTS AND FLOOR SWEEPINGS - HIGH	
Matrix: Inorganic Sludges/Particulates	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D010	Conc.	Stabilization

State: Ohio

ID #: 0000050323

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SOLIDIFIED FURNACE SALTS - NON-CHLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Solidified furnace salts - non-chloride; 913 Plant 9, General, Rockwell Furnaces - Molten Salt Cleaning.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
141.8	111,782.0	0.200	199.0	142.0	111,981.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050323

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SOLIDIFIED FURNACE SALTS - NON-CHLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification

State: Ohio

ID #: 0000050339

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGES, OILY, FOR OXIDATION, HIGH FREE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Sludges, oily, for oxidation, high free metal; 620 Plant 6, Machining.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	2.3	1,603.0	2.3	1,603.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050339

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGES, OILY, FOR OXIDATION, HIGH FREE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

State: Ohio

ID #: 0000050346

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: OILY SLUDGE FOR OXIDATION

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Oily sludge for oxidation; 940 Plant 9, Machining.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.400	292.0	0.000	0.000	0.400	292.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio	ID #: 00000503-46
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: OILY SLUDGE FOR OXIDATION	
Matrix: Organic Sludges/Particulates	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001F	Tech.	Deactivation

State: Ohio

ID #: 0000050347

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DISCARD PROCESS RESIDUE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Discard process residue; 767 Building 45, Boiler Plant.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	180.0	0.000	0.000	0.200	180.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio	ID #: 0000050347
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: DISCARD PROCESS RESIDUE	
Matrix: Organic Sludges/Particulates	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation

State: Ohio

ID #: 0000050349

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR RESIDUES - HIGH FLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Dust collector residues - high fluoride; 800 Plant 8.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	87.0	0.200	87.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

All future waste generation is due to environmental restoration activities. ER activities are being conducted according to good operating practices.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000050351

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR RESIDUES-HIGH FLOURIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Dust collector residues - high fluoride; 313 Plants 2 & 3, Green Salt Production, Dust Collectors.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	267.0	0.000	0.000	0.200	267.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050351

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DUST COLLECTOR RESIDUES-HIGH FLOURIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000050355

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DISCARD PROCESS RESIDUE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Discard process residue; 761 Building 45, General Sump.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
3.3	3,680.0	0.000	0.000	3.3	3,680.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050355

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: DISCARD PROCESS RESIDUE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration

State: Ohio

ID #: 0000050358

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED NON-BURNABLE

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Contaminated non-burnable; 742 Procurement, Decontamination.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.800	1,447.0	0.000	0.000	0.800	1,447.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Debris, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050358

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED NON-BURNABLE

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000050359

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Non-recoverable trash; 600 Plant 6, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.800	1,091.0	0.000	0.000	0.800	1,091.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050359

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

State: Ohio

ID #: 0000050361

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Non-recoverable trash; 600 Plant 6, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.416	274.0	0.416	274.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment technologies under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050361

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration

State: Ohio Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT Waste Stream Name: NON-RECOVERABLE TRASH Matrix: Inorganic Sludges/Particulates	ID #: 0000050367 Waste Type: MLLW
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Waste Stream Description and Source:

Non-recoverable trash; 201 Plants 2 & 3, General, Maintenance.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	195.0	0.000	0.000	0.200	195.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050367

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

State: Ohio	ID #: 0000050387
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: SALT SLUDGE, CHLORIDE	
Matrix: Inorganic Sludges/Particulates	Waste Type: MLLW

Waste Stream Description and Source:
Salt sludge, chloride; 730 Laboratory General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.400	324.0	0.000	0.000	0.400	324.0	0.000	0.000

Treatability Group:

MLLW CH. Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050387

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SALT SLUDGE, CHLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization

State: Ohio Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT Waste Stream Name: NON-RECOVERABLE TRASH Matrix: Inorganic Sludges/Particulates	ID #: 0000050405 Waste Type: MLLW
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Waste Stream Description and Source:
 Non-recoverable trash; 600 Plant 6, General.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.600	1,454.0	0.000	0.000	0.600	1,454.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050405

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization

State: Ohio

ID #: 0000050406

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: FURNACE SALT, CHLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Furnace salt, chloride; 642 Plant 6, Heat Treating, Salt-Oil Furnace.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	5.6	13,565.0	5.6	13,565.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050406

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: FURNACE SALT, CHLORIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D011	Conc.	Stabilization

State: Ohio

ID #: 0000050407

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Non-recoverable trash; 003.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	480.0	0.200	480.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000050407

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000060011

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Non-recoverable trash; 700 waste management.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
11.0	8,399.0	0.000	0.000	11.0	8,399.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000060011

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: NON-RECOVERABLE TRASH

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio	ID #: 0000060068
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: CONTAMINATED INSOLUBLE OIL	
Matrix: Organic Liquids	Waste Type: MLLW

Waste Stream Description and Source:

Contaminated insoluble oil; 503 Plant 5, General, Oil Storage Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.600	498.0	0.600	498.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000060068

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED INSOLUBLE OIL

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
F001	Conc.	Incineration

State: Ohio	ID #: 0000060069
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: CONTAMINATED INSOLUBLE OIL	
Matrix: Organic Liquids	Waste Type: MLLW

Waste Stream Description and Source:

Contaminated insoluble oil; 510 Plant 5, Metal Reduction Area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.2	1,371.0	1.5	514.0	2.7	1,885.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000060069

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: CONTAMINATED INSOLUBLE OIL

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
F001	Conc.	Incineration

State: Ohio Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT Waste Stream Name: SLUDGES, OILY, FOR OXIDATION HIGH FREE Matrix: Organic Sludges/Particulates	ID #: 0000060119 Waste Type: MLLW
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Waste Stream Description and Source:

Sludges, oily, for oxidation high free metal; 741 Procurement, Garage.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	3.3	2,972.0	3.3	2,972.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000060119

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SLUDGES, OILY, FOR OXIDATION HIGH FREE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio

ID #: 0000060123

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SOLVENT SEMISOLID

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Solvent semisolid; 736 Service Bldg. and Admin. Bldg., Laundry.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.200	40.0	0.200	40.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000060123

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: SOLVENT SEMISOLID

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D039		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration

State: Ohio

ID #: 0000060149

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: U3O8 FROM BOX FURNACE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

U3O8 from box furnace; 824 Plant 8, Oxidation System, Box Furnace.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
52.2	40,761.0	0.000	0.000	52.2	40,761.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000060149

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: U3O8 FROM BOX FURNACE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Ohio

ID #: 0000060152

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: U3O8 ROTEXED PLANT 8 FURNACE PRODUCT

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

U3O8 rotexed plant 8 furnace product; 5 Plant 8, Oxidation System, Oxidation Furnace Number 1.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	71.8	75,624.0	71.8	75,624.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio

ID #: 0000060152

Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Waste Stream Name: U3O8 ROTEXED PLANT 8 FURNACE PRODUCT

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio	ID #: 0000060331
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: WATER/GAS MIXTURE TANK #9	
Matrix: Organic Liquids	Waste Type: MLLW

Waste Stream Description and Source:

Water/gas mixture tank #9; 741 Procurement, Garage.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	4.4	3,945.0	4.4	3,945.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. All waste streams are being evaluated for appropriate treatment under CERCLA.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

The waste stream is no longer being generated.

State: Ohio	ID #: 0000060331
Site: FERNALD ENVIRONMENTAL MANAGEMENT PROJECT	
Waste Stream Name: WATER\GAS MIXTURE TANK #9	
Matrix: Organic Liquids	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
D018		Not currently prohibited under the LDR Program.

23.3 Mound Plant

Site Summary

The Mound Plant, located in south-central Ohio, has conducted testing and development of nuclear weapons components and processes since 1947 in support of the national defense programs. About 56 m³ of mixed wastes have been or are projected to be generated (Table 23.3-1) as a result of operations conducted in performing these missions.

The WPS provides detailed information on each mixed waste stream. Table 23.3-2 details the treatment facility, the wastes that have been assigned to the treatment facility, and the wastes that are currently unassigned. Assignments of other wastes will be made by the site in the future after assignment options are fully evaluated.

Transuranic (TRU) Waste. Mound currently stores about 3.2 m³ of mixed TRU (MTRU) waste and projects that approximately 0.2 m³ of additional TRU wastes will be generated through the end of 1997. This waste will be processed as needed (characterized, repackaged, immobilized) to meet the waste acceptance criteria of the Waste Isolation Pilot Plant (WIPP). Planned disposal of TRU waste is at WIPP.

There are no existing facilities at Mound that can treat TRU waste. Currently the Mound inventory is being stored.

Mixed Low-Level Waste (MLLW). Mound currently stores about 51 m³ of MLLW, which includes low-level waste and TRU waste reclassified as MLLW. Roughly 1.5 m³ of MLLW is projected to be generated through the end of 1997, with none of this from environmental restoration activities.

There is 1 existing MLLW treatment facility at Mound, the Mound Glass Melter. There are no additional planned facilities. Currently, the Mound MLLW inventory is not being treated. Commercial facilities are being evaluated to treat about 85 percent of the total stored MLLW volume (generated by 3 waste streams). When permits are granted, the Mound Glass Melter will be able to treat MLLW.

Treatment technology options have not been analyzed for most of Mound's other waste streams because the RCRA and radioactive contaminants are not well characterized.

General

Mound Plant, located in Miamisburg, Ohio, about 16 km southwest of Dayton (Figure 23-1), is operated by EG&G Mound Applied Technologies for DOE. Since 1947, Mound Plant's mission has been the development of processes for the nuclear-weapons program, production of non-nuclear components for nuclear weapons, and diagnostic testing of explosive and nuclear components. Other programs include the manufacture of stable isotopes for research, the development and manufacture of small chemical heat sources for the defense program, recovery and purification of tritium from scrap materials, and the development and fabrication of heat sources fueled by plutonium-238 to provide power for satellites and spacecraft. Mound Plant has 120 buildings on 1.24 km² of land and employs approximately 1650 people. The Mound Plant is a CERCLA site.

TABLE 23.3-1
Mixed Wastes at the Mound Facility

Waste Type/Matrix	Number of Waste Streams	Inventory		Number of Waste Streams	Five-Year Projection	
		(m ³)	(kg)		(m ³)	(kg)
WASTE TYPE -- MLLW						
CH, Organic Liquids	2	1.14	1,702.30	0	0.00	0.00
CH, Heterogeneous Debris	1	0.23	181.00	0	0.00	0.00
CH, Lab Packs With Metals	2	43.22	13,301.40	0	0.00	0.00
CH, Lab Packs Without Metals	1	0.14	14.66	0	0.00	0.00
CH, Liquid Mercury	1	0.10	29.50	1	<0.10	0.96
CH, Elemental Lead	1	4.99	4,117.42	1	0.68	454.00
CH, Batteries (lead Acid, Cadmium)	1	0.85	1,024.00	1	0.79	1,104.00
Sub-Total MLLW:	9	50.67	20,370.28	3	1.47	1,558.96
WASTE TYPE -- MTRU						
CH -alpha, Cemented Solids	1	2.04	1,003.60	0	0.00	0.00
CH -alpha, Elemental Lead	1	1.13	404.50	1	0.23	95.00
Sub-Total MTRU:	2	3.17	1,408.10	1	0.23	95.00
TOTAL:	11	53.84	21,778.38	4	1.70	1,653.96

TABLE 23.3-2
Mound Facility
Mixed Waste Treatment Facilities
Current and Planned Facilities - Treatment Category

Facility/System	Operating Status *	Feed Types	Final Waste Form	HLW MTRU MLLW	Alpha **	RH CH	Hg	Other Toxic Metals	Toxic Organics
Mound Glass Melter	Exists, Plan To Use, 1995	Liquids, Sludges, Solids	To Be Determined	MLLW		CH		√	√

* Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

** Transuranic alpha greater than 10 nCi/g.

TABLE 23.3-3
Mound Facility
Mixed Waste Treatment Facilities
Existing, Plan to Use for Mixed Wastes

Facility/System	Treatment Type(s)	Allowable Waste		Ident. Of MW Streams To Be Treated	Capacity (m3/yr) **	Date Avail. For Use **
		Radioactive Type(s) *	Physical/Chemical Matrix			
Mound Glass Melter	Vitrification	MLLW, CH	Liquids, Sludges, Solids	MOUND 2063	200.0	1995

* ALPHA refers to transuranic alpha greater than 10 nCi/g

** Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

Mound Plant has 2 MTRU waste streams about 3.2 m³ (1400 kg) from plutonium operations and 9 MLLW streams about 50.7 m³ (20,370 kg) from general laboratory analyses and equipment maintenance (Table 23.3-1). These streams are discussed individually in the Waste Profile Sheets. Inventory data are current as of December 31, 1992.

23.3.1 Mixed Waste

23.3.1.1 High-Level Waste

There is no HLW stored at Mound and none will be generated.

23.3.1.2 Mixed Transuranic Waste

Mound Plant's 2 MTRU waste streams consist of corrosive wastes from Pu-238 operations and lead shielding removed from gloveboxes and other equipment during decommissioning. Neither stream is subject to LDR storage prohibitions. Both have been characterized by process knowledge and are contact-handled. Only the lead shielding will be generated in the future. An estimated 0.2 m³ (95 kg) of MTRU lead waste will be produced in the next 5 years. MTRU wastes are planned for disposal in the Waste Isolation Pilot Plant (WIPP) in New Mexico if the wastes meet the final Waste Acceptance Criteria developed at WIPP.

Mound has reported 252 m³ of non-MTRU in inventory pending shipment off-site at some future time¹, so the inventory volume of 3.2 m³ represents only 1 percent of the total TRU inventory (mixed and non-mixed).

23.3.1.3 Mixed Low-Level Waste

The 2 major components of the MLLW inventory are lab packs with scintillation cocktails (about 85 percent of the total MLLW volume) and lead shielding from decommissioned gloveboxes and other equipment (about 10 percent). Remaining MLLW consists of drained lead batteries, ethylene dichloride, lab packs with silver and beryllium, liquid mercury, PCB- and tritium-contaminated kerosene, PCB- and plutonium-contaminated oil, and miscellaneous laboratory chemicals. All streams are contact-handled and characterized by process knowledge. Primary radiological contaminants are plutonium and tritium. Approximately 18 percent (9.2 m³) of the total MLLW volume is subject to the LDR storage prohibition.

Waste minimization and cessation of some operations at Mound Plant have reduced the number of MLLW streams from 9 to 3. Specific waste-minimization activities include substitution of a nonhazardous scintillation cocktail, elimination of chlorinated solvents, and institution of chemical exchange procedures among various groups. An estimated 1.5 m³ (1600 kg) of MLLW will be generated during the next 5 years.

The only radionuclide in Mound's MLLW that poses special issues for treatment is tritium, which must be contained to protect workers and the general public. Any tritium release during treatment must be reported. Treatment options have not been determined for most of Mound's MLLW. Commercial treatment facilities are being evaluated to treat the scintillation cocktail waste stream and to decontaminate the lead shielding. These 2 streams comprise about 85 percent of the total stored volume of MLLW.

¹ Mound Plant, ERWM Site Specific Plan, May 19, 1992.

23.3.2 Treatment Facilities and Technology

The Mound Glass Melter (MGM) is the only on-site mixed waste treatment facility (Tables 23.3-2 and 23.3-3) at Mound. The MGM will be used to treat liquid and solid MLLW. Construction is complete, but the melter has not received its operating permit from the State of Ohio.

The MGM consists of a melt chamber lined with refractory material with an outer shell of stainless steel connected to an off-gas emission control system. During cold start-up, soda-lime/silica glass cullet will be heated in the melt chamber by a propane burner. After the glass melts, heated electrodes will maintain the glass in the molten state. When the melt has reached a temperature of 1,000 to 1,333 °C, waste will be introduced into the melt chamber through a feed port in the top of the melter. At the end of the process run, glass waste will be poured into molds for cooling. It is anticipated that the MGM will begin operations in 1995.

The alpha content of wastes treated at the melter must be < 10 nCi/g. When operational, the MGM will be able to treat 200 m³ of waste per year. Since total MLLW inventory is about 51 m³ and only 1.5 m³ is projected to be generated during the next 5 years, the facility would have excess capacity during its first year of operation and would be available to handle appropriate D&D wastes from facility shutdown and CERCLA operations wastes during subsequent years, should any mixed waste be generated by these operations.

23.3.3 Technology Development

Mound is in the initial stages of an investigation to assess the viability of a Packed Bed Reactor/Silent Discharge Plasma Technology to treat the waste stream of organic liquids. There are no site-specific technology development activities for Mound Plant.

23.3.4 Environmental Restoration Waste

Operations at Mound generate sanitary, hazardous, radioactive, and mixed wastes. The operations at the site using tritium have historically generated both airborne and liquid waste streams. Trace levels of chlorinated organics in the groundwater may be from process solvents. The processing, handling and storage of plutonium 238 resulted in the contamination of several laboratories, building support areas, and soil on and off site. The storage, handling and repackaging of thorium sludge resulted in on-site soil contamination.

The Mound environmental restoration program includes a CERCLA cleanup program and D&D activities for plutonium processing buildings. A CERCLA Section 120 Federal Facilities Agreement was signed in August 1990 by EPA and DOE. The long-range objective of the CERCLA program is to remediate all potential release sites to allow unrestricted land use. The CERCLA program is in the early phase of the Remedial Investigation/Feasibility Study process. The Records of Decision for most of the operable units will be finalized in the mid-1990s. D&D operations began in FY 1978 and will continue until FY 2003. D&D activities are conducted solely under the jurisdiction of the Atomic Energy Act. Residual soil contamination after final D&D (to contamination levels that would allow unrestricted release) will be assessed under CERCLA, cleaned up under D&D, and verified under the CERCLA program driven by the Federal Facilities Agreement.

Environmental restoration accomplishments include: removing 3 underground storage tanks, completing the West Powerhouse PCB removal action, completing sampling of radioactively contaminated soil in

areas where removals are underway or planned, initiating fieldwork to collect data on potential release sites where little or no data are available, removing remaining contaminated soil on the waste transfer system project, decontaminating 1 area in the plutonium processing building, and initiating removal of plutonium contaminated soil from the Special Metallurgical Building. More information on contaminated media associated with environmental restoration activities is provided in Chapter 2.

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**WASTE
PROFILE
SHEETS**

Mound Plant

ROADMAP TO WASTE PROFILE SHEETS (WPS)

Waste Profile Sheets (WPS) have been compiled in this report for each of the mixed waste streams identified at the different DOE sites. Each WPS is a concise summary of the information required by the FFCAct-1992, with waste stream specific data primarily derived from the Waste Management Information System (WMIS) database. Each WPS consists of the following items:

Header: The information in the header in each WPS includes the State, the official name of the site, an identification number, an identifying waste stream name, the waste type, and the waste matrix. The identification number is either a number assigned by the WMIS database or a number assigned by the site. The waste stream name is a unique identifier which corresponds to the name used in the WMIS database, or is assigned by the site. The waste type is either HLW, MTRU, or MLLW. The waste matrix corresponds to the categories (or their further subdivisions) defined earlier based on the physical and chemical form of the waste.

Waste Stream Description and Source: This section of the WPS presents a short description of the source of the waste and the waste stream characteristics.

Inventory Table: The inventory table in each WPS reports the volume (m³) and/or mass (kg) of each waste stream currently in storage, and projected to be generated in the next five years. The table also indicates the date assumed in calculating the current and projected inventories. As required by the FFCAct-1992, the table also differentiates between waste not subject to LDR and that subject to LDR for the current inventory.

Treatability Group: This section lists the name of the treatability group to which the waste stream belongs.

Treatment Status, Technology Status: This section of the WPS lists the status of the technology that could be applied to the waste stream for compliance with the LDR. This section provides information on if the waste stream is currently being treated, and if technology options and facilities for the treatment exist.

Radiation Characteristics Section: This section of the WPS provides additional information on the radiological characteristics of the waste (in addition to characterizing the waste stream as HLW, MTRU, or MLLW). This section of the WPS specifies whether the waste stream is contact handled or remote handled, if the radionuclides are alpha or beta/gamma emitters, and if they contain activation products.

Radiation Effects Section: As required by the FFCAct-1992, this section of the WPS lists possible effects of the radiological characteristics of the waste stream on treatment technologies that could be applicable to that waste stream. For example, radiation levels may require remote handling of the waste and affect the design and operation of the treatment facility. The presence of volatile radionuclides may require the containment of all off-gases from the treatment system.

Waste Minimization Activities: As required by the FFCAct-1992, this section of the WPS provides information on the waste minimization practices being used for the waste stream. This section provides information on if the waste minimization practices include good operating practices, technology changes, raw material changes, product changes, etc.

EPA Code: This table of the WPS reports the EPA hazardous waste codes applicable to the waste stream, the basis for assigning the codes (process knowledge or sampling/analysis), the LDR basis (which is either technology based or concentration based), and the BDAT for each of the EPA hazardous waste codes.

In summary, the WPS for each waste stream, along with the site sections in the report for each State (Section B), summarize the site-specific information required by the FFCAct-1992.

State: Ohio

ID #: 497

Site: MOUND PLANT

Waste Stream Name: SCINTILLATION COCKTAIL

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Stream Description and Source:

This waste is scintillation cocktail, which contains hazardous constituents. This scintillation cocktail waste was generated during routine counting operations on bio-assay, environmental and other radioactive samples containing primarily H-3 or PU-238.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
34.0	10,600.0	9.2	2,700.0	43.2	13,300.0	0.000	0.000

Treatability Group:

MLLW CH, Lab Packs with Metals, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. Once the vials have been repackaged and radiation levels determined they will be sent to a treatment facility. The Mound Glass Melter and a commercial facility are being considered to treat this waste.

Technology Status:

Assessing technologies to determine if the technology exists, and if so, whether it needs modification.

Radiation Characteristics:

- 1) Volatile radionuclide

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider containment of radioactive off-gases to protect treatment facility personnel and the public. Safeguard issues may be a concern. Treatment involves tritium release, which must be reported.
- 2) None.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.

Waste is no longer generated. A nonhazardous cocktail has been substituted.

General Comments:

The radiation effects on treatment vary on each package. The radiation effects may be unknown or as specified in the radiation effects field.

State: Ohio	ID #: 497
Site: MOUND PLANT	
Waste Stream Name: SCINTILLATION COCKTAIL	
Matrix: Lab Packs with Metals	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
F003	Conc.	Incineration

The alternate LDR treatment standards for labpacks is incineration as a method of treatment and a requirement for the incinerator residues to meet the treatment standards for the TC toxic metals (i.e., D004-D008, and D010-D011).

State: Ohio	ID #: 833
Site: MOUND PLANT	
Waste Stream Name: CORROSIVES - TRU	
Matrix: Cemented Solids	Waste Type: MTRU

Waste Stream Description and Source:

This waste stream is TRU radionuclides in a caustic or acidic matrix. Process wastes and analytical wastes from PU 238 operations. The waste stream is no longer being generated.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
2.0	1,003.6	0.000	0.000	2.0	1,003.6	0.000	0.000

Treatability Group:

MTRU CH/AL, Cemented Solids

Treatment Status:

Treatment of most mixed transuranic waste to meet LDR treatment standards is not applicable because DOE plans to ship these wastes to the Waste Isolation Pilot Plant (WIPP), pending issuance of a No-Migration Determination of the operational phase. Pretreatment to meet the WIPP Waste Acceptance Criteria may be required.

Technology Status:

Not Applicable.

Radiation Characteristics:

- 1) Transuranic contaminants
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

Waste is no longer being generated.

State: Ohio	ID #: 833
Site: MOUND PLANT	
Waste Stream Name: CORROSIVES - TRU	
Matrix: Cemented Solids	Waste Type: MTRU

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002A	Tech.	Deactivation
D002B	Tech.	Deactivation

State: Ohio	ID #: 835
Site: MOUND PLANT	
Waste Stream Name: LEAD - TRU	
Matrix: Elemental Lead	Waste Type: MTRU

Waste Stream Description and Source:

Lead loaded dry gloves, lead shielding-TRU. Shielding removed from gloveboxes and other equipment during decommissioning operations.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.1	404.5	0.000	0.000	1.1	404.5	0.227	95.0

Treatability Group:

MTRU CH/AL, Elemental Lead, Toxic Metals w/o Mercury

Treatment Status:

Treatment of most mixed transuranic waste to meet LDR treatment standards is not applicable because DOE plans to ship these wastes to the Waste Isolation Pilot Plant (WIPP), pending issuance of a No-Migration Determination of the operational phase. Pretreatment to meet the WIPP Waste Acceptance Criteria may be required.

Technology Status:

Not Applicable.

Radiation Characteristics:

- 1) Transuranic contaminants
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.

State: Ohio

ID #: 835

Site: MOUND PLANT

Waste Stream Name: LEAD - TRU

Matrix: Elemental Lead

Waste Type: MTRU

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008C	Tech.	Macroencapsulation

State: Ohio	ID #: 836
Site: MOUND PLANT	
Waste Stream Name: LEAD - LLW	
Matrix: Elemental Lead	Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is waste lead. Shielding removed from gloveboxes and other equipment during decommissioning operations. Sources of this waste include: tritium operations from SW and T Buildings; Pu-238; Unknown source, cobalt-60; uranium; lab waste lead solids, unknown contamination.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
5.0	4,117.4	0.000	0.000	5.0	4,117.4	0.679	454.0

Treatability Group:

MLLW CH, Elemental Lead, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. The possibility of using a commercial facility to decontaminate this waste is being investigated. Radioactive contamination of this waste has not been well characterized.

Technology Status:

Technology assessment has not started. Technology options have not been analyzed.

Radiation Characteristics:

- 1) Volatile radionuclide
- 2) Beta/gamma emitter

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider containment of radioactive off-gases to protect treatment facility personnel and the public. Safeguard issues may be a concern. Treatment involves tritium release, which must be reported.
- 2) Treatment could result in plating, precipitation, or some other form of concentration, which could cause workers to receive a significant radiation exposure. The potential for concentration of beta and gamma emitters will affect the design and operation of a treatment facility.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.
- 2) Change in operations status; process interruptions; work stoppages; mission changes; and new processes.

State: Ohio

ID #: 836

Site: MOUND PLANT

Waste Stream Name: LEAD - LLW

Matrix: Elemental Lead

Waste Type: MLLW

The only component of this waste stream that is still being generated is the tritium-contaminated lead shielding from the SW and T buildings.

General Comments:

Other lead wastes radiation contaminant levels have not been determined.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008C	Tech.	Macroencapsulation

State: Ohio	ID #: 837
Site: MOUND PLANT	
Waste Stream Name: CONTAMINATED MERCURY	
Matrix: Liquid Mercury	Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is mercury and clean-up residue. Waste is generated by clean-up activities.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.098	25.9	0.002	3.6	0.100	29.5	0.002	0.960

Treatability Group:

MLLW CH, Liquid Mercury, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology assessment has not started. Technology options have not been analyzed. Tritium content has not been determined.

Radiation Characteristics:

- 1) Volatile radionuclide

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider containment of radioactive off-gases to protect treatment facility personnel and the public. Safeguard issues may be a concern. Treatment involves tritium release, which must be reported.

Waste Minimization Activities:

- 1) Not Applicable.

Waste is no longer generated.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009D	Tech.	Amalgamation

State: Ohio

ID #: 2063

Site: MOUND PLANT

Waste Stream Name: ETHYLENE DICHLORIDE - LLW

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

This is laboratory clean-out waste -- waste ethylene dichloride. Excess laboratory material from a radiologically controlled area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.005	2.3	0.005	2.3	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. This waste is a potential candidate for treatment in the Mound Glass Melter.

Technology Status:

Technology assessment has not started. Technology options have not been analyzed.

Radiation Characteristics:

- 1) Volatile radionuclide

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider containment of radioactive off-gases to protect treatment facility personnel and the public. Safeguard issues may be a concern. Treatment involves tritium release, which must be reported.

Waste Minimization Activities:

- 1) Not Applicable.

Waste is no longer generated.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation

State: Ohio	ID #: 0000002064
Site: MOUND PLANT	
Waste Stream Name: LEAD WASTE DRAINED BATTERIES	
Matrix: Batteries (lead acid, cadmium)	Waste Type: MLLW

Waste Stream Description and Source:

Drained lead batteries that may contain plutonium contamination. The source of this waste stream is SM-Building electric fork lifts.

The reported weights for this waste stream include the drum or box weight.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.850	1,024.0	0.000	0.000	0.850	1,024.0	0.792	1,104.0

Treatability Group:

MLLW CH, Batteries (lead acid, cadmium), Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. Surface decontamination of the lead plates is not practical.

Technology Status:

Technology assessment has not started. Technology options have not been analyzed. Radioactive contamination has not been well characterized.

Radiation Characteristics:

Radiation level unknown.

Waste-Specific Radiation Effects on Treatment:

The radiation contaminant levels for battery wastes have not been determined. Therefore, the radiation effects on treatment are unknown.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008A	Tech.	Secondary Lead Smelting

State: Ohio

ID #: 0000002065

Site: MOUND PLANT

Waste Stream Name: KEROSENE, PCB, TRITIUM CONTAMINATED

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Rinse from the hydraulic press in SW-Building. LDR effective date was 8/8/90. Waste was placed in storage from 5/9/85 to 10/2/85. All weights include drum or box weight.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.1	1,700.0	0.000	0.000	1.1	1,700.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Assessing technologies to determine if the technology exists, and if so, whether it needs modification. Mound is in the initial stages of an investigation of a Packed Bed Reactor/Silent Discharge Plasma Technology to treat this waste stream. An assessment of the viability of this technology is being conducted.

Radiation Characteristics:

- 1) Volatile radionuclide

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider containment of radioactive off-gases to protect treatment facility personnel and the public. Safeguard issues may be a concern. Treatment involves tritium release, which must be reported.

Waste Minimization Activities:

- 1) Not Applicable.

Waste is no longer generated.

State: Ohio

ID #: 0000002065

Site: MOUND PLANT

Waste Stream Name: KEROSENE, PCB, TRITIUM CONTAMINATED

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation

State: Ohio	ID #: 0000002066
Site: MOUND PLANT	
Waste Stream Name: ABSORBED OIL, PCB, PLUTONIUM	
Matrix: Heterogeneous Debris	Waste Type: MLLW

Waste Stream Description and Source:

Absorbed oil containing PCBs with Plutonium contamination. The source of this waste stream is from the press in PP-Building, Room 146/148.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.227	181.0	0.000	0.000	0.227	181.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology assessment has not started. Technology options have not been analyzed. No technology assessment has been scheduled. The waste is not characterized for radiation or PCB content. The waste is heterogenous and will be very difficult to sample.

Waste-Specific Radiation Effects on Treatment:

Contains plutonium. Radiation level unknown.

Waste Minimization Activities:

1) Not Applicable.

Waste is no longer generated.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical,

State: Ohio

ID #: 0000002066

Site: MOUND PLANT

Waste Stream Name: ABSORBED OIL, PCB, PLUTONIUM

Matrix: Heterogeneous Debris

Waste Type: MLLW

or thermal), macro microencapsulation or sealing.

State: Ohio

ID #: 0000002067

Site: MOUND PLANT

Waste Stream Name: LAB PACKS WITH METALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Stream Description and Source:

Lab pack containing silver and beryllium. The source of this waste stream is unknown. The LDR effective date was 8/8/88. The waste was placed into storage on 3/5/87.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.020	1.4	0.000	0.000	0.020	1.4	0.000	0.000

Treatability Group:

MLLW CH, Lab Packs with Metals, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology assessment has not started. Technology options have not been analyzed. Material needs both RCRA and radionuclide characterization.

Radiation Characteristics:

1) Radionuclides or radiation level unknown

Waste-Specific Radiation Effects on Treatment:

The radiation contaminant levels of lab pack metals is unknown. Therefore, the radiation effects on treatment are unknown.

Waste Minimization Activities:

1) Not Applicable.

Waste is no longer generated.

General Comments:

The radiation contaminant levels of lab pack metals is unknown. Therefore, the radiation effects on treatment are unknown.

State: Ohio	ID #: 0000002067
Site: MOUND PLANT	
Waste Stream Name: LAB PACKS WITH METALS	
Matrix: Lab Packs with Metals	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D011	Conc.	Stabilization
P015	Tech.	Metals Recovery; or Thermal Recovery of Metals

The alternate LDR treatment standards for labpacks is incineration as a method of treatment and a requirement for the incinerator residues to meet the treatment standards for the TC toxic metals (i.e., D004-D008, and D010-D011).

State: Ohio

ID #: 0000002068

Site: MOUND PLANT

Waste Stream Name: LAB PACKS WITHOUT METALS

Matrix: Lab Packs without Metals

Waste Type: MLLW

Waste Stream Description and Source:

Lab packs contain a variety of materials including: oxidizers with Thorium and Uranium; corrosive solids: corrosives; ignitables; metal polish; and liquid corrosives. Sources of these wastes include: Thorium perchlorate, uranyl nitrate, cerous nitrate, potassium hydroxide, metallographic operations, tritium; and naval jelly, selenous acid rust retarder.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.143	14.7	0.000	0.000	0.143	14.7	0.000	0.000

Treatability Group:

MLLW CH, Lab Packs without Metals, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology assessment has not started. Technology options have not been analyzed. RCRA and radioactive contaminants need to be characterized.

Radiation Characteristics:

- 1) Radionuclides or radiation level unknown
- 2) Volatile radionuclide

Waste-Specific Radiation Effects on Treatment:

Several lab packs radiation contaminant levels have not been determined. Therefore, the radiation effects on treatment are unknown.

Waste Minimization Activities:

- 1) Not Applicable.

Waste is no longer generated.

General Comments:

Several lab pack radiation contaminant levels have not been determined. Therefore, the radiation effects on treatment are unknown.

State: Ohio

ID #: 0000002068

Site: MOUND PLANT

Waste Stream Name: LAB PACKS WITHOUT METALS

Matrix: Lab Packs without Metals

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D001F	Tech.	Deactivation
D002A	Tech.	Deactivation
D002B	Tech.	Deactivation
D002C	Tech.	Deactivation
D007	Conc.	Chemical Reduction followed by Stabilization
D010	Conc.	Stabilization
U055	Tech.	Fuel Substitution; or Incineration

The alternate LDR treatment standards for labpacks is incineration as a method of treatment and a requirement for the incinerator residues to meet the treatment standards for the TC toxic metals (i.e., D004-D008, and D010-D011).

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MOUND-WPS-22

April 1993

23.4 Portsmouth Gaseous Diffusion Plant

Site Summary

The Portsmouth Gaseous Diffusion Plant (PORTS) is located near Piketon, Ohio, 99 km south of Columbus. The site encompasses 15 km², and its major facilities are located within a 2 km² secure area. Martin Marietta Energy Systems, Inc., operates the plant for DOE. The PORTS mission is to produce enriched uranium for the nuclear power industry. The United States currently has 2 gas diffusion plants: Portsmouth and a plant near Paducah, Kentucky. The Paducah plant enriches UF₆ containing approximately 0.7 percent U-235 to 1.9 percent U-235. Enriched UF₆ is transported to Portsmouth where it is enriched to the final product assay.

The following mission-related PORTS activities generate mixed waste:

- Receipt and assay of UF₆ process feed material
- The staged, porous barrier, U-235 enrichment process
- Assay and shipment of enriched U-235 product material
- Facility maintenance and other supporting activities
- Environmental restoration
- Decontamination and decommissioning of obsolete equipment and facilities.

Mixed Waste Sources. Mixed waste managed at PORTS falls into 1 of 4 general source categories: ongoing waste generation by production and production support; environmental restoration; decontamination and decommissioning; and wastes that have accumulated on-site prior to FY 92.

Mixed Waste Inventory. All mixed waste generated and stored at PORTS is contact-handled MLLW. Uranium (α emitter) is the only radionuclide present in significant quantities, although traces of technetium may also be present. As of February 1993 the MLLW inventory is approximately 5,500,000 kg (Table 23.4-1). All this inventory is subject to the provisions of the LDR. Detailed quantitative and descriptive information for each waste stream may be found in the Waste Profile Sheets (WPS) at the end of Section 23.

Total MLLW to be generated during the next 5 years is estimated at 4,500,000 kg. As of February 1993 the majority of the waste streams have not been fully characterized by sampling and analysis; however, all waste streams are characterized by process knowledge. These characterizations are the basis for determining the applicable RCRA hazardous waste codes for each waste stream in the WPS.

Treatment Technology. Treatment technologies exist for all MLLW streams. The low-level uranium radiation poses no special handling problems. The technologies for treatment of wastes contaminated with enriched uranium are mainly affected by the constraints required for nuclear criticality safety and, to a lesser extent, the need for safeguarding special nuclear material. The technology specified for a particular waste will still be applicable, but the facility design and operating procedures will require modification relative to a typical commercial treatment facility. For example, incineration remains the required technology for mixed waste solids contaminated with organics and Polychlorinated Biphenals (PCBs), but the incinerator and off-gas treatment system require the use of a subcritical geometry or a batch operating mode to limit the mass of uranium in the system. Additional constraints for an off-site facility include the required Nuclear Regulatory Commission license and safeguard measures for highly enriched uranium.

Table 23.4-1
Mixed Wastes at Portsmouth Gaseous Diffusion Plant

Waste Type/Matrix	Number of Waste Streams	Inventory		Number of Waste Streams	Five-Year Projection	
		(m ³)	(kg)		(m ³)	(kg)
WASTE TYPE -- MLLW						
CH, Organic Liquids	14		162,776 00	12	-	282,435 00
CH, Aqueous Liquid	12	-	61,327 40	12		195,883 21
CH, Organic Sludges/particulates	4	-	9,483 00	3		13,037 00
CH, Inorganic Sludges/particulates	13	-	210,002 50	11		212,092 40
CH, Soils	2	-	4,527,649 00	1		166,616 00
CH, Organic Debris	5	-	197,401.00	5		166,636 00
CH, Inorganic Debris	9		61,401 50	9		61,076 00
CH, Heterogeneous Debris	12	-	264,766 10	13		3,230,792 30
CH, Lab Packs With Metals	3	-	26,111 00	3		103,867 00
CH, Compressed Gases	2	-	798 10	2		563 00
CH, Liquid Mercury	1	-	123 00	1		50 50
CH, Batteries (lead Acid, Cadmium)	1	-	7,620 00	1		18,189 00
CH, Multiple	1	-	1,184 00	1		4,910 00

Table 23.4-1 (Continued)
Mixed Wastes at Portsmouth Gaseous Diffusion Plant

Waste Type/Matrix	Number of Waste Streams	Inventory		Number of Waste Streams	Five-Year Projection	
		(m ³)	(kg)		(m ³)	(kg)
WASTE TYPE -- MLLW						
Sub-Total MLLW:	79	-	5,530,642.60	74	-	4,456,147.41
TOTAL:	79	-	5,530,642.60	74	-	4,456,147.41

Treatment technologies specified for PORTS waste streams exist in the commercial sector, but the facilities are not designed to handle wastes contaminated with enriched uranium. The only off-site treatment facility available for PORTS waste is the DOE K-25 Site TSCA incinerator located in Oak Ridge, Tennessee, which only accepts liquid waste.

Waste Management Status. The majority of PORTS waste streams have not been characterized by sampling and analysis. Aqueous waste streams are currently being treated on-site, and organic liquids are being treated at the K-25 Site TSCA incinerator. During 1992, these facilities treated 3,150,000 kg and 253,700 kg, respectively. One inorganic waste stream is being neutralized in-situ. The possibility of treating lead solids and batteries at a commercial facility is being investigated.

Although no treatment facility currently exists for PORTS MLLW sludges and solids, PORTS is planning a Waste Treatment Facility (FY 97 Line Item Project) to treat all of its mixed waste streams. A Feasibility Study Report kick-off meeting is scheduled for July 1993.

23.4.1 Mixed Waste

23.4.1.1 High-Level Waste

There is no high level waste (HLW) currently stored at PORTS and none is expected to be generated in the next 5 years.

23.4.1.2 Mixed Transuranic Waste

There is no MTRU waste currently stored at PORTS and none is expected to be generated in the next 5 years.

23.4.1.3 Mixed Low-Level Waste

Operations wastes account for approximately 18 percent of the total stored MLLW mass; the remainder is packaged soil from environmental restoration. Principal hazardous components are heavy metals and spent solvents. Facility maintenance generates site-wide waste streams, such as used light bulbs, paints and thinners, floor sweepings, batteries, aerosol cans, rags, gloves, and Personal Protective Equipment (PPE). Parts scheduled for repair or routine maintenance must first be cleaned and decontaminated. As part of decontamination, equipment may be stripped of corrosion-resistant coatings (e.g., nickel) and replated prior to being returned to service. These processes generate such waste streams as cleaning solvents, spent alkaline solutions, stripping and plating solutions, and sludge from the degreasing process. Equipment repair results in metal turnings and shavings and scrap metal.

Several waste streams are currently being treated on-site at the Decontamination Facility in Building X-705: motor cleaning solutions, spent alkaline solutions, laboratory waste, cleaning solutions, waste acid/bases, decontamination waste solutions, and some elements of the stream identified as "unused laboratory chemicals." Approximately 3,150,000 kg were processed in 1992. Five additional streams are scheduled to begin treatment at this facility after FY 94: flushing solution, waste antifreeze, blue print solutions, silver solutions, and waste water from painting booths.

Some organic liquid waste streams are sent to the K-25 Site TSCA incinerator at Oak Ridge, Tennessee; 253,700 kg were sent in 1992. Streams sent to the facility must have a U-235 assay < 1.0 percent, or

uranium content < 5 ppm. If the K-25 Site TSCA incinerator were to accept solids, streams from PORTS consisting of vapor-degreasing sludge and rags, gloves, filter cloth, and PPE could also be processed.

Stored waste streams generated by environmental restoration consist of MLLW soils (about 4,500,000 kg) and contaminated groundwater (22,000 kg). The latter is being treated at the carbon adsorption groundwater treatment facilities (Section 23.4.2.1), along with groundwater plumes from the X-749, X-231B, X-701B, and Little Beaver Creek areas. Soils contain low levels of halogenated solvents and uranium. Peroxidation (destruction of organic compounds by oxidation with hydrogen peroxide) and thermal vapor extraction are 2 technologies being evaluated for soil treatment by the Environmental Restoration Division.

Waste minimization is being incorporated into all PORTS processes. For example, an aggressive campaign is underway to eliminate vapor degreasers. Aqueous immersion cleaners and steam cleaners are under evaluation as possible alternative technologies. A washwater recycling system is being tested for the motor shop steam cleaning system, along with a proposed steam-cleaning system for the Compressor Shop. A system under development at the Oak Ridge K-25 site to recover nickel plating solutions is being investigated for use at Portsmouth. PORTS is converting to latex-based paints for all maintenance. Cleaning techniques have been modified and solvents substituted to reduce the amount of rags, gloves, wipes, sludges, and other solids generated. The paint spray booth is being reviewed for replacement by a booth that uses a dry filtering system, which will eliminate the "booth water" waste stream. Finally, the substitution of a phosphate-based corrosion inhibitor in the Recirculating Cooling Water/Recirculating Heating Water (RCW/RHW) system has eliminated 3 waste streams: chromate residue from the old inhibitor; large canvas curtains that are placed in the cooling towers; and spent filters and PPE from the Liquid Effluent Treatment Facility (LETf), which removed chromium from the cooling water by chemical reduction and precipitation. The canvas curtains had to be replaced periodically due to deterioration. The phosphate inhibitor is expected to prolong their useful lifetime, and they are not expected to require replacement during the next 5 years. Since chromium no longer must be removed from the cooling water, the LETf is shut down and is being decommissioned.

23.4.2 Treatment Facilities and Technology

23.4.2.1 Existing Treatment Facilities

Existing treatment facilities at PORTS (Table 23.4-2) consist of groundwater treatment units and a wastewater treatment facility. Three groundwater treatment facilities are currently operating: the X-622, which is treating the X-749 and X-231B groundwater plumes; the X-624, which treats groundwater from the Little Beaver Creek Interceptor Trench; and the X-701E, which treats groundwater from the X-701B area. All 3 use an activated carbon adsorption system to remove trichloroethylene, volatile organic compounds, iron, and uranium. The X-624 system also uses an air stripper. Effluent pH is adjusted to allow discharge either to the site sewage treatment plant or to the X-230-J7 pond, which collects the discharge from building drains and storm water runoff. The facilities operate continuously. Facility design incorporates wells that pump groundwater to the treatment system. The 3 facilities operating together can process about 454 liters of groundwater per minute (150 liters each) with an upgrade capacity of 908 liters per minute (300 liters each).

Groundwater treatment by carbon adsorption generates 2 waste streams: filters that remove suspended solids from the influent and deactivated carbon sludge. These 2 streams contribute about 1 percent to the total mass of stored MLLW.

**Table 23.4-2
Portsmouth Gaseous Diffusion Plant
Mixed Waste Treatment Facilities
Currently in Use for Mixed Wastes**

Facility/System	Treatment Type(s)	Allowable Waste		Ident. Of MW Streams To Be Treated	Normal Operating Capacity (m3/yr)
		Radioactive Type(s) *	Physical/Chemical Matrix		
X-622 Groundwater Treatment Facility	Carbon Adsorption	MLLW, CH	Groundwater, Aqueous Liquids	10078	79,576.0
X-624 Groundwater Treatment Facility	Air Stripping, Carbon Adsorption	MLLW, CH	Groundwater, Aqueous Liquids	10078	99,470.0
X-701E Groundwater Treatment Facility	Carbon Adsorption	MLLW, CH	Groundwater, Aqueous Liquids	10078	99,470.0
X-705 Decontamination Facility / Microfiltration	Neutralization, Filtration	MLLW, CH	Aqueous Liquids & Slurries	10069, 10081, 10083, 10107, 10108, 10109, 187, 189, 192, 2078, 2081, 2079, 2080	3,000.0
X-705 Decontamination Facility / Uranium Recovery System	Liquid Extraction, Neutralization, Filtration, Ion Exchange, Biodenitrofication	MLLW, CH	Aqueous Liquids & Slurries	10069, 10081, 10083, 10107, 10108, 10109, 187, 189, 192,	150.0

* ALPHA refers to transuranic alpha greater than 10 nCi/g

Table 23.4-2 (Continued)
Portsmouth Gaseous Diffusion Plant
Mixed Waste Treatment Facilities
Currently in Use for Mixed Wastes

Facility/System	Treatment Type(s)	Allowable Waste		Ident. Of MW Streams To Be Treated	Normal Operating Capacity (m3/yr)
		Radioactive Type(s) *	Physical/Chemical Matrix		
				2078, 2081, 2079, 2080	

* ALPHA refers to transuranic alpha greater than 10 nCi/g

The X-705 Decontamination Facility contains 2 separate wastewater treatment systems. Both systems are designed to process corrosive aqueous waste streams that contain varying concentrations of uranium and toxic metals from decontamination and cleaning. The process to be used for a particular waste is determined by its uranium concentration. Waste streams with high uranium concentrations are processed through the uranium recovery system. Wastewater treatment sludges (MLLW) are generated by these processes.

The uranium recovery system consists of a liquid-liquid extraction system for selective removal of uranium, a neutralization/filtration system for pH adjustment and removal of toxic metals, an ion-exchange facility for removal of technetium, and a biological denitrification system. Effluent from the uranium recovery system is discharged under the National Pollutant Discharge Elimination System (NPDES) permit for Outfall 604. The system has a practical influent capacity (based on 3 shifts per day and 22 operating days per month) of about 13,000 liters/month (150 m³/yr).

Uranium recovery generates 3 waste streams: the organic solvent phase from the liquid-liquid extraction, heavy metal sludge, and spent ion-exchange resin contaminated with technetium. Current inventory of these wastes is about 2.0 percent of total stored mass.

The microfiltration system consists of an oil and grease removal system (used as required) and a neutralization/concentration/filtration system for pH adjustment and removal of toxic metals. Effluent from the microfiltration system is discharged under the NPDES permit for Outfall 605. The system has a practical influent capacity (based on 3 shifts per day and 22 operating days per month) of about 250,000 liters per month (3000 m³/yr). Sludge and filters from this process comprise a waste stream that is about 0.9 percent of total stored mass.

23.4.2.2 Planned Treatment Facilities

Two additional carbon adsorption groundwater treatment facilities to be built at PORTS, the X-622T and the X-623 (Table 23.4-3), will mimic the existing treatment units. The additional groundwater treatment capacity is estimated to be 170,000 m³/yr. Plans call for the X-622T facility to begin operating in 1993, and the X-623 facility, in 1994.

Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for this facility, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

23.4.2.3 Treatment Facility Summary

Table 23.4-4 summarizes the capabilities of current and planned treatment facilities at PORTS. The table lists the physical form of both feed and treatment products, the current operating status of the plant, and whether the facility is intended for high-level, TRU, or low-level waste or a combination of these. This table indicates whether a facility is capable of treating remote-handled waste, as opposed to contact-handled waste only. The table also summarizes the relevant waste-acceptance parameters related to the chemical composition of the waste, such as the presence of transuranic isotopes, mercury, other toxic metals, and toxic organics. Parameters marked as acceptable are still subject to concentration limitations. For example, a facility may accept waste with uranium but only if the uranium is present below a certain concentration.

Table 23.4-3
Portsmouth Gaseous Diffusion Plant
Mixed Waste Treatment Facilities
Planned or Under Construction for Mixed Wastes

Facility/System	Treatment Type(s)	Allowable Waste		Ident. Of MW Streams To Be Treated	Design Capacity (m3/yr) **	Date Avail. For Treating MW **
		Radioactive Type(s) *	Physical/Chemical Matrix			
Waste Treatment Facility (1)	Incineration, Deactivation, Amalgamation, Stabilization, Neutralization	MLLW, CH	Various	To Be Determined	To Be Determined	Year To Be Determined
X-622T Groundwater Treatment Facility	Carbon Adsorption	MLLW, CH	Aqueous Liquids, Groundwater	2091	69,628.0	1993
X-623 Groundwater Treatment Facility	Carbon Adsorption	MLLW, CH	Groundwater, Aqueous Liquids	2091	99,470.0	1994

* ALPHA refers to transuranic alpha greater than 10 nCi/g

** Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

Note (1): Planned for FY97 line item.

Table 23.4-4
Portsmouth Gaseous Diffusion Plant
Current and Planned Facilities - Treatment Category
Mixed Waste Treatment Facilities

Facility/System	Operating Status *	Feed Types	Final Waste Form	HLW MTRU MLLW	Alpha **	RH CH	Hg	Other Toxic Metals	Toxic Organics
Waste Treatment Facility	Planned, Year To Be Determined	Various	Various	MLLW		CH	✓	✓	✓
X-622 Groundwater Treatment Facility	Operating	Groundwater, Aqueous Liquids	Groundwater , Filters, Carbon Sludge	MLLW		CH			✓
X-622T Groundwater Treatment Facility	Planned, 1993	Aqueous Liquids, Groundwater	To Be Determined	MLLW		CH			✓
X-623 Groundwater Treatment Facility	Planned, 1994	Groundwater, Aqueous Liquids	To Be Determined	MLLW		CH			✓
X-624 Groundwater Treatment Facility	Operating	Groundwater, Aqueous Liquids	Groundwater , Filters, Carbon Sludge	MLLW		CH			✓

* Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

** Transuranic alpha greater than 10 nCi/g.

Table 23.4-4 (continued)
Portsmouth Gaseous Diffusion Plant
Current and Planned Facilities - Treatment Category
Mixed Waste Treatment Facilities

Facility/System	Operating Status *	Feed Types	Final Waste Form	HLW MTRU MLLW	Alpha **	RH CH	Hg	Other Toxic Metals	Toxic Organics
X-701E Groundwater Treatment Facility	Operating	Groundwater, Aqueous Liquids	Groundwater , Filters, Carbon Sludge	MLLW		CH			✓
X-705 Decontamination Facility / Microfiltration	Operating	Aqueous Liquids & Slurries	Water Sludge	MLLW		CH		✓	
X-705 Decontamination Facility / Uranium Recovery System	Operating	Aqueous Liquids & Slurries	Organic Solvent, Heavy Metal Sludge, Ion Exchange Resin	MLLW		CH		✓	

* . Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

** Transuranic alpha greater than 10 nCi/g.

Approximately 3,150,000 kg of MLLW was treated at the X-705 Decontamination Facility during 1992 (Table 23.4-3). Total facility capacity is 3,150 m³; therefore, the system was operating at full capacity. Current stored inventory of wastes treated by the X-705 facility is about 61,000 kg and roughly 196,000 kg are predicted to be generated during the next 5 years (Table 23.4-1).

About 253,700 kg of organic liquid waste was sent to the K-25 Site TSCA incinerator in 1992. Current stored inventory of TSCA-designed waste is about 154,000 kg and the total generation over the next 5 years is predicted to be 272,000 kg. It is assumed the K-25 Site TSCA incinerator will meet future PORTS generation rates for organic liquids.

Between the X-705 Decontamination Facility, the carbon adsorption units, and the K-25 Site TSCA incinerator, PORTS can treat 24 of its current and future waste streams. However, at present, many waste streams are not treated since no treatment facility has been identified.

23.4.3 Technology Development

There are no PORTS mixed waste streams for which no treatment technology exists. There are no site-specific technology development activities for PORTS.

23.4.4 Environmental Restoration Program

The site contains a number of surface impoundments, landfills, spoils areas, and storage and treatment facilities that are contaminated with various radionuclides and hazardous chemicals. About 132 solid waste management units have been identified and are the primary targets of ongoing investigations. The major environmental problem at the site is groundwater contamination that resulted primarily from the leaching of solvents that were used for industrial metal-cleaning maintenance operations. Some chromium contamination has also resulted from past anticorrosive maintenance activities for the plant cooling water systems.

The DOE has entered into agreements with EPA and the State of Ohio to outline the cleanup process and identify the oversight responsibilities of each agency. The EPA Administrative Consent Order addresses compliance with RCRA and CERCLA, as amended. The State of Ohio Consent Decree is similar to the EPA agreement and addresses remedial action activities regarding the appropriate handling of solid, hazardous, and mixed waste and contaminated water.

Environmental restoration activities have been initiated at the Portsmouth site to assess and clean up environmental contamination and to perform decontamination and decommissioning (D&D) activities at inactive/surplus facilities. For planning purposes, the site has been divided into quadrants based on groundwater flow, and a separate RCRA Facility Investigation/Corrective Measures Study process is being followed for each. The RCRA Facility Investigation is prepared to define the contamination problems, and the Corrective Measures Study is developed to assess cost-effective cleanup alternatives. These studies are then followed by an implementation phase during which the appropriate cleanup measures will be conducted.

A number of cleanup measures are already under way or have been completed at specific contaminated areas, and several of these activities are expected to generate mixed waste. The activities include (1) removing sludge from lagoons and placing them in new monocells of an existing on-site landfill, with subsequent closure of the lagoons; (2) removing, treating, and boxing sludge from holding ponds and dewatering the ponds for subsequent closure; (3) constructing interceptor trenches, a slurry wall and

subsurface drains, and a temporary groundwater treatment facility; (4) treating at least 42,000 gallons of hazardous wastewater; (5) conducting a technology demonstration project for soil remediation at an oil biodegradation plot; and (6) removing 4 underground storage tanks and associated contaminated soil. All storage tanks are being brought up to current standards, including diking and soil cleanup in spill areas for aboveground tanks. Plans are under way for additional cleanup and closure activities at several landfills, storage facilities, and tanks. Upcoming plans include demolishing and removing equipment and plugging legacy wells, as well as constructing a mixed waste treatment facility. More information on contaminated media associated with environmental restoration is in Chapter 2.

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23.4-14

April 1993

WASTE

PROFILE

SHEETS

Portsmouth Gaseous Diffusion Plant

ROADMAP TO WASTE PROFILE SHEETS (WPS)

Waste Profile Sheets (WPS) have been compiled in this report for each of the mixed waste streams identified at the different DOE sites. Each WPS is a concise summary of the information required by the FFCAct-1992, with waste stream specific data primarily derived from the Waste Management Information System (WMIS) database. Each WPS consists of the following items:

Header: The information in the header in each WPS includes the State, the official name of the site, an identification number, an identifying waste stream name, the waste type, and the waste matrix. The identification number is either a number assigned by the WMIS database or a number assigned by the site. The waste stream name is a unique identifier which corresponds to the name used in the WMIS database, or is assigned by the site. The waste type is either HLW, MTRU, or MLLW. The waste matrix corresponds to the categories (or their further subdivisions) defined earlier based on the physical and chemical form of the waste.

Waste Stream Description and Source: This section of the WPS presents a short description of the source of the waste and the waste stream characteristics.

Inventory Table: The inventory table in each WPS reports the volume (m³) and/or mass (kg) of each waste stream currently in storage, and projected to be generated in the next five years. The table also indicates the date assumed in calculating the current and projected inventories. As required by the FFCAct-1992, the table also differentiates between waste not subject to LDR and that subject to LDR for the current inventory.

Treatability Group: This section lists the name of the treatability group to which the waste stream belongs.

Treatment Status, Technology Status: This section of the WPS lists the status of the technology that could be applied to the waste stream for compliance with the LDR. This section provides information on if the waste stream is currently being treated, and if technology options and facilities for the treatment exist.

Radiation Characteristics Section: This section of the WPS provides additional information on the radiological characteristics of the waste (in addition to characterizing the waste stream as HLW, MTRU, or MLLW). This section of the WPS specifies whether the waste stream is contact handled or remote handled, if the radionuclides are alpha or beta/gamma emitters, and if they contain activation products.

Radiation Effects Section: As required by the FFCAct-1992, this section of the WPS lists possible effects of the radiological characteristics of the waste stream on treatment technologies that could be applicable to that waste stream. For example, radiation levels may require remote handling of the waste and affect the design and operation of the treatment facility. The presence of volatile radionuclides may require the containment of all off-gases from the treatment system.

Waste Minimization Activities: As required by the FFCAct-1992, this section of the WPS provides information on the waste minimization practices being used for the waste stream. This section provides information on if the waste minimization practices include good operating practices, technology changes, raw material changes, product changes, etc.

EPA Code: This table of the WPS reports the EPA hazardous waste codes applicable to the waste stream, the basis for assigning the codes (process knowledge or sampling/analysis), the LDR basis (which is either technology based or concentration based), and the BDAT for each of the EPA hazardous waste codes.

In summary, the WPS for each waste stream, along with the site sections in the report for each State (Section B), summarize the site-specific information required by the FFCAct-1992.

State: Ohio Site: PORTSMOUTH GASEOUS DIFFUSION PLANT Waste Stream Name: TREATMENT FILTERS Matrix: Organic Debris	ID #: 31 Waste Type: MLLW
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Waste Stream Description and Source:

Waste is sediment on filters from carbon treatment units. The waste is generated during the treatment of groundwater. Filters are cloth-like bags used to remove soil, sediment, etc. from the water before passing it through carbon for organic removal.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	63,184.0	-	63,184.0	-	150,933.0

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

New innovative treatment technologies are being investigated for future remediation activities, including peroxidation and bioremediation. Air stripping prior to carbon adsorption is also being considered. This would prolong the life of the filters.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical,

State: Ohio

ID #: 31

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: TREATMENT FILTERS

Matrix: Organic Debris

Waste Type: MLLW

or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 35

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: VAPOR DEGREASER SLUDGE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

The waste was generated during a vapor degreaser operation. It is a spent halogenated solvent sludge.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	81.0	-	81.0	-	405.0

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.

An aggressive campaign is underway to eliminate the use of vapor degreasers at PORTS. Aqueous immersion cleaners and steam cleaners are being investigated as suitable alternative cleaning technology.

General Comments:

CODE BASIS: The TCLP results are pending. GENERAL COMMENT: Do not expect to generate too much in the future.

State: Ohio

ID #: 35

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: VAPOR DEGREASER SLUDGE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 172

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: GLASS BEADS

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is generated by glass-blasting of brass, bronze and babbitt components in the decontamination facility and in two maintenance shops. It consists of small beads of glass and the surface particles/residue. Surfaces could contain dirt, grease or metals (lead, cadmium).

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	3,122.5	-	3,122.5	-	6,032.0

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

Alternative blasting methods are being evaluated, such as CO2 cleaning.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization

State: Ohio	ID #: 175
Site: PORTSMOUTH GASEOUS DIFFUSION PLANT	
Waste Stream Name: LIGHT BULBS	
Matrix: Inorganic Debris	Waste Type: MLLW

Waste Stream Description and Source:

Spent fluorescent and incandescent light bulbs and spent metal-halide bulbs are generated site-wide.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	4,715.0	-	4,715.0	-	13,608.0

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Waste avoidance due to recycling/reuse: solvent, oil, and metals recycling; chemical exchange and reuse; and packaging material reuse.

The recycling of light bulbs that are not radiologically contaminated is being pursued. All necessary requirements to install a crusher are being investigated.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration

State: Ohio

ID #: 175

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: LIGHT BULBS

Matrix: Inorganic Debris

Waste Type: MLLW

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 176

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE METAL TURNINGS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

This waste is generated from machining operations of brass, bronze, and babbitt components in the X-710 Lab machine shop.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	828.0	-	828.0	-	1,136.0

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. Technology exists but no facility is available. Possible candidate for treatment at proposed Y-12 regional MW treatment facility for solid wastes.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Waste avoidance due to recycling/reuse: solvent, oil, and metals recycling; chemical exchange and reuse; and packaging material reuse.

Metal turnings that are not radiologically contaminated are segregated and collected as scrap metal.

State: Ohio

ID #: 176

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE METAL TURNINGS

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 183

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE HG, METALLIC

Matrix: Liquid Mercury

Waste Type: MLLW

Waste Stream Description and Source:

This stream is generated in the switchyards, cascade, cooling tower pumphouse, water treatment facility and the decontamination facility. Waste is elemental mercury from manometer cleaning or replacement.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	123.0	-	123.0	-	50.5

Treatability Group:

MLLW CH, Liquid Mercury, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

The recycling of mercury that is not radiologically contaminated is under investigation.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009D	Tech.	Amalgamation

State: Ohio

ID #: 185

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: MACHINE COOLANT/OIL

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

The waste is a water-based coolant used in the machine shop to cool grinders, lathes, etc. The coolant is mixed with the machinery's oil. Analysis has shown this mixture to contain lead and cadmium. Waste oil in the coolant may contain benzene.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	7,430.0	-	7,430.0	-	15,395.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility. Portions of this waste stream currently do not meet the K-25 Site TSCA Incinerator Waste Acceptance Criteria.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Waste avoidance due to recycling/reuse: solvent, oil, and metals recycling; chemical exchange and reuse; and packaging material reuse.

The use of a machine coolant recycling system is under investigation. The machine shop is scheduled to undergo a process waste assessment in the future.

State: Ohio	ID #: 185
Site: PORTSMOUTH GASEOUS DIFFUSION PLANT	
Waste Stream Name: MACHINE COOLANT/OIL	
Matrix: Organic Liquids	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 187

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: MOTOR CLEANING SOLUTIONS

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is an alkaline aqueous solution with traces of oil and metals. It is generated in the motor shop's cleaning and is stored in an 800 gallon, stainless steel container until it can be processed through the X-705 Microfiltration system. If the system is shut down the waste is stored in the X-7725 storage building. Sampling analysis indicated lead and cadmium. Based on process knowledge, the solution could contain grease, iron, copper, nickel, zinc, small amounts of oil, and chromium.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	0.000	-	0.000	-	51,261.0

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Currently being treated on-site at the X-705 Decontamination Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Waste avoidance due to recycling/reuse: solvent, oil, and metals recycling; chemical exchange and reuse; and packaging material reuse.

A wash water recycling system is being reviewed and tested for the motor shop steam cleaning system.

State: Ohio	ID #: 187
Site: PORTSMOUTH GASEOUS DIFFUSION PLANT	
Waste Stream Name: MOTOR CLEANING SOLUTIONS	
Matrix: Aqueous Liquid	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002B	Tech.	Deactivation
D006B	Conc.	Chemical Precipitation
D008B	Conc.	Chemical Precipitation

State: Ohio

ID #: 189

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: SPENT ALKALINE SOLUTIONS

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

This waste is generated in the X-700 and X-705 buildings from cleaning parts and removing grease, respectively. The solution is primarily sodium hydroxide.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	8,974.0	-	8,974.0	-	8,117.0

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Organics and Metals w/o Mercury

Treatment Status:

Currently being treated on-site at the X-705 Decontamination Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

The cleaning operations will undergo a process waste assessment in the future.

State: Ohio

ID #: 189

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: SPENT ALKALINE SOLUTIONS

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002B	Tech.	Deactivation
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.

State: Ohio	ID #: 192
Site: PORTSMOUTH GASEOUS DIFFUSION PLANT	
Waste Stream Name: NICKEL STRIPPING SOLUTION	
Matrix: Aqueous Liquid	Waste Type: MLLW

Waste Stream Description and Source:

This waste is generated from a Nickel Stripping operation in the X-700 Bldg. Nitric Acid is used to strip nickel from the surface of nickel-plated steel parts.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	399.0	-	399.0	-	1,196.0

Treatability Group:

MLLW CH, Aqueous Liquid, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Plan to treat on-site at the existing X-705 Decontamination Facility.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

This system is scheduled to undergo a process waste assessment in the future.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002A	Tech.	Deactivation

State: Ohio	ID #: 193
Site: PORTSMOUTH GASEOUS DIFFUSION PLANT	
Waste Stream Name: PLATING SOLUTION	
Matrix: Aqueous Liquid	Waste Type: MLLW

Waste Stream Description and Source:

Waste stream is generated from a electroless nickel plating operation. Nickel plating is used for corrosion prevention purposes.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	667.0	-	667.0	-	1,191.0

Treatability Group:

MLLW CH, Aqueous Liquid, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Plan to treat on-site at the existing X-705 Decontamination Facility.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

A system to recover the nickel plating solution being developed by the K-25 site in Oak Ridge, Tennessee, is being investigated for use at Portsmouth.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002A	Tech.	Deactivation

State: Ohio

ID #: 194

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: U RECOVERY SOLVENT WASTE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is generated from the X-705 uranium recovery process. Uranium is recovered from a nitrated solution by liquid extraction. The solvent phase of this process is made up of tri-butyl phosphate and mineral spirits or Stoddard Solvent.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	1,067.0	-	1,067.0	-	953.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Metals w/ Mercury

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility. Portions of the K-25 Site waste stream currently do not meet the K-25 Site TSCA Incinerator Waste Acceptance Criteria.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

This system is scheduled to undergo a process waste assessment in the future.

State: Ohio

ID #: 194

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: U RECOVERY SOLVENT WASTE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
D002A	Tech.	Deactivation
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization
D009B	Tech.	Mercury Roast/Retort

State: Ohio

ID #: 196

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: CHROMIC ACID TANK CLOSURE WASTE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Waste will be generated from the closure of Tank #7 in the X-700 converter maintenance and chemical cleaning building. Past operations performed in this tank included bright dipping of aluminum parts. A variety of sludges will be generated in closure activities. This waste is characterized based on process knowledge as wastewater treatment sludge from an electroplating process (F006) that may contain As (D004), Ba (D005) Cd (D006B).

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	126.0	-	126.0	-	32,885.0

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. Being neutralized during closure activity.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

Waste minimization was addressed in the planning stage.

State: Ohio	ID #: 196
Site: PORTSMOUTH GASEOUS DIFFUSION PLANT	
Waste Stream Name: CHROMIC ACID TANK CLOSURE WASTE	
Matrix: Inorganic Sludges/Particulates	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
F006	Conc.	Alkaline Chlorination followed by Chemical Precipitation; and Stabilization; or Incineration; or High Temperature Metals Recovery

State: Ohio

ID #: 197

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE CYANIDE PLATING SOLUTIONS

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

The waste was generated in the Instrument Shop's plating process. The waste plating solutions from the cyanide process are characterized through process knowledge and MSDS information. Solutions contain sodium cyanide, silver cyanide, and potassium cyanide. Although the plating process operations have ceased, the area is still being cleaned. Therefore, waste is being generated.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	80.0	-	80.0	-	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

Will no longer be generated once decontamination and decommissioning are completed.

State: Ohio

ID #: 197

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE CYANIDE PLATING SOLUTIONS

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D003A	Conc.	Chemical Oxidation followed by Alkaline Chlorination
D007	Conc.	Chemical Reduction followed by Stabilization
D011	Conc.	Stabilization
F007	Conc.	Alkaline Chlorination followed by Chemical Precipitation; and Stabilization

State: Ohio

ID #: 485

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: HEAVY METAL SLUDGE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is generated in the X-705 uranium recovery facility. The recovery process uses acid and alkaline solutions. The solutions are processed through a liquid-liquid extraction system to recover the uranium as an oxide. Raffinate from the extraction columns is processed through a filter to remove precipitated heavy metals. Based on process knowledge, the sludge may also contain lead and mercury.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	99,026.0	-	99,026.0	-	56,692.0

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

This system is scheduled to undergo a process waste assessment in the future.

State: Ohio

ID #: 485

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: HEAVY METAL SLUDGE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization
D009B	Tech.	Mercury Roast/Retort

State: Ohio

ID #: 758

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: MICROFILTRATION SLUDGE AND FILTERS

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

This waste is generated in the X-705 facility. Solutions containing low U concentrations are processed through a microfiltration unit to remove precipitated metals. The process produces this waste stream and water that is discharged to an NPDES outfall.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	48,705.0	-	48,705.0	-	60,468.0

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

This system is scheduled to undergo a process waste assessment in the future.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization

State: Ohio

ID #: 759

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: PAINTS AND THINNERS

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

The waste stream is produced in the paint shop. The shop uses mineral spirits, lacquers, and/or solvent-containing thinners.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	31,822.0	-	31,822.0	-	23,502.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility. Portions of this waste stream currently do not meet the K-25 Site TSCA Incinerator Waste Acceptance Criteria.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.

The paint shop is in the process of converting its inventory to latex based paints. This would eliminate the use of RCRA hazardous solvents, used as thinners, in most painting applications.

State: Ohio

ID #: 759

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: PAINTS AND THINNERS

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D035		Not currently prohibited under the LDR Program.
F002	Conc.	Incineration
F003	Conc.	Incineration
F005A	Conc.	Incineration

State: Ohio

ID #: 829

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: ION EXCHANGE RESIN

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is generated in the X-705 decontamination facility during the U recovery process. The filtrate from the heavy metal filtration process is passed through ion exchange columns to remove technetium. Hydroxyl form anionic resin is used to capture the technetium. Based on analysis, the resin is characterized as hazardous due to the presence of mercury.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	14,309.0	-	14,309.0	-	18,779.0

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

This system is scheduled to undergo a process waste assessment in the future.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009B	Tech.	Mercury Roast/Retort

State: Ohio

ID #: 2068

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE OIL

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

This waste is waste oil from process systems and motor vehicles that operate in process buildings.

The waste stream can contain solvents as well as metals.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	71,309.0	-	71,309.0	-	180,565.5

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/ Mercury

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility. Portions of this waste stream currently do not meet the K-25 Site Incinerator Waste Acceptance Criteria.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

The recycling of oil both on and off-site is under investigation. The X-750 Garage is reviewing information on an oil to diesel fuel blending unit.

State: Ohio

ID #: 2068

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE OIL

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D018		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F003	Conc.	Incineration
F004	Conc.	Incineration
F005A	Conc.	Incineration

State: Ohio

ID #: 0000002069

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: LEAD SOLIDS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is generated from spills, relief valve testing, routine maintenance in the switchyards, dismantling operation using a radio frequency heater. The waste stream contains lead seals, cables, scrap metal and soils.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	9,391.0	-	9,391.0	-	9,408.0

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

Lead which contains no added radioactivity is being collected as scrap metal.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000002070

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: FLUORINE GENERATOR SCRAP AND DEBRIS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Fluorine is generated on-site for process applications by an electrolytic process using potassium fluoride and hydrogen fluoride. When the solution is spent, the sludge and liquid are removed from the generator cell. If necessary, the interior metallic parts and carbon blades are removed and become waste generator scrap. PPE, gloves, rags and other debris are also generated by this activity. Waste fluorine generator scrap and debris are characterized as hazardous based on analysis that found them to contain arsenic.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	2,972.0	-	2,972.0	-	1,798.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

This system will undergo a process waste assessment in the future.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the

State: Ohio

ID #: 0000002070

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: FLUORINE GENERATOR SCRAP AND DEBRIS

Matrix: Heterogeneous Debris

Waste Type: MLLW

following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000002071

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE DECONTAMINATION SOLIDS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

This waste is generated from decontamination operations performed on process equipment. The process equipment is decontaminated before it is repaired (remove U) and after it is repaired (remove contaminants that would react with the diffusion process). Halogenated hydrocarbons are used for the second decontamination operation because of their compatibility with the diffusion process equipment. The decontamination operations generate various waste solids including sludges and other solids removed from process equipment. These solids are characterized as hazardous wastes because analysis found that the waste solids contain cadmium (D006B); based on process knowledge, the waste solids may contain arsenic (D004), barium (D005), chromium (D007), lead (D008B), mercury (D009D), selenium (D010), silver (D011), methyl ethyl ketone (D035) and trichloroethylene (D040). The sludges may contain trichloroethylene, 1,1,1-trichloroethane, refrigerant 113, xylene, acetone, mek and toluene. Also included are rags, gloves, towels, shoes and sponges. The waste code is D008B.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	4,625.0	-	4,625.0	-	1,178.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.

Many cleaning techniques have been modified and solvents substituted to allow for a reduction in the generation of rags, gloves, wipes, sludges and other solids.

State: Ohio

ID #: 0000002071

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE DECONTAMINATION SOLIDS

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D010	Conc.	Stabilization
D011	Conc.	Stabilization
D035		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration
F005A	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000002072

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: RCW/RHW SYSTEM WASTE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

The recirculating cooling water (RCW)/recirculating heating water (RHW) system waste results from the substitution of a phosphate-based corrosion inhibitor for a chromate-based inhibitor, and spills.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	7,331.0	-	7,331.0	-	6,804.0

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.

Due to the conversion of the system to the non-hazardous inhibitor, the chromate residue should decrease.

General Comments:

Code Basis: high confidence.

State: Ohio

ID #: 0000002072

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: RCW/RHW SYSTEM WASTE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

State: Ohio

ID #: 0000002073

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: FLOOR SWEEPINGS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Floor sweepings are generated by housekeeping activities in all of the process-related buildings. Based on analytical results, these sweepings are characterized as hazardous wastes because they contain Cd (D006B), Cr (D007), Pb (D008B) and/or Se (D010). Metals found in floor sweepings are from maintenance or machining activities. The source for Se is unknown. The waste stream can contain floor sweepings mixed in gloves and mop heads. It can contain PCB's.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	58,351.5	-	58,351.5	-	97,069.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

The sawdust and oil floor sweeping compound has been eliminated with a procedural modification.

State: Ohio

ID #: 0000002073

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: FLOOR SWEEPINGS

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D010	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000002074

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: HEPA FILTERS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

The waste stream is generated by removing the HEPA filters from mercury vacuum cleaners. The vacuum cleaners are used by the field cleaning crew to collect spills of mercury. HEPA filters are contaminated with mercury.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	126.0	-	126.0	-	32,885.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

The recycling of mercury that is not radiologically contaminated is under investigation.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009B	Tech.	Mercury Roast/Retort

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000002076

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: METAL SHAVINGS AND SCRAP

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

This waste is generated in the maintenance shops (compressor, machine and valve). The wastes in this group are known on the Part B permit as brass, waste brass turnings and metal shavings and scrap. The waste is characterized as hazardous based on lab analysis, process knowledge and MSDS.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	29,826.5	-	29,826.5	-	18,088.0

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

Metal shavings and scrap that are not radiologically contaminated are segregated and collected as scrap metal.

State: Ohio

ID #: 0000002076

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: METAL SHAVINGS AND SCRAP

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000002077

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: X-705A INCINERATOR ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

The ash and debris were generated in the closure of the X-705 Incinerator. The ash waste is derived from spent trichloroethylene and is characterized, through process knowledge, as a spent solvent hazardous waste that may contain various toxicity characteristic metals (arsenic, barium, cadmium, chromium, lead, selenium, and silver.)

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	466.0	-	466.0	-	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Not Applicable.

State: Ohio

ID #: 0000002077

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: X-705A INCINERATOR ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D010	Conc.	Stabilization
D011	Conc.	Stabilization
F001	Conc.	Incineration

State: Ohio

ID #: 0000002078

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: LAB WASTE

Matrix: Multiple

Waste Type: MLLW

Waste Stream Description and Source:

The waste is generated in the X-705 Building. The process laboratory supports the decontamination building operation by providing uranium analysis at several different stages of the uranium recovery process. This waste is generated from the current U shake-out procedure and an experimental shake-out procedure. The waste from the past U shake-out procedure is being managed as an acidic waste. This waste stream includes aqueous liquid, and organic liquids.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	1,184.0	-	1,184.0	-	4,910.0

Treatability Group:

MLLW CH, Multiple, Toxic Organics

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility. Portions of this waste stream currently do not meet the K-25 Site TSCA Incinerator Waste Acceptance Criteria.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

The X-705 Building is scheduled to undergo a process waste assessment in the future.

General Comments:

Category includes both aqueous and organic liquids.

State: Ohio	ID #: 0000002078
Site: PORTSMOUTH GASEOUS DIFFUSION PLANT	
Waste Stream Name: LAB WASTE	
Matrix: Multiple	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
D002A	Tech.	Deactivation
F003	Conc.	Incineration

State: Ohio

ID #: 0000002080

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE ANTIFREEZE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

This is a site-wide waste stream generated during routine and preventive maintenance operations.

The waste stream is also known as "Antifreeze".

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	8,787.0	-	8,787.0	-	10,054.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the planned X-705 Decontamination Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

The recycling of antifreeze that is not radiologically contaminated is under investigation.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D010	Conc.	Stabilization

State: Ohio

ID #: 0000002081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: USED LAB CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is generated site-wide. Laboratory activities are conducted in various locations. The chemicals are routinely depleted but process changes and shelf-life cause them to be wastes. Some are treated at the K-25 Incinerator. This particular waste stream is multi-EPA coded. The Lab Acid Pit waste stream is included (D007, D040, F001, F003). Other waste streams are waste chloradane and formaldehyde.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	340.0	-	340.0	-	900.0

Treatability Group:

MLLW CH, Lab Packs with Metals, Toxic Organics and Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. Some chemicals are being treated at the K-25 Site TSCA Incinerator and the X-705 Microfiltration Facility, as appropriate.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

These labs are scheduled to undergo a process waste assessment in the future.

General Comments:

TREATMENT: Some of the chemicals, based on assay, can go to TSCA Incinerator and X-705 Bldg. CODE BASIS: Medium high confidence level based on MSDS and process knowledge. Waste Code U219 (Thiourea) was not on the EPA Table.

State: Ohio

ID #: 0000002081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: USED LAB CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D002A	Tech.	Deactivation
D003A	Conc.	Chemical Oxidation followed by Alkaline Chlorination
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009D	Tech.	Amalgamation
D010	Conc.	Stabilization
D011	Conc.	Stabilization
D012	Conc.	Incineration
D013	Conc.	Incineration
D014	Conc.	Incineration
D015	Conc.	Incineration
D016	Conc.	Incineration
D017	Conc.	Incineration
D018		Not currently prohibited under the LDR Program.
D019		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000002081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: USED LAB CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D020		Not currently prohibited under the LDR Program.
D021		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.
D023		Not currently prohibited under the LDR Program.
D024		Not currently prohibited under the LDR Program.
D025		Not currently prohibited under the LDR Program.
D026		Not currently prohibited under the LDR Program.
D027		Not currently prohibited under the LDR Program.
D028		Not currently prohibited under the LDR Program.
D029		Not currently prohibited under the LDR Program.
D030		Not currently prohibited under the LDR Program.
D031		Not currently prohibited under the LDR Program.
D032		Not currently prohibited under the LDR Program.
D033		Not currently prohibited under the LDR Program.
D034		Not currently prohibited under the LDR Program.
D035		Not currently prohibited under the LDR Program.
D036		Not currently prohibited under the LDR Program.
D037		Not currently prohibited under the LDR Program.
D038		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
D041		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000002081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: USED LAB CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D042		Not currently prohibited under the LDR Program.
D043		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration
F003	Conc.	Incineration
F027	Conc.	Incineration
P001	Tech.	Fuel Substitution; or Incineration
P003	Tech.	Fuel Substitution; or Incineration
P004	Conc.	Incineration
P005	Tech.	Fuel Substitution; or Incineration
P008	Tech.	Incineration
P010	Conc.	Vitrification
P011	Conc.	Vitrification
P012	Conc.	Vitrification
P013	Conc.	Electrolytic Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation; and Stabilization
P015	Tech.	Metals Recovery; or Thermal Recovery of Metals
P016	Tech.	Incineration
P018	Tech.	Incineration
P020	Conc.	Incineration
P021	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P022	Tech.	Incineration

State: Ohio

ID #: 0000002081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: USED LAB CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
P023	Tech.	Incineration
P024	Conc.	Incineration
P028	Tech.	Incineration
P029	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P030	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P031	Tech.	Chemical Oxidation; Wet Air Oxidation; OR Incineration
P033	Tech.	Chemical Oxidation; Wet Air Oxidation; OR Incineration
P037	Conc.	Incineration
P038	Conc.	Vitrification
P041	Tech.	Fuel Substitution; or Incineration
P042	Tech.	Incineration
P046	Tech.	Incineration
P047	Conc.	Incineration
P048	Conc.	Incineration
P050	Conc.	Incineration
P051	Conc.	Incineration
P056	Tech.	Adsorption followed by Neutralization
P058	Tech.	Incineration
P059	Conc.	Incineration
P060	Conc.	Incineration

State: Ohio

ID #: 0000002081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: USED LAB CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
P063	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P064	Tech.	Incineration
P068	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
P070	Tech.	Incineration
P071	Conc.	Incineration
P072	Tech.	Incineration
P074	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation followed by Stabilization
P075	Tech.	Incineration
P076	Tech.	Adsorption
P077	Conc.	Incineration
P078	Tech.	Adsorption
P082	Tech.	Incineration
P087	Tech.	Metals Recovery; or Thermal Recovery of Metals
P089	Conc.	Incineration
P093	Tech.	Incineration
P095	Tech.	Incineration
P098	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P099	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation followed by Stabilization
P104	Conc.	Chemical Oxidation followed by Alkaline

State: Ohio

ID #: 0000002081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: USED LAB CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
		Chlorination followed by Chemical Precipitation followed by Stabilization
P105	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
P106	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P108	Tech.	Incineration
P110	Conc.	Incineration followed by Stabilization
P111	Tech.	Incineration
P113	Tech.	Thermal Recovery of Metals; or Stabilization
P114	Conc.	Stabilization
P115	Tech.	Thermal Recovery of Metals ;or Stabilization
P116	Tech.	Incineration
P119	Tech.	Stabilization
P120	Tech.	Stabilization
P121	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P123	Conc.	Incineration
U001	Tech.	Incineration or Fuel Substitution
U002	Conc.	Incineration
U003	Tech.	Incineration
U004	Conc.	Incineration
U006	Tech.	Incineration
U007	Tech.	Incineration

State: Ohio

ID #: 0000002081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: USED LAB CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U008	Tech.	Fuel Substitution; or Incineration
U009	Conc.	Incineration
U012	Conc.	Incineration
U017	Tech.	Incineration
U018	Conc.	Incineration
U019	Conc.	Incineration
U020	Tech.	Incineration
U021	Tech.	Incineration
U022	Conc.	Incineration
U023	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U026	Tech.	Incineration
U028	Conc.	Incineration
U029	Conc.	Incineration
U030	Conc.	Incineration
U031	Conc.	Incineration
U032	Conc.	Chemical Reduction followed by Chemical Precipitation
U033	Tech.	Incineration
U034	Tech.	Incineration
U036	Conc.	Incineration
U037	Conc.	Incineration
U039	Conc.	Incineration

State: Ohio

ID #: 0000002081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: USED LAB CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U041	Tech.	Incineration
U042	Tech.	Incineration
U043	Conc.	Incineration
U044	Conc.	Incineration
U045	Conc.	Incineration
U046	Tech.	Incineration
U047	Conc.	Incineration
U048	Conc.	Incineration
U050	Conc.	Incineration
U051	Conc.	Incineration
U052	Conc.	Incineration
U055	Tech.	Fuel Substitution; or Incineration
U056	Tech.	Fuel Substitution; or Incineration
U057	Tech.	Fuel Substitution; or Incineration
U060	Conc.	Incineration
U061	Conc.	Incineration
U063	Conc.	Incineration
U064	Tech.	Fuel Substitution; or Incineration
U066	Conc.	Incineration
U067	Conc.	Incineration
U068	Conc.	Incineration
U069	Conc.	Incineration

State: Ohio

ID #: 0000002081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: USED LAB CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U070	Conc.	Incineration
U071	Conc.	Incineration
U072	Conc.	Incineration
U073	Tech.	Incineration
U074	Tech.	Incineration
U075	Conc.	Incineration
U076	Conc.	Incineration
U077	Conc.	Incineration
U078	Conc.	Incineration
U079	Conc.	Incineration
U080	Conc.	Incineration
U081	Conc.	Incineration
U082	Conc.	Incineration
U083	Conc.	Incineration
U084	Conc.	Incineration
U086	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U088	Conc.	Incineration
U092	Tech.	Incineration
U094	Tech.	Fuel Substitution; or Incineration
U096	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U101	Conc.	Incineration

State: Ohio

ID #: 0000002081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: USED LAB CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U102	Conc.	Incineration
U105	Conc.	Incineration
U106	Conc.	Incineration
U107	Conc.	Incineration
U108	Conc.	Incineration
U109	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U110	Tech.	Incineration
U112	Conc.	Incineration
U113	Tech.	Fuel Substitution; or Incineration
U117	Conc.	Incineration
U118	Conc.	Incineration
U120	Conc.	Incineration
U121	Conc.	Incineration
U122	Tech.	Fuel Substitution; or Incineration
U123	Tech.	Fuel Substitution; or Incineration
U126	Tech.	Fuel Substitution; or Incineration
U127	Conc.	Incineration
U128	Conc.	Incineration
U129	Conc.	Incineration
U130	Conc.	Incineration
U131	Conc.	Incineration
U133	Tech.	Fuel Substitution; Chemical Oxidation; Chemical

State: Ohio

ID #: 0000002081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: USED LAB CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
		Reduction; or Incineration
U134	Tech.	Adsorption followed by Neutralization; or Neutralization
U135	Tech.	Chemical Oxidation; Chemical Reduction; or Incineration
U137	Conc.	Incineration
U138	Conc.	Incineration
U140	Conc.	Incineration
U141	Conc.	Incineration
U142	Conc.	Stabilization; or Incineration
U144	Conc.	Incineration followed by Stabilization
U145	Conc.	Stabilization
U146	Conc.	Incineration followed by Stabilization
U147	Tech.	Fuel Substitution; or Incineration
U149	Tech.	Incineration
U150	Tech.	Incineration
U151	Tech.	Amalgamation
U152	Conc.	Incineration
U153	Tech.	Incineration
U154	Tech.	Fuel Substitution; or Incineration
U159	Conc.	Incineration
U160	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U161	Conc.	Incineration

State: Ohio

ID #: 0000002081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: USED LAB CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U162	Conc.	Incineration
U165	Conc.	Incineration
U169	Conc.	Incineration
U170	Conc.	Incineration
U171	Tech.	Incineration
U182	Tech.	Fuel Substitution; or Incineration
U183	Conc.	Incineration
U184	Tech.	Incineration
U185	Conc.	Incineration
U188	Conc.	Incineration
U190	Conc.	Incineration; or Fuel Substitution
U196	Conc.	Incineration
U197	Tech.	Fuel Substitution; or Incineration
U201	Tech.	Fuel Substitution; or Incineration
U202	Tech.	Incineration
U204	Conc.	Stabilization
U205	Conc.	Stabilization
U207	Conc.	Incineration
U208	Conc.	Incineration
U209	Conc.	Incineration
U210	Conc.	Incineration
U211	Conc.	Incineration

State: Ohio

ID #: 0000002081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: USED LAB CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U213	Tech.	Fuel Substitution; or Incineration
U214	Tech.	Thermal Recovery of Metals; or Stabilization
U215	Tech.	Thermal Recovery of Metals; or Stabilization
U216	Tech.	Thermal Recovery of Metals; or Stabilization
U217	Tech.	Thermal Recovery of Metals; or Stabilization
U218	Tech.	Incineration
U219	Tech.	Incineration
U220	Conc.	Incineration
U223	Tech.	Fuel Substitution; or Incineration
U225	Conc.	Incineration
U226	Conc.	Incineration
U227	Conc.	Incineration
U228	Conc.	Incineration
U234	Tech.	Incineration
U235	Conc.	Incineration
U236	Tech.	Incineration
U238	Tech.	Incineration
U239	Conc.	Incineration
U240	Tech.	Incineration
U243	Conc.	Incineration
U246	Tech.	Chemical Oxidation; Wet Air Oxidation; or Incineration
U247	Conc.	Incineration

State: Ohio	ID #: 0000002081
Site: PORTSMOUTH GASEOUS DIFFUSION PLANT	
Waste Stream Name: USED LAB CHEMICALS	
Matrix: Lab Packs with Metals	Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U248	Tech.	Fuel Substitution; or Incineration
U328	Tech.	Incineration; or Thermal Destruction
U353	Tech.	Incineration; or Thermal Destruction
U359	Tech.	Incineration; or Fuel Substitution

The alternate LDR treatment standards for labpacks is incineration as a method of treatment and a requirement for the incinerator residues to meet the treatment standards for the TC toxic metals (i.e., D004-D008, and D010-D011).

State: Ohio

ID #: 0000002082

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: UNUSED LABORATORY CHEMICALS (SOLID)

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Stream Description and Source:

Due to the nature of the laboratory activities conducted in various locations at PORTS, a large number of small containers of chemicals are required for testing and formulation. These chemicals are routinely depleted, but occasionally they must be considered waste due to process changes or to chemicals being stocked past their shelf lives. Waste unused laboratory chemicals are characterized as hazardous wastes through process knowledge according to the nature of the constituents identified on the containers or MSDS's.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	2,477.0	-	2,477.0	-	909.0

Treatability Group:

MLLW CH, Lab Packs with Metals, Toxic Organics and Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

A request has been made to obtain a minimum sampling size requirement for each individual analysis from the lab. Waste Code U219 (Thiourea) is not in the EPA Table.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D002A	Tech.	Deactivation

State: Ohio

ID #: 0000002082

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: UNUSED LABORATORY CHEMICALS (SOLID)

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D003A	Conc.	Chemical Oxidation followed by Alkaline Chlorination
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009D	Tech.	Amalgamation
D010	Conc.	Stabilization
D011	Conc.	Stabilization
D012	Conc.	Incineration
D013	Conc.	Incineration
D014	Conc.	Incineration
D015	Conc.	Incineration
D016	Conc.	Incineration
D017	Conc.	Incineration
D018		Not currently prohibited under the LDR Program.
D019		Not currently prohibited under the LDR Program.
D020		Not currently prohibited under the LDR Program.
D021		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.
D023		Not currently prohibited under the LDR Program.
D024		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000002082

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: UNUSED LABORATORY CHEMICALS (SOLID)

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D025		Not currently prohibited under the LDR Program.
D026		Not currently prohibited under the LDR Program.
D027		Not currently prohibited under the LDR Program.
D028		Not currently prohibited under the LDR Program.
D029		Not currently prohibited under the LDR Program.
D030		Not currently prohibited under the LDR Program.
D031		Not currently prohibited under the LDR Program.
D032		Not currently prohibited under the LDR Program.
D033		Not currently prohibited under the LDR Program.
D034		Not currently prohibited under the LDR Program.
D035		Not currently prohibited under the LDR Program.
D036		Not currently prohibited under the LDR Program.
D037		Not currently prohibited under the LDR Program.
D038		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
D041		Not currently prohibited under the LDR Program.
D042		Not currently prohibited under the LDR Program.
D043		Not currently prohibited under the LDR Program.
F027	Conc.	Incineration
P001	Tech.	Fuel Substitution; or Incineration
P003	Tech.	Fuel Substitution; or Incineration

State: Ohio

ID #: 0000002082

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: UNUSED LABORATORY CHEMICALS (SOLID)

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
P004	Conc.	Incineration
P005	Tech.	Fuel Substitution; or Incineration
P008	Tech.	Incineration
P010	Conc.	Vitrification
P011	Conc.	Vitrification
P012	Conc.	Vitrification
P013	Conc.	Electrolytic Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation; and Stabilization
P015	Tech.	Metals Recovery; or Thermal Recovery of Metals
P016	Tech.	Incineration
P018	Tech.	Incineration
P020	Conc.	Incineration
P021	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P022	Tech.	Incineration
P023	Tech.	Incineration
P024	Conc.	Incineration
P028	Tech.	Incineration
P029	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P030	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P031	Tech.	Chemical Oxidation; Wet Air Oxidation; OR Incineration

State: Ohio

ID #: 0000002082

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: UNUSED LABORATORY CHEMICALS (SOLID)

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
P033	Tech.	Chemical Oxidation; Wet Air Oxidation; OR Incineration
P037	Conc.	Incineration
P038	Conc.	Vitrification
P041	Tech.	Fuel Substitution; or Incineration
P042	Tech.	Incineration
P046	Tech.	Incineration
P047	Conc.	Incineration
P048	Conc.	Incineration
P050	Conc.	Incineration
P051	Conc.	Incineration
P056	Tech.	Adsorption followed by Neutralization
P058	Tech.	Incineration
P059	Conc.	Incineration
P060	Conc.	Incineration
P063	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P064	Tech.	Incineration
P068	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
P070	Tech.	Incineration
P071	Conc.	Incineration
P072	Tech.	Incineration
P074	Conc.	Chemical Oxidation followed by Alkaline

State: Ohio

ID #: 0000002082

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: UNUSED LABORATORY CHEMICALS (SOLID)

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
		Chlorination followed by Chemical Precipitation followed by Stabilization
P075	Tech.	Incineration
P076	Tech.	Adsorption
P077	Conc.	Incineration
P078	Tech.	Adsorption
P082	Tech.	Incineration
P087	Tech.	Metals Recovery; or Thermal Recovery of Metals
P089	Conc.	Incineration
P093	Tech.	Incineration
P095	Tech.	Incineration
P098	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P099	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation followed by Stabilization
P104	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation followed by Stabilization
P105	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
P106	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P108	Tech.	Incineration
P110	Conc.	Incineration followed by Stabilization
P111	Tech.	Incineration

State: Ohio

ID #: 0000002082

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: UNUSED LABORATORY CHEMICALS (SOLID)

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
P113	Tech.	Thermal Recovery of Metals; or Stabilization
P114	Conc.	Stabilization
P115	Tech.	Thermal Recovery of Metals ;or Stabilization
P116	Tech.	Incineration
P119	Tech.	Stabilization
P120	Tech.	Stabilization
P121	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P123	Conc.	Incineration
U001	Tech.	Incineration or Fuel Substitution
U002	Conc.	Incineration
U003	Tech.	Incineration
U004	Conc.	Incineration
U006	Tech.	Incineration
U007	Tech.	Incineration
U008	Tech.	Fuel Substitution; or Incineration
U009	Conc.	Incineration
U012	Conc.	Incineration
U017	Tech.	Incineration
U018	Conc.	Incineration
U019	Conc.	Incineration
U020	Tech.	Incineration
U021	Tech.	Incineration

State: Ohio

ID #: 0000002082

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: UNUSED LABORATORY CHEMICALS (SOLID)

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U022	Conc.	Incineration
U023	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U026	Tech.	Incineration
U028	Conc.	Incineration
U029	Conc.	Incineration
U030	Conc.	Incineration
U031	Conc.	Incineration
U032	Conc.	Chemical Reduction followed by Chemical Precipitation
U033	Tech.	Incineration
U034	Tech.	Incineration
U036	Conc.	Incineration
U037	Conc.	Incineration
U039	Conc.	Incineration
U041	Tech.	Incineration
U042	Tech.	Incineration
U043	Conc.	Incineration
U044	Conc.	Incineration
U045	Conc.	Incineration
U046	Tech.	Incineration
U047	Conc.	Incineration
U048	Conc.	Incineration

State: Ohio

ID #: 0000002082

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: UNUSED LABORATORY CHEMICALS (SOLID)

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U050	Conc.	Incineration
U051	Conc.	Incineration
U052	Conc.	Incineration
U055	Tech.	Fuel Substitution; or Incineration
U056	Tech.	Fuel Substitution; or Incineration
U057	Tech.	Fuel Substitution; or Incineration
U060	Conc.	Incineration
U061	Conc.	Incineration
U063	Conc.	Incineration
U064	Tech.	Fuel Substitution; or Incineration
U066	Conc.	Incineration
U067	Conc.	Incineration
U068	Conc.	Incineration
U069	Conc.	Incineration
U070	Conc.	Incineration
U071	Conc.	Incineration
U072	Conc.	Incineration
U073	Tech.	Incineration
U074	Tech.	Incineration
U075	Conc.	Incineration
U076	Conc.	Incineration
U077	Conc.	Incineration

State: Ohio

ID #: 0000002082

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: UNUSED LABORATORY CHEMICALS (SOLID)

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U078	Conc.	Incineration
U079	Conc.	Incineration
U080	Conc.	Incineration
U081	Conc.	Incineration
U082	Conc.	Incineration
U083	Conc.	Incineration
U084	Conc.	Incineration
U086	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U088	Conc.	Incineration
U092	Tech.	Incineration
U094	Tech.	Fuel Substitution; or Incineration
U096	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U101	Conc.	Incineration
U102	Conc.	Incineration
U105	Conc.	Incineration
U106	Conc.	Incineration
U107	Conc.	Incineration
U108	Conc.	Incineration
U109	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U110	Tech.	Incineration
U112	Conc.	Incineration

State: Ohio

ID #: 0000002082

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: UNUSED LABORATORY CHEMICALS (SOLID)

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U113	Tech.	Fuel Substitution; or Incineration
U117	Conc.	Incineration
U118	Conc.	Incineration
U120	Conc.	Incineration
U121	Conc.	Incineration
U122	Tech.	Fuel Substitution; or Incineration
U123	Tech.	Fuel Substitution; or Incineration
U126	Tech.	Fuel Substitution; or Incineration
U127	Conc.	Incineration
U128	Conc.	Incineration
U129	Conc.	Incineration
U130	Conc.	Incineration
U131	Conc.	Incineration
U133	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U134	Tech.	Adsorption followed by Neutralization; or Neutralization
U135	Tech.	Chemical Oxidation; Chemical Reduction; or Incineration
U137	Conc.	Incineration
U138	Conc.	Incineration
U140	Conc.	Incineration
U141	Conc.	Incineration
U142	Conc.	Stabilization; or Incineration

State: Ohio

ID #: 0000002082

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: UNUSED LABORATORY CHEMICALS (SOLID)

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U144	Conc.	Incineration followed by Stabilization
U145	Conc.	Stabilization
U146	Conc.	Incineration followed by Stabilization
U147	Tech.	Fuel Substitution; or Incineration
U149	Tech.	Incineration
U150	Tech.	Incineration
U151	Tech.	Amalgamation
U152	Conc.	Incineration
U153	Tech.	Incineration
U154	Tech.	Fuel Substitution; or Incineration
U159	Conc.	Incineration
U160	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U161	Conc.	Incineration
U162	Conc.	Incineration
U165	Conc.	Incineration
U169	Conc.	Incineration
U170	Conc.	Incineration
U171	Tech.	Incineration
U182	Tech.	Fuel Substitution; or Incineration
U183	Conc.	Incineration
U184	Tech.	Incineration
U185	Conc.	Incineration

State: Ohio

ID #: 0000002082

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: UNUSED LABORATORY CHEMICALS (SOLID)

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U188	Conc.	Incineration
U190	Conc.	Incineration; or Fuel Substitution
U196	Conc.	Incineration
U197	Tech.	Fuel Substitution; or Incineration
U201	Tech.	Fuel Substitution; or Incineration
U202	Tech.	Incineration
U204	Conc.	Stabilization
U205	Conc.	Stabilization
U207	Conc.	Incineration
U208	Conc.	Incineration
U209	Conc.	Incineration
U210	Conc.	Incineration
U211	Conc.	Incineration
U213	Tech.	Fuel Substitution; or Incineration
U214	Tech.	Thermal Recovery of Metals; or Stabilization
U215	Tech.	Thermal Recovery of Metals; or Stabilization
U216	Tech.	Thermal Recovery of Metals; or Stabilization
U217	Tech.	Thermal Recovery of Metals; or Stabilization
U218	Tech.	Incineration
U220	Conc.	Incineration
U223	Tech.	Fuel Substitution; or Incineration
U225	Conc.	Incineration

State: Ohio

ID #: 0000002082

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: UNUSED LABORATORY CHEMICALS (SOLID)

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U226	Conc.	Incineration
U227	Conc.	Incineration
U228	Conc.	Incineration
U234	Tech.	Incineration
U235	Conc.	Incineration
U236	Tech.	Incineration
U238	Tech.	Incineration
U239	Conc.	Incineration
U240	Tech.	Incineration
U243	Conc.	Incineration
U246	Tech.	Chemical Oxidation; Wet Air Oxidation; or Incineration
U247	Conc.	Incineration
U248	Tech.	Fuel Substitution; or Incineration
U328	Tech.	Incineration; or Thermal Destruction
U353	Tech.	Incineration; or Thermal Destruction
U359	Tech.	Incineration; or Fuel Substitution

The alternate LDR treatment standards for labpacks is incineration as a method of treatment and a requirement for the incinerator residues to meet the treatment standards for the TC toxic metals (i.e., D004-D008, and D010-D011).

State: Ohio

ID #: 0000010056

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: PAINT SLUDGE AND SOLIDS

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Waste paint sludge and solids are generated from cleaning out water-based spray booths. Included in this stream is the "spill-cleanup stream," which is waste generated from a construction paint spill. EPA codes for paint sludge and solids are D006B, D007, D035, and D008B. The code for spill clean-up is D007 and F003.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	3,280.0	-	3,280.0	-	1,932.0

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

The paint shop is in the process of changing its inventory to latex based paints.

State: Ohio

ID #: 0000010056

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: PAINT SLUDGE AND SOLIDS

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D035		Not currently prohibited under the LDR Program.
F003	Conc.	Incineration

State: Ohio

ID #: 0000010057

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: BATTERIES

Matrix: Batteries (lead acid, cadmium)

Waste Type: MLLW

Waste Stream Description and Source:

This is a site-wide waste stream. Operations at PORTS involve the use of lead-acid, gel cell, and nickel-cadmium batteries in a variety of applications.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	7,620.0	-	7,620.0	-	18,189.0

Treatability Group:

MLLW CH, Batteries (lead acid, cadmium), Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

The off-site recycling of batteries, especially Lead-acid batteries is pending release under the current DOE/MMES moratorium on off-site shipments.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002C	Tech.	Deactivation
D006A	Tech.	Thermal Recovery of Metals
D008A	Tech.	Secondary Lead Smelting

State: Ohio

ID #: 0000010058

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: LEAD SOLUTIONS

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

The waste stream is generated in the clean-up of the plant firing range.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	445.0	-	445.0	-	283.0

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the existing X-705 Decontamination Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

Will undergo assessment.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000010059

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: OIL AND GREASE REMOVAL UNIT FILTER CAKE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

The stream is generated in the X-705 Bldg. Small parts are degreased with NaOH or soap solution. The resulting solution is processed through the oil and grease removal unit where the grease is removed as a filter cake.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	3,920.0	-	3,920.0	-	10,700.0

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

This system is scheduled to undergo a process waste assessment in the future.

State: Ohio

ID #: 0000010059

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: OIL AND GREASE REMOVAL UNIT FILTER CAKE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000010060

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: SEAL DISMANTLING SCRAP METAL

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Seals are disassembled with a radio frequency heater to facilitate cleaning. The waste stream is in the X-705 Bldg. Scrap metal from this activity includes bellows and solder.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	1,075.0	-	1,075.0	-	2,087.0

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

The X-705 Building is scheduled to undergo a process waste assessment in the future.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010061

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: MACHINE GRINDING SLUDGE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Waste is in the collection basin of the grinders.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	410.0	-	410.0	-	1,025.0

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

The building which contains the grinders will undergo a process assessment in the future

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000010062

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: PPE AND MISC DEBRIS

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Personal Protective Equipment (PPE) and other similar debris that was in contact with soil and water during RCRA Facility Investigation and closure activities.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	129,111.0	-	129,111.0	-	14,508.0

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

General Comments:

CODE BASIS: Medium high confidence level based on process knowledge. No sampling results are available.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000010062

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: PPE AND MISC DEBRIS

Matrix: Organic Debris

Waste Type: MLLW

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010063

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: SOILS

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Environmental Restoration activities generate soil as a result of investigation and clean-up work.

Soils contain low levels of TCE, TCA, and other halogenated solvents.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	4,506,787.0	-	4,506,787.0	-	166,616.0

Treatability Group:

MLLW CH, Soils, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time. Several treatment technologies, including peroxidation and thermal vapor extraction, are being investigated for this waste. Waste may be treated in situ.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

General Comments:

CODE BASIS: High level of confidence for determining the EPA code.

State: Ohio

ID #: 0000010063

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: SOILS

Matrix: Soils

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000010064

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: ACETONE STILL BOTTOMS/SOLVENTS

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

This waste was generated in the X-760 Chemical Engineering Facility from a pilot scale study.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	102.0	-	102.0	-	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility. Portions of this waste stream currently do not meet the K-25 Site TSCA Incinerator Waste Acceptance Criteria.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

Waste is no longer generated.

State: Ohio

ID #: 0000010064

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: ACETONE STILL BOTTOMS/SOLVENTS

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
F003	Conc.	Incineration

State: Ohio

ID #: 0000010065

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: FUELS OR OIL/WATER

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Waste fuels or oil with water are generated from field activities involving the draining of diked fuel storage areas after inclement weather. The water is containerized if a visible sheen is apparent on its surface.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	727.0	-	727.0	-	5,895.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility. Portions of this waste stream currently do not meet the K-25 Site TSCA Incinerator Waste Acceptance Criteria.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

The activities that generate this waste stream are scheduled to undergo a process waste assessment in the future.

State: Ohio

ID #: 0000010065

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: FUELS OR OIL/WATER

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000010067

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: FLOURINE GENERATOR SLUDGE AND SOLUTION

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Spent liquid and sludge from the flourine generator. Sludge results from lime neutralizing the spent waste liquids. Arsenic was found in the liquid and the sludge. The liquid waste is also characterized as corrosive through process knowledge and is considered acidic.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	16,456.0	-	16,456.0	-	13,161.0

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

This system is scheduled to undergo a process waste assessment in the future.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002A	Tech.	Deactivation
D004	Conc.	Vitrification

State: Ohio

ID #: 0000010068

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: FILTER TANK GUNK

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Uranium bearing solutions are filtered through a diatomaceous earth medium to remove suspended solids. The resultant filter cake gunk is characterized as hazardous because analysis indicated mercury.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	10,397.0	-	10,397.0	-	662.0

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

This system is scheduled to undergo a process waste assessment in the future.

State: Ohio

ID #: 0000010068

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: FILTER TANK GUNK

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization
D009B	Tech.	Mercury Roast/Retort

State: Ohio Site: PORTSMOUTH GASEOUS DIFFUSION PLANT Waste Stream Name: BOOTH WATER Matrix: Aqueous Liquid	ID #: 0000010069 Waste Type: MLLW
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Waste Stream Description and Source:

This waste stream is aqueous waste water generated in the Paint Shop.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	16,142.0	-	16,142.0	-	27,043.0

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Organics and Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the existing X-705 Decontamination Facility.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

The paint shop spray booth will be replaced with a booth that uses a dry filtering system. This project is being reviewed by Engineering.

State: Ohio

ID #: 0000010069

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: BOOTH WATER

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D035		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000010071

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE OIL/FILTERS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is generated in many areas. Maintenance operations on the equipment in the cascade, water treatment facility, garage, and at the landfill will generate waste oil and filters.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	6,533.0	-	6,533.0	-	18,863.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

Oil filters are currently being drained and crushed which eliminates them as RCRA Hazardous Waste. Waste oil is being investigated for both on and off-site recycling.

State: Ohio

ID #: 0000010071

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE OIL/FILTERS

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010072

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: COOLING TOWER CURTAINS

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

To improve the efficiency of the cooling towers during adverse weather conditions, large canvas curtains are placed on the towers. These curtains are periodically discarded.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	2,794.0	-	2,794.0	-	544.0

Treatability Group:

MLLW CH, Organic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

A phosphate corrosion inhibitor has replaced the chromium inhibitor used in the RCW system, which will prolong the useful life of the curtains.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010074

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: NON-LAB OFF SPEC CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Stream Description and Source:

A variety of chemicals are used in production and support operations at PORTS. Aside from the wastes generated from the use of these chemicals that are described elsewhere in this text, these chemicals also sometimes become wastes in unused form. Waste unused chemicals are generated as result of process changes or expiration of shelf life. Unused chemicals are characterized as hazardous wastes based on process knowledge according to the nature of the constituents as indicated on container labels and markings as well as MSDS information.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	23,294.0	-	23,294.0	-	102,058.0

Treatability Group:

MLLW CH, Lab Packs with Metals, Toxic Organics and Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

The use of these chemicals by other departments on site is investigated prior to disposal.

General Comments:

CODE BASIS: Multicode waste stream.

State: Ohio

ID #: 0000010074

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: NON-LAB OFF SPEC CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009D	Tech.	Amalgamation
D010	Conc.	Stabilization
D011	Conc.	Stabilization
D012	Conc.	Incineration
D013	Conc.	Incineration
D014	Conc.	Incineration
D015	Conc.	Incineration
D018		Not currently prohibited under the LDR Program.
D019		Not currently prohibited under the LDR Program.
D020		Not currently prohibited under the LDR Program.
D021		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.
D026		Not currently prohibited under the LDR Program.
D027		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000010074

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: NON-LAB OFF SPEC CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D028		Not currently prohibited under the LDR Program.
D029		Not currently prohibited under the LDR Program.
D030		Not currently prohibited under the LDR Program.
D031		Not currently prohibited under the LDR Program.
D032		Not currently prohibited under the LDR Program.
D033		Not currently prohibited under the LDR Program.
D034		Not currently prohibited under the LDR Program.
D035		Not currently prohibited under the LDR Program.
D036		Not currently prohibited under the LDR Program.
D038		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
D043		Not currently prohibited under the LDR Program.
P029	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P056	Tech.	Adsorption followed by Neutralization
P063	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P104	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation followed by Stabilization
P108	Tech.	Incineration
U019	Conc.	Incineration
U036	Conc.	Incineration

State: Ohio

ID #: 0000010074

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: NON-LAB OFF SPEC CHEMICALS

Matrix: Lab Packs with Metals

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U069	Conc.	Incineration
U077	Conc.	Incineration
U134	Tech.	Adsorption followed by Neutralization; or Neutralization
U151	Tech.	Amalgamation
U159	Conc.	Incineration
U211	Conc.	Incineration
U220	Conc.	Incineration
U226	Conc.	Incineration
U228	Conc.	Incineration
U239	Conc.	Incineration
U240	Tech.	Incineration

The alternate LDR treatment standards for labpacks is incineration as a method of treatment and a requirement for the incinerator residues to meet the treatment standards for the TC toxic metals (i.e., D004-D008, and D010-D011).

State: Ohio

ID #: 0000010075

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: GAS ANALYZER SOLUTIONS

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Process vent gas analyzers are used to monitor U content in production equipment exhaust gases. These analyzers generate spent indicator solutions that contain ethanol and acidic liquids and are characterized as corrosive hazardous waste based on analysis and ignitable based on process knowledge.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	12,444.0	-	12,444.0	-	6,783.0

Treatability Group:

MLLW CH, Organic Liquids

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility. Portions of this waste stream currently do not meet the K-25 Site TSCA Incinerator Waste Acceptance Criteria.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

The process buildings are scheduled to undergo a process waste assessment in the future. Gas analyzers may be replaced.

General Comments:

Stream was also known as spent vent sampling solutions, Arsenazo, Brom-Padap. Plans to replace the gas analyzers. Less waste will be generated. This explains the low five year estimate.

State: Ohio

ID #: 0000010075

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: GAS ANALYZER SOLUTIONS

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
D002A	Tech.	Deactivation

State: Ohio

ID #: 0000010077

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: SILVER PLATING COMPOUNDS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is generated in the hydrostatic test shop. Tubing and instrument lines are attached to the item being tested. A silver plating compound is used. Also contains silver solder.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	26.0	-	26.0	-	65.0

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

This system is scheduled to undergo a process waste assessment in the future.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D011	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010078

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: GROUNDWATER AND RELATED WATER

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

This is a site-wide waste stream. Environmental Restoration activities result in groundwater, excess sample water and decontamination water. These wastewaters are stored as hazardous wastes based on analysis.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	21,817.0	-	21,817.0	-	83,915.0

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Organics

Treatment Status:

Currently being treated on-site at the X-701E Groundwater Treatment Facility. Portions of this waste stream are also treated at the X-622 and X-624 Groundwater Treatment Facilities.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

New innovative treatment technologies are under investigation for new Environmental Restoration activities.

General Comments:

CODE BASIS: Sampling results indicate 1,1,1 - Trichloroethane as well as trichloroethylene. TOC can be greater than 1%.

State: Ohio

ID #: 0000010078

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: GROUNDWATER AND RELATED WATER

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000010079

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: FILM/MICROFILM/X-RAY

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

This is a site-wide stream generated in the X-100, X-801, X-101, and X-326 buildings.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	2,056.5	-	2,056.5	-	9,271.3

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

These areas will undergo a process waste assessment in the future.

General Comments:

Waste categories - film, microfilm, x-ray.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D011	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical,

State: Ohio

ID #: 0000010079

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: FILM/MICROFILM/X-RAY

Matrix: Heterogeneous Debris

Waste Type: MLLW

or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010080

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: RAGS, GLOVES, WIPES, ABSORBENT MATERIAL,

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

This is a site-wide waste stream. Operations at PORTS involve the use of rags, gloves, wipes, absorbent materials, PPE, disposable lab equipment, etc. The materials are used in general cleaning, spill clean-up and various maintenance activities.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	56,837.8	-	56,837.8	-	86,505.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics and Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

Many RCRA hazardous solvents are being substituted with nonhazardous products. This generates less rags, wipes, etc. Also, cleaning techniques are being modified to replace vapor degreasers. These new techniques will also generate less RCRA hazardous rag, wipes.

State: Ohio

ID #: 0000010080

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: RAGS, GLOVES, WIPES, ABSORBENT MATERIAL,

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009B	Tech.	Mercury Roast/Retort
D011	Conc.	Stabilization
F001	Conc.	Incineration
F002	Conc.	Incineration
F004	Conc.	Incineration
F005A	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE ACID/BASES

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

A variety of waste acids and bases (including hydrochloric, sulfuric, phosphoric, and nitric acids and sodium hydroxide) are generated in the X-710 facilities. Based on analysis, the wastes contain cadmium (D006B) and chromium (D007) and, through process knowledge and MSDS information, these wastes are characterized as corrosive (D002A or D002B) hazardous wastes that may contain arsenic (D004), barium (D005), lead (D008B), mercury (D009D), selenium (D010), and silver (D011).

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	3,943.0	-	3,943.0	-	12,409.0

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/ Mercury

Treatment Status:

Currently being treated on-site at the X-705 Decontamination Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

Waste acid/bases are generated primarily in the X-710 Lab. This lab will undergo a process waste assessment in the future.

State: Ohio

ID #: 0000010081

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE ACID/BASES

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D002B	Tech.	Deactivation
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D010	Conc.	Stabilization
D011	Conc.	Stabilization

State: Ohio

ID #: 0000010082

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: OIL TEST SOLUTION

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

This stream is generated in the X-720 Test Shop during the analysis of oil samples from the switch yard.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	2,417.0	-	2,417.0	-	2,761.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Currently being treated on-site at the X-705 Decontamination Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

The X-720 Test Shop is scheduled to undergo a process waste assessment in the future.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F005A	Conc.	Incineration

State: Ohio

ID #: 0000010083

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: DECONTAMINATION WASTE SOLUTIONS

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Decontamination of equipment, which is required prior to maintenance activities, generates aqueous waste solutions. These waste solutions are characterized as hazardous wastes based on analysis that found that the solutions may contain chromium (D007) and lead (D008B). Based on process knowledge and MSDS information, the solutions may be acidic or basic (D002), and may contain: arsenic (D004), barium (D005), cadmium (D006B), mercury (D009D), selenium (D010), silver (D011), and benzene-bearing oils (D018).

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	7,927.0	-	7,927.0	-	7,375.0

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Organics and Metals w/ Mercury

Treatment Status:

Currently being treated on-site at the X-705 Decontamination Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

This system is scheduled to undergo a process waste assessment in the future.

State: Ohio

ID #: 0000010083

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: DECONTAMINATION WASTE SOLUTIONS

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002A	Tech.	Deactivation
D002B	Tech.	Deactivation
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D010	Conc.	Stabilization
D011	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000010084

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: UF6 ANALYZER STILL BOTTOMS

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is still bottoms that contain ethanol. In the late 1980's a bench scale study was performed to determine the feasibility of ethanol distillation in uranium-bearing wastes. Waste ethanol used in the study was from the UF6 gas analyzers in the cascade process. The study generated still bottoms that contain ethanol.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	370.0	-	370.0	-	0.000

Treatability Group:

MLLW CH, Organic Liquids, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility. Portions of this waste stream currently do not meet the K-25 Site TSCA Incinerator Waste Acceptance Criteria.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation

State: Ohio

ID #: 0000010085

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: SOLVENTS

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is generated site-wide. It includes flammable and halogenated solvent waste streams.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	12,703.6	-	12,703.6	-	15,132.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility. Portions of this waste stream currently do not meet the K-25 TSCA Incinerator Waste Acceptance Criteria.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

An aggressive solvent substitution program is underway as part of the current process waste assessment program. Many substitutes have been found, particularly for chlorinated solvents.

State: Ohio

ID #: 0000010085

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: SOLVENTS

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001B	Tech.	Deactivation
F001	Conc.	Incineration
F003	Conc.	Incineration
F005A	Conc.	Incineration

State: Ohio

ID #: 0000010086

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: CARBON SLUDGE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream was known as spent activated carbon sludge. Activated carbon sludge from carbon filters was generated from groundwater treatment activities. The X-701E is still being operated.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	2,202.0	-	2,202.0	-	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

The installation of new carbon filtration units have the ability to extend the life of the carbon media by using a regeneration process.

General Comments:

New units are expected to come on line. This would affect the five year estimate.

State: Ohio

ID #: 0000010086

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: CARBON SLUDGE

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000010087

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: BAG FILTERS

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

This waste is generated in the X-705 building. In-line bag filters are used to remove suspended solids and oils from solutions flowing into the U recovery or microfiltration processes. When plugged, they are discarded.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	206.0	-	206.0	-	206.0

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics and Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

The X-705 building will undergo a process waste assessment in the future.

State: Ohio

ID #: 0000010087

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: BAG FILTERS

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D018		Not currently prohibited under the LDR Program.

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID.#: 0000010088

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: HAZARDOUS WASTE UNIT CLOSURE

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream will be generated in the future. The waste could contain contaminated equipment, structures, and soils from the closure of three old waste storage areas.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	0.000	-	0.000	-	2,954,791.0

Treatability Group:

MLLW CH, Heterogeneous Debris

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

Waste minimization will be addressed during the development of the closure plans.

General Comments:

CODE BASIS: Multiple codes are anticipated in third thirds and solvents.

EPA CODES

Waste Characterization Basis: Process Knowledge

No applicable RCRA Codes have been identified.

State: Ohio

ID #: 0000010089

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: MERCURY SOLIDS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Manometers are dismantled and cleaned, and the waste or spilled mercury and mercury contaminated materials are part of this waste stream. In 1989, the #6B well pump mercury seal failed and released mercury into the well. Waste oil, water, sand, and mercury generated from this accident make up the remainder of this waste stream.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	6,120.0	-	6,120.0	-	3,698.0

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

The recycling of mercury that is not radiologically contaminated is under investigation.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009B	Tech.	Mercury Roast/Retort

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical,

State: Ohio

ID #: 0000010089

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: MERCURY SOLIDS

Matrix: Inorganic Debris

Waste Type: MLLW

or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010090

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: FILTER CLOTH AND PPE

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

The waste stream is spent treatment filters and PPE from the Liquid Effluent Treatment Facility. The facility's process removed chromium from cooling water by chemical reduction and a precipitation process. The waste stream contains filters from the process and PPE from cleaning up spills. The facility is being phased out due to substitution of a phosphate corrosion inhibitor.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	2,106.0	-	2,106.0	-	445.0

Treatability Group:

MLLW CH, Organic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

A phosphate corrosion inhibitor has replaced the chromium inhibitor in the RCW system. Waste is no longer generated.

State: Ohio

ID #: 0000010090

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: FILTER CLOTH AND PPE

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D011	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010091

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: CHROMIUM CONTAMINATED SOILS

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is soil and spilled waste sludge, resulting from spills or treatment of cooling water or precipitate sludge from the X-616 Liquid Effluent Treatment Facility. The unit is being phased out, but small amounts of waste will be generated during the next five years as closure continues.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	20,862.0	-	20,862.0	-	0.000

Treatability Group:

MLLW CH, Soils, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

A phosphate corrosion inhibitor has replaced the chromium inhibitor in the RCW system. Waste will no longer be generated once closure is completed.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

State: Ohio

ID #: 0000010092

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: CEMENT DUST

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

The paint shop may paint and/or seal any on-site building floor. First, the floor must be stripped to remove the previous sealant/paint. PORTS uses a machine called a "Blas-Trac" that not only removes the sealant/paint but also removes small amounts of the concrete floor.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	8,262.0	-	8,262.0	-	7,484.0

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the

State: Ohio

ID #: 0000010092

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: CEMENT DUST

Matrix: Inorganic Debris

Waste Type: MLLW

following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010093

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: SOLID, LIQUID CLEAN-UP OF STORAGE AREAS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Clean-up wastes from closures of three waste storage areas and from future spills in the X-7725 RCRA Storage Facility. This is a future waste stream which involves the wastes resulting from cleaning up spills in three former waste storage areas and in the X-7725 RCRA Waste Storage Facility. The containerized waste is being moved from the three storage areas to the X-7725 building.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	3,970.0	-	3,970.0	-	584.0

Treatability Group:

MLLW CH, Heterogeneous Debris

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

General Comments:

CODE BASIS: No analysis is available. Assume it will be multiple codes.

EPA CODES

Waste Characterization Basis: Process Knowledge

No applicable RCRA Codes have been identified.

State: Ohio

ID #: 0000010094

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: CLEANING AND NEUTRALIZATION TANK RESIDUE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is generated in the X-700 Bldg. It consists of cleaning tank solution, neutralization pit sludge, and tank residue. Historically, neutralization pit sludge was generated from the cleaning of the neutralization pit that accepts the discharge from the immersion cleaning tanks.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	8,877.0	-	8,877.0	-	15,298.0

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

This system is scheduled to undergo a process waste assessment in the future.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio

ID #: 0000010095

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: AEROSOL CANS

Matrix: Compressed Gases

Waste Type: MLLW

Waste Stream Description and Source:

PORTS uses aerosol cans containing various paints, cleaning solutions, oils, and pesticides in numerous applications throughout the plant. Aerosol containers are emptied of their contents to the extent possible and are then managed as solid, non-hazardous waste. Aerosol containers that are off-spec or are damaged, which contain RCRA-regulated constituents, are managed as hazardous waste based upon available MSDS and/or process knowledge.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	789.0	-	789.0	-	472.0

Treatability Group:

MLLW CH, Compressed Gases, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

A program is in place which assures aerosol cans are completely used up prior to disposal.

State: Ohio

ID #: 0000010095

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: AEROSOL CANS

Matrix: Compressed Gases

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001D	Tech.	Deactivation
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization

State: Ohio

ID #: 0000010096

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: CIRCUIT BOARDS AND RELATED ITEMS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

This is a site-wide stream. Repair of electrical equipment at Portsmouth frequently generates waste circuit boards and related items.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	1,158.0	-	1,158.0	-	5,502.0

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

Alternative use for this waste will be investigated in the future.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization
D011	Conc.	Stabilization

State: Ohio

ID #: 0000010096

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: CIRCUIT BOARDS AND RELATED ITEMS

Matrix: Inorganic Debris

Waste Type: MLLW

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010097

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: CLEAN-UP AND SPILL RESPONSE RESIDUES

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

This is a site-wide waste stream consisting of various types and quantities of routine and emergency cleanup and spill response residues.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	127,074.0	-	127,074.0	-	226,796.0

Treatability Group:

MLLW CH, Heterogeneous Debris

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

Many of the waste streams that generated these spill cleanups have been minimized. This should reduce future cleanup activities.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

No applicable RCRA Codes have been identified.

State: Ohio

ID #: 0000010098

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: GAS CYLINDERS

Matrix: Compressed Gases

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream consists of spent commercial compressed gas cylinders. Hydrogen cyanide cylinders became off-spec during an instrumentation replacement. Other off-spec cylinders contain chlorine trifluoride or acetylene.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	9.1	-	9.1	-	91.0

Treatability Group:

MLLW CH, Compressed Gases

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

This system is scheduled to undergo a process waste assessment in the future.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001D	Tech.	Deactivation
P063	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation

State: Ohio

ID #: 0000010099

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE OIL AND DEBRIS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream consists of small amounts of oils and debris from the equipment used for ER investigation and cleanup activities.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	605.0	-	605.0	-	1,406.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

Waste minimization is addressed in the Waste Management Plan for every ER project.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010100

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: CLEAN-UP DEBRIS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

Waste is generated from cleaning the basement floor and the operating area in the X-700 building.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	1,139.0	-	1,139.0	-	3,384.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

This facility will undergo a process waste assessment in the future. Employees are trained in waste reduction techniques to be used in their jobs during a waste minimization training module.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D040		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical,

State: Ohio

ID #: 0000010100

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: CLEAN-UP DEBRIS

Matrix: Heterogeneous Debris

Waste Type: MLLW

or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010101

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: STEAM PLANT PPE AND DEBRIS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

PPE and debris are generated during routine maintenance at the X-600 steam plant. Analysis shows waste is toxic for arsenic.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	476.3	-	476.3	-	379.0

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

The use of washable PPE will be expanded as the current laundry facility is upgraded.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 0000010102

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE SODIUM

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

PORTS conducted a pilot-scale treatability study in the early 1980s to assess the feasibility of treating PCBs with sodium metal.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	682.0	-	682.0	-	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

Waste is no longer generated.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D003D	Tech.	Deactivation

State: Ohio

ID #: 0000010103

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: WASTE SLAG

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

This stream is waste slag from the silver solder process used to fabricate pigtails.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	95.0	-	95.0	-	286.4

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

This waste stream was reviewed during a process waste assessment of the pigtail fabrication process.
Potential off-site silver recovery will be investigated.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D011	Conc.	Stabilization

State: Ohio

ID #: 0000010104

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: CYANIDE BEARING SOLUTIONS

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Cyanide-containing wastes are generated from analytical laboratory procedures.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	40.4	-	40.4	-	145.0

Treatability Group:

MLLW CH, Organic Liquids, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

The X-710 laboratory is scheduled to undergo a process waste assessment in the future.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D003A	Conc.	Chemical Oxidation followed by Alkaline Chlorination

State: Ohio

ID #: 0000010105

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: NEAT TCE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

The off-gas carbon adsorption unit at X-624 is regenerated using. Vapors from this process are condensed to a waste liquid.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	2,810.0	-	2,810.0	-	10,643.5

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Plan to treat off-site. The K-25 Site TSCA Incinerator has been identified as the potential facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

A process waste assessment is scheduled for this stream.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: Ohio Site: PORTSMOUTH GASEOUS DIFFUSION PLANT Waste Stream Name: DIESEL FUEL, GASOLINE, KEROSENE Matrix: Organic Liquids	ID #: 0000010106 Waste Type: MLLW
--	--

Waste Stream Description and Source:

Site-wide waste stream from 700-6, 720-23, 720-11, and SW-9.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	10,747.0	-	10,747.0	-	10,606.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/o Mercury

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility. Portions of this waste stream currently do not meet the K-25 Site TSCA Incinerator Waste Acceptance Criteria.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

This waste stream will undergo a process waste assessment in the future.

State: Ohio

ID #: 0000010106

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: DIESEL FUEL, GASOLINE, KEROSENE

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 0000010107

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: BLUEPRINT SOLUTIONS

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

This waste is aqueous ammonia solution used in the reproduction of engineering blueprints.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	98.4	-	98.4	-	1,399.3

Treatability Group:

MLLW CH, Aqueous Liquid, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Plan to treat on-site at the existing X-705 Decontamination Facility.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

Alternate uses for this waste will be investigated.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002B	Tech.	Deactivation

State: Ohio

ID #: 0000010108

Site: PORTSMOUTH GASEOUS DIFFUSION PLANT

Waste Stream Name: FLUSHING SOLUTION

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

This is a site-wide stream. A weak solution of sulfuric acid solution is used to flush the generator cooling system.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	652.0	-	652.0	-	1,390.0

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the existing X-705 Decontamination Facility.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

This waste stream will undergo a process waste assessment.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002A	Tech.	Deactivation
D008B	Conc.	Stabilization

State: Ohio Site: PORTSMOUTH GASEOUS DIFFUSION PLANT Waste Stream Name: SILVER SOLUTION Matrix: Aqueous Liquid	ID #: 0000010109 Waste Type: MLLW
---	--

Waste Stream Description and Source:

Generated in the hospital during X-ray development.

Current Inventory as of February 28, 1993						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
-	0.000	-	183.0	-	183.0	-	303.9

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the existing X-705 Decontamination Facility.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

A process waste assessment is planned for this stream.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D011	Conc.	Stabilization

23.5 RMI Titanium Company

Site Summary

The RMI Titanium Company extrusion plant is located in northern Ashtabula County, Ohio, approximately 1 mile south of Lake Erie (Figure 23-1). The facility consists of 25 buildings and occupies 7 acres of a 26 acre site. RMI had operated an extrusion press to extrude depleted, normal, and slightly enriched uranium under contract with DOE and its predecessor agencies from 1962 to 1990. Years of handling, extruding, forging, machining, and processing uranium at the RMI facility have resulted in on-site and off-site surface soil contamination, building and equipment contamination, and groundwater contamination. RMI has approximately 16 m³ of MLLW in storage and projects 1 m³ of MLLW generated in the next 5 years.

General

Environmental restoration activities include remediation of local groundwater, surface soils, and buildings. The on-site and off-site surface soil is contaminated, and groundwater contains above-background concentrations of uranium. The groundwater investigation and remediation is being completed under RCRA. The remediation of the soils, building, and equipment is being conducted in accordance with the delicensing provisions of the Nuclear Regulatory Commission under 10 CFR Part 40.

23.5.1 Mixed Waste

RMI has approximately 16 m³ (about 9,100 kg) of stored MLLW from the uranium extrusion process (Table 23.5-1); approximately 5 m³ (27 percent) are subject to the LDR requirements. Data reflect quantities in storage as of December 31, 1992. All waste at RMI can be contact-handled.

Prior to extrusion, uranium billets were heated in molten salt baths consisting of barium (30 to 60 percent), sodium, and potassium chloride. This process has produced 4 of the 11 inventory waste streams, which are hazardous because of the barium contamination. Remaining waste consists of lead-contaminated lathe oil/water coolant, clay absorbent used to clean up lathe oil/water coolant spills, lead-contaminated pump oil, clay absorbent used to clean up coolant and oil spills, trichloroethylene-contaminated samples from groundwater monitoring wells, spent solvents, cleanup materials (rags and paper), and floor stripper solution. Principal RCRA contaminants are barium and lead; uranium is the radioactive contaminant. All waste is contact-handled and has been characterized by sampling and analysis. Details for individual waste streams may be found in the WPS.

In February 1991, 69 m³ (63,560 kg) of mixed waste was shipped to a commercial treatment facility in Texas. Due to problems that have developed with the treatment process, the waste may be returned to DOE within the next 5 years. Because this waste is not currently being stored at a DOE site, this volume is not included in the WPS in this report. However, if this waste is stored by a DOE facility, the WPS will be updated to reflect the current status.

23.5.2 Treatment Facilities

The presence of uranium poses no special issues for treatment. The 3 organic liquid waste streams, the cleanup material, and the oil/water coolant are to be treated at the K-25 Site TSCA incinerator at the

Table 23.5-1
Mixed Wastes at RMI Titanium Company

Waste Type/Matrix	Number of Waste Streams	Inventory		Number of Waste Streams	Five-Year Projection	
		(m ³)	(kg)		(m ³)	(kg)
WASTE TYPE -- MLLW						
CH, Organic Liquids	3	7.29	5,081.20	0	0.00	0.00
CH, Aqueous Liquid	2	1.99	1,637.94	0	0.00	0.00
CH, Organic Debris	1	2.87	570.63	0	0.00	0.00
CH, Inorganic Debris	1	1.77	220.50	1	0.44	54.43
CH, Heterogeneous Debris	2	0.66	589.75	0	0.00	0.00
CH, Other	2	1.33	997.48	2	0.44	385.56
Sub-Total MLLW:	11	15.91	9,097.50	3	0.88	439.99
TOTAL:	11	15.91	9,097.50	3	0.88	439.99

Oak Ridge Reservation. These 5 streams make up about 67 percent of the total stored waste volume. Treatment technologies exist for all remaining wastes; however, no treatment facility has been identified.

23.5.3 Technology Development

There are no site-specific technology development activities for RMI Titanium Company.

23.5.4 Environmental Restoration Program

Environmental restoration activities include remediation of local groundwater, surface soils, buildings, and equipment. The groundwater investigation and remediation is being completed under the Resource Conservation and Recovery Act. The remediation of the soils, building, and equipment is being conducted in accordance with the delicensing provisions of the Nuclear Regulatory Commission under 10 CFR Part 40. It is anticipated that ER activities will generate an additional 16 m³ of MLLW. Information on contaminated media associated with environmental restoration activities is in Chapter 2.

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23.5-4

April 1993

WASTE

PROFILE

SHEETS

RMI Titanium Company

ROADMAP TO WASTE PROFILE SHEETS (WPS)

Waste Profile Sheets (WPS) have been compiled in this report for each of the mixed waste streams identified at the different DOE sites. Each WPS is a concise summary of the information required by the FFCAct-1992, with waste stream specific data primarily derived from the Waste Management Information System (WMIS) database. Each WPS consists of the following items:

Header: The information in the header in each WPS includes the State, the official name of the site, an identification number, an identifying waste stream name, the waste type, and the waste matrix. The identification number is either a number assigned by the WMIS database or a number assigned by the site. The waste stream name is a unique identifier which corresponds to the name used in the WMIS database, or is assigned by the site. The waste type is either HLW, MTRU, or MLLW. The waste matrix corresponds to the categories (or their further subdivisions) defined earlier based on the physical and chemical form of the waste.

Waste Stream Description and Source: This section of the WPS presents a short description of the source of the waste and the waste stream characteristics.

Inventory Table: The inventory table in each WPS reports the volume (m³) and/or mass (kg) of each waste stream currently in storage, and projected to be generated in the next five years. The table also indicates the date assumed in calculating the current and projected inventories. As required by the FFCAct-1992, the table also differentiates between waste not subject to LDR and that subject to LDR for the current inventory.

Treatability Group: This section lists the name of the treatability group to which the waste stream belongs.

Treatment Status, Technology Status: This section of the WPS lists the status of the technology that could be applied to the waste stream for compliance with the LDR. This section provides information on if the waste stream is currently being treated, and if technology options and facilities for the treatment exist.

Radiation Characteristics Section: This section of the WPS provides additional information on the radiological characteristics of the waste (in addition to characterizing the waste stream as HLW, MTRU, or MLLW). This section of the WPS specifies whether the waste stream is contact handled or remote handled, if the radionuclides are alpha or beta/gamma emitters, and if they contain activation products.

Radiation Effects Section: As required by the FFCAct-1992, this section of the WPS lists possible effects of the radiological characteristics of the waste stream on treatment technologies that could be applicable to that waste stream. For example, radiation levels may require remote handling of the waste and affect the design and operation of the treatment facility. The presence of volatile radionuclides may require the containment of all off-gases from the treatment system.

Waste Minimization Activities: As required by the FFCAct-1992, this section of the WPS provides information on the waste minimization practices being used for the waste stream. This section provides information on if the waste minimization practices include good operating practices, technology changes, raw material changes, product changes, etc.

EPA Code: This table of the WPS reports the EPA hazardous waste codes applicable to the waste stream, the basis for assigning the codes (process knowledge or sampling/analysis), the LDR basis (which is either technology based or concentration based), and the BDAT for each of the EPA hazardous waste codes.

In summary, the WPS for each waste stream, along with the site sections in the report for each State (Section B), summarize the site-specific information required by the FFCAct-1992.

State: Ohio

ID #: 2294

Site: RMI TITANIUM COMPANY

Waste Stream Name: KAOL WOOL (HAZARDOUS)

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

This is a non-asbestos insulating material which is a woven fabric type refractory ceramic fiber. The material is similar in appearance to cotton gauze. Kaol wool is the insulation material from the lids on RMI's salt baths, press housing, and is used as an extrusion cooling media.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.8	220.5	0.000	0.000	1.8	220.5	0.442	54.4

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Material contains uranium.

Waste Minimization Activities:

- 1) Change in operations status; process interruptions; work stoppages; mission changes; and new processes.

General Comments:

Kg mass reflects net weight of 55 gallon drums.

State: Ohio

ID #: 2294

Site: RMI TITANIUM COMPANY

Waste Stream Name: KAOL WOOL (HAZARDOUS)

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 2296

Site: RMI TITANIUM COMPANY

Waste Stream Name: LATHE OIL-WATER COOLANT WASTE (LIQUID)

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is spent lathe oil-water coolant waste which consists of water and a water miscible metalworking fluid consisting of petroleum hydrocarbons plus additives. This lathe oil-water coolant waste was generated when lead-lubricant contaminated uranium was lathe machined during RMI's former production process. This production process is no longer performed.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.221	194.6	0.221	185.1	0.442	379.7	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Material contains uranium.

Waste Minimization Activities:

1) Change in operations status; process interruptions; work stoppages; mission changes; and new processes.

The process that generated this waste is no longer in operation.

General Comments:

Waste that is projected to be generated from Environmental Restoration activities is provided in Table 2-4.

State: Ohio

ID #: 2296

Site: RMI TITANIUM COMPANY

Waste Stream Name: LATHE OIL-WATER COOLANT WASTE (LIQUID)

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Chemical Precipitation

State: Ohio

ID #: 2297

Site: RMI TITANIUM COMPANY

Waste Stream Name: LATHE OIL-WATER COOLANT WASTE (SOLID)

Matrix: Other

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is spent oil dry clay based absorbent mixed with lathe oil-water coolant waste. The latter consists of water and a water miscible metal working fluid consisting of petroleum hydrocarbons plus additives. This lathe oil-water coolant waste (Solid) was generated when lead-lubricant contaminated uranium was lathe machined during RMI's former production process. The waste was mixed with oil-dry mixture.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.1	804.7	0.000	0.000	1.1	804.7	0.221	192.8

Treatability Group:

MLLW CH, Other, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology assessment has not started.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

1) Change in operations status; process interruptions; work stoppages; mission changes; and new processes.

General Comments:

Solid material from cleanup of small spill of lathe coolant oil.

State: Ohio

ID #: 2297

Site: RMI TITANIUM COMPANY

Waste Stream Name: LATHE OIL-WATER COOLANT WASTE (SOLID)

Matrix: Other

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

State: Ohio

ID #: 2301

Site: RMI TITANIUM COMPANY

Waste Stream Name: PUMP STATION ACCUMULATOR OIL (LIQUID)

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

This waste consists of a paraffinic oil blend plus anti-rust additives which are contaminated with lead. Pump station accumulator oil is oil contaminated with lead from lead seals within RMI's pump station equipment.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.221	194.1	0.221	185.5	0.442	379.6	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Metals w/o Mercury

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.

The process that generated this waste is no longer in operation.

General Comments:

Material contains Uranium. Waste that is projected to be generated from Environmental Restoration activities is provided in Table 2-4.

State: Ohio

ID #: 2301

Site: RMI TITANIUM COMPANY

Waste Stream Name: PUMP STATION ACCUMULATOR OIL (LIQUID)

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

State: Ohio

ID #: 2302

Site: RMI TITANIUM COMPANY

Waste Stream Name: PUMP STATION ACCUMULATOR OIL (SOLID)

Matrix: Other

Waste Type: MLLW

Waste Stream Description and Source:

This waste is a mixture of oil dry which is a clay based absorbent and pump station oil which is a paraffinic oil blend. This waste is generated from an oil spill of pump station accumulator oil. Pump station accumulator oil is an oil contaminated with lead from lead seals within RMI's pump station equipment.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.020	0.221	192.8	0.221	192.8	0.221	192.8

Treatability Group:

MLLW CH, Other, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. Technology options have not been analyzed.

Technology Status:

Technology assessment has not started.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.

General Comments:

Material from the cleanup of a spill.

State: Ohio

ID #: 2302

Site: RMI TITANIUM COMPANY

Waste Stream Name: PUMP STATION ACCUMULATOR OIL (SOLID)

Matrix: Other

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

State: Ohio

ID #: 2305

Site: RMI TITANIUM COMPANY

Waste Stream Name: SALT BATH FLOOR SWEEPINGS

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

The material consists of floor sweepings around the salt baths and extrusion press area. Salt bath floor sweepings are sweepings generated from the salt bath area.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.221	353.0	0.221	353.0	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology assessment has not started.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Contains uranium.

Waste Minimization Activities:

1) Change in operations status; process interruptions; work stoppages; mission changes; and new processes.

The process that generated this waste is no longer in operation.

General Comments:

Material was generated during housekeeping operations in the area of the salt baths. The granular material contains uranium and barium.

State: Ohio

ID #: 2305

Site: RMI TITANIUM COMPANY

Waste Stream Name: SALT BATH FLOOR SWEEPINGS

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 2311

Site: RMI TITANIUM COMPANY

Waste Stream Name: TCE CONTAM. MONITORING WELL BAIL WATER

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

The waste consists of groundwater contaminated with low levels of trichloroethylene. TCE contaminated monitoring well bail water is generated from the sampling of TCE contaminated groundwater wells.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.5	1,258.3	0.000	0.000	1.5	1,258.3	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Organics

Treatment Status:

Groundwater cleanup technology is being investigated.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Waste Minimization Activities:

1) Not Applicable.

N/A; wells must be sampled.

General Comments:

Groundwater cleanup technology is being investigated.

Waste contains uranium.

Waste that is projected to be generated from Environmental Restoration activities is provided in Table 2-4.

State: Ohio	ID #: 2311
Site: RMI TITANIUM COMPANY	
Waste Stream Name: TCE CONTAM. MONITORING WELL BAIL WATER	
Matrix: Aqueous Liquid	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D040		Not currently prohibited under the LDR Program.

State: Ohio

ID #: 2317

Site: RMI TITANIUM COMPANY

Waste Stream Name: CHLORINATED SOLV./STODDARD SOLV. (SOLID)

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream consists of paper, cloth towels and gloves used to put on and remove solvent and greases during general maintenance and production degreasing operations. The waste is a mixture of paper and cloth material contaminated with solvent which consists of aliphatic petroleum hydrocarbons, methylene chloride, perchloroethylene, paraffinic and naphthionic hydrocarbons, and mineral spirits. The chlorinated solvent with stoddard solvents in solid physical form are the solvent rags generated by miscellaneous maintenance and production activities.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.663	104.3	2.2	466.3	2.9	570.6	0.000	0.000

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

The process that generated this waste is no longer in operation.

General Comments:

Waste that is projected to be generated from Environmental Restoration activities is provided in Table 2-4.

State: Ohio

ID #: 2317

Site: RMI TITANIUM COMPANY

Waste Stream Name: CHLORINATED SOLV./STODDARD SOLV. (SOLID)

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
F001	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 2330

Site: RMI TITANIUM COMPANY

Waste Stream Name: CHLORINATED SOLV./STODDARD SOLV.(LIQUID)

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is spent solvent from general maintenance and production degreasing activities. The waste is a mixture of aliphatic petroleum hydrocarbons, methylene chloride, perchloroethylene, paraffinic, and naphthionic hydrocarbons, and mineral spirits. The chlorinated solvent with stoddard solvent waste is generated by miscellaneous maintenance and production activities.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.3	399.6	1.3	399.6	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

1) None.

Material contains uranium.

Waste Minimization Activities:

1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

The process that generated this waste is no longer in operation.

General Comments:

Waste that is projected to be generated from Environmental Restoration activities is provided in Table 2-4.

State: Ohio

ID #: 2330

Site: RMI TITANIUM COMPANY

Waste Stream Name: CHLORINATED SOLV./STODDARD SOLV.(LIQUID)

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
F001	Conc.	Incineration

State: Ohio

ID #: 2345

Site: RMI TITANIUM COMPANY

Waste Stream Name: DIE HEAD RESIDUE (HAZARDOUS)

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream was generated through collection of the material associated with extrusion press die head after an extrusion. The material consists of graphite, copper flashings, kaol wool, burlap pads, steel and scrap extrusion pieces, rag, aluminum foil, lube brushes, rubber, floor sweepings, die head sweepings, and other miscellaneous material. Die head residue (hazardous) was generated as a byproduct of RMI's former operation extrusion process. This production process is no longer performed.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.442	236.8	0.000	0.000	0.442	236.8	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology assessment has not started.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Material contains uranium.

Waste Minimization Activities:

- 1) Change in operations status; process interruptions; work stoppages; mission changes; and new processes.

The process that generated this waste is no longer in operation.

State: Ohio

ID #: 2345

Site: RMI TITANIUM COMPANY

Waste Stream Name: DIE HEAD RESIDUE (HAZARDOUS)

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Ohio

ID #: 2350

Site: RMI TITANIUM COMPANY

Waste Stream Name: FLOOR STRIPPING CHLORINATED SOLVENT

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

This waste material consists of a methylene chloride based floor stripping sludge which was generated during the stripping of a sealant from the cement floors of the manufacturing facility. The material is sludge-like and consists of methylene chloride, methyl alcohol, floor sealant, dirt and sludge from the floor. Floor Stripping Chlorinated Solvent was generated during the annual maintenance shutdown of the facility as in-plant cement floors were stripped and sealed.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
5.5	4,302.0	0.000	0.000	5.5	4,302.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Currently being treated off-site at the K-25 Site TSCA Incinerator facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Material contains uranium.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.

The process that generated this waste is no longer in operation.

General Comments:

Waste that is projected to be generated from Environmental Restoration activities is provided in Table 2-4.

State: Ohio

ID #: 2350

Site: RMI TITANIUM COMPANY

Waste Stream Name: FLOOR STRIPPING CHLORINATED SOLVENT

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration

24.0 PENNSYLVANIA

Pennsylvania has one facility that generates, expects to generate, and/or stores DOE-managed mixed waste, the Bettis Atomic Power Laboratory

Figure 24-1 shows the location of this facility.

Figure 24-1 Pennsylvania Facility that Generates, Expects to Generate, and/or Stores DOE-managed Mixed Waste.

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24.0-2

April 1993

24.1 Bettis Atomic Power Laboratory

Bettis Atomic Power Laboratory (BAPL) is located on a 0.82 km² tract on a plateau above the Monogahela River in West Mifflin, Pennsylvania, about 13 km southeast of Pittsburgh (Figure 24-1). The Laboratory is operated for the DOE by the Westinghouse Electric Corporation and is engaged solely in the design and development of naval nuclear propulsion plants. Laboratory operations include development and testing of nuclear fuel materials and reactor materials including radiochemical analyses. The only mixed waste generated from these activities is mixed low-level waste. Since the State of Pennsylvania currently has base RCRA authority, but does not have authority to regulate the hazardous constituents of mixed waste, this waste is not subject to LDR.

24.1.1 Mixed Waste

24.1.1.1 High-Level Waste

There is no HLW currently stored or expected to be generated at BAPL.

24.1.1.2 Mixed Transuranic Waste

There is no MTRU waste currently stored or expected to be generated at BAPL.

24.1.1.3 Mixed Low-Level Waste

BAPL has 28.37 m³ (16,775 kg) of mixed low-level waste stored on site as of December 31, 1992, (Table 24.1-1). Stored waste consists of 18 waste streams; eleven of these streams are no longer generated. The stored mixed low-level waste consists primarily of organic sludge (RCRA-contaminated oil and spent solvents with solids) and heterogeneous debris (debris with VOCs and PCBs and mercury-containing debris). Major hazardous constituents are heavy metals and organic solvents. The 5-year projected generation of mixed waste is about 4.8 m³ (3,300 kg) (Table 24.1-1). No new streams are expected to be generated.

All waste streams are contact-handled with the exception of the barium-contaminated ion-exchange resin which is remotely handled. All streams are beta/gamma emitters. Eight streams also contain alpha emitters with a radiation level < 10 nCi/g, and 1 stream, waste oil with heavy metals and PCBs, has an alpha radiation level of 10 to 100 nCi/g. The scintillation standards waste stream contains tritium.

Waste minimization includes eliminating wherever technically allowed, the use of acetone and other F-listed solvents, lead and chromium-based paints, lead shielding in disposal containers, and chemical paint removers.

24.1.2 Treatment Facilities

Small quantities of mixed waste are generated at BAPL. As of this date, no treatment facilities for the waste have been identified. Where possible, simple treatment by stabilization in the accumulation container will be performed in accordance with applicable regulations.

Table 24.1-1
Mixed Wastes at the Bettis Atomic Power Laboratory

Waste Type/Matrix	Number of Waste Streams	Inventory		Number of Waste Streams	Five-Year Projection	
		(m ³)	(kg)		(m ³)	(kg)
WASTE TYPE -- MLLW						
CH, Organic Liquids	2	0.11	110.30	0	0.00	0 00
CH, Aqueous Liquid	1	<0.10	1.80	1	<0.10	9 00
CH, Organic Sludges/particulates	5	21.21	9,851.90	3	2.35	946 00
RH, Organic Sludges/particulates	1	<0.10	1.00	0	0 00	0 00
CH, Inorganic Sludges/particulates	3	0.21	56.90	1	0 21	55 00
CH, Soil With <50% Debris	1	0.84	693.00	0	0.00	0 00
CH, Soils	1	0.42	432.00	0	0 00	0 00
CH, Organic Debris	2	0.53	224.00	1	0.10	51 00
CH, Inorganic Debris	1	0.21	42.00	0	0.00	0 00
CH, Heterogeneous Debris	1	4.83	5,362.00	1	2.10	2,250 00
Sub-Total MLLW:	18	28.37	16,774.90	7	4.77	3,311 00
TOTAL:	18	28.37	16,774.90	7	4.77	3,311 00

April 1993

24.1.3 Technology Development

Since radiation levels are not of significance to affect treatment, these mixed waste streams should require treatment technology comparable to that used in treating similar hazardous, but non-radioactive waste streams. Concentration of radionuclides in treatment residues will need to be considered. There are no site-specific technology development activities for BAPL.

24.1.4 Excess Heavy Metal Bearing Equipment

During equipment decommissioning, every effort is made to separate lead-bearing and other heavy metal components from the radioactive parts of the equipment to avoid declaring the entire unit mixed waste. The excess equipment containing recyclable heavy metals in storage as of December 31, 1992 was 7 m³ (25,500 kg), with approximately 3.5 m³ (8800 kg) expected to become excess in the next 5 years.

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24.1-4

April 1993

WASTE

PROFILE

SHEETS

Bettis Atomic Power Laboratory

ROADMAP TO WASTE PROFILE SHEETS (WPS)

Waste Profile Sheets (WPS) have been compiled in this report for each of the mixed waste streams identified at the different DOE sites. Each WPS is a concise summary of the information required by the FFCAct-1992, with waste stream specific data primarily derived from the Waste Management Information System (WMIS) database. Each WPS consists of the following items:

Header: The information in the header in each WPS includes the State, the official name of the site, an identification number, an identifying waste stream name, the waste type, and the waste matrix. The identification number is either a number assigned by the WMIS database or a number assigned by the site. The waste stream name is a unique identifier which corresponds to the name used in the WMIS database, or is assigned by the site. The waste type is either HLW, MTRU, or MLLW. The waste matrix corresponds to the categories (or their further subdivisions) defined earlier based on the physical and chemical form of the waste.

Waste Stream Description and Source: This section of the WPS presents a short description of the source of the waste and the waste stream characteristics.

Inventory Table: The inventory table in each WPS reports the volume (m³) and/or mass (kg) of each waste stream currently in storage, and projected to be generated in the next five years. The table also indicates the date assumed in calculating the current and projected inventories. As required by the FFCAct-1992, the table also differentiates between waste not subject to LDR and that subject to LDR for the current inventory.

Treatability Group: This section lists the name of the treatability group to which the waste stream belongs.

Treatment Status, Technology Status: This section of the WPS lists the status of the technology that could be applied to the waste stream for compliance with the LDR. This section provides information on if the waste stream is currently being treated, and if technology options and facilities for the treatment exist.

Radiation Characteristics Section: This section of the WPS provides additional information on the radiological characteristics of the waste (in addition to characterizing the waste stream as HLW, MTRU, or MLLW). This section of the WPS specifies whether the waste stream is contact handled or remote handled, if the radionuclides are alpha or beta/gamma emitters, and if they contain activation products.

Radiation Effects Section: As required by the FFCAct-1992, this section of the WPS lists possible effects of the radiological characteristics of the waste stream on treatment technologies that could be applicable to that waste stream. For example, radiation levels may require remote handling of the waste and affect the design and operation of the treatment facility. The presence of volatile radionuclides may require the containment of all off-gases from the treatment system.

Waste Minimization Activities: As required by the FFCAct-1992, this section of the WPS provides information on the waste minimization practices being used for the waste stream. This section provides information on if the waste minimization practices include good operating practices, technology changes, raw material changes, product changes, etc.

EPA Code: This table of the WPS reports the EPA hazardous waste codes applicable to the waste stream, the basis for assigning the codes (process knowledge or sampling/analysis), the LDR basis (which is either technology based or concentration based), and the BDAT for each of the EPA hazardous waste codes.

In summary, the WPS for each waste stream, along with the site sections in the report for each State (Section B), summarize the site-specific information required by the FFCAct-1992.

State: Pennsylvania

ID #: 49

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: OIL CONTAINING HEAVY METALS #1

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Lubricating oil and hydraulic oil from equipment decommissioning.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
12.7	5,306.0	0.000	0.000	12.7	5,306.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive hazardous waste having the same characteristics.

Concentration of radionuclides in treatment residues will be considered. Top 5 Radionuclides present: Cs-137, Sr-90, Y-90, Ba-137m, Ni-63.

Waste Minimization Activities:

Not applicable. Waste is no longer generated.

State: Pennsylvania

ID #: 49

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: OIL CONTAINING HEAVY METALS #1

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D010	Conc.	Stabilization
D011	Conc.	Stabilization

State: Pennsylvania	ID #: 50
Site: BETTIS ATOMIC POWER LABORATORY	
Waste Stream Name: SPENT M-192 SOLVENT RAGS	
Matrix: Organic Debris	Waste Type: MLLW

Waste Stream Description and Source:

M-192 solvent and rags used to clean material and tooling.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.210	71.0	0.000	0.000	0.210	71.0	0.100	51.0

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Alpha emitter, < 10 nCi/g
- 2) Beta/gamma emitter
- 3) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive, hazardous waste having the same characteristics. Concentration of radionuclides in treatment residues will be considered. Radionuclide is U-depleted.

Waste Minimization Activities:

Good operating practices: material handling and inventory procedures; waste segregation.

State: Pennsylvania

ID #: 50

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: SPENT M-192 SOLVENT RAGS

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F003	Conc.	Incineration
F005A	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Pennsylvania

ID #: 51

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: OIL CONTAINING HEAVY METALS #2

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Lubricating oil and hydraulic oil from equipment decommissioning.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.530	530.0	0.000	0.000	0.530	530.0	0.210	210.0

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant radiological problems during treatment; treatment would be similar to that done on non-radioactive hazardous waste having the same characteristics. Concentration of radionuclides in treatment residue will be considered.

Waste Minimization Activities:

Good operating practices: material handling and inventory procedures; waste segregation; or changes in production scheduling.

State: Pennsylvania	ID #: 51
Site: BETTIS ATOMIC POWER LABORATORY	
Waste Stream Name: OIL CONTAINING HEAVY METALS #2	
Matrix: Organic Sludges/Particulates	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization
D011	Conc.	Stabilization

State: Pennsylvania	ID #: 388
Site: BETTIS ATOMIC POWER LABORATORY	
Waste Stream Name: SPENT M-192 SOLVENT	
Matrix: Organic Sludges/Particulates	Waste Type: MLLW

Waste Stream Description and Source:

Solvent blend used to clean materials and tooling.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.7	708.0	0.000	0.000	1.7	708.0	0.044	36.0

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Alpha emitter, < 10 nCi/g
- 2) Beta/gamma emitter
- 3) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive, hazardous waste having the same characteristics. Concentration of radionuclides in treatment residues will be considered. Radionuclides present: U-234, U-235, Th-231.

Waste Minimization Activities:

- 1) Good operating practices: material handling and inventory procedures; waste segregation.
- 2) Technology changes; Process changes

State: Pennsylvania	ID #: 388
Site: BETTIS ATOMIC POWER LABORATORY	
Waste Stream Name: SPENT M-192 SOLVENT	
Matrix: Organic Sludges/Particulates	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F003	Conc.	Incineration
F005A	Conc.	Incineration

State: Pennsylvania

ID #: 390

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: LEAD & CHROM. BASED PAINT CHIPS

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Lead and chromium based paint was removed in order to decontaminate radiological facilities and equipment.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.210	55.0	0.000	0.000	0.210	55.0	0.210	55.0

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. Paint chips will be subjected to simple treatment by stabilization in the accumulation container in accordance with applicable regulations.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Alpha emitter, < 10 nCi/g
- 2) Beta/gamma emitter
- 3) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive, hazardous waste having the same characteristics. Concentration of radionuclides in treatment residues will be considered. Radionuclides present: Cs-137, Sr-90, Ba-137m, U-234.

Waste Minimization Activities:

The use of lead and chromium-based paints has been eliminated wherever technically feasible.

State: Pennsylvania

ID #: 390

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: LEAD & CHROM. BASED PAINT CHIPS

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization

State: Pennsylvania

ID #: 838

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: SOLID WASTE WITH F-LISTED SOLVENT, PAINT

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Solid waste containing solvent and removed paint combined and compacted. Generated from facility decontamination and cleaning materials and tooling; contains alpha emitting radionuclides.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.320	153.0	0.000	0.000	0.320	153.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Alpha emitter, < 10 nCi/g
- 2) Beta/gamma emitter
- 3) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive, hazardous waste having the same characteristics. Concentration of radionuclides in treatment residues will be considered. Radionuclides present: U-enriched, Ni-63, Th-natural, Cs-137, Ba-137m.

Waste Minimization Activities:

Waste is no longer generated.

State: Pennsylvania

ID #: 838

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: SOLID WASTE WITH F-LISTED SOLVENT PAINT

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F002	Conc.	Incineration
F003	Conc.	Incineration
F005A	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Pennsylvania

ID #: 839

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: SOLIDS WITH SOLVENTS

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Solid waste, such as charcoal and rags.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
6.3	3,300.0	0.000	0.000	6.3	3,300.0	2.1	700.0

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive, hazardous waste having the same characteristics. Concentration of radionuclides in treatment residues will be considered. Radionuclides: Sb-125, I-129, Pm-147, Cs-134, Co-60.

Waste Minimization Activities:

- 1) Good operating practices: material handling and inventory procedures; waste segregation.
- 2) Technology changes: process changes.
- 3) Product change: product substitution and conservation.

State: Pennsylvania

ID #: 839

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: SOLIDS WITH SOLVENTS

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration
F003	Conc.	Incineration

State: Pennsylvania

ID #: 2056

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: MERCURY CONTAINING WASTE

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Cloth, metal and glass waste containing small amounts of hardened mercury residue. Generated from equipment repair.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.210	42.0	0.000	0.000	0.210	42.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. Cannot be amalgamated because waste is not a liquid.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive, hazardous waste having the same characteristics. Concentration of radionuclides in treatment residues will be considered. Radionuclides present: Sb-125, Ni-63, Eu-154, Co-60, Te-125m.

Waste Minimization Activities:

This waste stream is no longer generated.

State: Pennsylvania	ID #: 2056
Site: BETTIS ATOMIC POWER LABORATORY	
Waste Stream Name: MERCURY CONTAINING WASTE	
Matrix: Inorganic Debris	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Pennsylvania

ID #: 0000002058

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: VOC CONTAMINATED SOIL

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Soil sampling.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.420	432.0	0.000	0.000	0.420	432.0	0.000	0.000

Treatability Group:

MLLW CH, Soils, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive, hazardous waste having the same characteristics.

Concentration of radionuclides in treatment residues will be considered. Radionuclides present: Sr-90, Cs-137.

Waste Minimization Activities:

Waste is no longer generated.

State: Pennsylvania	ID #: 0000002058
Site: BETTIS ATOMIC POWER LABORATORY	
Waste Stream Name: VOC CONTAMINATED SOIL	
Matrix: Soils	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D039		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

State: Pennsylvania

ID #: 0000002062

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: WASTE OIL WITH HEAVY METALS AND PCBS

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Equipment draining and decommissioning; contains alpha emitting radionuclides.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.110	110.0	0.000	0.000	0.110	110.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. Waste is currently a liquid but will be absorbed for shipment.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Contact-handled
- 2) Beta/gamma emitter
- 3) Alpha emitter, < 10 nCi/g

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive, hazardous waste having the same characteristics. Concentration of radionuclides in treatment residues will be considered.

Waste Minimization Activities:

Waste is no longer generated.

State: Pennsylvania	ID #: 0000002062
Site: BETTIS ATOMIC POWER LABORATORY	
Waste Stream Name: WASTE OIL WITH HEAVY METALS AND PCBS	
Matrix: Organic Liquids	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D008B	Conc.	Stabilization
D009A	Tech.	Incineration; or Mercury Roast/Retort
D010	Conc.	Stabilization

State: Pennsylvania

ID #: 0000002069

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: SLUDGE CONTAINING SOLVENTS

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Facility decontamination.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.004	7.9	0.000	0.000	0.004	7.9	0.000	0.000

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Alpha emitter, < 10 nCi/g
- 2) Beta/gamma emitter
- 3) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive, hazardous waste having the same characteristics.

Concentration of radionuclides in treatment residues will be considered. Radionuclides present: U-234, U-238, Th-234, U-235, Po-234m.

Waste Minimization Activities:

Waste is no longer generated.

State: Pennsylvania

ID #: 0000002069

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: SLUDGE CONTAINING SOLVENTS

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D035		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F003	Conc.	Incineration
F005A	Conc.	Incineration

State: Pennsylvania Site: BETTIS ATOMIC POWER LABORATORY Waste Stream Name: VOC & PCB CONTAMINATED DEBRIS Matrix: Heterogeneous Debris	ID #: 0000002070 Waste Type: MLLW
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Waste Stream Description and Source:
 Debris removed from system.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
4.8	5,362.0	0.000	0.000	4.8	5,362.0	2.1	2,250.0

Treatability Group:
 MLLW CH, Heterogeneous Debris, Toxic Organics

Treatment Status:
 Have not identified a planned facility for this waste stream at this time.

Technology Status:
 Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:
 1) Beta/gamma emitter
 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:
 Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive, hazardous waste having the same characteristics. Concentration of radionuclides in treatment residues will be considered. Radionuclides present: Cs-137, Sr-90.

Waste Minimization Activities:
 1) Good operating practices; material handling and inventory procedures; waste segregation.
 2) The use of oils containing PCB's has been eliminated.

State: Pennsylvania

ID #: 0000002070

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: VOC & PCB CONTAMINATED DEBRIS

Matrix: Heterogeneous Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration
F005A	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Pennsylvania Site: BETTIS ATOMIC POWER LABORATORY Waste Stream Name: VOC & PCB CONTAMINATED SOIL Matrix: Soil with <50% Debris	ID #: 0000002072 Waste Type: MLLW
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Waste Stream Description and Source:

Soil containing F listed solvents and PCBs; contains alpha emitting radionuclides.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.840	693.0	0.000	0.000	0.840	693.0	0.000	0.000

Treatability Group:

MLLW CH, Soil with <50% Debris, Toxic Organics

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Alpha emitter, < 10 nCi/g
- 2) Beta/gamma emitter
- 3) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive, hazardous waste having the same characteristics. Concentration of radionuclides in treatment residues will be considered. Radionuclides: Natural Uranium, Cs-137, Sr-90.

Waste Minimization Activities:

Waste is no longer generated.

General Comments:

The alternate LDR treatment standard for debris is treatment prior to land disposal using any one of the following technologies; extraction (physical, chemical, or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: Pennsylvania

ID #: 0000002072

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: VOC & PCB CONTAMINATED SOIL

Matrix: Soil with <50% Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D039		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration

State: Pennsylvania	ID #: 0000002073
Site: BETTIS ATOMIC POWER LABORATORY	
Waste Stream Name: ZIRCONYL NITRATE	
Matrix: Inorganic Sludges/Particulates	Waste Type: MLLW

Waste Stream Description and Source:
Chemistry lab.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.002	1.4	0.000	0.000	0.002	1.4	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive, hazardous waste having the same characteristics. Concentration of radionuclides in treatment residues will be considered. Radionuclides present: Cs-137, Sr-90, Y-90, Ba-137m, Ni-63.

Waste Minimization Activities:

Waste is no longer generated.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001F	Tech.	Deactivation

State: Pennsylvania

ID #: 0000002074

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: VANADIUM PENTOXIDE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Chemistry lab.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
< 0.001	0.500	0.000	0.000	< 0.001	0.500	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive, hazardous waste having the same characteristics.

Concentration of radionuclides in treatment residues will be considered.

Waste Minimization Activities:

Waste is no longer generated.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
P120	Tech.	Stabilization

State: Pennsylvania	ID #: 0000002075
Site: BETTIS ATOMIC POWER LABORATORY	
Waste Stream Name: SCINTILLATION STANDARDS	
Matrix: Organic Liquids	Waste Type: MLLW

Waste Stream Description and Source:
Laboratory testing waste.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
< 0.001	0.300	0.000	0.000	< 0.001	0.300	0.000	0.000

Treatability Group:
MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:
Have not identified a planned facility for this waste stream at this time.

Technology Status:
Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:
 1) Volatile radionuclide
 2) Beta/gamma emitter
 3) Contact-handled

Waste-Specific Radiation Effects on Treatment:
 Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive, hazardous waste having the same characteristics. Concentration of radionuclides in treatment residues will be considered. Volatile radionuclides present: C 14, H 3, Cl 36, I 129.

Waste Minimization Activities:
 Waste is no longer generated.

State: Pennsylvania

ID #: 0000002075

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: SCINTILLATION STANDARDS

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
F003	Conc.	Incineration
F005A	Conc.	Incineration

State: Pennsylvania

ID #: 0000002076

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: ION EXCHANGE RESIN

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:
Purification resin.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.001	1.000	0.000	0.000	0.001	1.000	0.000	0.000

Treatability Group:

MLLW RH, Organic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Remote handled

Waste-Specific Radiation Effects on Treatment:

- 1) Radiation levels requiring remote handling will affect the design and operation of a treatment facility, i.e., need for robotics, additional shielding, etc.

Waste Minimization Activities:

Waste is no longer generated.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D005	Conc.	Chemical Precipitation; or Stabilization

State: Pennsylvania

ID #: 0000002077

Site: BETTIS ATOMIC POWER LABORATORY

Waste Stream Name: TCLP EXTRACTION FLUID

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Hazardous waste analysis.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.002	1.8	0.000	0.000	0.002	1.8	0.010	9.0

Treatability Group:

MLLW CH, Aqueous Liquid

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Assessing technologies to determine if the technology exists, and if so, whether it needs modification. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Volatile radionuclide
- 3) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive, hazardous waste having the same characteristics. Concentration of radionuclides in treatment residues will be considered. Volatile radionuclides present: C 14, H 3, I 129, Kr 85.

Waste Minimization Activities:

Good operating practices; material handling and inventory procedures; waste segregation.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

No applicable RCRA Codes have been identified.

25.0 SOUTH CAROLINA

There are two South Carolina facilities that generate, expect to generate, and/or store DOE-managed mixed waste

- 25.1 Charleston Naval Shipyard
- 25.2 Savannah River Site

Figure 25-1 shows the location of these facilities.

Figure 25-1. South Carolina Facilities that Generate, Expect to Generate, and/or Store DOE-managed Mixed Waste.

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25.0-2

April 1993

25.1 Charleston Naval Shipyard

Charleston Naval Shipyard (CNS) is located north of Charleston, South Carolina (Figure 25-1). The shipyard is a U.S. Navy facility that repairs, overhauls, and maintains Navy ships, including nuclear-powered ships. Drydocks, cranes, waste-handling facilities, and offices are located at the shipyard. Activities relating to naval nuclear propulsion systems are performed in accordance with the requirements and authority of the Naval Nuclear Propulsion Program. As described in Section 1.3, the Naval Nuclear Propulsion Program is a joint DOE and U.S. Department of Navy program responsible for all activities relating to naval nuclear propulsion. The only mixed waste generated by the shipyard is mixed low-level waste (MLLW).

25.1.1 Mixed Waste

25.1.1.1 High-Level Waste

There is no high-level waste (HLW) currently stored or expected to be generated at CNS.

25.1.1.2 Mixed Transuranic Waste

There is no mixed transuranic (MTRU) waste currently stored or expected to be generated at CNS.

25.1.1.3 Mixed Low-Level Waste

CNS currently has no MLLW in storage but expects to generate 2 MLLW streams consisting of material containing chromates and debris containing lead. All waste to be stored on the site will be subject to the LDR storage prohibitions. The 5-year projected generation of mixed waste is about .73 m³ (6440.4 kg).

The mixed waste expected to be generated at the CNS is MLLW resulting from ship overhaul, decommissioning, or routine maintenance in the shipyard. All waste streams are expected to be contact-handled, beta/gamma emitters with Co-60 as the primary radionuclide.

Waste minimization includes eliminating, wherever technically allowed, the use of acetone and other F-listed solvents, lead and chromium-based paints, lead shielding in disposal containers, and chemical paint removers.

25.1.2 Treatment Facilities

Only small quantities of mixed waste are generated at CNS. As of this date, no treatment facilities for the waste have been identified. Where possible, simple treatment by stabilization in the accumulation container will be performed in accordance with state regulations.

There are no existing or planned treatment facilities at CNS.

Table 25.1-1
Mixed Wastes at Charleston Naval Shipyard

Waste Type/Matrix	Number of Waste Streams	Inventory		Number of Waste Streams	Five-Year Projection	
		(m ³)	(kg)		(m ³)	(kg)
WASTE TYPE – MLLW						
CH, Organic Debris	0	0.00	0.00	1	0.25	90.00
CH, Elemental Lead	0	0.00	0.00	1	0.28	3,175.20
CH, Inorganic Sludges/Particulates	0	0.00	0.00	1	0.20	3,175.20
Sub-Total MLLW:	0	0.00	0.00	3	0.73	6,440.40
TOTAL:	0	0.00	0.00	3	0.73	6,440.40

25.1.3 Technology Development

Because the site does not expect radiation levels to affect or limit treatment options, these mixed waste streams should require technology comparable to that used in treating similar hazardous, but non-radioactive waste streams. Concentration of radionuclides in treatment residues will need to be considered, however.

There are no site-specific technology development activities for CNS.

25.1.4 Excess Heavy Metal Bearing Equipment

During equipment decommissioning, every effort is made to separate lead-bearing and other heavy metal components from the radioactive parts of the equipment to avoid declaring the entire unit mixed waste. The equipment containing recyclable heavy metals expected to become excess in the next 5 years is approximately 1 m³ (550 kg).

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WASTE

PROFILE

SHEETS

Charleston Naval Shipyard

ROADMAP TO WASTE PROFILE SHEETS (WPS)

Waste Profile Sheets (WPS) have been compiled in this report for each of the mixed waste streams identified at the different DOE sites. Each WPS is a concise summary of the information required by the FFCAct-1992, with waste stream specific data primarily derived from the Waste Management Information System (WMIS) database. Each WPS consists of the following items:

Header: The information in the header in each WPS includes the State, the official name of the site, an identification number, an identifying waste stream name, the waste type, and the waste matrix. The identification number is either a number assigned by the WMIS database or a number assigned by the site. The waste stream name is a unique identifier which corresponds to the name used in the WMIS database, or is assigned by the site. The waste type is either HLW, MTRU, or MLLW. The waste matrix corresponds to the categories (or their further subdivisions) defined earlier based on the physical and chemical form of the waste.

Waste Stream Description and Source: This section of the WPS presents a short description of the source of the waste and the waste stream characteristics.

Inventory Table: The inventory table in each WPS reports the volume (m³) and/or mass (kg) of each waste stream currently in storage, and projected to be generated in the next five years. The table also indicates the date assumed in calculating the current and projected inventories. As required by the FFCAct-1992, the table also differentiates between waste not subject to LDR and that subject to LDR for the current inventory.

Treatability Group: This section lists the name of the treatability group to which the waste stream belongs.

Treatment Status, Technology Status: This section of the WPS lists the status of the technology that could be applied to the waste stream for compliance with the LDR. This section provides information on if the waste stream is currently being treated, and if technology options and facilities for the treatment exist.

Radiation Characteristics Section: This section of the WPS provides additional information on the radiological characteristics of the waste (in addition to characterizing the waste stream as HLW, MTRU, or MLLW). This section of the WPS specifies whether the waste stream is contact handled or remote handled, if the radionuclides are alpha or beta/gamma emitters, and if they contain activation products.

Radiation Effects Section: As required by the FFCAct-1992, this section of the WPS lists possible effects of the radiological characteristics of the waste stream on treatment technologies that could be applicable to that waste stream. For example, radiation levels may require remote handling of the waste and affect the design and operation of the treatment facility. The presence of volatile radionuclides may require the containment of all off-gases from the treatment system.

Waste Minimization Activities: As required by the FFCAct-1992, this section of the WPS provides information on the waste minimization practices being used for the waste stream. This section provides information on if the waste minimization practices include good operating practices, technology changes, raw material changes, product changes, etc.

EPA Code: This table of the WPS reports the EPA hazardous waste codes applicable to the waste stream, the basis for assigning the codes (process knowledge or sampling/analysis), the LDR basis (which is either technology based or concentration based), and the BDAT for each of the EPA hazardous waste codes.

In summary, the WPS for each waste stream, along with the site sections in the report for each State (Section B), summarize the site-specific information required by the FFCAct-1992.

State: South Carolina

ID #: 0000000003

Site: CHARLESTON NAVAL SHIPYARD

Waste Stream Name: SOLIDS CONTAINING POTASSIUM CHROMATE

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Cloths and plastic materials containing residue from chromate solutions.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.000	0.000	0.000	0.000	0.250	90.0

Treatability Group:

MLLW CH, Organic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant radiological problems during treatment. Treatment would be similar to that done on non-radioactive hazardous waste having the same characteristics. Concentration of radionuclide in treatment residues will be considered. Predominant radionuclide is Co-60.

Waste Minimization Activities:

- 1) Not Applicable.

This waste cannot be minimized since it results from work on systems where chromate is required.

State: South Carolina

ID #: 0000000003

Site: CHARLESTON NAVAL SHIPYARD

Waste Stream Name: SOLIDS CONTAINING POTASSIUM CHROMATE

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 0000000004

Site: CHARLESTON NAVAL SHIPYARD

Waste Stream Name: LEAD AND LEAD BEARING MATERIALS

Matrix: Elemental Lead

Waste Type: MLLW

Waste Stream Description and Source:

Solids from decontaminating lead-shielded items.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.000	0.000	0.000	0.000	0.280	3,175.2

Treatability Group:

MLLW CH, Elemental Lead, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant radiological problems during treatment. Treatment would be similar to that done on non-radioactive hazardous waste having the same characteristics. Concentration of radionuclide in treatment residues will be considered. Predominant radionuclide is Co-60.

Waste Minimization Activities:

Good operating practices.
Waste avoidance due to recycling/reuse.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

State: South Carolina	ID #: 0000000005
Site: CHARLESTON NAVAL SHIPYARD	
Waste Stream Name: LEAD AND/OR CHROMIUM BASED PAINT CHIPS	
Matrix: Inorganic Sludges/Particulates	Waste Type: MLLW

Waste Stream Description and Source:

Paint chips from ship overhaul and decommissioning.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.000	0.000	0.000	0.000	0.200	3,175.2

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat at a planned facility. Simple treatment by stabilization in the accumulation container.

Technology Status:

Technology exists. No modifications are necessary. Technology to treat this waste should be consistent with technology needed to treat equivalent solely hazardous waste.

Waste-Specific Radiation Effects on Treatment:

Radiation levels are not expected to cause significant problems during treatment; treatment would be similar to that done on non-radioactive hazardous waste having the same characteristics. Predominant radionuclide is Co-60.

Waste Minimization Activities:

Use of lead and/or chromium has been eliminated where technically feasible.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization

25.2 Savannah River Site

The Savannah River Site (SRS) is managed by the Westinghouse Savannah River Company (WSRC) under contract with the DOE. The site occupies about 780 km² along the Savannah River in Aiken, Allendale, and Barnwell Counties, South Carolina, about 30 km south of Aiken. The primary mission of the SRS is the production of plutonium, tritium, and other special nuclear materials, although the Savannah River Technical Center (SRTC), formally known as the Savannah River Laboratory (SRL), and the Savannah River Ecology Laboratory, are also located on the site. Approximately 24,500 people work at SRS; about 22,000 of those work for WSRC/Bechtel Savannah River, Inc., and 600 for the DOE. The balance work for various subcontractors on-site.

Site Summary

Mixed Waste Sources: The following SRS activities generate mixed waste:

- Plutonium recovery through separation processes
- Processing of enriched and depleted uranium
- Laboratory analytical testing and research
- Tritium production
- Bioassay studies
- Facility maintenance and other supporting activities
- Decontamination and decommissioning of facilities
- Waste processing
- Environmental restoration

Of the 54 identified waste streams for the site, 22 are no longer being generated. Programmatic changes are expected to produce at least 10 new streams in the next 5 years, which are included in the total. Detailed quantitative and descriptive information for each waste stream may be found in the Waste Profile Sheets (WPS) at the end of this section.

Mixed Waste Inventory: All the MTRU waste and all but 3 of the MLLW streams can be contact handled. Using December 1991 data, and projecting mixed waste generation for 1992, the mixed waste inventory is approximately 140,000 m³ (2.00 x 10⁸ kg). Of the stored wastes, almost 99 percent is subject to the LDR requirements.

Currently stored and 5-year projected wastes are identified by treatability group in Table 25.2-1. As of December 31, 1991, almost 94 percent of the waste by volume had been characterized by sampling and analysis. The remaining volume was characterized by process knowledge. These characterizations are the basis for determining the applicable RCRA hazardous waste codes for each waste stream in the WPS.

Waste Minimization: The SRS implemented a formal waste minimization program in 1989. The program provides for segregation of solvent-contaminated materials from non-hazardous wastes, use of non-hazardous solvents rather than hazardous solvents, and overall minimization of hazardous waste generated throughout the site. Waste-minimization activities directed specifically at reducing mixed waste generation include improving operating practices through waste segregation and changes in material handling procedures.

**Table 25.2-1
Mixed Wastes at Savannah River Site**

Waste Type/Matrix	Number of Waste Streams	Inventory		Number of Waste Streams	Five-Year Projection	
		(m ³)	(kg)		(m ³)	(kg)
WASTE TYPE -- HLW						
RH -alpha, Aqueous Liquid	3	126,939.00	196,434,313.42	3	9,324.42	9,791,737.00
Sub-Total HLW:	3	126,939.00	196,434,313.42	3	9,324.42	9,791,737.00
WASTE TYPE -- MLLW						
CH, Organic Liquids	6	19.80	16,179.00	6	765.00	673,169.00
CH -alpha, Organic Liquids	1	89.60	83,374.40	0	0.00	0.00
CH, Aqueous Liquid	7	41.37	41,759.52	2	6,519.00	6,492,000.00
RH -alpha, Aqueous Liquid	1	71.10	71,200.00	1	800.00	800,000.00
CH, Organic Sludges/particulates	0	0.00	0.00	1	1.00	1,000.00
CH, Inorganic Sludges/particulates	3	987.40	1,185,253.00	1	1,140.00	1,400,000.00
CH -alpha, Inorganic Sludges/particulates	0	0.00	0.00	1	374.00	1,371,686.00
CH, Cemented Solids	1	0.20	27.40	2	4,811.00	7,700,137.00
CH -alpha, Soils	1	18.11	23,205.00	0	0.00	0.00
CH, Organic Debris	4	262.53	65,654.00	4	33.15	18,720.00

Table 25.2-1 (Continued)
Mixed Wastes at Savannah River Site

Waste Type/Matrix	Number of Waste Streams	Inventory		Number of Waste Streams	Five-Year Projection	
		(m ³)	(kg)		(m ³)	(kg)
WASTE TYPE -- MLLW						
CH -alpha, Organic Debris	2	2,799 10	645,150 00	1	25 00	5,750 00
CH, Inorganic Debris	2	66 20	14,048 40	3	21 15	8,634 00
CH -alpha, Inorganic Debris	1	<0 10	29 50	0	0 00	0 00
RH, Inorganic Debris	1	0 25	2,270 00	2	4 27	218 00
CH, Heterogeneous Debris	1	0 63	136 40	0	0 00	0 00
CH, Reactive Metals	1	0 82	318 00	0	0 00	0 00
CH, Liquid Mercury	2	1 18	3,077 30	1	9 25	700 00
CH, Elemental Lead	1	280 00	212,525 00	1	30 00	62,350 00
RH, Other	1	9 70	9,135 00	1	4 90	3,786 20
Sub-Total MLLW:	36	4,648 03	2,373,341 92	27	14,537 72	18,538,150 20
WASTE TYPE -- MTRU						
CH -alpha, Organic Liquids	2	1 31	1,212 36	1	<0 10	11 79
CH -alpha, Inorganic Sludges/particulates	1	<0 10	30 80	0	0 00	0 00

Table 25.2.1 (Continued)
Mixed Wastes at Savannah River Site

Waste Type/Matrix	Number of Waste Streams	Inventory		Number of Waste Streams	Five-Year Projection	
		(m ³)	(kg)		(m ³)	(kg)
WASTE TYPE -- MTRU						
CH -alpha, Organic Debris	2	5,000.80	1,150,184.00	1	140.00	32,200.00
Sub-Total MTRU:	5	5,002.12	1,151,427.16	2	140.03	32,211.79
TOTAL:	44	136,589.15	199,959,082.50	32	24,002.17	28,362,098.99

Treatment Technology: Technologies exist for treating over 99 percent of the SRS mixed waste volume in storage. Treatment options have not been analyzed for the remaining volume. The remote-handled waste streams and those containing tritium will pose the greatest problems during treatment.

25.2.1 Mixed Waste

Four primary activities at the SRS generate mixed waste: fabrication of fuel and target elements at the reactor material area (M Area), waste management and environmental restoration activities, production of tritium and plutonium at the reactor areas (C, K, L, P, R areas), and separation and processing of uranium, plutonium, tritium, and fission products at the separation areas (F and H areas). All reactors except the K Reactor are currently shut down. As a result of these activities, high-level, low-level, and transuranic radioactive wastes have been and continue to be generated. Generation at shutdown facilities continues, but is reduced.

A total of 54 mixed waste streams are reported by the SRS. This total includes streams that are no longer being generated, future waste streams with no stored inventory, and streams currently producing waste that are expected to produce waste in the next 5 years. Table 25.2-1 groups the inventory of waste streams into treatability groups by their general physical-chemical matrix. The inventory column only includes those streams contributing to the volume of mixed waste currently in storage; the 5-year projection only includes those streams that will be generating mixed wastes in the near future.

The SRS reports approximately 127,000 m³ of HLW, 5000 m³ of MTRU waste, and 4,600 m³ MLLW in storage as of December 31, 1991. As a result of SRS's mission, radionuclides predominantly present in the waste inventory can be characterized as either uranium residues, fission products or transuranic elements. Almost all of the MLLW and MTRU waste streams can be contact-handled, and the HLW is remote-handled. Many of the MLLW streams expected to be generated in the future will be the result of planned treatment for the mixed wastes currently in storage.

SRS has been implementing waste-reduction and waste-minimization programs to reduce the amount of mixed waste generated. All required SRS facilities (those generating waste with a total life cycle cost in excess of \$100,000 per-year) prepared facility-specific waste-minimization plans in 1991 and scheduled process-waste assessments. Through the process-waste assessments, facilities identify the origins of their waste streams and systematically determine which streams and methods to target for minimization. As a result of this program, mixed waste generation has been reduced by waste segregation and changes in material-handling procedures.

Fifty-two waste streams, totalling 1538 m³, subject to the DOE shipping moratorium were also generated and are stored at SRS. These are hazardous wastes that have not been fully characterized to prove the absence of radioactive constituents. The wastes are currently stored in RCRA-permitted storage buildings pending approval of radiological screening procedures and subsequent resolution of the shipping moratorium. Once the shipping moratorium is resolved, SRS intends to treat these wastes on-site if they are mixed or off-site if they are confirmed to be non-radioactive.

25.2.1.1 High-Level Waste

Three HLW streams account for almost 93 percent of the total volume of mixed waste at SRS. These streams are stored in 49 large underground storage tanks in the F- and H-area tank farms. Two streams enter the tank farms as liquid streams of mostly water and fission products generated during plutonium and uranium recovery. The third stream consists of alkaline liquid generated by regeneration of resins for cleaning deionized water.

Through sampling and analysis, the stored HLW streams have been shown to contain various hazardous metals, e.g., lead, mercury, chromium, and silver. The high activity from fission products and transuranic elements require all HLW to be remote-handled.

A future waste stream will be generated by laboratory research, development, and analysis supporting operations of the In-Tank Precipitation (ITP) program. The waste is expected to contain benzene and heavy metals. The 5-year projected generation of this waste stream is about 4 m³.

25.2.1.2 Mixed Transuranic Waste

The SRS lists 5 MTRU waste streams, defined as having transuranic activity greater than 100 nCi/g, with a total volume of about 5000 m³. Three of these waste streams are no longer generated. Sixty-six percent of the waste is subject to the LDR requirements. MTRU waste volumes represent only a small portion of the mixed wastes at the SRS, representing less than 4 percent of the total volume of mixed wastes.

The MTRU waste streams are being stored on site in RCRA-approved facilities until treatment capacity can be brought on-line. The solvent waste stream, consisting of process waste contaminated with solvent rags and accounting for over 99 percent of the MTRU waste, is slated for shipment to the Waste Isolation Pilot Plant in New Mexico after pretreatment at the Transuranic Waste Facility (TWF). The fraction of this stream generated prior to January 1990 is being managed as MTRU waste. The pretreatment at the TWF will enable the waste to meet the WIPP Waste Acceptance Criteria. The MTRU streams that meet the WIPP no-migration variance, if granted, will not require further treatment.

Two MTRU waste streams are expected to be generated in the next 5 years, with a projected volume of approximately 140 m³. These are primarily routinely generated debris with toxic metal constituents such as lead lined gloves.

The other 3 waste streams contributing to the stored inventory are an organic liquid stream produced in the Plutonium and Uranium Reduction Extraction (PUREX) process; organic solvent-containing solid debris; and nearly 31 kg of plutonium-laden incinerator ash from the Rocky Flats Plant. The incinerator ash is a fixed amount of material sent to the SRS for plutonium-recovery research that has since been cancelled. Treatment options for the small volume of incinerator ash from the Rocky Flats Plant have not yet been analyzed.

With the exception of organic liquids generated by the PUREX process, all the MTRU waste has been characterized using process knowledge. Wastes from the PUREX process are stored in 2 tanks, 1 of which has undergone sampling and analysis. All the waste can be contact handled during waste management and treatment.

25.2.1.3 Mixed Low-Level Waste

The SRS classifies 45 waste streams, 3 percent of the total volume in storage, as MLLW. Of the total, 18 streams are no longer generated, and 9 are expected to start generating mixed waste in the future. Of the total MLLW volume, approximately 48 percent is subject to the LDR requirements.

The waste matrices include aqueous liquids, cemented solids, elemental lead, inorganic and organic debris, inorganic and organic sludge and particulates, liquid mercury, and organic liquids. The largest single category of MLLW is organic debris, making up approximately 66 percent (3,100 m³) of the MLLW volume. The organic debris stream contributing approximately 90 percent of the volume came

from separation activities during plutonium recovery and consists primarily of booties, lab coats, rags, and housekeeping debris. This waste stream is estimated to contain between 10 and 100 nCi/g TRU radionuclides and is currently being managed in the same manner as TRU waste. A second smaller stream, accounting for approximately 8 percent of the volume in this category, consists of spent filter paper used to treat nickel plating solutions at the M-Area Dilute Effluent Treatment Facility (DETF). This waste stream is still being generated. Inorganic sludges and particulates account for approximately 21 percent (990 m³) of the MLLW volume. Sludge resulting from the treatment of M-Area nickel-plating solutions and the Process Waste Interim Treatment and Storage Facility (PWIT/SF) makes up around 71 percent of this volume. The M-Area activities have included nickel plating of depleted uranium core rods for use as target components in the reactors. Elemental lead is a smaller but significant stream with approximately 6 percent (280 m³) of the volume in this category. The waste is composed of miscellaneous lead shapes used for shielding, lead acid batteries, lead weights, and mercury vapor lights. The waste is generated in reactor fuel, target and separation areas, and in laboratories. The lead stream is still being generated. The remaining volume, about 7 percent, is distributed in small amounts among the 6 other categories.

Five-year projections estimate that around 15,000 m³ of MLLW will be generated at SRS. The largest fraction of this will be a treated waste stream from M-Area consisting of plating-solution sludges that will be stabilized by a commercial vendor. The waste will be in a final form and is slated for disposal in the Hazardous Waste/Mixed Waste Disposal Facility vaults. This stream will account for approximately 33 percent of the future MLLW volume. The other significant volume of MLLW projected for the next 5 years is acidic aqueous waste from laboratory research for production and waste management support at the SRTC. The stream is currently being generated and will account for around 32 percent of future generation. This stream is being treated on-site using the SRL Ion Exchange Treatment Probe. An aqueous liquid stream from blowdown of the Consolidation Incinerator Facility will represent approximately 13 percent of the future volume.

EPA hazardous-waste codes were assigned to the MLLW using sampling and analysis for 14 of the 45 waste streams, accounting for approximately 31 percent of the volume. Waste codes for the other 31 streams were determined by process knowledge. The streams characterized by process knowledge include some streams no longer being produced, the 9 new streams that will be generated in the future, and several waste streams which contain a listed waste component.

25.2.2 Treatment Facilities and Technology

With the planned Consolidated Incineration Facility (CIF) and Hazardous Waste/Mixed Waste Disposal Facility, almost all organic liquids, organic debris, and heavy metals can be treated to the LDR requirements. However, the largest MLLW stream (ID #910) contains a wide variety of debris with fairly high levels of alpha-emitting radionuclides; therefore, treatment methods have not yet been identified. A few streams (e.g., ID#2688) can be solidified by stabilization or vitrification, but no facility is currently available to treat them. Tables 25.2-2 through 25.2-4 summarize mixed waste treatment facilities at SRS currently treating mixed wastes, and that are planned, or under construction.

**Table 25.2-2
Savannah River Site
Mixed Waste Treatment Facilities
Currently in Use for Mixed Wastes**

Facility/System	Treatment Type(s)	Allowable Waste		Ident. Of MW Streams To Be Treated	Normal Operating Capacity (m3/yr)
		Radioactive Type(s) *	Physical/Chemical Matrix		
F/H Area Effluent Treatment Facility	Neutralization, Chemical Precipitation, Filtration, Carbon Adsorption, Reverse Osmosis, Ion Exchange, Evaporation, Mercury Absorption	MLLW, CH	Aqueous Liquids	F/H area wastewater	16,264.0
M-Area Liquid Effluent Treatment Facility	Neutralization, Chemical Precipitation, Flocculation, Filtration	MLLW, CH	Aqueous Liquids	Supernates From 129, 2688	480.0
SRL Ion Exchange Treatment Probe / High Activity	Ion Exchange	MLLW, ALPHA, RH	Aqueous Liquids	133	210.0
SRL Ion Exchange Treatment Probe / Low Activity	Ion Exchange	MLLW, CH	Aqueous Liquids	132	1,500.0
Z-Area Saltstone Facility (1)	Stabilization	MLLW, CH	Aqueous Liquids	Certain overheads from 422, 424	39,840.0

* ALPHA refers to transuranic alpha greater than 10 nCi/g
 Note (1): Essentially the feed to this is the supernate fraction of SRS HLW. Primary feed streams are the concentrates from ETF facility & HLW supernate exiting the ITP process.

**Table 25.2-3
Savannah River Site
Mixed Waste Treatment Facilities
Planned or Under Construction for Use for Mixed Wastes**

Facility/System	Treatment Type(s)	Allowable Waste		Ident. Of MW Streams To Be Treated	Design Capacity (m3/yr) **	Date Avail. For Treating MW **
		Radioactive Type(s) *	Physical/Chemical Matrix			
Consolidated Incineration Facility / CIF Ashcrete	Stabilization	MLLW, ALPHA, CH	Inorganic Sludges/Particulates (Ash)	SRS-2697	344,029.0 Kg/yr	1996
Consolidated Incineration Facility / CIF Incinerator - Liquid Feed System	Incineration	MLLW, CH	Organic Liquids, Aqueous Liquids	123, 124, 2319, 407, 884, 916	340.0	1996
Consolidated Incineration Facility / CIF Incinerator - Solid Feed System (1)	Incineration	MLLW, CH	Organic Solids	125, 2693, 2694, 413, 425, 914	14,300,000.0 Kg/yr	1996
DWPF Vitrification Plant	Vitrification	HLW, RH	HLW Sludges, Liquid Slurries	Sludges from 422, Sludges from 424, Sludges from 440	4,368.0	1994

*

ALPHA refers to transuranic alpha greater than 10 nCi/g

**

Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

Note (1):

Incinerator capacity must be reported in mass flow rather than volume flow to account for varying densities and heat content of the waste feed.

Table 25.2-3 (Continued)
Savannah River Site
Mixed Waste Treatment Facilities
Planned or Under Construction for Use for Mixed Wastes

Facility/System	Treatment Type(s)	Allowable Waste		Ident. Of MW Streams To Be Treated	Design Capacity (m3/yr) **	Date Avail. For Treating MW **
		Radioactive Type(s) *	Physical/Chemical Matrix			
Hazardous Waste/Mixed Waste Disposal Facility / Acid Leaching And Chemical Precipitation Unit	Acid Leaching, Chemical Precipitation	MLLW, CH	Inorganic Debris, Cadmium Solids	412	17.0	2004
Hazardous Waste/Mixed Waste Disposal Facility / Macroencapsulation Unit	Macroencapsulation	MLLW, CH	Elemental Lead	412, 414	73.0	2004
Hazardous Waste/Mixed Waste Disposal Facility / Mercury Amalgamation Unit	Amalgamation	MLLW, CH	Elemental Mercury	416	0.6	2004
Hazardous Waste/Mixed Waste Disposal Facility / Mercury Roasting/Retorting And Recovery Unit	Hg Roasting/Retorting	MLLW, CH	Mercury Contaminated Solids	2702, 417, 883	17.1	2004
Hazardous Waste/Mixed Waste	Soil Washing	MLLW, CH	Soil	2699	340.0	2004

*

ALPHA refers to transuranic alpha greater than 10 nCi/g

**

Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

Table 25.2-3 (Continued)
Savannah River Site
Mixed Waste Treatment Facilities
Planned or Under Construction for Use for Mixed Wastes

Facility/System	Treatment Type(s)	Allowable Waste		Ident. Of MW Streams To Be Treated	Design Capacity (m3/yr) **	Date Avail. For Treating MW **
		Radioactive Type(s) *	Physical/Chemical Matrix			
Disposal Facility / Soil Washing						
Hazardous Waste/Mixed Waste Disposal Facility / Stabilization/Solidification Unit	Stabilization	MLLW, CH	Aqueous Liquids, Inorganic Sludges/Particulates, Solids	2692, 412	484.0	2004
M-Area Vendor Treatment (2)	Stabilization, Vitrification	MLLW, CH	Inorganic Sludges/Particulates, Aqueous Liquids	129, 130, 2688, 2689, 2690, 915	2,134.0	1995

* ALPHA refers to transuranic alpha greater than 10 nCi/g

** Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

Note (2): Stabilization or vitrification may be selected based on need.

Table 25.2-4
Savannah River Site
Compaction, Evaporation, Shredding, Sorting, Size Reduction, and Packaging Facilities
Planned or Under Construction for Mixed Wastes

Facility/System	Treatment Type(s)	Allowable Waste		Ident. Of MW Streams To Be Treated	Design Capacity (m3/yr) **	Date Avail. For Treating MW **
		Radioactive Type(s) *	Physical/Chemical Matrix			
Hazardous Waste/Mixed Waste Disposal Facility / Size Reduction	Size Reduction, Sorting, Shredding, Compacting	MLLW, CH	Solids	425, 914, 413, 414, 417	1,313.0	2004
Transuranic Waste Facility	Sorting & Repackaging	MTRU, MLLW, ALPHA, CH	Solids, Liquids	910, 919, 911, 912	722.0	1998

* ALPHA refers to transuranic alpha greater than 10 nCi/g

** Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

25.2.2.1 Existing Treatment Facilities

Four facilities are currently treating mixed waste at SRS: the M-Area Liquid Effluent Treatment Facility (LETf), the F/H-Area Effluent Treatment Facility (ETF), the Z-Area Saltstone Facility, and the Savannah River Laboratory (SRL) Ion Exchange Treatment Probe (IETP). Of these 4 facilities, the SRL IETP, the Z-Area Saltstone Facility, and the F/H-Area ETF treat wastes to LDR requirements.

M-Area Liquid Effluent Treatment Facility. The LETf is a physical and chemical treatment plant that processes wastewater originating in the M-Area fuel-fabrication facilities and laboratories. Under the current mission changes, the LETf exists but is not treating mixed wastes at this time. The LETf operation consists of the Dilute Effluent Treatment Facility (DETF), the Chemical Transfer Facility (CTF), and the Process Waste Interim Treatment/Storage Facility (PWIT/SF). Wastes treated at the LETf are listed hazardous wastes because they contain solids from electroplating operations. The waste is also a mixed waste because it contains low levels of uranium.

The DETF consists of a conventional treatment system for M-Area process effluent containing low-contaminant concentrations and spent process solutions as well as systems for transfer of wastewater from all buildings to the DETF. Effluent streams are collected in equalization tanks and treated by neutralization, precipitation, flocculation, and filtration. Treatment of wastewater in the DETF produces a filtercake that is sent to the CTF slurry hold tank, where it is slurried before being transferred to the PWIT/SF. Treated wastewater from the DETF is discharged in compliance with a National Pollutant Discharge Elimination System (NPDES) permit.

The PWIT/SF consists of several tanks used to store and treat waste sludge from the DETF and CTF until final treatment and disposal. Waste treatment in the PWIT/SF tanks consists of occasional batch addition of caustic for corrosion control and pH adjustment of new waste as it enters the tanks. When the solid fraction settles to the bottom of the storage tank, the supernate is decanted and returned to the DETF for treatment. The solids are left in the tank pending future treatment by the vendor treatment process. The design capacity for the M-Area PWIT/SF is 3,000,000 m³/yr.

Under current operating conditions, the M-Area LETf treats about 480 m³/year. The low rate of waste treatment is the result of a mission change at SRS as there is no longer as great a need for the manufacture of fuel and target assemblies. The M-Area LETf will not accept high-level radioactive constituents, organics or PCBs.

F/H-Area Effluent Treatment Facility. The F/H-Area ETF is designed to treat routine wastewater from F/H areas, contaminated cooling water, and storm-water runoff. Processes included in the ETF are chlorination, pH adjustment and filtration, mercury removal, organic removal, reverse osmosis, ion exchange, ion-exchange regeneration, and evaporation.

Treated waste water from the ETF is discharged in compliance with an NPDES permit. Concentrated low-level liquid is delivered to the Z-Area Saltstone Facility for solidification. Solids collected during the process are sent to low-level waste disposal.

Design capacity for the ETF is around 600,000 m³/year. The maximum permitted treatment capacity is about 400,000 m³/year. Under normal operating conditions, the ETF treats over 16,000 m³ of liquid waste per year. The facility cannot accept PCBs or fissile material.

SRL Ion Exchange Treatment Probes. The method of treatment for chromium, lead, mercury, and benzene content is sorption on an appropriate ion exchange medium using an SRTC-designed apparatus.

This system is an in-tank treatment system that has been installed in 1 high and 1 low-activity tank. Each treatment system consists of a treatment probe containing an ion-exchange resin and a feed pump. Two different types of resins are used; 1 for metals, and another for organics. This system will treat the waste to meet the LDR treatment standards.

Ion exchange resins currently used for this treatment have already passed the TCLP test for sorbed mercury, lead, chromium, and benzene. The waste, which is rendered non-hazardous, is sent to the F-Area Evaporator. The non-hazardous, but radioactive, ion exchange resin will be sent to low-level waste disposal when the resin reaches its saturation point.

The capacity of the SRL Ion Exchange Treatment Probes is about 210 m³ per year for high-activity waste and 1500 m³/year for low-activity waste that comes from the SRTC waste streams.

Z-Area Saltstone Facility. The Z-Area Saltstone Facility (ZASF) is a solidification facility for treating mixed low-level liquid wastes, including those with heavy metals. The process treats a characteristic waste to meet treatment standards and renders the waste to a non-hazardous and non-leachable final form. The ZASF houses a grouting process used to convert mixed low-level liquid wastes to a cementitious final waste form. In the grouting process, the liquid waste is mixed with a blend of dry materials in a saltstone mixing unit. The pre-blended materials consist of ground blast furnace slag (grade 120), Class F fly ash, and calcium hydroxide cement to promote setting of the grout mixture.

The ZASF contains 3 units, a dry-blend handling unit, a grout mixing unit, and above ground disposal vaults. Dry materials for the cementation process are received, stored, and blended in the dry-blend handling unit. The dry materials and liquid waste are mixed in the grout mixing unit. The resulting mixture is gravity fed into an agitated holding tank. A centrifugal pump transfers the grout slurry to an above-ground disposal vault.

The capacity of the ZASF is limited to almost 40,000 m³/yr by the rate at which above-ground vaults can be constructed. Only liquid wastes can be processed in the facility. The facility can treat alpha-contaminated waste with a level less than 10 nCi/g and waste streams that contain heavy metals. The ZASF includes a line-clearing mechanism to remove blockages in the lines between the grouting unit and the above ground vaults. As a result, the facility may be able to handle fairly viscous grouts.

25.2.2.2 Planned Treatment Facilities

The SRS has 6 planned treatment facilities: the Defense Waste Processing Facility (DWPF), the Consolidated Incineration Facility (CIF) and the CIF Ashcrete Facility, the Hazardous Waste/Mixed Waste Disposal Facility (HW/MW DF), the Transuranic Waste Facility (TWF), the M-Area Vendor Treatment Process, and the CIF Blowdown Treatment Facility. These facilities will produce waste forms that are considered final. The planned facilities have been designed to work together to treat SRS wastes. For example, the CIF Ashcrete Facility is intended to solidify the by-product ash waste produced by the CIF, and the CIF Blowdown Treatment Facility will solidify blowdown from the incinerator's off-gas system. Similarly, the DWPF vitrification plant and the ZASF will be used together to treat the sludge and supernatant liquid from the SRS high-level mixed waste tanks. Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, technology development, permit issuance, etc.

Defense Waste Processing Facility. The DWPF is a vitrification facility intended to convert insoluble, high-level waste sludge containing Sr-90 and Cs-137 and other radioisotopes to borosilicate glass. The

DWPF will treat the high-level fraction, and the Z-Area Saltstone Facility will treat the low-level fraction of the HLW currently stored in tanks at the SRS. Pretreatment steps of this waste between the tanks and the DWPF such as in-tank precipitation, extended sludge processing, and evaporation are not separately identified in this report. There is not a one-to-one correlation between the HLW inventory and feed rate of the DWPF due to pretreatment steps that are performed before vitrification of the waste. SRS is working with the EPA Region IV and the South Carolina Department of Health and Environmental Control to determine a schedule for treating the backlog of HLW. The DWPF will contain a liquid-fed glass melter capable of processing 0.5 m³/hr of high-level slurry waste. Molten glass will be poured into stainless steel canisters and stored in an on-site vault pending shipment to a geologic repository. The process will render the characteristic waste non-hazardous and will meet the LDR specified technology for this waste type.

The DWPF is estimated to become operational in 1994 with nearly 4,400 m³/yr treatment capacity. The final waste form leaving the DWPF will be borosilicate glass. The entire facility is housed in a canyon structure, and all operations are remote. A canyon is the large hot (radioactive) cell at the center of fuel reprocessing and radionuclide production plants. Each has an overhead crane and is surrounded by operating galleries. Canyons typically have tunnels through the walls where flatbed rail cars can enter and exit with equipment. The entire plant is encased by thick concrete walls. As a result, no restrictions will be placed on the radioactive constituents allowed in the feed. The facility will accept heavy metals. No organic waste chemicals or PCB wastes will be accepted.

Consolidated Incineration Facility. The CIF can accept either liquid or solid combustible mixed low-level waste. The facility houses an 8 x 25-ft rotary-kiln incinerator with 1 organic waste burner coupled to a 7 x 21-ft secondary combustion chamber with 1 radioactive organic burner. Liquid waste is fed to the incinerator using an aqueous waste nozzle, and solid waste is fed using a ram solid-waste feed system. Solid-waste pieces fed to the incinerator must fit into a 21-inch cubical cardboard box. Off-gas for the CIF is managed through a 150-ft exhaust stack. Off-gas control equipment includes a quench vessel, a free-jet scrubber, a cyclone separator, a high-efficiency mist eliminator, and a series of HEPA filters. Incineration of mixed low-level waste liquid produces an ash that must be treated as mixed low-level waste.

The CIF is expected to begin operation in 1996. The estimated annual capacity of the CIF is 14,300,000 kg/yr for solid wastes and 340 m³/yr for liquid wastes. Due to varying densities in the solid materials incinerated by the CIF, capacity is reported in mass (kg) instead of volume (m³). The CIF can be used to treat organic wastes including PVC plastic but not PCBs. Wastes with alpha contamination below 10 nCi/g will be allowed.

The CIF also includes a process to solidify ash produced during waste combustion. This process is designed to stabilize ash from the CIF and is called the CIF Ashcrete Facility. It is an integral part of the CIF and is not designed to operate separately. Ash from the incinerator will undergo a wet cooling bath and be raked into 55-gallon drums. After each drum is two-thirds full, a conveyor belt will move it to the ashcrete unit, where Portland cement is added, a lid is secured on the open end, and the drum is agitated. The lid is then removed, more Portland cement is added, and the drum agitated again. Then the drum is sealed and sent to a RCRA-permitted storage area to cure prior to disposal in the HW/MW DF disposal vaults.

The full 3-shift capacity for the CIF Ashcrete Facility is over 340,000 kg/yr. The drum-tumbling mixing system is designed to handle fine particulate matter such as ash, and coarser feed materials may be more difficult to process. The CIF Ashcrete Facility can treat low-level radioactive ash and ash contaminated with heavy metals. The facility is expected to be operational in 1996. The facility will not accept PCBs.

Hazardous Waste/Mixed Waste Disposal Facility. The HW/MW DF is a RCRA-permitted facility designed to treat and dispose, in accordance with the LDR requirements, hazardous and mixed waste generated at the SRS that cannot be managed at other existing or planned facilities. The facility consists of 2 phases: Phase I is the HW/MW Disposal Vaults and Phase II is the HW/MW Treatment Building. The result will be an integrated waste-management facility incorporating a number of treatment processes. The HW/MW Treatment Building will house the various treatment systems and will also treat any secondary streams generated during waste processing. The treatment systems will include waste handling (sorting and size reduction), acid leaching and chemical precipitation for the removal of heavy metals, stabilization for solidifying solid and liquid wastes in a cement matrix, soil washing for pretreating contaminated soils, macroencapsulation for treating radioactive lead solids, roasting and retorting for soils and equipment contaminated with high mercury wastes, amalgamation for treating elemental mercury, and wastewater treatment for processing wastewater generated by the other processes.

The HW/MW DF treatment building is estimated for start-up in 2004. Treatment capacities expected for each primary unit are 73 m³/year for the macroencapsulation unit, > 17 m³/year for the mercury roasting/retorting and recovery unit, 0.6 m³/year for the mercury amalgamation unit, 17 m³/year for the acid leaching and chemical precipitation unit, > 340 m³/year for the soil-washing unit, > 480 m³/year for the solidification unit, and > 1300 m³/yr for the pretreatment (shredding, packaging, size reduction, and compaction) unit. Capacity is based on existing waste streams slated for treatment at the HW/MW DF treatment building and using commercially available standard equipment for economy of design. Treatment of waste will be performed in campaigns or batch runs. The facility also includes a permitted storage area for approximately 3,300 m³ of waste.

Transuranic Waste Facility. The TWF is intended to prepare transuranic wastes stored at the SRS for shipment to the Waste Isolation Pilot Plant in New Mexico. Low-activity transuranic wastes will be assayed, X-rayed, sorted, and repackaged. High-activity waste treatment may include decontamination, incineration, encapsulation, stabilization, and vitrification, depending on the WIPP Waste Acceptance Criteria. The facility is estimated to begin operation in the late 1990s or early 2000s.

M-Area Vendor Treatment Facility. This facility is designed to treat sludge by stabilization or vitrification. The facility is estimated for start-up in 1995. The design capacity for the facility is about 2,000 m³/year. Treatment capacity under normal operating conditions is expected to be approximately 1,100 m³/year. The facility is in the preliminary planning stages and only the forecasted cost has been estimated. The amount of waste generated will vary depending on the treatment method used. Since the waste to be treated by this process is finite, a private contractor will operate the treatment unit.

CIF Blowdown Treatment Facility. The Y-Area Treatment Facility project was originally scoped to treat the M-Area sludges and the blowdown wastes from the CIF. The M-Area sludges will now be treated at the M-Area Vendor Treatment Facility. The Y-Area Treatment Facility is being considered for rescoping to treat the CIF blowdown only. Other options such as vendor treatment are also being investigated. The facility is projected to provide volume reduction and stabilization of the CIF blowdown waste. There is no design information such as waste acceptance parameters, operating capacities, or process description available at this time, therefore the facility has not been included in the treatment tables.

25.2.2.3 Treatment Facility Summary

Tables 25.2-5 and 25.2-6 summarize the capabilities of current and planned treatment facilities at SRS. The tables list the physical form of both feed and treatment products, the current operating status of the unit, and whether the facility is intended for high-level, TRU, or low-level waste or a combination of

these. The tables also summarize other relevant waste acceptance parameters for the facility, with an "√" marking acceptable parameters. The assumption has been made that the legal limitations and the technological limitations of a facility will be identical. These tables indicate if a facility is capable of treating remote-handled waste, as opposed to contact-handled waste only. These tables also summarize 3 relevant waste-acceptance parameters related to the chemical composition of the waste, such as presence of toxic metals, toxic organics, or mercury. Parameters marked as acceptable are still subject to concentration limitations. For example, a facility may accept waste with uranium but only if the uranium is present below a certain concentration.

25.2.3 Technology Development

The availability and applicability of waste management technologies has been examined for all SRS mixed wastes. The different degrees of availability of the waste specific technology treatment are included in the waste profile sheets and summarized below.

For some wastes, technologies exist or are considered readily available based on previous commercial sector or DOE experience. No significant process modifications are required for the treatment of waste streams with this determination.

In many cases, the determination has been made that the technology exists but has to be modified for application to SRS mixed wastes. Most technology development efforts fall in this group. Modifications may include adaptations of design and operation to assure containment of radionuclides. Other modifications may be aimed at treatment of the mixed waste matrix. Typically, the SRS site specific treatment technologies are being adapted from processes developed for radioactive material processing (with no RCRA LDR constituents) or other applications.

For some wastes the decision has not been made on the availability of treatment technology. If the wastes are not yet well enough characterized from sampling or process knowledge, the necessary evaluations of potential treatment processes are hindered. Waste analysis and review is still ongoing.

There are a number of planned facilities at Savannah River, e.g. DWPF, CIF, HW/MWDF, Transuranic Waste Facility, the M-Area Vendor Treatment Facility, and the CIF Blowdown Treatment Facility. Many of the site-specific technology development activities are being carried out in support of the commissioning of these facilities. These include studies of incinerator off-gas treatment, metal transport in incinerators, and waste form evaluations. There are also waste form evaluation studies for the processing of M-Area electroplating sludge and a number of activities which support the development of the HW/MWDF. Additional site specific technologies are reported here, such as remediation technology development activities, that do not support specific waste management facilities but may have some benefit when applied to mixed waste management strategies.

Site-specific technology development activities with numerically indexed narrative descriptions and tables of titles are presented in the following sections of this chapter as well as in appendix B. The following site-specific technology development activities listed below identifies site-specific technology development activities which are potentially applicable to the treatability groups and BDATs identified in Chapter 6.0. Additionally, crosscutting technology development activities not assigned to treatability groups are included. Where BDAT is indicated as NA, or is blank, the technology development activity does not link to specific BDAT treatment functions, but is intended to provide other supporting functions.

Table 25.2-5
Savannah River Site
Current and Planned Facilities - Treatment Category
Mixed Waste Treatment Facilities

Facility/System	Operating Status *	Feed Types	Final Waste Form	HLW MTRU MLLW	Alpha **	RH CH	Hg	Other Toxic Metals	Toxic Organics
Consolidated Incineration Facility / CIF Ashcrete	Planned, 1996	Inorganic Sludges/Particulates (Ash)	Cemented Waste	MLLW	√	CH	√	√	
Consolidated Incineration Facility / CIF Incinerator - Liquid Feed System	Planned, 1996	Organic Liquids, Aqueous Liquids	Ash	MLLW		CH	√	√	√
Consolidated Incineration Facility / CIF Incinerator - Solid Feed System	Planned, 1996	Organic Solids	Ash	MLLW		CH	√	√	√
DWPF Vitrification Plant	Planned, 1994	HLW Sludges, Liquid Slurries	Vitrified Glass	HLW	√	RH	√	√	
F/H Area Effluent Treatment Facility	Operating	Aqueous Liquids	Aqueous Liquid	MLLW		CH	√	√	√
Hazardous Waste/Mixed Waste Disposal Facility / Acid Leaching And Chemical Precipitation Unit	Planned, 2004	Inorganic Debris, Cadmium Solids	Liquid	MLLW		CH		√	

* Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

** Transuranic alpha greater than 10 nCi/g.

Table 25.2-5 (Continued)
Savannah River Site
Current and Planned Facilities - Treatment Category
Mixed Waste Treatment Facilities

Facility/System	Operating Status *	Feed Types	Final Waste Form	HLW MTRU MLLW	Alpha **	RH CH	Hg	Other Toxic Metals	Toxic Organics
Hazardous Waste/Mixed Waste Disposal Facility / Macroencapsulation Unit	Planned, 2004	Elemental Lead	Lead	MLLW		CH		✓	
Hazardous Waste/Mixed Waste Disposal Facility / Mercury Amalgamation Unit	Planned, 2004	Elemental Mercury	Mercury	MLLW		CH	✓		
Hazardous Waste/Mixed Waste Disposal Facility / Mercury Roasting/Retorting And Recovery Unit	Planned, 2004	Mercury Contaminated Solids	Mercury	MLLW		CH	✓		
Hazardous Waste/Mixed Waste Disposal Facility / Soil Washing	Planned, 2004	Soil	Slurries	MLLW		CH	✓	✓	✓
Hazardous Waste/Mixed Waste Disposal Facility / Stabilization/Solidification Unit	Planned, 2004	Aqueous Liquids, Inorganic Sludges/Particulates, Solids	Solid	MLLW		CH	✓	✓	
M-Area Liquid Effluent Treatment	Operating	Aqueous Liquids	Liquid	MLLW		CH		✓	

* Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

** Transuranic alpha greater than 10 nCi/g.

Table 25.2-5 (Continued)
Savannah River Site
Current and Planned Facilities - Treatment Category
Mixed Waste Treatment Facilities

Facility/System	Operating Status *	Feed Types	Final Waste Form	HLW MTRU MLLW	Alpha **	RH CH	Hg	Other Toxic Metals	Toxic Organics
Facility			Sludges						
M-Area Vendor Treatment	Planned, 1995	Inorganic Sludges/Particulates, Aqueous Liquids	Cemented Solids Or Vitrified Waste	MLLW		CH		√	
SRL Ion Exchange Treatment Probe / High Activity	Operating	Aqueous Liquids	Liquids	MLLW	√ *	RH	√	√	√
SRL Ion Exchange Treatment Probe / Low Activity	Operating	Aqueous Liquids	Liquids	MLLW		CH	√	√	√
Z-Area Saltstone Facility	Operating	Aqueous Liquids	Stabilized Wastes	MLLW		CH	√	√	

* Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

** Transuranic alpha greater than 10 nCi/g.

Table 25.2-6
Savannah River Site
Current and Planned Facilities - Treatment Category
Compaction, Evaporation, Shredding, Sorting, Size Reduction, and Packaging Facilities

Facility/System	Operating Status *	Feed Types	Final Waste Form	HLW MTRU MLLW	Alpha **	RH CH	Hg	Other Toxic Metals	Toxic Organics
Hazardous Waste/Mixed Waste Disposal Facility / Size Reduction	Planned, 2004	Solids	Solids	MLLW		CH	√	√	
Transuranic Waste Facility	Planned, 1998	Solids, Liquids	Drums Of TRU	MTRU MLLW	√	CH	√	√	√

* Because DOE is still in the planning/conceptual stage, in the design stages, or in the construction stage for these facilities, schedules and capacities are subject to changes based on the availability of funds, results of treatability studies, permit issuance, etc.

** Transuranic alpha greater than 10 nCi/g.

Site-Specific Technology Development Activities

(by BDAT:

by Summary Technology (Tech) Area ID:

by ID number: (references numerically indexed narrative descriptions presented later
in this chapter and in Appendix B)

by Title:)

BDAT: BIODG

Summary Tech Area ID: off-gas technology

328 Integrated Demonstration for Cleanup of Organics in Soils and at Non Arid Sites; off-gas
treatment

Summary Tech Area ID: waste destruction & stabilization

314 Biomolecular Probe Analysis of Bioremediation Organisms

305 Soil Bioreactor Studies

321 Savannah River Integrated Demonstration Test, Monitoring

BDAT: CARBN

Summary Tech Area ID: off-gas technology

328 Integrated Demonstration for Cleanup of Organics in Soils and at Non Arid Sites; off-gas
treatment

BDAT: CHOXD

Summary Tech Area ID: off-gas technology

328 Integrated Demonstration for Cleanup of Organics in Soils and at Non Arid Sites; off-gas
treatment

Summary Tech Area ID: waste destruction & stabilization

360 Destruction of HAZ/MIXED/TRU waste - organic material oxidation process

BDAT: HLVIT

Summary Tech Area ID: final form

167 Waste Form and Vitrification Process Development for Mixed Waste

349 Immobilization studies

351 Waste form evaluation

BDAT: INCIN

Summary Tech Area ID: off-gas technology

352 Off-gas treatment studies

328 Integrated Demonstration for Cleanup of Organics in Soils and at Non Arid Sites; off-gas
treatment

353 Hazardous metals transport in incinerators

Summary Tech Area ID: waste destruction & stabilization

360 Destruction of HAZ/MIXED/TRU waste - organic material oxidation process

302 Pulsed Ultraviolet Irradiation Gas-Treatment Technology

295 Cold Plasma Destruction of Savannah River Off-Gas VOCs

313 High Energy Corona for Destruction of VOCs in Process Off-Gases

354 Rotary kiln seal tests

BDAT: MACRO

Summary Tech Area ID: final form

351 Waste form evaluation

358 Macroencapsulation

BDAT: RMETL

Summary Tech Area ID: chemical physical treatment

359 Destruction of HAZ/MIXED/TRU waste - removing plutonium oxide

Summary Tech Area ID: off-gas technology

353 Hazardous metals transport in incinerators

BDAT: STABL

Summary Tech Area ID: chemical physical treatment

357 Silver saddle treatment

Summary Tech Area ID: final form

349 Immobilization studies

167 Waste Form and Vitrification Process Development for Mixed Waste

356 Waste form for CIF Ash

351 Waste form evaluation

BDAT: WTRRX

Summary Tech Area ID: waste destruction & stabilization

350 Electron beam treatment of MLLW

Technology development activities that do not link to specific BDAT RCRA treatment functions

BDAT: NA

Summary Tech Area ID: characterization

319 Fiber Optic Sensor and Analysis for the Integrated Demonstration for Cleanup of Soils and Groundwater in Non-Arid Sites

Summary Tech Area ID: final form

413 Radiological Performance Assessment

Summary Tech Area ID: waste minimization

355 CIF related waste minimization activities

25.2.4 Environmental Restoration Program

The SRS environmental restoration mission is to manage activities to achieve full compliance with all applicable laws, regulations, and agreements; to treat, store, and dispose of the current inventory of restoration waste; to reduce the generation of new wastes; to clean up inactive waste sites; to remediate contaminated ground water; and to decontaminate and decommission surplus facilities. This mission will be accomplished over a 30-year period. Seventeen major milestones are outlined in the 5-Year Plan to correct adverse environmental conditions and to remediate and close abandoned waste sites. The 5 year projections for environmental restoration activities do not include investigation-derived wastes. SRS is presently working with its regulators to determine if and how this material may be managed as hazardous/mixed waste.

Planned environmental restoration activities include closing 7 sites, starting 8 ground water remediation programs, and completing 63 waste investigations. Environmental restoration accomplishments include closure of 4 basin and tank areas; continuing treatment of the A-Area and M-Area ground water that has surpassed a milestone for treating over 3,800 m³; producing 39 work plans and 7 closure plans; and completing the Site Decontamination and Decommissioning (D&D) Facility Assessment Document. Chapter 2 provides information on contaminated media associated with environmental restoration activities.

WASTE

PROFILE

SHEETS

Savannah River Site

ROADMAP TO WASTE PROFILE SHEETS (WPS)

Waste Profile Sheets (WPS) have been compiled in this report for each of the mixed waste streams identified at the different DOE sites. Each WPS is a concise summary of the information required by the FFCAct-1992, with waste stream specific data primarily derived from the Waste Management Information System (WMIS) database. Each WPS consists of the following items:

Header: The information in the header in each WPS includes the State, the official name of the site, an identification number, an identifying waste stream name, the waste type, and the waste matrix. The identification number is either a number assigned by the WMIS database or a number assigned by the site. The waste stream name is a unique identifier which corresponds to the name used in the WMIS database, or is assigned by the site. The waste type is either HLW, MTRU, or MLLW. The waste matrix corresponds to the categories (or their further subdivisions) defined earlier based on the physical and chemical form of the waste.

Waste Stream Description and Source: This section of the WPS presents a short description of the source of the waste and the waste stream characteristics.

Inventory Table: The inventory table in each WPS reports the volume (m³) and/or mass (kg) of each waste stream currently in storage, and projected to be generated in the next five years. The table also indicates the date assumed in calculating the current and projected inventories. As required by the FFCAct-1992, the table also differentiates between waste not subject to LDR and that subject to LDR for the current inventory.

Treatability Group: This section lists the name of the treatability group to which the waste stream belongs.

Treatment Status, Technology Status: This section of the WPS lists the status of the technology that could be applied to the waste stream for compliance with the LDR. This section provides information on if the waste stream is currently being treated, and if technology options and facilities for the treatment exist.

Radiation Characteristics Section: This section of the WPS provides additional information on the radiological characteristics of the waste (in addition to characterizing the waste stream as HLW, MTRU, or MLLW). This section of the WPS specifies whether the waste stream is contact handled or remote handled, if the radionuclides are alpha or beta/gamma emitters, and if they contain activation products.

Radiation Effects Section: As required by the FFCAct-1992, this section of the WPS lists possible effects of the radiological characteristics of the waste stream on treatment technologies that could be applicable to that waste stream. For example, radiation levels may require remote handling of the waste and affect the design and operation of the treatment facility. The presence of volatile radionuclides may require the containment of all off-gases from the treatment system.

Waste Minimization Activities: As required by the FFCAct-1992, this section of the WPS provides information on the waste minimization practices being used for the waste stream. This section provides information on if the waste minimization practices include good operating practices, technology changes, raw material changes, product changes, etc.

EPA Code: This table of the WPS reports the EPA hazardous waste codes applicable to the waste stream, the basis for assigning the codes (process knowledge or sampling/analysis), the LDR basis (which is either technology based or concentration based), and the BDAT for each of the EPA hazardous waste codes.

In summary, the WPS for each waste stream, along with the site sections in the report for each State (Section B), summarize the site-specific information required by the FFCAct-1992.

State: South Carolina

ID #: 123

Site: SAVANNAH RIVER SITE

Waste Stream Name: RADIOACTIVE TRICHLOROETHANE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is trichloroethane. This was generated in the process of cleaning equipment at the Separations 200 Areas.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.400	240.0	0.400	240.0	2.0	1,600.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Plan to treat on-site at the planned Consolidated Incineration Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled
- 3) Volatile radionuclide

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider radioactive off-gases to protect the public and treatment facility personnel from releases.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration

State: South Carolina

ID #: 124

Site: SAVANNAH RIVER SITE

Waste Stream Name: RADIOACTIVE FREON-113

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is radioactive freon. This was generated in the process of cleaning equipment at the Separations 200 Areas.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	1.000	1,591.0	1.000	1,591.0	3.0	4,500.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Plan to treat on-site at the planned Consolidated Incineration Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Volatile radionuclide
- 2) Beta/gamma emitter
- 3) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider containment of radioactive off-gases to protect treatment facility personnel and the public. Safeguard issues may be a concern. Treatment involves tritium release, which must be reported.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.

State: South Carolina

ID #: 124

Site: SAVANNAH RIVER SITE

Waste Stream Name: RADIOACTIVE FREON-113

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D019		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration

State: South Carolina

ID #: 125

Site: SAVANNAH RIVER SITE

Waste Stream Name: SOLVENT CONTAMINATED APPLICATORS (LLW)

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Spent solvent rags & wipes used to clean-up interior spills and for decontamination; site wide generation.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	4.0	2,140.0	4.0	2,140.0	0.500	100.0

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics and Metals w/ Mercury

Treatment Status:

Plan to treat on-site at the planned Consolidated Incineration Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Volatile radionuclide
- 3) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider containment of radioactive off-gases to protect treatment facility personnel and the public. Safeguard issues may be a concern. Treatment involves tritium release, which must be reported.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization

— — — — — SRS-WPS-6 — — — — — April 1993 —

State: South Carolina

ID #: 125

Site: SAVANNAH RIVER SITE

Waste Stream Name: SOLVENT CONTAMINATED APPLICATORS (LLW)

Matrix: Organic Debris

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D010	Conc.	Stabilization
D011	Conc.	Stabilization
D012	Conc.	Incineration
D013	Conc.	Incineration
D014	Conc.	Incineration
D015	Conc.	Incineration
D016	Conc.	Incineration
D017	Conc.	Incineration
D018		Not currently prohibited under the LDR Program.
D019		Not currently prohibited under the LDR Program.
D020		Not currently prohibited under the LDR Program.
D021		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.
D023		Not currently prohibited under the LDR Program.
D024		Not currently prohibited under the LDR Program.
D025		Not currently prohibited under the LDR Program.
D026		Not currently prohibited under the LDR Program.
D027		Not currently prohibited under the LDR Program.
D028		Not currently prohibited under the LDR Program.

State: South Carolina**ID #: 125****Site: SAVANNAH RIVER SITE****Waste Stream Name: SOLVENT CONTAMINATED APPLICATORS (LLW)****Matrix: Organic Debris****Waste Type: MLLW**

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D029		Not currently prohibited under the LDR Program.
D030		Not currently prohibited under the LDR Program.
D031		Not currently prohibited under the LDR Program.
D032		Not currently prohibited under the LDR Program.
D033		Not currently prohibited under the LDR Program.
D034		Not currently prohibited under the LDR Program.
D035		Not currently prohibited under the LDR Program.
D036		Not currently prohibited under the LDR Program.
D037		Not currently prohibited under the LDR Program.
D038		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
D041		Not currently prohibited under the LDR Program.
D042		Not currently prohibited under the LDR Program.
D043		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration
F003	Conc.	Incineration
F005A	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 129

Site: SAVANNAH RIVER SITE

Waste Stream Name: PLATING LINE SLUDGE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

This waste is a sludge generated from the treatment of M-Area plating bath solutions from nickel plating of depleted uranium core rods (e.g. slugs) to be used as target components in the reactors and from treatment of the supernate in the PWIT/SF tanks. The spent plating bath solutions from M-Area and the supernate from the PWIT/SF tanks are transferred to the Dilute Effluent Treatment Facility (DETF) for treatment. These combined liquid wastes are treated at the DETF to produce: (1) Filtrate which is discharged under a NPDES permit, (2) secondary sludge which is this RMW stream, and (3) filter paper take up rolls which is another SRS RMW stream. The sludge is transferred to the CTF and then to the PWIT/SF tanks for storage. This stream is distinguished from the SRS stream titled "M-Area Plating Line Waste Sludge-Tank 7" because the waste in PWIT/SF Tank 7 is considered CA list.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
465.0	579,000.0	235.0	260,000.0	700.0	839,000.0	1,140.0	1,400,000.0

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the planned M-Area Vendor Treatment facility. Treatment of the M-Area sludge will be either a cementation or vitrification process. Technology does exist but no facility is available at this time.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

State: South Carolina

ID #: 129

Site: SAVANNAH RIVER SITE

Waste Stream Name: PLATING LINE SLUDGE

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F006	Conc.	Alkaline Chlorination followed by Chemical Precipitation; and Stabilization; or Incineration; or High Temperature Metals Recovery

State: South Carolina

ID #: 130

Site: SAVANNAH RIVER SITE

Waste Stream Name: MARK 15 FILTERCAKE - F006

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Storage location is 316-M. Filtercake from precipitation and filtration of enriched uranium (1.1 % U-235) solutions from Building 313-M. The waste was generated by treatment and precipitation of etching solutions from nickel plating operations on the enriched uranium slugs.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
15.4	16,253.0	0.000	0.000	15.4	16,253.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the planned M-Area Vendor Treatment facility. Treatment of M-area sludge will be either a cementation or vitrification process. Technology does exist but no facility is available at this time.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Not Applicable.

General Comments:

Waste no longer being generated.

State: South Carolina

ID #: 130

Site: SAVANNAH RIVER SITE

Waste Stream Name: MARK 15 FILTERCAKE - F006

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F006	Conc.	Alkaline Chlorination followed by Chemical Precipitation; and Stabilization; or Incineration; or High Temperature Metals Recovery

State: South Carolina

ID #: 131

Site: SAVANNAH RIVER SITE

Waste Stream Name: MIXED TTA/XYLENE

Matrix: Organic Liquids

Waste Type: MTRU

Waste Stream Description and Source:

773-A Facility

Laboratory waste from plutonium extractions.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.010	2.0	0.000	0.000	0.010	2.0	0.026	11.8

Treatability Group:

MTRU CH/AL, Organic Liquids, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Treatment of most mixed transuranic waste to meet LDR treatment standards is not applicable because DOE plans to ship these wastes to the Waste Isolation Pilot Plant (WIPP), pending issuance of a No-Migration Determination of the operational phase. Pretreatment to meet the WIPP Waste Acceptance Criteria may be required. Pretreatment in the TRU Waste Facility (TWF) to NA to BDAT/LDR prepare for disposal at WIPP.

Technology Status:

Not Applicable.

Radiation Characteristics:

- 1) Transuranic contaminants
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

State: South Carolina

ID #: 131

Site: SAVANNAH RIVER SITE

Waste Stream Name: MIXED TTA/XYLENE

Matrix: Organic Liquids

Waste Type: MTRU

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration

State: South Carolina

ID #: 132

Site: SAVANNAH RIVER SITE

Waste Stream Name: SRL LOW ACTIVITY WASTE

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Acidic aqueous waste from Savannah River Technology Center (SRTC) 773-A Labs.

The waste is generated by laboratory research, development and analytical programs.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
25.6	25,600.0	0.000	0.000	25.6	25,600.0	4,627.0	4,600,000.0

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Organics and Metals w/ Mercury

Treatment Status:

Currently being treated on-site at the SRL Ion Exchange Treatment Probe facility. Being treated now to meet treatment standards, using Ion Exchange Resin Probe, 773-A and then sent to the 241-F Area Tank Farm.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled
- 2) Beta/gamma emitter
- 3) Alpha emitter, < 10 nCi/g
- 4) Activation Products
- 5) Volatile radionuclide

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider containment of radioactive off-gases to protect treatment facility personnel and the public. Safeguard issues may be a concern. Treatment involves tritium release, which must be reported.

Waste Minimization Activities:

- 1) Change in operations status; process interruptions; work stoppages; mission changes; and new processes.

State: South Carolina

ID #: 132

Site: SAVANNAH RIVER SITE

Waste Stream Name: SRL LOW ACTIVITY WASTE

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002A	Tech.	Deactivation
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D018		Not currently prohibited under the LDR Program.

State: South Carolina

ID #: 133

Site: SAVANNAH RIVER SITE

Waste Stream Name: SRL HIGH ACTIVITY WASTE

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Acidic aqueous waste from the Savannah River Technology Center (SRTC) 773-A Labs.

The waste is generated by laboratory research, development and analytical programs.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
71.1	71,200.0	0.000	0.000	71.1	71,200.0	800.0	800,000.0

Treatability Group:

MLLW RH/AL, Aqueous Liquid, Toxic Organics and Metals w/ Mercury

Treatment Status:

Currently being treated on-site at the SRL Ion Exchange Treatment Probe facility. Being treated now to meet treatment standards using the Ion Exchange Resin Probe in 776-2A and then sent to the 241-F Area Tank Farm.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Remote handled
- 2) Beta/gamma emitter
- 3) Alpha emitter, 10-100 nCi/g
- 4) Activation Products

Waste-Specific Radiation Effects on Treatment:

- 1) Radiation levels requiring remote handling will affect the design and operation of a treatment facility, i.e., need for robotics, additional shielding, etc.

Waste Minimization Activities:

- 1) Change in operations status; process interruptions; work stoppages; mission changes; and new processes.

State: South Carolina

ID #: 133

Site: SAVANNAH RIVER SITE

Waste Stream Name: SRL HIGH ACTIVITY WASTE

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002A	Tech.	Deactivation
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D018		Not currently prohibited under the LDR Program.

State: South Carolina

ID #: 405

Site: SAVANNAH RIVER SITE

Waste Stream Name: SILVER COATED PACKING MATERIAL

Matrix: Other

Waste Type: MLLW

Waste Stream Description and Source:

Waste from 221-F and 221-H Canyon Bldgs. This waste is spent ceramic packing material (e.g. silver-coated berl saddles) used in the removal of radioactive iodine from dissolver offgases. When placed in service, the saddles are coated with silver nitrate and contained in cartridges. During operation, the iodine in the dissolver offgases is removed by reacting with the silver nitrate to form silver iodide. This waste stream is close to inorganic debris, but does not meet the size criteria for debris.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
8.7	8,362.3	1.000	772.7	9.7	9,135.0	4.9	3,786.2

Treatability Group:

MLLW RH, Other, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Assessing technologies to determine if the technology exists, and if so, whether it needs modification. Technology options currently being analyzed and exploring the path of a treatability variance using 'metathesis' as an alternate treatment.

Radiation Characteristics:

- 1) Remote handled
- 2) Volatile radionuclide
- 3) Beta/gamma emitter

Waste-Specific Radiation Effects on Treatment:

- 1) Radiation levels requiring remote handling will affect the design and operation of a treatment facility, i.e., need for robotics, additional shielding, etc.
- 2) Treatment must consider radioactive off-gases to protect the public and treatment facility personnel from releases.
- 3) The presence of Iodine-131, Volatile Radionuclide effect treatment.

Waste Minimization Activities:

- 1) Change in operations status; process interruptions; work stoppages; mission changes; and new processes.

State: South Carolina

ID #: 405

Site: SAVANNAH RIVER SITE

Waste Stream Name: SILVER COATED PACKING MATERIAL

Matrix: Other

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D011	Conc.	Stabilization

State: South Carolina

ID #: 407

Site: SAVANNAH RIVER SITE

Waste Stream Name: SCINTILLATION SOLUTION

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is used solution. It is used in bioassays analysis and is generated by analytical laboratories state wide (reactor separators, and heavy water production). This waste stream is also listed as South Carolina DHEC code # 7777.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
3.0	1,909.0	0.600	273.0	3.6	2,182.0	1.000	700.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Plan to treat on-site at the planned Consolidated Incineration Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Volatile radionuclide
- 3) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider containment of radioactive off-gases to protect treatment facility personnel and the public. Safeguard issues may be a concern. Treatment involves tritium release, which must be reported.
- 2) Treatment must consider radioactive off-gases to protect the public and treatment facility personnel from releases.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.

State: South Carolina

ID #: 407

Site: SAVANNAH RIVER SITE

Waste Stream Name: SCINTILLATION SOLUTION

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D018		Not currently prohibited under the LDR Program.
F003	Conc.	Incineration
F005A	Conc.	Incineration
U019	Conc.	Incineration
U220	Conc.	Incineration
U239	Conc.	Incineration

State: South Carolina

ID #: 412

Site: SAVANNAH RIVER SITE

Waste Stream Name: CADMIUM - COATED HEPA FILTERS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Waste is from reactor buildings 105-K, 105-P, 105-L, 105-C, 105-R.

The filters are hazardous due to their cadmium-coated frame.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
46.6	11,273.0	0.000	0.000	46.6	11,273.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the planned M-Area Vendor Treatment facility. Original plans were to treat in the HW/MW DF using acid leaching and chemical precipitation. With the debris rule issued in August 1992, SRS is proceeding forward with plans to treat in the HW/MW DF via macroencapsulation.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.
- 2) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

Waste minimization activities included segregation of metal filter frames from filter media and compaction of frames to reduce waste volume.

State: South Carolina

ID #: 412

Site: SAVANNAH RIVER SITE

Waste Stream Name: CADMIUM - COATED HEPA FILTERS

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 413

Site: SAVANNAH RIVER SITE

Waste Stream Name: TOXIC CLEANUP MATERIAL

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Rags, wipes and toxic metals, generated in the process of clean up activities.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	64.0	0.000	0.000	0.200	64.0	1.000	320.0

Treatability Group:

MLLW CH, Organic Debris, Toxic Metals w/ Mercury

Treatment Status:

Plan to treat on-site at the planned Consolidated Incineration Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

State: South Carolina

ID #: 413

Site: SAVANNAH RIVER SITE

Waste Stream Name: TOXIC CLEANUP MATERIAL

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D010	Conc.	Stabilization
D011	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 414

Site: SAVANNAH RIVER SITE

Waste Stream Name: LLW LEAD

Matrix: Elemental Lead

Waste Type: MLLW

Waste Stream Description and Source:

This waste consists of miscellaneous radioactive lead items including tiles, bricks, sheets, collars, wool, weights, mercury vapor lights, batteries, housings and associated shielding materials. These wastes are generally used as shields from radioactivity (e.g. around pipes in tank farms), as counterweights, or serve as parts of other devices. The waste is generated in reactor areas and fuel and target and separation areas, and laboratories. Five-year generation estimate may increase if plans for decommissioning reactors are accelerated. Sitewide generation.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
280.0	212,525.0	0.000	0.000	280.0	212,525.0	30.0	62,350.0

Treatability Group:

MLLW CH, Elemental Lead, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the planned Hazardous Waste/Mixed Waste Disposal Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment could result in plating, precipitation, or some other form of concentration, which could cause workers to receive a significant radiation exposure. The potential for concentration of beta and gamma emitters will affect the design and operation of a treatment facility.

Waste Minimization Activities:

- 1) Waste avoidance due to recycling/reuse: solvent, oil, and metals recycling; chemical exchange and reuse; and packaging material reuse.

State: South Carolina

ID #: 414

Site: SAVANNAH RIVER SITE

Waste Stream Name: LLW LEAD

Matrix: Elemental Lead

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008A	Tech.	Secondary Lead Smelting
D008B	Conc.	Stabilization
D008C	Tech.	Macroencapsulation

State: South Carolina

ID #: 416

Site: SAVANNAH RIVER SITE

Waste Stream Name: TRITIATED MERCURY

Matrix: Liquid Mercury

Waste Type: MLLW

Waste Stream Description and Source:

Building 232-H; This waste stream is Tritiated Mercury oxide layered on elemental mercury. Tritium and other gases are moved in the tritium facilities by using pumps that use mercury as the pumping medium. Tritium gas comes in direct contact with the mercury. Tritiated mercury oxide layer on elemental mercury. Additional, future generation of this waste will be one-time only when mercury pumps are no longer used (estimated to be in 2003).

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.182	2,475.0	0.000	0.000	0.182	2,475.0	0.000	0.000

Treatability Group:

MLLW CH, Liquid Mercury, Toxic Metals w/ Mercury

Treatment Status:

Plan to treat on-site at the planned Hazardous Waste/Mixed Waste Disposal Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Volatile radionuclide
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider radioactive off-gases to protect the public and treatment facility personnel from releases.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

State: South Carolina

ID #: 416

Site: SAVANNAH RIVER SITE

Waste Stream Name: TRITIATED MERCURY

Matrix: Liquid Mercury

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009D	Tech.	Amalgamation

State: South Carolina

ID #: 417

Site: SAVANNAH RIVER SITE

Waste Stream Name: MERCURY CONTAMINATED EQUIPMENT

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Building 232-H and 234-H; the waste stream is mercury pumps etc. that have failed. As much mercury as possible removed but still potentially contaminated. These wastes consist of tritiated processing equipment (such as diffusion pumps, Sprengel pumps and process beds) generated from tritium production in H-Area's Tritium Facility. Lead (D008) is only present with some of the equipment. Some pumps have lead solder. Also, some process beds have lead collars.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
19.6	2,775.4	0.000	0.000	19.6	2,775.4	19.3	7,500.0

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/ Mercury

Treatment Status:

Plan to treat on-site at the planned Hazardous Waste/Mixed Waste Disposal Facility. Current plan for mercury treatment is roasting/retorting followed by amalgamation.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Volatile radionuclide
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider radioactive off-gases to protect the public and treatment facility personnel from releases.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.
- 2) Technology changes: process changes; equipment, piping, or layout changes; automation; changes in operational settings; and energy, water conservation.
- 3) Change in operations status; process interruptions; work stoppages; mission changes; and new processes.

State: South Carolina

ID #: 417

Site: SAVANNAH RIVER SITE

Waste Stream Name: MERCURY CONTAMINATED EQUIPMENT

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 422

Site: SAVANNAH RIVER SITE

Waste Stream Name: 221-F CANYON HIGH LEVEL LIQUID WASTE

Matrix: Aqueous Liquid

Waste Type: HLW

Waste Stream Description and Source:

221-F Canyon, PUREX process. This waste stream is a liquid stream of mostly water and fission products which are generated from separation process. Generated from the recovery of plutonium from reactor target and other feed stock.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	54,327.3	88,828,317.0	54,327.3	88,828,317.0	8,500.0	8,979,852.0

Treatability Group:

HLW RH/AL, Aqueous Liquid, Toxic Metals w/ Mercury

Treatment Status:

Plan to treat on-site at the planned DWPF Vitrification Plant facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Remote handled
- 3) Transuranic contaminants

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment could result in plating, precipitation, or some other form of concentration, which could cause workers to receive a significant radiation exposure. The potential for concentration of beta and gamma emitters will affect the design and operation of a treatment facility.
- 2) High beta or gamma levels in contact with organics can result in radiolysis, with production of hydrogen gas and formation of free radicals that attack structural materials, particularly steel. The buildup of hydrogen gas and embrittlement of structural materials are important considerations, in storage, design, and operation of treatment facilities, and in stabilization of the final waste form.
- 3) Radiation levels requiring remote handling will affect the design and operation of a treatment facility, i.e., need for robotics, additional shielding, etc.

Waste Minimization Activities:

- 1) Raw material changes: raw material purification; and substitution.
- 2) Change in operations status; process interruptions; work stoppages; mission changes; and new processes.

State: South Carolina

ID #: 422

Site: SAVANNAH RIVER SITE

Waste Stream Name: 221-F CANYON HIGH LEVEL LIQUID WASTE

Matrix: Aqueous Liquid

Waste Type: HLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002B	Tech.	High Level Vittrification
D005	Tech.	High Level Vittrification
D007	Tech.	High Level Vittrification
D008B	Tech.	High Level Vittrification
D009C	Tech.	High Level Vittrification
D011	Tech.	High Level Vittrification

State: South Carolina

ID #: 424

Site: SAVANNAH RIVER SITE

Waste Stream Name: 221-H CANYON HIGH LEVEL LIQUID WASTE

Matrix: Aqueous Liquid

Waste Type: HLW

Waste Stream Description and Source:

221-H Canyon Building, modified PUREX process and 299-H Maintenance Building. This waste stream is liquid containing mixed fission products from the 221-H Canyon Separations Process and decontamination solutions from 299-H. 221-H materials are generated from the recovery of enriched uranium from fuel tubes.

Current Inventory as of December 31, 1992						Projected Generation 1993 through 1997	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	67,713.4	101,163,224.2	67,713.4	101,163,224.2	820.0	811,885.0

Treatability Group:

HLW RH/AL, Aqueous Liquid, Toxic Metals w/ Mercury

Treatment Status:

Plan to treat on-site at the planned DWPF Vitrification Plant facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Remote handled
- 3) Transuranic contaminants

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment could result in plating, precipitation, or some other form of concentration, which could cause workers to receive a significant radiation exposure. The potential for concentration of beta and gamma emitters will affect the design and operation of a treatment facility.
- 2) High beta or gamma levels in contact with organics can result in radiolysis, with production of hydrogen gas and formation of free radicals that attack structural materials, particularly steel. The buildup of hydrogen gas and embrittlement of structural materials are important considerations, in storage, design, and operation of treatment facilities, and in stabilization of the final waste form.
- 3) Radiation levels requiring remote handling will affect the design and operation of a treatment facility, i.e., need for robotics, additional shielding, etc.

Waste Minimization Activities:

- 1) Raw material changes: raw material purification; and substitution.
- 2) Change in operations status; process interruptions; work stoppages; mission changes; and new

State: South Carolina

ID #: 424

Site: SAVANNAH RIVER SITE

Waste Stream Name: 221-H CANYON HIGH LEVEL LIQUID WASTE

Matrix: Aqueous Liquid

Waste Type: HLW

processes.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002B	Tech.	High Level Vittrification
D005	Tech.	High Level Vittrification
D007	Tech.	High Level Vittrification
D008B	Tech.	High Level Vittrification
D009C	Tech.	High Level Vittrification
D011	Tech.	High Level Vittrification

State: South Carolina

ID #: 425

Site: SAVANNAH RIVER SITE

Waste Stream Name: FILTER PAPER TAKE UP ROLLS (FPTUR)

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Stored in buildings 709-2G AND 316-M. This waste stream is "TYVEK" filter paper, contaminated with residual filter cake and precipitated metal. The rolls are about 2 feet in diameter, 6 feet long, and weigh approx. 80 lbs. each. This waste is spent filter media from the treatment of spent nickel plating bath solutions at the Dilute Effluent Treatment Facility (DETF). The filtration process results in three waste streams; (1) filtrate which is discharged under a NPDES permit, (2) secondary sludge which is another SRS RMW stream, and (3) this waste.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
244.8	55,300.0	12.7	7,300.0	257.5	62,600.0	30.0	18,000.0

Treatability Group:

MLLW CH, Organic Debris, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the planned Hazardous Waste/Mixed Waste Disposal Facility. Treatment of all the M-Area FPTUR and Mark 15 filter paper is scheduled to be conducted by the HW/MWDF (for size reduction).

Incineration of the size reduced material will then be conducted in the CIF. Final disposal will be at the HW/MW vaults. Hence technology does exist and is planned to treat.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Technology changes: process changes; equipment, piping, or layout changes; automation; changes in operational settings; and energy, water conservation.

State: South Carolina

ID #: 425

Site: SAVANNAH RIVER SITE

Waste Stream Name: FILTER PAPER TAKE UP ROLLS (FPTUR)

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F006	Conc.	Alkaline Chlorination followed by Chemical Precipitation; and Stabilization; or Incineration; or High Temperature Metals Recovery

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 440

Site: SAVANNAH RIVER SITE

Waste Stream Name: 244-H RBOF HIGH ACTIVITY LIQUID WASTE

Matrix: Aqueous Liquid

Waste Type: HLW

Waste Stream Description and Source:

This waste is liquid waste solutions used in 244-H/245-H. Newly generated material is no longer hazardous.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	4,898.3	6,442,772.2	4,898.3	6,442,772.2	0.000	0.000

Treatability Group:

HLW RH/AL, Aqueous Liquid, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Plan to treat on-site at the planned DWPF Vitrification Plant facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Remote handled
- 3) Transuranic contaminants

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment could result in plating, precipitation, or some other form of concentration, which could cause workers to receive a significant radiation exposure. The potential for concentration of beta and gamma emitters will affect the design and operation of a treatment facility.
- 2) High beta or gamma levels in contact with organics can result in radiolysis, with production of hydrogen gas and formation of free radicals that attack structural materials, particularly steel. The buildup of hydrogen gas and embrittlement of structural materials are important considerations, in storage, design, and operation of treatment facilities, and in stabilization of the final waste form.
- 3) Radiation levels requiring remote handling will affect the design and operation of a treatment facility, i.e., need for robotics, additional shielding, etc.

Waste Minimization Activities:

- 1) Raw material changes: raw material purification; and substitution.
- 2) Change in operations status; process interruptions; work stoppages; mission changes; and new processes.

State: South Carolina

ID #: 440

Site: SAVANNAH RIVER SITE

Waste Stream Name: 244-H RBOF HIGH ACTIVITY LIQUID WASTE

Matrix: Aqueous Liquid

Waste Type: HLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002B	Tech.	High Level Vitrification

State: South Carolina

ID #: 882

Site: SAVANNAH RIVER SITE

Waste Stream Name: ITP FILTERS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

This waste (filters) will be generated from the In-Tank Precipitation process located in the H-Area Tank Farm. The ITP process treats and separates radioactive salt solution into different waste streams in preparation for further treatment and processing at the DWPF and Saltstone facilities. The filters consist of 144 sintered metal tubes that are 14 feet long and 0.625 in diameter that are encased within a filter housing that is 14 feet long and 18 inches in diameter. While treating/separating the salt solution, a film may develop around the tubes that could eventually impede the filter's efficiency to the point where filter replacement becomes necessary.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.000	0.000	0.000	0.000	4.3	-

Treatability Group:

MLLW RH, Inorganic Debris, Toxic Organics and Metals w/ Mercury

Treatment Status:

Treatment variance applied for on 9/30/91.

Technology Status:

No technology exists (based on assessment).

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Remote handled

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment could result in plating, precipitation, or some other form of concentration, which could cause workers to receive a significant radiation exposure. The potential for concentration of beta and gamma emitters will affect the design and operation of a treatment facility.
- 2) Radiation levels requiring remote handling will affect the design and operation of a treatment facility, i.e., need for robotics, additional shielding, etc.
- 3) High beta or gamma levels in contact with organics can result in radiolysis, with production of hydrogen gas and formation of free radicals that attack structural materials, particularly steel. The buildup of hydrogen gas and embrittlement of structural materials are important considerations, in storage, design, and operation of treatment facilities, and in stabilization of the final waste form.

Waste Minimization Activities:

State: South Carolina

ID #: 882

Site: SAVANNAH RIVER SITE

Waste Stream Name: ITP FILTERS

Matrix: Inorganic Debris

Waste Type: MLLW

1) Not Applicable.

Waste has not yet been generated.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D018		Not currently prohibited under the LDR Program.

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 883

Site: SAVANNAH RIVER SITE

Waste Stream Name: POISONED CATALYST MATERIAL

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Future waste stream. ITP Process in H-Area Tank Farm. This waste will be generated as a byproduct of the treatment/destruction of benzene vapors produced during the ITP Process in H-Area Tank Farm. Catalytic oxidation equipment utilizing precious metal catalyst material will treat off-gas by promoting combustion of benzene vapors. The catalyst, usually in the form of small rings or buttons, will eventually become contaminated by other constituents in the ITP's offgas streams and require replacement.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.000	0.000	0.000	0.000	0.870	-

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Organics and Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. Technology exists at HW/MW DF but needs modification or verification to treat this waste stream.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) High beta or gamma levels in contact with organics can result in radiolysis, with production of hydrogen gas and formation of free radicals that attack structural materials, particularly steel. The buildup of hydrogen gas and embrittlement of structural materials are important considerations, in storage, design, and operation of treatment facilities, and in stabilization of the final waste form.

Waste Minimization Activities:

- 1) Not Applicable.

Waste will not be generated until 1995.

State: South Carolina

ID #: 883

Site: SAVANNAH RIVER SITE

Waste Stream Name: POISONED CATALYST MATERIAL

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D018		Not currently prohibited under the LDR Program.

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 884

Site: SAVANNAH RIVER SITE

Waste Stream Name: DWPF BENZENE

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Future waste stream. This waste will be generated from DWPF operations to vitrify HLW. The reaction between the precipitate slurry and the process feed chemicals within the precipitate reactor will liberate benzene from the slurry. The tetraphenylborate compounds will decompose in the presence of formic acid and copper catalyst to form boric acid, formate salts, and organics (including benzene). This off-gas will be condensed and transferred to the Organic Waste Storage Tank.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.000	0.000	0.000	0.000	756.0	664,524.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics and Metals w/ Mercury

Treatment Status:

Plan to treat on-site at the planned Consolidated Incineration Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Not Applicable.

Waste has not yet been generated.

State: South Carolina	ID #: 884
Site: SAVANNAH RIVER SITE	
Waste Stream Name: DWPF BENZENE	
Matrix: Organic Liquids	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D018		Not currently prohibited under the LDR Program.

State: South Carolina

ID #: 888

Site: SAVANNAH RIVER SITE

Waste Stream Name: SAFETY/CONTROL RODS

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Reactor Buildings (C,P,K,L). These wastes are steel encapsulated, cadmium containing rods used to control neutron flux in the reactors. The rods must be discarded if they become bent or are off specification, or the latching mechanism is damaged. Some rods may contain a lead snubber. Five-year generation estimate may increase to 3.5 m³ (30,000 kg) if plans for decommissioning reactors are accelerated.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.250	2,270.0	0.250	2,270.0	0.020	218.0

Treatability Group:

MLLW RH, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

No treatment required prior to disposal. Cadmium rods naturally meet macroencapsulation treatment standard.

Technology Status:

Technology exists. No modifications are necessary. Certain rods may be hazardous for D008 lead for which technology options are being analyzed.

Radiation Characteristics:

- 1) Activation Products
- 2) Remote handled

Waste-Specific Radiation Effects on Treatment:

- 1) Radiation levels requiring remote handling will affect the design and operation of a treatment facility, i.e., need for robotics, additional shielding, etc.

Waste Minimization Activities:

- 1) Technology changes: process changes; equipment, piping, or layout changes; automation; changes in operational settings; and energy, water conservation.

State: South Carolina

ID #: 888

Site: SAVANNAH RIVER SITE

Waste Stream Name: SAFETY/CONTROL RODS

Matrix: Inorganic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization
D008C	Tech.	Macroencapsulation

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 894

Site: SAVANNAH RIVER SITE

Waste Stream Name: GOLD TRAPS

Matrix: Liquid Mercury

Waste Type: MLLW

Waste Stream Description and Source:

Elemental mercury contaminated with radioactive materials - elemental mercury amalgamated on gold foil. 232-H/234-H Tritium Facility: Gold traps are used to remove escaping mercury particles or vapor from transfer process pumps that use mercury as the transport medium. A trap consists of a stainless steel cylindrical housing that is 38 inches high and 2 inches in diameter that contains gold foil on 16 evenly spaced trays. As the process gas stream passes through the trap, any mercury in the gas stream is removed as it amalgamates with the gold. These wastes are generated from tritium production in H-Area's Tritium Facility.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.000	602.3	0.000	0.000	1.000	602.3	9.3	700.0

Treatability Group:

MLLW CH, Liquid Mercury, Toxic Metals w/ Mercury

Treatment Status:

No treatment required prior to disposal. No treatment required prior to disposal for D009; gold traps naturally meet treatment for elemental mercury which is amalgamation.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Volatile radionuclide
- 3) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider radioactive off-gases to protect treatment facility personnel and the public.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.
- 2) Technology changes: process changes; equipment, piping, or layout changes; automation; changes in operational settings; and energy, water conservation.

State: South Carolina

ID #: 894

Site: SAVANNAH RIVER SITE

Waste Stream Name: GOLD TRAPS

Matrix: Liquid Mercury

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009D	Tech.	Amalgamation

State: South Carolina

ID #: 910

Site: SAVANNAH RIVER SITE

Waste Stream Name: SOLVENT WASTE <100 NCI/G TRU RAD

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

200 Areas (F and H Separations Facilities). This waste is primarily solids consisting of mainly booties, lab coats, floor sweepings, and rags.

This waste is generated primarily through separation activities in the course of plutonium production, includes small amounts of TRU waste from on site laboratories.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1,103.5	253,805.0	1,687.6	389,505.0	2,791.1	643,310.0	0.000	0.000

Treatability Group:

MLLW CH/AL, Organic Debris, Toxic Organics and Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. No treatment identified.

Technology Status:

Technology assessment has not started.

Radiation Characteristics:

- 1) Alpha emitter, 10-100 nCi/g
- 2) Contact-handled
- 3) Transuranic contaminants

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.
- 2) Radioactive decay may produce significant amounts of heat that needs to be considered during treatment and disposal.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.

State: South Carolina

ID #: 910

Site: SAVANNAH RIVER SITE

Waste Stream Name: SOLVENT WASTE <100 NCI/G TRU RAD

Matrix: Organic Debris

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D003D	Tech.	Deactivation
D004	Conc.	Vitrification
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D011	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
D019		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.
D023		Not currently prohibited under the LDR Program.
D024		Not currently prohibited under the LDR Program.
D025		Not currently prohibited under the LDR Program.
D026		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration
F003	Conc.	Incineration
F005A	Conc.	Incineration

State: South Carolina

ID #: 910

Site: SAVANNAH RIVER SITE

Waste Stream Name: SOLVENT WASTE <100 NCI/G TRU RAD

Matrix: Organic Debris

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
P012	Conc.	Vitrification
P015	Tech.	Metals Recovery; or Thermal Recovery of Metals
P048	Conc.	Incineration
P113	Tech.	Thermal Recovery of Metals; or Stabilization
P120	Tech.	Stabilization
U002	Conc.	Incineration
U032	Conc.	Chemical Reduction followed by Chemical Precipitation
U052	Conc.	Incineration
U080	Conc.	Incineration
U133	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U134	Tech.	Adsorption followed by Neutralization; or Neutralization
U144	Conc.	Incineration followed by Stabilization
U151	Tech.	Amalgamation
U154	Tech.	Fuel Substitution; or Incineration
U161	Conc.	Incineration
U209	Conc.	Incineration
U211	Conc.	Incineration
U220	Conc.	Incineration
U226	Conc.	Incineration
U239	Conc.	Incineration

State: South Carolina

ID #: 910

Site: SAVANNAH RIVER SITE

Waste Stream Name: SOLVENT WASTE <100 NCI/G TRU RAD

Matrix: Organic Debris

Waste Type: MLLW

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 911

Site: SAVANNAH RIVER SITE

Waste Stream Name: THIRDS TRU WASTE

Matrix: Organic Debris

Waste Type: MTRU

Waste Stream Description and Source:

Generated by Separations 200 Areas and primarily through separation activities in the course of plutonium production includes small amounts of TRU waste from on site laboratories. These wastes are primarily solids consisting mainly of booties, lab coats, floor sweeping and rags.

Hazardous constituents are primarily Third Thirds.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
45.3	10,419.0	0.000	0.000	45.3	10,419.0	140.0	32,200.0

Treatability Group:

MTRU CH/AL, Organic Debris, Toxic Organics and Metals w/ Mercury

Treatment Status:

Treatment of most mixed transuranic waste to meet LDR treatment standards is not applicable because DOE plans to ship these wastes to the Waste Isolation Pilot Plant (WIPP), pending issuance of a No-Migration Determination of the operational phase. Pretreatment to meet the WIPP Waste Acceptance Criteria may be required. Pretreatment in the LATF of the TRU Waste Facility (TWF) for disposal at WIPP.

Technology Status:

Not Applicable.

Radiation Characteristics:

- 1) Transuranic contaminants
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) High alpha activity in contact with organics or water can result in radiolysis, with production of hydrogen gas, methane and other degradation products. The buildup of hydrogen gas and radiation interaction with the waste form can affect storage, design and operation of treatment facilities, and stability of the final waste form.
- 2) Daughter products of alpha emitters may cause problems, i.e., production of radon gas, emissions from short-lived daughter products, and potential chemical incompatibility of daughter products.
- 3) Radioactive decay may produce significant amounts of heat that needs to be considered during treatment and disposal.

Waste Minimization Activities:

State: South Carolina

ID #: 911

Site: SAVANNAH RIVER SITE

Waste Stream Name: THIRDS TRU WASTE

Matrix: Organic Debris

Waste Type: MTRU

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D003D	Tech.	Deactivation
D004	Conc.	Vitrification
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D011	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
D019		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.
D023		Not currently prohibited under the LDR Program.
D024		Not currently prohibited under the LDR Program.
D025		Not currently prohibited under the LDR Program.
D026		Not currently prohibited under the LDR Program.
P012	Conc.	Vitrification
P015	Tech.	Metals Recovery; or Thermal Recovery of Metals
P048	Conc.	Incineration
P113	Tech.	Thermal Recovery of Metals; or Stabilization

State: South Carolina

ID #: 911

Site: SAVANNAH RIVER SITE

Waste Stream Name: THIRDS TRU WASTE

Matrix: Organic Debris

Waste Type: MTRU

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
P120	Tech.	Stabilization
U002	Conc.	Incineration
U032	Conc.	Chemical Reduction followed by Chemical Precipitation
U052	Conc.	Incineration
U080	Conc.	Incineration
U133	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U134	Tech.	Adsorption followed by Neutralization; or Neutralization
U144	Conc.	Incineration followed by Stabilization
U151	Tech.	Amalgamation
U154	Tech.	Fuel Substitution; or Incineration
U161	Conc.	Incineration
U209	Conc.	Incineration
U211	Conc.	Incineration
U220	Conc.	Incineration
U226	Conc.	Incineration
U239	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 912

Site: SAVANNAH RIVER SITE

Waste Stream Name: SOLVENT TRU WASTE

Matrix: Organic Debris

Waste Type: MTRU

Waste Stream Description and Source:

Generated by Separations 200 Areas and primarily through separation activities in the course of plutonium production. Includes small amounts of TRU waste from on-site laboratories. These wastes include solvents and consist of booties, lab coats, floor sweeping and rags. Hazardous constituents contain F-listed solvent contaminated wipes.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1,655.2	380,696.0	3,300.3	759,069.0	4,955.5	1,139,765.0	0.000	0.000

Treatability Group:

MTRU CH/AL, Organic Debris, Toxic Organics and Metals w/ Mercury

Treatment Status:

Treatment of most mixed transuranic waste to meet LDR treatment standards is not applicable because DOE plans to ship these wastes to the Waste Isolation Pilot Plant (WIPP), pending issuance of a No-Migration Determination of the operational phase. Pretreatment to meet the WIPP Waste Acceptance Criteria may be required. Pretreatment in the TRU Waste Facility to prepare waste for disposal at WIPP.

Technology Status:

Not Applicable.

Radiation Characteristics:

- 1) Transuranic contaminants
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Treatments using chemical separation could result in concentration of certain isotopes of uranium and plutonium to form a critical mass; concentration of polonium or plutonium in contact with beryllium could result in production of neutrons.
- 2) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.
- 3) Radioactive decay may produce significant amounts of heat that needs to be considered during treatment and disposal.

State: South Carolina

ID #: 912

Site: SAVANNAH RIVER SITE

Waste Stream Name: SOLVENT TRU WASTE

Matrix: Organic Debris

Waste Type: MTRU

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D003D	Tech.	Deactivation
D004	Conc.	Vitrification
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D011	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
D019		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.
D023		Not currently prohibited under the LDR Program.
D024		Not currently prohibited under the LDR Program.
D025		Not currently prohibited under the LDR Program.
D026		Not currently prohibited under the LDR Program.
F001	Conc.	Incineration
F002	Conc.	Incineration
F003	Conc.	Incineration
F005A	Conc.	Incineration

State: South Carolina

ID #: 912

Site: SAVANNAH RIVER SITE

Waste Stream Name: SOLVENT TRU WASTE

Matrix: Organic Debris

Waste Type: MTRU

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
P012	Conc.	Vitrification
P015	Tech.	Metals Recovery; or Thermal Recovery of Metals
P048	Conc.	Incineration
P113	Tech.	Thermal Recovery of Metals; or Stabilization
P120	Tech.	Stabilization
U002	Conc.	Incineration
U032	Conc.	Chemical Reduction followed by Chemical Precipitation
U052	Conc.	Incineration
U080	Conc.	Incineration
U133	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U134	Tech.	Adsorption followed by Neutralization; or Neutralization
U144	Conc.	Incineration followed by Stabilization
U151	Tech.	Amalgamation
U154	Tech.	Fuel Substitution; or Incineration
U161	Conc.	Incineration
U209	Conc.	Incineration
U211	Conc.	Incineration
U220	Conc.	Incineration
U226	Conc.	Incineration
U239	Conc.	Incineration

State: South Carolina

ID #: 912

Site: SAVANNAH RIVER SITE

Waste Stream Name: SOLVENT TRU WASTE

Matrix: Organic Debris

Waste Type: MTRU

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 914

Site: SAVANNAH RIVER SITE

Waste Stream Name: MARK 15 FILTER PAPER - F006

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

The waste stream is filter paper stored in 316-M from a plate-frame filter press in 313-M. It is contaminated with diatomaceous earth and precipitated uranium and nickel compounds, and sodium nitrate. The filter paper is a heavy paper material. The total waste is assumed to be 30% paper, 20% filter aide and 50% water. Waste was generated by treatment and precipitation of etching solutions from nickel plating operations on slightly enriched uranium slugs.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.830	850.0	0.000	0.000	0.830	850.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Debris, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the planned Consolidated Incineration Facility. Treatment of all M-Area FPTUR and Mark 15 filter paper is scheduled to be conducted by the HW/MWDF (for size reduction). Incineration of the size reduced material will then be conducted in the CIF, final disposal will be at the HW/MW vaults. Hence, treatment is planned.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Not Applicable.

Waste is no longer being generated.

State: South Carolina	ID #: 914
Site: SAVANNAH RIVER SITE	
Waste Stream Name: MARK 15 FILTER PAPER - F006	
Matrix: Organic Debris	Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F006	Conc.	Alkaline Chlorination followed by Chemical Precipitation; and Stabilization; or Incineration; or High Temperature Metals Recovery

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 915

Site: SAVANNAH RIVER SITE

Waste Stream Name: M-AREA SLUDGE TREATABILITY SAMPLES-F006

Matrix: Cemented Solids

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is stabilized sludge samples (F006 sludge) from 313-M stabilized with cement, or cement/flyash/blast furnace slag or vitrification samples. The samples are generated during waste treatability studies to determine the formulation for the stabilized wasteform. The samples remaining after testing are stored until a treatment/disposal facility is constructed.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	27.4	0.000	0.000	0.200	27.4	1.000	137.0

Treatability Group:

MLLW CH, Cemented Solids, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the planned M-Area Vendor Treatment facility. Treatment of the M-Area sludge will be either a cementitious or vitrification process. Technology exists but no facility is available at this time.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F006	Conc.	Alkaline Chlorination followed by Chemical Precipitation; and Stabilization; or Incineration; or High Temperature Metals Recovery

State: South Carolina

ID #: 916

Site: SAVANNAH RIVER SITE

Waste Stream Name: SPENT METHANOL SOLUTION

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Building 247-F. This waste stream was generated by Naval Fuels Operations. The process that generated the waste is classified information. This waste stream is no longer generated since Naval Fuels facility is no longer in operation.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	130.0	0.000	0.000	0.200	130.0	0.000	0.000

Treatability Group:

MLLW CH, Organic Liquids, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the planned Consolidated Incineration Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Alpha emitter, < 10 nCi/g
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.
- 2) Daughter products of alpha emitters may cause problems, i.e., production of radon gas, emissions from short-lived daughter products, and potential chemical incompatibility of daughter products.
- 3) Radioactive decay may produce significant amounts of heat that needs to be considered during treatment and disposal.

Waste Minimization Activities:

- 1) Not Applicable.

Waste is no longer being generated.

State: South Carolina

ID #: 916

Site: SAVANNAH RIVER SITE

Waste Stream Name: SPENT METHANOL SOLUTION

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D006B	Conc.	Stabilization
D010	Conc.	Stabilization

State: South Carolina

ID #: 917

Site: SAVANNAH RIVER SITE

Waste Stream Name: URANIUM/CHROMIUM SOLN (WASTEWATER)

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Building 247-F. This wastestream was generated by Naval Fuels laboratory during a scintillation and Davis-Grey procedure to determine uranium content. This wastestream is no longer generated since Naval Fuels is no longer in operation.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.416	147.4	0.000	0.000	0.416	147.4	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Alpha emitter, < 10 nCi/g
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Treatments using chemical separation could result in concentration of certain isotopes of uranium and plutonium to form a critical mass; concentration of polonium or plutonium in contact with beryllium could result in production of neutrons.

Waste Minimization Activities:

- 1) Not Applicable.

Waste is no longer being generated.

State: South Carolina

ID #: 917

Site: SAVANNAH RIVER SITE

Waste Stream Name: URANIUM/CHROMIUM SOLN (WASTEWATER)

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Chemical Precipitation

State: South Carolina

ID #: 918

Site: SAVANNAH RIVER SITE

Waste Stream Name: MERCURY CONTAMINATED HEAVY WATER

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Heavy Water Operations laboratory in D area generated this waste stream during analytical testing using mercuric chloride. The flush water from this analysis was collected and managed as hazardous waste. This waste stream is no longer generated due to a change in analysis procedures. The mercury content is now below toxic limits.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
9.6	10,740.0	0.000	0.000	9.6	10,740.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Volatile radionuclide
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider containment of radioactive off-gases to protect treatment facility personnel and the public. Safeguard issues may be a concern. Treatment involves tritium release, which must be reported.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

State: South Carolina

ID #: 918

Site: SAVANNAH RIVER SITE

Waste Stream Name: MERCURY CONTAMINATED HEAVY WATER

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009C	Conc.	Chemical Precipitation

State: South Carolina

ID #: 919

Site: SAVANNAH RIVER SITE

Waste Stream Name: THIRDS WASTE < 100 N CI/G TRU RAD

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

Separations (200 Area) generation. Generated primarily through separation activities in the course of plutonium production. Includes small amounts of TRU waste from on site laboratories. These wastes are primarily solids consisting of booties, lab coats, floor sweeping and rags.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
8.0	1,840.0	0.000	0.000	8.0	1,840.0	25.0	5,750.0

Treatability Group:

MLLW CH/AL, Organic Debris, Toxic Organics and Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. Current plans are to pretreat in the Low Activity TRU Waste Facility, part of the TRU Waste Facility, and to assay and separate TRU waste from LLW waste.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams. The dilemma is the possibility of creating TRU waste when incinerating LLW containing relatively high levels (e.g., 10-100 nCi/g) of TRU radionuclides.

Radiation Characteristics:

- 1) Alpha emitter, 10-100 nCi/g
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Daughter products of alpha emitters may cause problems, i.e., production of radon gas, emissions from short-lived daughter products, and potential chemical incompatibility of daughter products.
- 2) Radioactive decay may produce significant amounts of heat that needs to be considered during treatment and disposal.
- 3) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

State: South Carolina

ID #: 919

Site: SAVANNAH RIVER SITE

Waste Stream Name: THIRDS WASTE < 100 N CI/G TRU RAD

Matrix: Organic Debris

Waste Type: MLLW

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D003D	Tech.	Deactivation
D004	Conc.	Vitrification
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D011	Conc.	Stabilization
D019		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.
D023		Not currently prohibited under the LDR Program.
D024		Not currently prohibited under the LDR Program.
D025		Not currently prohibited under the LDR Program.
D026		Not currently prohibited under the LDR Program.
P012	Conc.	Vitrification
P015	Tech.	Metals Recovery; or Thermal Recovery of Metals
P048	Conc.	Incineration
P113	Tech.	Thermal Recovery of Metals; or Stabilization
P120	Tech.	Stabilization

State: South Carolina

ID #: 919

Site: SAVANNAH RIVER SITE

Waste Stream Name: THIRDS WASTE < 100 N CI/G TRU RAD

Matrix: Organic Debris

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U002	Conc.	Incineration
U032	Conc.	Chemical Reduction followed by Chemical Precipitation
U052	Conc.	Incineration
U080	Conc.	Incineration
U133	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U134	Tech.	Adsorption followed by Neutralization; or Neutralization
U144	Conc.	Incineration followed by Stabilization
U151	Tech.	Amalgamation
U154	Tech.	Fuel Substitution; or Incineration
U161	Conc.	Incineration
U209	Conc.	Incineration
U211	Conc.	Incineration
U220	Conc.	Incineration
U226	Conc.	Incineration
U239	Conc.	Incineration

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 2318

Site: SAVANNAH RIVER SITE

Waste Stream Name: CALCIUM METAL

Matrix: Reactive Metals

Waste Type: MLLW

Waste Stream Description and Source:

This waste stream is slightly oxidized calcium metal. Calcium metal is used as an ingredient in the FB line processing. The waste stream is slightly oxidized calcium metal that was no longer acceptable for the process.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.820	318.0	0.000	0.000	0.820	318.0	0.000	0.000

Treatability Group:

MLLW CH, Reactive Metals, Ignitable, Corrosive, or Reactive Only

Treatment Status:

Have not identified a planned facility for this waste stream at this time. Technology exists but needs modification or verification to treat this waste stream at the CIF.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Not Applicable.

Waste is no longer being generated.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D003D	Tech.	Deactivation

State: South Carolina

ID #: 2319

Site: SAVANNAH RIVER SITE

Waste Stream Name: FREON 11/OIL

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

This waste was generated as a result of preventive maintenance. This is compressor oil from the 232-H, 234-H and 221-HB chillers (air conditioning units). The oil/freon mixture comes from a "clean area" but tritium above clean levels were detected in these drums. Buildings 232-H and 234-H are no longer generating this waste.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.9	1,636.0	0.000	0.000	1.9	1,636.0	1.000	100.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Organics

Treatment Status:

Plan to treat on-site at the planned Consolidated Incineration Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Volatile radionuclide
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider radioactive off-gases to protect the public and treatment facility personnel from releases.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

State: South Carolina

ID #: 2319

Site: SAVANNAH RIVER SITE

Waste Stream Name: FREON 11/OIL

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D019		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.

State: South Carolina

ID #: 2687

Site: SAVANNAH RIVER SITE

Waste Stream Name: RADIOACTIVE OIL

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

200 Area Separations Facilities (including tritium). This waste stream consists of used, liquid waste oil that is contaminated with Tritium and in some cases also mercury. Tritium activity level ranges from background levels to approx. 185 Ci/l. Mercury concentration can be greater than 0.2 mg/l. Waste oil is contained in 13.5 gallon carboys placed in specially fabricated stainless steel containers. Oil Dri (Kitty litter/clay) is also placed inside the stainless steel overpack to absorb any oil that might leak due to degradation of the 13.5 gal. plastic carboy. It also acts to protect the top of the carboy when the stainless steel container is being welded shut. Radioactive waste oil is generated during normal Tritium facilities operations. Pumps and compressors are used in Tritium gas handling operations. The pump/compressor oil either comes in direct contact with Tritium or the equipment is located in regulated areas. Periodically, the oil is replaced due to routine maintenance or pump failure. There is also the potential for mercury contamination of the waste oil, since mercury diffusion pumps are also used in the tritium process. Oil taken from the Kinney Stack Pumps has the highest potential for mercury contamination.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
12.7	10,400.0	0.000	0.000	12.7	10,400.0	2.0	1,745.0

Treatability Group:

MLLW CH, Organic Liquids, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. Technology options are being analyzed because of the tritium content in the oil. These levels exceed the tritium levels for the CIF.

Technology Status:

No technology exists (based on assessment).

Radiation Characteristics:

- 1) Volatile radionuclide
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment must consider containment of radioactive off-gases to protect treatment facility personnel and the public.

State: South Carolina

ID #: 2687

Site: SAVANNAH RIVER SITE

Waste Stream Name: RADIOACTIVE OIL

Matrix: Organic Liquids

Waste Type: MLLW

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D010	Conc.	Stabilization
D011	Conc.	Stabilization

State: South Carolina

ID #: 0000002688

Site: SAVANNAH RIVER SITE

Waste Stream Name: M-AREA PLATING LINE WASTE SLUDGE (TANK7)

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Generated from nickel plating of depleted uranium slugs in Building 313-M. this waste stored in PWIT/SF tank 7 is distinguished from the other plating sludges stored in the PWIT/S because it is considered CA LIST due to nickel. Sludges in the other PWIT/SF tanks are not considered CA list.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	272.0	330,000.0	272.0	330,000.0	0.000	0.000

Treatability Group:

MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the planned M-Area Vendor Treatment facility. Treatment of the M-Area sludge will be either cementation or vitrification process. Technology does exist, but no facility is available at this time.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Not Applicable.

Waste is no longer being generated.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F006	Conc.	Alkaline Chlorination followed by Chemical Precipitation; and Stabilization; or Incineration; or High Temperature Metals Recovery

State: South Carolina

ID #: 0000002689

Site: SAVANNAH RIVER SITE

Waste Stream Name: PLATING LINE SUMP MATERIAL

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Storage location 709-2G. Building 313-M sump clean out activities.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.420	100.0	0.000	0.000	0.420	100.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the planned M-Area Vendor Treatment facility. Treatment of M-Area sludge and solutions will be either cementation or vitrification process. Technology does exist, but no facility is available at this time.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Not Applicable.

Waste is no longer being generated.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization

State: South Carolina

ID #: 0000002690

Site: SAVANNAH RIVER SITE

Waste Stream Name: NICKEL PLATING LINE SOLUTION

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Storage location 316-M. This waste stream was generated upon shutdown of the slug process line in Building 313-M. This facility was an electroplating facility. This waste stream is considered a CA list waste.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	5.0	5,000.0	5.0	5,000.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Plan to treat on-site at the planned M-Area Vendor Treatment facility. Treatment of the M-Area sludge and solutions will be either a cementation or vitrification process. Technology does exist, but no facility is available at this time.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Not Applicable.

Waste is no longer being generated.

State: South Carolina

ID #: 0000002690

Site: SAVANNAH RIVER SITE

Waste Stream Name: NICKEL PLATING LINE SOLUTION

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D002A	Tech.	Deactivation
D008B	Conc.	Stabilization

State: South Carolina

ID #: 0000002691

Site: SAVANNAH RIVER SITE

Waste Stream Name: M-AREA STABILIZED SLUDGE

Matrix: Cemented Solids

Waste Type: MLLW

Waste Stream Description and Source:

****Future Waste****The M-area wastes will be homogenized and stabilized by a vendor to meet the LDR treatment standards. The treated M-Areas wastes will include the following M-Area wastestreams: plating line sludge, plating line sludge (tank7), M-Area sludge treatability samples-F006, mark 15 filtercake, nickel plating line solution, and plating line sump material. The vendor will stabilize the waste using vitrification or cementitious solidification. The vendor will then package the stabilized waste in 71-gallon drums with plastic liners. Generation numbers will be given based on a cementitious solidification process, but the numbers will decrease if vitrification is the selected treatment technology.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.000	0.000	0.000	0.000	4,810.0	7,700,000.0

Treatability Group:

MLLW CH, Cemented Solids, Toxic Metals w/o Mercury

Treatment Status:

No treatment required prior to disposal. The solidified sludge in its final disposal state will be sent to the HW/MW vaults for storage.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Not Applicable.

Waste has not yet been generated.

State: South Carolina

ID #: 0000002691

Site: SAVANNAH RIVER SITE

Waste Stream Name: M-AREA STABILIZED SLUDGE

Matrix: Cemented Solids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F006	Conc.	Alkaline Chlorination followed by Chemical Precipitation; and Stabilization; or Incineration; or High Temperature Metals Recovery

State: South Carolina

ID #: 0000002692

Site: SAVANNAH RIVER SITE

Waste Stream Name: AQUEOUS MERCURY AND LEAD

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Naval fuels activities : 247-F. Solutions containing mercury and lead contaminants. One time generation.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.200	45.0	0.000	0.000	0.200	45.0	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled
- 2) Volatile radionuclide
- 3) Beta/gamma emitter

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Not Applicable.

Waste is no longer generated.

State: South Carolina

ID #: 0000002692

Site: SAVANNAH RIVER SITE

Waste Stream Name: AQUEOUS MERCURY AND LEAD

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D009A	Tech.	Incineration; or Mercury Roast/Retort

State: South Carolina

ID #: 0000002693

Site: SAVANNAH RIVER SITE

Waste Stream Name: PAINTS AND THINNERS

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

Excess and retired paints and thinners from various areas on site. Potential future waste for expired shelf life and/or unused materials.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.000	0.000	0.000	0.000	1.000	1,000.0

Treatability Group:

MLLW CH, Organic Sludges/Particulates, Toxic Organics and Metals w/ Mercury

Treatment Status:

Plan to treat on-site at the planned Consolidated Incineration Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Product change: product substitution and conservation; and change in product composition.
- 2) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

State: South Carolina

ID #: 0000002693

Site: SAVANNAH RIVER SITE

Waste Stream Name: PAINTS AND THINNERS

Matrix: Organic Sludges/Particulates

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D001A	Tech.	Fuel Substitution; Organics Recovery; or Incineration
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D018		Not currently prohibited under the LDR Program.
D035		Not currently prohibited under the LDR Program.
D038		Not currently prohibited under the LDR Program.
F003	Conc.	Incineration

State: South Carolina

ID #: 0000002694

Site: SAVANNAH RIVER SITE

Waste Stream Name: LAB WASTE W/TETRAPHENYL BORATE

Matrix: Organic Debris

Waste Type: MLLW

Waste Stream Description and Source:

This is a future waste that will be generated at Savannah River Technology Center in 1992 at 0.33 m³/yr. The waste will be various labtop pieces (e.g. filters, wipes, etc.) coated with powdery tetraphenyl borate. When exposed to acidic solutions, tetraphenyl borate degrades to benzene.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.000	0.000	0.000	0.000	1.7	300.0

Treatability Group:

MLLW CH, Organic Debris, Toxic Organics

Treatment Status:

Plan to treat on-site at the planned Consolidated Incineration Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Contact-handled
- 2) Beta/gamma emitter

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Improved operating practices: changes in material handling and inventory procedures; waste segregation; and changes in production scheduling.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D018		Not currently prohibited under the LDR Program.

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical,

State: South Carolina

ID #: 0000002694

Site: SAVANNAH RIVER SITE

Waste Stream Name: LAB WASTE W/TETRAPHENYL BORATE

Matrix: Organic Debris

Waste Type: MLLW

or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 0000002695

Site: SAVANNAH RIVER SITE

Waste Stream Name: TRI-BUTYL-PHOSPHATE & N-PARAFFIN - TRU

Matrix: Organic Liquids

Waste Type: MTRU

Waste Stream Description and Source:

Part of the Purex Process used in the Separations Areas (200-F & 200-H).
Organic solvent, resembles diesel fuel in appearance, transuranic.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
1.3	1,210.4	0.000	0.000	1.3	1,210.4	0.000	0.000

Treatability Group:

MTRU CH/AL, Organic Liquids, Toxic Metals w/ Mercury

Treatment Status:

Treatment of most mixed transuranic waste to meet LDR treatment standards is not applicable because DOE plans to ship these wastes to the Waste Isolation Pilot Plant (WIPP), pending issuance of a No-Migration Determination of the operational phase. Pretreatment to meet the WIPP Waste Acceptance Criteria may be required. Pretreatment in TRU Waste Facility (TWF) for disposal at WIPP.

Technology Status:

Not Applicable.

Radiation Characteristics:

- 1) Contact-handled
- 2) Transuranic contaminants

Waste-Specific Radiation Effects on Treatment:

- 1) Radioactive decay may produce significant amounts of heat that needs to be considered during treatment and disposal.
- 2) High alpha activity in contact with organics or water can result in radiolysis, with production of hydrogen gas, methane and other degradation products. The buildup of hydrogen gas and radiation interaction with the waste form can affect storage, design and operation of treatment facilities, and stability of the final waste form.
- 3) Daughter products of alpha emitters may cause problems, i.e., production of radon gas, emissions from short-lived daughter products, and potential chemical incompatibility of daughter products.

Waste Minimization Activities:

- 1) Change in operations status; process interruptions; work stoppages; mission changes; and new processes.

State: South Carolina

ID #: 0000002695

Site: SAVANNAH RIVER SITE

Waste Stream Name: TRI-BUTYL-PHOSPHATE & N-PARAFFIN - TRU

Matrix: Organic Liquids

Waste Type: MTRU

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D010	Conc.	Stabilization
D011	Conc.	Stabilization

State: South Carolina

ID #: 0000002696

Site: SAVANNAH RIVER SITE

Waste Stream Name: TRI-BUTYL-PHOSPHATE & N-PARAFFIN

Matrix: Organic Liquids

Waste Type: MLLW

Waste Stream Description and Source:

Part of the purex process used in the separations areas (200-F and 200-H). An organic solvent resembling diesel fuel in appearance. Future plan for F- and H-canyons shows about 340,194 kg of process material will become waste at time of decommissioning which is not expected within this 5-year time frame.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
89.6	83,374.4	0.000	0.000	89.6	83,374.4	0.000	0.000

Treatability Group:

MLLW CH/AL, Organic Liquids, Toxic Organics and Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time. Treatment options are still being analyzed.

Technology Status:

Technology assessment has not started. Treatment technology exists (incineration) but needs modification to treat this waste.

Radiation Characteristics:

- 1) Contact-handled
- 2) Alpha emitter, 10-100 nCi/g

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.
- 2) Radioactive decay may produce significant amounts of heat that needs to be considered during treatment and disposal.

Waste Minimization Activities:

- 1) Change in operations status; process interruptions; work stoppages; mission changes; and new processes.

State: South Carolina

ID #: 0000002696

Site: SAVANNAH RIVER SITE

Waste Stream Name: TRI-BUTYL-PHOSPHATE & N-PARAFFIN

Matrix: Organic Liquids

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D010	Conc.	Stabilization
D011	Conc.	Stabilization
D018		Not currently prohibited under the LDR Program.
D035		Not currently prohibited under the LDR Program.

State: South Carolina

ID #: 0000002697

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Stream Description and Source:

****Future wastestream**** Waste stream is the ash generated by the operation of the consolidated incineration facility (CIF), which will treat hazardous, mixed and low level waste. The waste will not be generated until 1996. The final form is ashcrete. Generation rate used for 5-year estimate is based on the production of about 900 drums of ashcrete per year.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.000	0.000	0.000	0.000	374.0	1,371,686.0

Treatability Group:

MLLW CH/AL, Inorganic Sludges/Particulates, Toxic Organics and Metals w/ Mercury

Treatment Status:

Plan to treat on-site at the planned Consolidated Incineration Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Alpha emitter, < 10 nCi/g
- 2) Alpha emitter, 10-100 nCi/g
- 3) Contact-handled
- 4) Beta/gamma emitter

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.
- 2) Daughter products of alpha emitters may cause problems, i.e., production of radon gas, emissions from short-lived daughter products, and potential chemical incompatibility of daughter products.
- 3) Treatment could result in plating, precipitation, or some other form of concentration, which could cause workers to receive a significant radiation exposure. The potential for concentration of beta and gamma emitters will affect the design and operation of a treatment facility.
- 4) Treatment must consider radioactive off-gases to protect the public and treatment facility personnel from releases.

State: South Carolina

ID #: 0000002697

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Minimization Activities:

- 1) Not Applicable.

Waste has not yet been generated.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D010	Conc.	Stabilization
D011	Conc.	Stabilization
D012	Conc.	Incineration
D013	Conc.	Incineration
D014	Conc.	Incineration
D015	Conc.	Incineration
D016	Conc.	Incineration
D017	Conc.	Incineration
D018		Not currently prohibited under the LDR Program.
D019		Not currently prohibited under the LDR Program.
D020		Not currently prohibited under the LDR Program.
D021		Not currently prohibited under the LDR Program.

State: South Carolina

ID #: 0000002697

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D022		Not currently prohibited under the LDR Program.
D023		Not currently prohibited under the LDR Program.
D024		Not currently prohibited under the LDR Program.
D025		Not currently prohibited under the LDR Program.
D026		Not currently prohibited under the LDR Program.
D027		Not currently prohibited under the LDR Program.
D028		Not currently prohibited under the LDR Program.
D029		Not currently prohibited under the LDR Program.
D030		Not currently prohibited under the LDR Program.
D031		Not currently prohibited under the LDR Program.
D032		Not currently prohibited under the LDR Program.
D033		Not currently prohibited under the LDR Program.
D034		Not currently prohibited under the LDR Program.
D035		Not currently prohibited under the LDR Program.
D036		Not currently prohibited under the LDR Program.
D037		Not currently prohibited under the LDR Program.
D038		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
D041		Not currently prohibited under the LDR Program.
D042		Not currently prohibited under the LDR Program.
D043		Not currently prohibited under the LDR Program.

State: South Carolina

ID #: 0000002697

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
F001	Conc.	Incineration
F002	Conc.	Incineration
F003	Conc.	Incineration
F004	Conc.	Incineration
F005A	Conc.	Incineration
F006	Conc.	Alkaline Chlorination followed by Chemical Precipitation; and Stabilization; or Incineration; or High Temperature Metals Recovery
P005	Tech.	Fuel Substitution; or Incineration
P009	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
P011	Conc.	Vitrification
P012	Conc.	Vitrification
P016	Tech.	Incineration
P017	Tech.	Incineration
P018	Tech.	Incineration
P022	Tech.	Incineration
P023	Tech.	Incineration
P024	Conc.	Incineration
P028	Tech.	Incineration
P037	Conc.	Incineration
P045	Tech.	Incineration
P048	Conc.	Incineration
P051	Conc.	Incineration

State: South Carolina

ID #: 0000002697

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
P054	Tech.	Incineration
P059	Conc.	Incineration
P060	Conc.	Incineration
P063	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P064	Tech.	Incineration
P068	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
P069	Tech.	Incineration
P070	Tech.	Incineration
P077	Conc.	Incineration
P089	Conc.	Incineration
P093	Tech.	Incineration
P095	Tech.	Incineration
P098	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P102	Tech.	Fuel Substitution; or Incineration
P104	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation followed by Stabilization
P105	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
P106	Conc.	Chemical Oxidation followed by Alkaline Chlorination followed by Chemical Precipitation
P108	Tech.	Incineration
P112	Tech.	Fuel Substitution; Chemical Oxidation; Chemical

State: South Carolina

ID #: 0000002697

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
		Reduction; or Incineration
P113	Tech.	Thermal Recovery of Metals; or Stabilization
P116	Tech.	Incineration
P119	Tech.	Stabilization
P120	Tech.	Stabilization
P123	Conc.	Incineration
U001	Tech.	Incineration or Fuel Substitution
U002	Conc.	Incineration
U003	Tech.	Incineration
U004	Conc.	Incineration
U006	Tech.	Incineration
U007	Tech.	Incineration
U008	Tech.	Fuel Substitution; or Incineration
U009	Conc.	Incineration
U011	Tech.	Incineration
U012	Conc.	Incineration
U014	Tech.	Incineration
U017	Tech.	Incineration
U019	Conc.	Incineration
U021	Tech.	Incineration
U022	Conc.	Incineration
U023	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration

State: South Carolina

ID #: 0000002697

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U025	Conc.	Incineration
U027	Conc.	Incineration
U028	Conc.	Incineration
U031	Conc.	Incineration
U032	Conc.	Chemical Reduction followed by Chemical Precipitation
U034	Tech.	Incineration
U036	Conc.	Incineration
U037	Conc.	Incineration
U041	Tech.	Incineration
U043	Conc.	Incineration
U044	Conc.	Incineration
U045	Conc.	Incineration
U046	Tech.	Incineration
U047	Conc.	Incineration
U048	Conc.	Incineration
U050	Conc.	Incineration
U051	Conc.	Incineration
U052	Conc.	Incineration
U053	Tech.	Fuel Substitution; or Incineration
U055	Tech.	Fuel Substitution; or Incineration
U056	Tech.	Fuel Substitution; or Incineration
U057	Tech.	Fuel Substitution; or Incineration

State: South Carolina

ID #: 0000002697

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U060	Conc.	Incineration
U061	Conc.	Incineration
U063	Conc.	Incineration
U067	Conc.	Incineration
U069	Conc.	Incineration
U070	Conc.	Incineration
U071	Conc.	Incineration
U072	Conc.	Incineration
U073	Tech.	Incineration
U074	Tech.	Incineration
U075	Conc.	Incineration
U076	Conc.	Incineration
U077	Conc.	Incineration
U078	Conc.	Incineration
U079	Conc.	Incineration
U080	Conc.	Incineration
U081	Conc.	Incineration
U082	Conc.	Incineration
U083	Conc.	Incineration
U084	Conc.	Incineration
U088	Conc.	Incineration
U091	Tech.	Incineration

State: South Carolina

ID #: 0000002697

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U092	Tech.	Incineration
U095	Tech.	Incineration
U102	Conc.	Incineration
U103	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U105	Conc.	Incineration
U106	Conc.	Incineration
U108	Conc.	Incineration
U109	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U110	Tech.	Incineration
U112	Conc.	Incineration
U115	Tech.	Chemical Oxidation; or Incineration
U116	Tech.	Incineration
U117	Conc.	Incineration
U121	Conc.	Incineration
U122	Tech.	Fuel Substitution; or Incineration
U123	Tech.	Fuel Substitution; or Incineration
U124	Tech.	Fuel Substitution; or Incineration
U125	Tech.	Fuel Substitution; or Incineration
U127	Conc.	Incineration
U128	Conc.	Incineration
U129	Conc.	Incineration

State: South Carolina

ID #: 0000002697

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U130	Conc.	Incineration
U131	Conc.	Incineration
U132	Tech.	Incineration
U133	Tech.	Fuel Substitution; Chemical Oxidation; Chemical Reduction; or Incineration
U134	Tech.	Adsorption followed by Neutralization; or Neutralization
U136	Conc.	Vitrification
U138	Conc.	Incineration
U140	Conc.	Incineration
U142	Conc.	Stabilization; or Incineration
U144	Conc.	Incineration followed by Stabilization
U146	Conc.	Incineration followed by Stabilization
U147	Tech.	Fuel Substitution; or Incineration
U151	Tech.	Amalgamation
U154	Tech.	Fuel Substitution; or Incineration
U157	Conc.	Incineration
U158	Conc.	Incineration
U159	Conc.	Incineration
U161	Conc.	Incineration
U162	Conc.	Incineration
U165	Conc.	Incineration
U166	Tech.	Fuel Substitution; or Incineration

State: South Carolina

ID #: 0000002697

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U167	Tech.	Incineration
U169	Conc.	Incineration
U170	Conc.	Incineration
U171	Tech.	Incineration
U182	Tech.	Fuel Substitution; or Incineration
U183	Conc.	Incineration
U184	Tech.	Incineration
U185	Conc.	Incineration
U187	Conc.	Incineration
U188	Conc.	Incineration
U190	Conc.	Incineration; or Fuel Substitution
U196	Conc.	Incineration
U197	Tech.	Fuel Substitution; or Incineration
U201	Tech.	Fuel Substitution; or Incineration
U204	Conc.	Stabilization
U207	Conc.	Incineration
U208	Conc.	Incineration
U209	Conc.	Incineration
U210	Conc.	Incineration
U211	Conc.	Incineration
U213	Tech.	Fuel Substitution; or Incineration
U215	Tech.	Thermal Recovery of Metals; or Stabilization

State: South Carolina

ID #: 0000002697

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U216	Tech.	Thermal Recovery of Metals; or Stabilization
U218	Tech.	Incineration
U219	Tech.	Incineration
U220	Conc.	Incineration
U223	Tech.	Fuel Substitution; or Incineration
U225	Conc.	Incineration
U226	Conc.	Incineration
U227	Conc.	Incineration
U228	Conc.	Incineration
U234	Tech.	Incineration
U236	Tech.	Incineration
U239	Conc.	Incineration
U247	Conc.	Incineration
U328	Tech.	Incineration; or Thermal Destruction
U359	Tech.	Incineration; or Fuel Substitution

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

****Future wastestream**** The CIF treats hazardous, mixed and low level waste. Wastes are both listed and characteristically hazardous. The waste will not be generated until 1995. The Y-area saltstone facility is currently being rescoped to provide treatment for this waste stream only. The technologies are currently under development.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.000	0.000	0.000	0.000	1,892.0	1,892,000.0

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Organics and Metals w/ Mercury

Treatment Status:

Plan to treat on-site at the planned CIF Blowdown Interim Vendor Treatment facility.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Volatile radionuclide
- 3) Alpha emitter, < 10 nCi/g
- 4) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.
- 2) Daughter products of alpha emitters may cause problems, i.e., production of radon gas, emissions from short-lived daughter products, and potential chemical incompatibility of daughter products.
- 3) Treatment could result in plating, precipitation, or some other form of concentration, which could cause workers to receive a significant radiation exposure. The potential for concentration of beta and gamma emitters will affect the design and operation of a treatment facility.
- 4) Treatment must consider radioactive off-gases to protect the public and treatment facility personnel from releases.

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Minimization Activities:

- 1) Not Applicable.

Waste stream has not yet been generated.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Chemical Precipitation
D005	Conc.	Chemical Precipitation
D006B	Conc.	Chemical Precipitation
D007	Conc.	Chemical Reduction followed by Chemical Precipitation
D008B	Conc.	Chemical Precipitation
D009C	Conc.	Chemical Precipitation
D010	Conc.	Chemical Precipitation
D011	Conc.	Chemical Precipitation
D012	Tech.	Biodegradation; or Incineration
D013	Tech.	Carbon Adsorption; or Incineration
D014	Tech.	Wet Air Oxidation; or Incineration
D015	Tech.	Biodegradation or Incineration
D016	Tech.	Chemical Oxidation; Biodegradation; or Incineration
D017	Tech.	Chemical Oxidation or Incineration
D018		Not currently prohibited under the LDR Program.
D019		Not currently prohibited under the LDR Program.
D020		Not currently prohibited under the LDR Program.

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D021		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.
D023		Not currently prohibited under the LDR Program.
D024		Not currently prohibited under the LDR Program.
D025		Not currently prohibited under the LDR Program.
D026		Not currently prohibited under the LDR Program.
D027		Not currently prohibited under the LDR Program.
D028		Not currently prohibited under the LDR Program.
D029		Not currently prohibited under the LDR Program.
D030		Not currently prohibited under the LDR Program.
D031		Not currently prohibited under the LDR Program.
D032		Not currently prohibited under the LDR Program.
D033		Not currently prohibited under the LDR Program.
D034		Not currently prohibited under the LDR Program.
D035		Not currently prohibited under the LDR Program.
D036		Not currently prohibited under the LDR Program.
D037		Not currently prohibited under the LDR Program.
D038		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
D041		Not currently prohibited under the LDR Program.
D042		Not currently prohibited under the LDR Program.

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D043		Not currently prohibited under the LDR Program.
F001	Conc.	Biodegradation; Carbon Adsorption; Steam Stripping; Liquid-Liquid Extraction; Wet Air Oxidation; or Reverse Osmosis
F002	Conc.	Biodegradation; Carbon Adsorption; Steam Stripping; Liquid-Liquid Extraction; Wet Air Oxidation; or Reverse Osmosis
F003	Conc.	Biodegradation; Carbon Adsorption; Steam Stripping; Liquid-Liquid Extraction; Wet Air Oxidation; or Reverse Osmosis
F004	Conc.	Biodegradation; Carbon Adsorption; Steam Stripping; Liquid-Liquid Extraction; Wet Air Oxidation; or Reverse Osmosis
F005A	Conc.	Biodegradation; Carbon Adsorption; Steam Stripping; Liquid-Liquid Extraction; Wet Air Oxidation; or Reverse Osmosis
F006	Conc.	Alkaline Chlorination; and Chemical Reduction followed by Chemical Precipitation
P005	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
P009	Tech.	Chemical Oxidation; Chemical Reduction; Carbon Adsorption; Biodegradation; or Incineration
P011	Conc.	Chemical Precipitation
P012	Conc.	Chemical Precipitation
P016	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
P017	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
P018	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
P022	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
P023	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
P024	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
P028	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
P037	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
P045	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
P048	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
P051	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
P054	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
P059	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
P060	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
P063	Conc.	Alkaline Chlorination followed by Chemical Precipitation
P064	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
P068	Tech.	Chemical Oxidation; Chemical Reduction; Carbon Adsorption; Biodegradation; or Incineration
P069	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
P070	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
P077	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
P089	Conc.	Biodegradation
P093	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
P095	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
P098	Conc.	Alkaline Chlorination followed by Chemical Precipitation
P102	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
P104	Conc.	Alkaline Chlorination followed by Chemical Precipitation
P105	Tech.	Chemical Oxidation; Chemical Reduction; Carbon Adsorption; Biodegradation or Incineration
P106	Conc.	Alkaline Chlorination followed by Chemical Precipitation
P108	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
P112	Tech.	Chemical Oxidation; Chemical Reduction; Carbon Adsorption; Biodegradation; or Incineration
P113	Conc.	Chemical Oxidation followed by Chemical Precipitation
P116	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
P119	Cc	Chemical Precipitation
P120	Conc.	Chemical Precipitation

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
P123	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U001	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U002	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U003	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U004	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U006	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U007	Tech.	(Wet Air Oxidation OR Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U008	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U009	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U011	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U012	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U014	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U017	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U019	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U021	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U022	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U023	Tech.	Chemical Oxidation; Chemical Reduction; Carbon Adsorption; Biodegradation; or Incineration
U025	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U027	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U028	Conc.	Incineration
U031	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U032	Conc.	Chemical Reduction followed by Chemical Precipitation
U034	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U036	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U037	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U041	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U043	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U044	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U045	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U046	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U047	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U048	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U050	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U051	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U052	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U053	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U055	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U056	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U057	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U060	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U061	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U063	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U067	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U069	Conc.	Incineration
U070	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U071	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U072	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U073	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U074	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U075	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U076	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U077	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U078	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U079	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U080	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U081	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U082	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U083	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U084	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U088	Conc.	Incineration

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U091	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U092	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U095	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U102	Conc.	Incineration
U103	Tech.	Chemical Oxidation; Chemical Reduction; Carbon Adsorption; Biodegradation; or Incineration
U105	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U106	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U108	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U109	Tech.	Chemical Oxidation; Chemical Reduction; Carbon Adsorption; Biodegradation; or Incineration
U110	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U112	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U115	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U116	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U117	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U121	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U122	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U123	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U124	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U125	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U127	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U128	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U129	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U130	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U131	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U132	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U133	Tech.	Chemical Oxidation; Chemical Reduction; Carbon Adsorption; Biodegradation; or Incineration
U134	Conc.	Chemical Precipitation
U136	Conc.	Chemical Precipitation
U138	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U140	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U142	Conc.	Biodegradation; or Wet Air Oxidation followed by

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
		Carbon Adsorption
U144	Conc.	Chemical Oxidation followed by Chemical Precipitation
U146	Conc.	Chemical Oxidation followed by Chemical Precipitation
U147	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U151	Conc.	Chemical Precipitation
U154	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U157	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U158	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U159	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U161	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U162	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U165	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U166	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U167	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U169	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U170	Conc.	Biodegradation; or Wet Air Oxidation followed by

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
		Carbon Adsorption
U171	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U182	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U183	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U184	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U185	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U187	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U188	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U190	Conc.	Biodegradation
U196	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U197	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U201	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U204	Conc.	Chemical Precipitation
U207	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U208	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U209	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U210	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U211	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U213	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U215	Conc.	Chemical Oxidation followed by Chemical Precipitation
U216	Conc.	Chemical Oxidation followed by Chemical Precipitation
U218	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U219	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U220	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U223	Tech.	Carbon Adsorption; or Incineration
U225	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U226	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U227	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U228	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U234	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration
U236	Tech.	(Wet Air Oxidation or Chemical Oxidation) followed by Carbon Adsorption; or Incineration

State: South Carolina

ID #: 0000002698

Site: SAVANNAH RIVER SITE

Waste Stream Name: CONSOLIDATED INCINERATOR (CIF) BLOWDOWN

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
U239	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U247	Conc.	Biodegradation; or Wet Air Oxidation followed by Carbon Adsorption
U328	Tech.	Incineration; or Chemical Oxidation followed by (Biodegradation or Carbon Adsorption); or Biodegradation followed by Carbon Adsorption
U359	Tech.	Incineration; or Chemical Oxidation followed by (Biodegradation or Carbon Adsorption); or Biodegradation followed by Carbon Adsorption

State: South Carolina

ID #: 0000002699

Site: SAVANNAH RIVER SITE

Waste Stream Name: WASTE SITES/SPILL SITE SOIL

Matrix: Soils

Waste Type: MLLW

Waste Stream Description and Source:

Spills and waste site remediation.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
18.1	23,205.0	0.000	0.000	18.1	23,205.0	0.000	0.000

Treatability Group:

MLLW CH/AL, Soils, Toxic Organics and Metals w/ Mercury

Treatment Status:

Plan to treat on-site at the existing Hazardous Waste/Mixed Waste Disposal Facility. Technology exists and plan to modify HW/MW DF permit to soil wash this waste stream.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled
- 2) Beta/gamma emitter
- 3) Transuranic contaminants

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Not Applicable.

Waste is no longer generated.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D004	Conc.	Vitrification
D005	Conc.	Chemical Precipitation; or Stabilization
D006B	Conc.	Stabilization

— — — — — SRS-WES-123 — — — — — April 1993 —

State: South Carolina

ID #: 0000002699

Site: SAVANNAH RIVER SITE

Waste Stream Name: WASTE SITES/SPILL SITE SOIL

Matrix: Soils

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Conc.	Chemical Reduction followed by Stabilization
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
D010	Conc.	Stabilization
D011	Conc.	Stabilization
D012	Conc.	Incineration
D013	Conc.	Incineration
D014	Conc.	Incineration
D015	Conc.	Incineration
D016	Conc.	Incineration
D017	Conc.	Incineration
D018		Not currently prohibited under the LDR Program.
D019		Not currently prohibited under the LDR Program.
D020		Not currently prohibited under the LDR Program.
D021		Not currently prohibited under the LDR Program.
D022		Not currently prohibited under the LDR Program.
D023		Not currently prohibited under the LDR Program.
D024		Not currently prohibited under the LDR Program.
D025		Not currently prohibited under the LDR Program.
D026		Not currently prohibited under the LDR Program.
D027		Not currently prohibited under the LDR Program.
D028		Not currently prohibited under the LDR Program.

State: South Carolina

ID #: 0000002699

Site: SAVANNAH RIVER SITE

Waste Stream Name: WASTE SITES/SPILL SITE SOIL

Matrix: Soils

Waste Type: MLLW

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D029		Not currently prohibited under the LDR Program.
D030		Not currently prohibited under the LDR Program.
D031		Not currently prohibited under the LDR Program.
D032		Not currently prohibited under the LDR Program.
D033		Not currently prohibited under the LDR Program.
D034		Not currently prohibited under the LDR Program.
D035		Not currently prohibited under the LDR Program.
D036		Not currently prohibited under the LDR Program.
D037		Not currently prohibited under the LDR Program.
D038		Not currently prohibited under the LDR Program.
D039		Not currently prohibited under the LDR Program.
D040		Not currently prohibited under the LDR Program.
D041		Not currently prohibited under the LDR Program.
D042		Not currently prohibited under the LDR Program.
D043		Not currently prohibited under the LDR Program.

State: South Carolina

ID #: 0000002700

Site: SAVANNAH RIVER SITE

Waste Stream Name: TANK E-3-1 CLEAN OUT MATERIAL

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

The waste stream resulted from the one-time clean out of mercury contaminated sludge in the bottom of tank E-3-1 located in 211-H. This waste stream is rocks, dirt, sand, concrete, pebbles, etc., which were collected in tank E-3-1 in 211 H over a period of many years. The 211-H regulated sumps were transferred into this tank. The high density material collected on the bottom and holds a residual amount of mercury. The waste was placed in storage at 709-2G on May 5, 1992. There is 1134 kg (1.03 M3).

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.000	0.000	0.000	0.000	1.0	1,134.0

Treatability Group:

MLLW CH, Inorganic Debris, Toxic Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Not Applicable.

EPA CODES

Waste Characterization Basis: Sampling/Analysis

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration

State: South Carolina

ID #: 0000002700

Site: SAVANNAH RIVER SITE

Waste Stream Name: TANK E-3-1 CLEAN OUT MATERIAL

Matrix: Inorganic Debris

Waste Type: MLLW

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 0000002701

Site: SAVANNAH RIVER SITE

Waste Stream Name: ITP SAMPLES

Matrix: Aqueous Liquid

Waste Type: HLW

Waste Stream Description and Source:

****FUTURE WASTESTREAM****

The waste will be generated by laboratory research, development, and analytical programs at 773-A to support the operations of the in-tank precipitation (ITP) operation.

This wastestream will be generated by shielded cell operations during projects for the glass technology group and will come from demonstrations of the ITP process on actual HLW samples.

The liquid waste will most likely contain mercury, benzene, and chromium. The chromium will most likely be at low levels.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.000	0.000	0.000	0.000	0.000	0.000	4.4	-

Treatability Group:

HLW RH/AL, Aqueous Liquid, Toxic Organics and Metals w/ Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Beta/gamma emitter
- 2) Remote handled
- 3) Transuranic contaminants

Waste-Specific Radiation Effects on Treatment:

- 1) Treatment could result in plating, precipitation, or some other form of concentration, which could cause workers to receive a significant radiation exposure. The potential for concentration of beta and gamma emitters will affect the design and operation of a treatment facility.
- 2) High beta or gamma levels in contact with organics can result in radiolysis, with production of hydrogen gas and formation of free radicals that attack structural materials, particularly steel. The buildup of hydrogen gas and embrittlement of structural materials are important considerations, in storage, design, and operation of treatment facilities, and in stabilization of the final waste form.
- 3) Radiation levels requiring remote handling will affect the design and operation of a treatment facility, i.e., need for robotics, additional shielding, etc.

State: South Carolina

ID #: 0000002701

Site: SAVANNAH RIVER SITE

Waste Stream Name: ITP SAMPLES

Matrix: Aqueous Liquid

Waste Type: HLW

Waste Minimization Activities:

- 1) Not Applicable.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D007	Tech.	High Level Vitrification
D009C	Tech.	High Level Vitrification
D018		Not currently prohibited under the LDR Program.

State: South Carolina

ID #: 0000002702

Site: SAVANNAH RIVER SITE

Waste Stream Name: SPENT FILTER CARTRIDGES

Matrix: Heterogeneous Debris

Waste Type: MLLW

Waste Stream Description and Source:

247-F Naval fuels reprocessing cartridges.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.630	136.4	0.000	0.000	0.630	136.4	0.000	0.000

Treatability Group:

MLLW CH, Heterogeneous Debris, Toxic Metals w/ Mercury

Treatment Status:

Plan to treat on-site at the planned Hazardous Waste/Mixed Waste Disposal Facility.

Technology Status:

Technology exists. No modifications are necessary.

Radiation Characteristics:

- 1) Alpha emitter, < 10 nCi/g
- 2) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Certain isotopes of U, Pu, Am, Cm, Cf, Np and Th are non-accountable if present below specific levels, and require different levels of safeguards, depending on the amount present. Treatments resulting in concentration of the material can result in the "roll up" of large volumes of non-accountable wastes into a smaller volume of accountable waste or change a mixed low-level waste to a TRU waste.

Waste Minimization Activities:

- 1) Not Applicable.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration

State: South Carolina

ID #: 0000002702

Site: SAVANNAH RIVER SITE

Waste Stream Name: SPENT FILTER CARTRIDGES

Matrix: Heterogeneous Debris

Waste Type: MLLW

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 0000002703

Site: SAVANNAH RIVER SITE

Waste Stream Name: CADMIUM CONTAMINATED GLOVEBOX SECTION

Matrix: Inorganic Debris

Waste Type: MLLW

Waste Stream Description and Source:

The waste was generated from decommissioning operations of a glovebox in 773-A. Part of a glovebox being decommissioned was contaminated previously with a cadmium solution. The glovebox piece now located in a drum in a satellite area.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.040	29.5	0.000	0.000	0.040	29.5	0.000	0.000

Treatability Group:

MLLW CH/AL, Inorganic Debris, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Technology exists. Needs modifications or verification for application to DOE waste streams.

Radiation Characteristics:

- 1) Contact-handled
- 2) Alpha emitter, 10-100 nCi/g

Waste-Specific Radiation Effects on Treatment:

- 1) None.

Waste Minimization Activities:

- 1) Not Applicable.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D006B	Conc.	Stabilization

The alternate LDR treatment standard for debris is treatment prior to land disposal using any of the following technologies: extraction (physical, chemical or thermal), destruction (biological, chemical, or thermal), macro/microencapsulation or sealing.

State: South Carolina

ID #: 0000002704

Site: SAVANNAH RIVER SITE

Waste Stream Name: ROCKY FLATS INCINERATOR ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MTRU

Waste Stream Description and Source:

In satellite area of 235-F, sample material sent to SRS to investigate possible flow sheets for the recover of SNM (plutonium). The ash was classified as waste by the Colorado Court System and the flow sheet experiments were canceled. Ash from the Rocky Flats Incinerator was sent to SRS for plutonium recovery research purposes.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.008	30.8	0.000	0.000	0.008	30.8	0.000	0.000

Treatability Group:

MTRU CH/AL, Inorganic Sludges/Particulates, Toxic Organics and Metals w/ Mercury

Treatment Status:

Treatment of most mixed transuranic waste to meet LDR treatment standards is not applicable because DOE plans to ship these wastes to the Waste Isolation Pilot Plant (WIPP), pending issuance of a No-Migration Determination of the operational phase. Pretreatment to meet the WIPP Waste Acceptance Criteria may be required.

Technology Status:

Not Applicable.

Radiation Characteristics:

- 1) Contact-handled
- 2) Alpha emitter, 10-100 nCi/g
- 3) Transuranic contaminants

Waste-Specific Radiation Effects on Treatment:

- 1) Treatments using chemical separation could result in concentration of certain isotopes of uranium and plutonium to form a critical mass; concentration of polonium or plutonium in contact with beryllium could result in production of neutrons.

Waste Minimization Activities:

- 1) Not Applicable.

State: South Carolina

ID #: 0000002704

Site: SAVANNAH RIVER SITE

Waste Stream Name: ROCKY FLATS INCINERATOR ASH

Matrix: Inorganic Sludges/Particulates

Waste Type: MTRU

General Comments:

One-time generation.

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization
D009C	Conc.	Thermal Recovery of Metals; Acid Leaching; Stabilization; or Incineration
F001	Conc.	Incineration

State: South Carolina

ID #: 0000002705

Site: SAVANNAH RIVER SITE

Waste Stream Name: ENRICHED URANIUM CONTAMINATED WITH LEAD

Matrix: Aqueous Liquid

Waste Type: MLLW

Waste Stream Description and Source:

Bldg. 320-M Satellite Area. Generated by the laboratory performing a total uranium analysis by Jones Reduction. The laboratory will now use an alternative method and this waste is no longer generated. Waste is in polyethylene carboys, stored inside a stainless steel tray for secondary containment.

Current Inventory as of December 31, 1991						Projected Generation 1992 through 1996	
Not Subject To LDR Prohibition		Subject To LDR Prohibition		TOTAL			
m ³	kg	m ³	kg	m ³	kg	m ³	kg
0.130	127.1	0.000	0.000	0.130	127.1	0.000	0.000

Treatability Group:

MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury

Treatment Status:

Have not identified a planned facility for this waste stream at this time.

Technology Status:

Assessing technologies to determine if the technology exists, and if so, whether it needs modification.

Radiation Characteristics:

- 1) Contact-handled

Waste-Specific Radiation Effects on Treatment:

- 1) Treatments using chemical separation could result in concentration of certain isotopes of uranium and plutonium to form a critical mass; concentration of polonium or plutonium in contact with beryllium could result in production of neutrons.

Waste Minimization Activities:

- 1) Not Applicable.

General Comments:

Waste no longer generated. Do not expect future generation.

State: South Carolina

ID #: 0000002705

Site: SAVANNAH RIVER SITE

Waste Stream Name: ENRICHED URANIUM CONTAMINATED WITH LEAD

Matrix: Aqueous Liquid

Waste Type: MLLW

EPA CODES

Waste Characterization Basis: Process Knowledge

Waste Codes	LDR Basis	Best Demonstrated Available Technologies
D008B	Conc.	Stabilization

TECHNOLOGY

DEVELOPMENT

SUMMARIES

Savannah River Site

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Target Site: Savannah River

Location site: Savannah River

Programs/Facilities Supported:
MWIP

ID: 167

Program Title: Waste Form and Vitrification Process Development for Mixed Waste

Summary Description:

Vitrification has been applied to high-level radioactive waste but has not been demonstrated as cost-effective for MLLW radioactive waste. SRTC and university subcontractors will develop glass/ceramic waste forms and demonstrate processes using commercially available melters.

Demonstration of superior performance, life-cycle costs and risk over cementation will provide data and justification for a "best demonstrated technology" for mixed waste treatment. Collaboration among different sites (PNL, LANL, RFP) and institutions (D/IC at Clemson University, N.Y State College of Ceramics, the University of Missouri-Rolla, and the Virginia Military Institute). The effort consists of 2 primary objectives: 1) Glass Waste Form Development; and 2) Vitrification Process Development. Test cases will consist of sludges representative of Rocky Flats, LANL, and ORNL sludges, and an ash representative of Rocky Flats, LANL, ORNL or SRS ashes. Work will also be conducted on drummed solids wastes.

Summary Purpose/Need:

Current Joule-heated HLW melters are capable of producing high quality MLLW or TRU waste forms, but are expensive. They have limited capabilities for repair, and their design life is 2 years. Stirred melter technology is being rapidly developed and is believed to offer significant improvements in equipment cost, repair, recovery from operating upsets, replacement time, and final melter disposal. TECO Inc. (a well-known commercial glass furnace design firm) has established a subsidiary to manufacture and market high temperature melters for waste vitrification.

LLMW can be delisted for hazardous materials by vitrification, simplifying and reducing the life-cycle costs and allowing direct land disposal in appropriate LLW facilities. Both the stirred and high temperature melters offer unique advantages to vitrifying mixed wastes.

Summary Result/Endpoint/Deliverable:

Key technical requirements to establish vitrification technology as viable for low-level mixed waste will be established, focusing on a delisting petition. Deliverables include technical requirements, data quality objectives for vitrification technology, a preliminary flowsheet for mixed waste vitrification, and a strategy for delisting mixed wastes.

BDAT: HLVIT STABL
Functional Areas: final form
final form glass
final form ceramic

Target Site: Savannah River

Location site: Los Alamos National Laboratory

Programs/Facilities Supported:
VOC in Non-Arid Soils ID

ID: 295

Program Title: Cold Plasma Destruction of Savannah River Off-Gas VOCs

Summary Description:

Demonstration of silent discharge plasma (SDP) technology as an effective means of destroying gaseous-based hazardous organic wastes (viz VOCs) at the Savannah River Site (SRS) and to perform a technology demonstration in the field at SRS. The goal for the field demonstration is to treat a waste stream containing VOCs at 100 ppm concentrations at a flow rate in the range 200 - 500 SCFH. In cooperation with EPRI, we would conduct a parallel effort to apply this cold plasma waste treatment technology to a small-scale industrial field demonstration (e.g. a small manufacturer in Southern California).

Summary Purpose/Need:

The off-gas treatment portion of Phase II of the Savannah River Site Integrated Demonstration deals with hazardous organic wastes, or volatile organic compounds (VOCs) which arise from off-gases liberated from the arid soil and the groundwater. Present waste treatment technologies (such as incineration or carbon absorption) suffer from lack of public acceptance, degree of destruction, or ability to minimize the final waste stream. In laboratory tests, cold (or non-equilibrium) plasmas, specifically the Silent Discharge Plasma (SDP), have demonstrated their effectiveness in destroying hazardous organic wastes, particularly chlorocarbons.

Summary Result/Endpoint/Deliverable:

Upon successful demonstration at SRS, the process will be ready for technology integration and commercialization.

BDAT: INCIN

Functional Areas: waste destruction & stabilization
alternative organic destruction - low concentration

Target Site: Savannah River

Location site: Argonne National Laboratory East

Programs/Facilities Supported:

VOC in Non-Arid Soils ID

ID: 302

Program Title: Pulsed Ultraviolet Irradiation Gas-Treatment Technology

Summary Description:

The objective of this project is to develop and demonstrate an advanced pulsed ultraviolet (UV) irradiation process for effective destruction of chlorinated volatile organic compounds (VOCs) in the effluent gas from the soil vapor-extraction system at the SR site. The project consists of 3 main tasks: site preparation, demonstration tests, and technical support.

Summary Purpose/Need:

Results from the recently completed Phase I of the soil-cleanup Integrated Demonstration project at the Savannah River (SR) site indicate the need for an effective treatment for off-gas generated from directional boring activities.

Summary Result/Endpoint/Deliverable:

Final Technology Evaluation Report on this technology will be prepared.

BDAT: INCIN

Functional Areas: waste destruction & stabilization
alternative organic destruction - low concentration

Target Site: Savannah River

Location site: Idaho

Programs/Facilities Supported:
VOC in Non-Arid Soils ID

ID: 305

Program Title: Soil Bioreactor Studies

Summary Description:

Samples of contaminated soil and groundwater from the Savannah River site will be obtained and microbial degradation evaluated in differential soil bioreactors developed at the INEL. Assessments of the potential and time-scale in-situ bioremediation of trichloroethylene (TCE) by indigenous bacteria will be estimated by observing the biodegradation within the differential bioreactors. Nutrient limitations (principally nitrate and methane) will be studied for their effect on process rate. By establishing the kinetics of growth and biodegradation, recommendations will be made concerning nutrient delivery (e.g., pulsing) requirements. During FY-1993, the effects of subsurface heterogeneities will be assessed for their impact on the in-situ treatment process. The FY-1992 effort is jointly supported by this Technical Task Plan (TTP) as well as SR-0566-AA.

Summary Purpose/Need:

Summary Result/Endpoint/Deliverable:

BDAT: BIODG

Functional Areas: waste destruction & stabilization
alternative organic destruction - high concentration
other

Target Site: Savannah River

Location site: Pacific Northwest Laboratory

Programs/Facilities Supported:

VOC in Non-Arid Soils ID
ID: 313

Program Title: High Energy Corona for Destruction of VOCs in Process Off-Gases

Summary Description:

The scope and objective of this task is to develop and conduct field tests on a prototype off-gas treatment unit capable of treating 5 scfm or greater quantities of water-saturated off-gas containing up to a total 500 ppmv of trichloroethylene (TCE) and perchloroethylene (PCE).

The objectives of the proposed task will be accomplished in 3 stages. In the first stage, the best design embodiment for off-gas treatment will be determined. In the second stage, the prototype off-gas treatment unit will be designed, built, and tested to obtain baseline performance data. The third stage will involve the actual field implementation and testing of the prototype unit.

Summary Purpose/Need:

The prototype will represent an innovative, high-energy corona technology to completely oxidize the volatile organic compounds (VOC) with no further treatment required, other than acid-gas scrubbing (if effluent HCl levels require this). The advantages of the delivered system would include eliminating need for external off-gas heating, cooling, or drying. There will also be no need for additives, catalyst, sorbents or any regenerables. It will also consume low energy.

Summary Result/Endpoint/Deliverable:

A final summary report will be submitted at the end of the task.

BDAT: INCIN

Functional Areas: waste destruction & stabilization
alternative organic destruction - low concentration
off-gas technology

Target Site: Savannah River

Location site: Lawrence Livermore National Laboratory

Programs/Facilities Supported:

VOC in Non-Arid Soils ID

ID: 319

Program Title: Fiber Optic Sensor and Analysis for the Integrated Demonstration for Cleanup of Soils and Groundwater in Non-Arid Sites

Summary Description:

The Integrated Demonstration at the SRS has been chosen as the initial location for field demonstration of LLNL fiber sensor technology. Sensors and instrumentation that are significantly into, or through, the development stage will be evaluated as to their applicability to the SRS. Initial target compounds will be volatile organic solvents and fuels. The LLNL TCE sensor has established sensitivity at below drinking water standard and has been engineered for field testing. Consequently, it will be the focus of FY 92 and FY 93 activities at SRS. It is anticipated that a second generation TCE sensor will be ready for field testing by late FY 92. Three sensor placement modalities will be evaluated (1) screened vadose zone well implant, (2) direct well-water implant and (3) penetrometer placement.

Summary Purpose/Need:

Sensors and instrumentation that are significantly into, or through, the development stage will be evaluated as to their applicability to the SRS. Initial target compounds will be volatile organic compounds (solvents and fuels).

Summary Result/Endpoint/Deliverable:

The on-demand TCE sensor will be demonstrated.

BDAT: NA

Functional Areas: characterization
monitoring

Target Site: Savannah River

Location site: Oak Ridge National Laboratory (X-10)

Programs/Facilities Supported:

VOC in Non-Arid Soils ID

ID: 321

Program Title: TCE/PCE VEGETATION DEMONSTRATION

Summary Description:

The general objective of this task is to demonstrate 2 innovative technologies (tasks) with potential for application to the DOE-DP waste management program.

Task 1 is to demonstrate the utility of using vegetation to enhance a microbial community in surface soils capable of rapid degradation of TCE and PCE. This technology is applicable to a variety of hydrocarbon contaminants, when they are confined to shallow sediments. It has the advantage of being low cost, resulting in complete degradation on site and being aesthetically pleasing.

Task 2 is concerned with the demonstration of a large scale continuous flow fermenter (bioreactor) for the treatment of TCE and PCE. This technology has the advantages of operating on site degradation, terminal destruction, and being environmentally sound and cost effective. Cost effectiveness modeling has shown that this technology will save at least 40-60 percent over conventional air stripping/activated carbon adsorption. Additional savings and efficiencies will be realized when compared to air stripping by the degradation of less volatile compounds by the bioreactor.

Summary Purpose/Need:

The specific goal is to develop and implement an environmental project for demonstrating / evaluating the potential of 1) in situ bioreclamation for cleanup of shallow subsurface contamination and 2) bioreactor bioreclamation for cleanup of deep subsurface contamination from disposal of chlorinated hydrocarbons in unlined waste disposal facilities.

Summary Result/Endpoint/Deliverable:

The 2 technologies will be tested and evaluated.

BDAT: BIODG

Functional Areas: waste destruction & stabilization
alternative organic destruction - low concentration

Target Site: Savannah River

Location site: Savannah River

Programs/Facilities Supported:
VOC in Non-Arid Soils ID

ID: 328

Program Title: Integrated Demonstration for Cleanup of Organics in Soils and at Non Arid Sites; off gas treatment

Summary Description:

The scope of the project includes demonstration and assessment of the efficiency and cost effectiveness of several innovative destructive or hybrid off-gas treatment systems at a cost of approximately \$150K per system. Classes of technologies to be demonstrated include catalytic, biological, electrochemical, electrical, and carbon regenerating systems. The technologies that will be tested during FY-92 for Phase I are: steam regeneration of activated carbon, gas-phase bioreactor, membrane separation, high-energy corona, photocatalytic destruction, and thermal catalytic destruction.

Summary Purpose/Need:

Large quantities of hazardous chlorinated solvents at DOE facilities need to be treated in order to comply with existing regulations. The classes of treatment for remediation of chlorinated solvents include systems that solely capture contaminants, systems that destroy contaminants directly in the off-gas stream, and hybrid systems that combine capture with destruction. Existing remediation systems pass off-gas streams from an airstripper through activated carbon. Cost effective systems based on on-site destruction of contaminants are clearly preferable because they do not produce a hazardous remedial waste. These technologies used in conjunction with air stripping or vacuum extraction have the potential to reduce the cost and increase the effectiveness of future remediation at contaminated sites.

Summary Result/Endpoint/Deliverable:

The technologies will be tested and evaluated.

BDAT: CARBN INCIN BIODG CHOXD
Functional Areas: off-gas technology
alternative organic destruction - low concentration

Target Site: Savannah River

Location site: Savannah River

Programs/Facilities Supported:

Savannah River Site M Area Electroplating Sludge Treatability Study

ID: 349

Program Title: Immobilization studies

Summary Description:

Grout and vitrification are currently being examined as the best means of immobilization. The bench testing will deliver waste forms that pass TCLP and will produce cost data to allow a choice between the 2 methods. Grout and borosilicate forms have already been demonstrated to pass the TCLP.

Summary Purpose/Need:

A treatment method is needed to provide an acceptable waste form for disposal in vaults. The method will be one that will allow a commercial vendor to bring temporary treatment facilities on site, treat the inventory of material, and remove the treatment facilities when all of the material has been immobilized.

Summary Result/Endpoint/Deliverable:

The result of this study will be a waste form recommendation choosing between grout and vitrification with demonstrations of the performance of the chosen form.

BDAT: HLVT STBL

Functional Areas: final form

final form glass

final form-grout or micro-encapsulation

Target Site: Savannah River

Location site: Savannah River

Programs/Facilities Supported:

MLLW Laboratory Drain Storage Tank Treatment Capacity Development.

ID: 350

Program Title: Electron beam treatment of MLLW

Summary Description:

Electron beams are being evaluated as a treatment technology which destroys the organic components (the benzene and benzene derivatives) of the mixture in the tank. The method has shown the ability to destroy organics up to the solubility limit of the organics in water, may be applicable to a wide variety of DOE waste streams, and is cheaper than ozonolysis. The technology will be demonstrated at the pilot plant level.

Summary Purpose/Need:

Laboratory MLLW liquids containing benzene, benzene derivatives and natural uranium are held in a laboratory drain storage tank.

Summary Result/Endpoint/Deliverable:

A final report detailing the performance in the 4000 gal treatment test will be delivered in fall of 1993. These data will be the basis for the design of a treatment facility.

BDAT: WTRRX

Functional Areas: waste destruction & stabilization
alternative organic destruction - high concentration

Target Site: Savannah River

Location site: Savannah River

Programs/Facilities Supported:

CIF

ID: 351

Program Title: Waste form evaluation

Summary Description:

A development program is being carried out to stabilize CIF blowdown solids in a waste form that will pass TCLP. Vitrification, thermoplastic, and cement are being evaluated as immobilization media.

Summary Purpose/Need:

The CIF blowdown ash will contain radioactive components in association with hazardous metals and will be a mixed waste. The ash will need to be stabilized in a form that will pass TCLP requirements.

Summary Result/Endpoint/Deliverable:

Bench scale testing, which is scheduled to be completed by 9/93, is expected to provide performance data upon which to base decisions on which form or forms to take to the pilot phase of development.

BDAT: HLVIT STABL MACRO

Functional Areas: final form

final form glass

final form-grout or macro-encapsulation

Target Site: Savannah River

Location site: Savannah River

Programs/Facilities Supported:
CIF

ID: 352

Program Title: Off-gas treatment studies

Summary Description:

An off-gas pilot facility (1/10 scale) is almost complete. The project will be ready to operate 8 months after Part II project authorization.

Summary Purpose/Need:

The design and operation of the CIF off-gas treatment pilot scale system will provide data on off-gas treatment performance as well as help to predict CIF reliability and maintenance (RAM). It will also provide additional support during the operation of the CIF.

Summary Result/Endpoint/Deliverable:

This facility will generate data concerning particle and HCl removal efficiencies, RAM considerations, process optimization, and support CIF operation through pilot studies.

BDAT: INCIN

Functional Areas: off-gas technology

Target Site: Savannah River

Location site: Savannah River

Programs/Facilities Supported:
CIF

ID: 353

Program Title: Hazardous metals transport in incinerators

Summary Description:

Feed material for the CIF will contain hazardous metals as well as hazardous organics. The hazardous organics will be destroyed while the fate of the metals must be determined. A series of tests to determine the transport of the metals through the process chain is in progress in a pilot scale rotary kiln incinerator. Metal doped samples have been incinerated, and sample characterization is in progress to determine the metal concentrations at various points in the system.

Summary Purpose/Need:

Since the feed material from the CIF will contain hazardous metals, it is necessary to understand the pathways metals travel through the system during operation.

Summary Result/Endpoint/Deliverable:

The data generated in these tests will be used to determine hazardous metals transport in the process. The data will help in the development of secondary waste stabilization processes to contain the metals.

<u>BDAT:</u>	INCIN	RMETL
Functional Areas:	off-gas technology	
system analysis		
decision support		

Target Site: Savannah River

Location site: Savannah River

Programs/Facilities Supported:
CIF

ID: 354

Program Title: Rotary kiln seal tests

Summary Description:

Several new rotary kiln seal designs will be tested (beginning 10/93) in a 1/4 scale pilot facility. Successful tests will validate the seal containment and operating life.

Summary Purpose/Need:

Operation of a mixed waste, rotary kiln incinerator requires seals that can control air in-leakage and contain positive pressure excursions.

Summary Result/Endpoint/Deliverable:

A better seal will enhance the system safety as well as the performance and maintainability.

BDAT: INCIN

Functional Areas: waste destruction & stabilization
thermal treatment unit - high residue

Target Site: Savannah River

Location site: Savannah River

Programs/Facilities Supported:
CIF

ID: 355

Program Title: CIF related waste minimization activities

Summary Description:

Included in the development effort supporting the CIF is a waste minimization activity. This activity is addressing the replacement of PVC in on-going operations that generate larger quantities of blowdown in the off-gas treatment.

Summary Purpose/Need:

The incineration of materials with a high chlorine content, e.g. PVC, produces a large quantity of HCl in the blowdown which must be removed in the secondary treatment system. High quantities of chlorine containing materials will produce high quantities of secondary waste and will be more difficult to stabilize.

Summary Result/Endpoint/Deliverable:

When these wastes become feed for the CIF, they will produce less secondary waste than high chlorine bearing materials which will decrease the volume of blowdown solids.

BDAT: NA

Functional Areas: waste minimization
thermal treatment unit - high residue

Target Site: Savannah River

Location site: Savannah River

Programs/Facilities Supported:
CIF

ID: 356

Program Title: Waste form for CIF Ash

Summary Description:

Specific formulations for a wet ash ashcrete process are being developed to be compatible with CIF ash.

Summary Purpose/Need:

The ash from the CIF will contain hazardous metals and radioactive constituents and therefore will be a mixed waste. The waste form must immobilize the RCRA and radioactive constituents. In addition the waste form must pass compressibility tests and TCLP requirements for vault storage.

Summary Result/Endpoint/Deliverable:

The result of these tests will be the development of an ashcrete formulation which will produce a waste form which will satisfy the above requirements.

BDAT: STABL

Functional Areas: final form

final form-grout or micro-encapsulation

Target Site: Savannah River

Location site: Savannah River

Programs/Facilities Supported:
HW/MW DF

ID: 357

Program Title: Silver saddle treatment

Summary Description:

Silver saddles (a ceramic substrate coated with silver nitrate) have been used to scavenge radioactive iodine from gas streams. The spent saddles are a disposal problem since the silver nitrate is not totally reacted to insoluble silver iodide and the residual silver ion is soluble. HBr treatment of the saddles is being studied as a means of immobilizing the residual silver ion as AgBr which is insoluble.

Summary Purpose/Need:

Silver is a RCRA regulated metal. The presence of radioactive iodine in addition to the silver places the waste in the mixed waste category. This necessitates putting the material in a waste form which passes TCLP requirements.

Summary Result/Endpoint/Deliverable:

If the tests are successful they will demonstrate that the soluble silver has been converted to an insoluble form. In this form it will be suitable for disposal in a long lived isotope facility.

BDAT: STABL

Functional Areas: chemical physical treatment
final form

Target Site: Savannah River

Location site: Savannah River

Programs/Facilities Supported:
HW/MW TF

ID: 358

Program Title: Lead Macroencapsulation

Summary Description:

A simple process for encapsulating lead cylinders in epoxy, contained in a metal shell, has been developed and is being evaluated. The encapsulation is resistant to radiation, will withstand shock and meets EPA requirements.

Summary Purpose/Need:

Macroencapsulation is required for contaminated lead.

Summary Result/Endpoint/Deliverable:

The method will provide an easily handled and disposable waste form which satisfies the relevant requirements.

BDAT: MACRO
Functional Areas: final form
final form-grout or micro-encapsulation
lead treatment/recycle

Target Site: Savannah River

Location site: Savannah River

Programs/Facilities Supported:
HW/MW TF

ID: 359

Program Title: Destruction of HAZ/MIXED/TRU waste - removing plutonium oxide

Summary Description:

A method for removing plutonium oxide from surfaces of a wide variety of materials has been developed. Solutions of Ag+2 are generated in the presence of the plutonium contamination. The silver ion oxidizes the plutonium to a soluble form. After which it dissolves away from the surface. The process has been tested at the bench scale.

Summary Purpose/Need:

There is a need to reduce the volume of plutonium contaminated waste.

Summary Result/Endpoint/Deliverable:

This process is ready to be deployed in support of the HW/MWTF.

<u>BDAT:</u>	RMETL
Functional Areas:	chemical physical treatment
radionuclide removal	

Target Site: Savannah River

Location site: Savannah River

Programs/Facilities Supported:

HW/MW TF

ID: 360

Program Title: Destruction of HAZ/MIXED/TRU waste - organic material oxidation process

Summary Description:

A solution based, organic material oxidation process has been developed. The process involves the use of nitric and phosphoric acid in a closed digestion system. The process has demonstrated a 99 percent destruction efficiency for organics such as plastic. Inorganics remain in solution or precipitate as solids and can be separated from the process solutions. This process can also remove PuO₂ from the surface of noncombustible solids. This is heavily supported in the literature and is more efficient than HNO₃-HF dissolution for PuO₂.

Summary Purpose/Need:

There is a large volume of radioactive or TRU contaminated organic material, particularly plastics. A reduction of the volume of the material would be beneficial.

Summary Result/Endpoint/Deliverable:

The current studies are directed toward the generation of chemical rate data and pilot design information. Successful development should reduce SRS dependency on shipments to the WIPP.

BDAT: CHOXD INCIN

Functional Areas: waste destruction & stabilization
alternative organic destruction - high concentration

Target Site: Savannah River

Location site: Savannah River

Programs/Facilities Supported:

Proposed Hazardous/Mixed Waste Disposal Facility

ID: 413

Program Title: Radiological Performance Assessment

Summary Description:

Radiological disposal facilities require a radiological performance to be conducted to insure the environment will be protected per DOE Order 5820.2A. This includes source term determination, degradation modeling, geochemistry, vadose zone and saturated zone contaminant migration modeling, and risk assessment.

Summary Purpose/Need:

DOE radiological disposal facilities must protect the public from radiological hazards for at least 10,000 years in the future. This radiological performance assessment assures that this requirement will be met.

Summary Result/Endpoint/Deliverable:

The radiological performance assessment will demonstrate that the proposed Hazardous/Mixed Waste Disposal Facility will protect the public.

BDAT: NA
Functional Areas: final form
system analysis

END DATE
8-26-93

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