G-000-102.117

4886

CONCEPTUAL SITE TREATMENT PLAN FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

10/27/93

DOE-FN/OEPA
800
REPORT

4320

4886

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CONCEPTUAL SITE TREATMENT PLAN

10-27-93

Attachment to: DOE-0183-94

TABLE OF CONTENTS

SECTION 1.0 INTRODUCTION 1
- 1.1 Purpose and Scope 1
- 1.2 Site History and Mission 3
- 1.3 Framework For Developing DOE's Site Treatment Plans 4
- 1.4 CSTP Organization 7
- 1.5 Other Activities Closely Related to CSTP Development 9

SECTION 2.0 METHODOLOGY 13
- 2.1 Assumptions 14
- 2.2 Definitions 15
- 2.3 Treatability Groups 16
- 2.4 Characterization of Mixed Wastes 17
- 2.5 Treatment Options Analysis and Technology Selection Process 18
- 2.6 Prioritization of Wastestreams 23

SECTION 3.0 LOW-LEVEL MIXED WASTE STREAMS 24
- 3.1 Wastestreams with Existing Treatment Capacity 24
- 3.2 Wastestreams for which Technology Exists but without Capacity On-Site 28
- 3.3 Wastestreams for which Technology Needs Adaptation or for which no Technology Exists 29
- 3.4 Wastestreams Requiring Further Characterization or For Which Technology Assessment Has Not Been Done 31

SECTION 4.0 TRU MIXED WASTESTREAMS 32

SECTION 5.0 HIGH-LEVEL MIXED WASTESTREAMS 32

SECTION 6.0 FUTURE GENERATION AND TREATMENT OF MIXED WASTESTREAMS 32
- 6.1 Environmental Remediation Wastes 32
- 6.2 D&D Wastes 35
- 6.3 Other Wastes 35

SECTION 7.0 MIXED WASTESTREAMS FOR WHICH RADIONUCLIDE SEPARATION MAY BE APPROPRIATE 35

SECTION 8.0 CONCEPTUAL SITE TREATMENT PLAN SUMMARY TABLES 35

APPENDIX A- List of Environmental Restoration Sites for which Conceptual Site Treatment Plans are Required

APPENDIX B - Candidate Mixed Waste Treatment System Information Sheets

2

48 86

TABLE OF CONTENTS
continued

APPENDIX C - CSTP Definitions

APPENDIX D.1 - Wastestreams with Existing Treatment Capacity

APPENDIX D.2 - Wastestreams for which Technology Needs Adaptation or for which no Technology Exists

APPENDIX E - Example ReOpt Information

Table 8.1 - Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Table 8.2 - Summary of On-site Treatment Systems at Fernald Environmental Management Project

Figure 1 - Framework for Developing DOE's Site Treatment Plans 5

Figure 2.5.1 - A Decision Process for Evaluating Treatment and Technology Options 20

3

CONCEPTUAL SITE TREATMENT PLAN FOR FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

SECTION 1.0 INTRODUCTION

1.1 Purpose and Scope

The Department of Energy (DOE) is required by section 3021(b) of the Resource Conservation and Recovery Act (RCRA), as amended by the Federal Facility Compliance Act (the Act), to prepare plans describing the development of treatment capacities and technologies for treating mixed waste. The Act requires site treatment plans (STPs or plans) to be developed for each site at which DOE generates or stores mixed waste and submitted to the State or USEPA for approval, approval with modification, or disapproval. The Fernald Environmental Management Project's (FEMP) Conceptual Site Treatment Plan (CSTP) is the preliminary version of the plan required by the Act and is being provided to the State of Ohio, the U.S. Environmental Protection Agency (USEPA), and others for review. A list of the other DOE sites preparing CSTPs is included in Appendix A of this document.

In addition to aiding the FEMP, in conjunction with the State of Ohio and USEPA, in formulating its final Site Treatment Plan (STP), the CSTP will also provide information to other DOE sites for use in identifying common technology needs and potential options for treating their wastes. The FEMP CSTP is also intended to be used in conjunction with CSTPs from other sites as a basis for nationwide discussions among State regulators, USEPA, and other interested parties on the treatment strategies and options, and on technical and equity issues associated with DOE's mixed waste. DOE also intends to prepare a summary of the CSTPs to provide a national picture of DOE's technology needs and options to facilitate these discussions.

The CSTP includes the following information:

- The CSTP addresses mixed waste, which is defined by the Act as waste containing both a hazardous waste subject to RCRA, and source, special nuclear or by-product material subject to the Atomic Energy Act of 1954 (42 U.S.C. 2111 et. seq.).

- The CSTP presents preliminary information on the treatment technology and capacity needs for the FEMP's mixed waste. It also describes any existing mixed waste treatment capacity at the site to assist other sites in determining the suitability of that capacity for their wastes.

- The CSTP identifies options for treatment where capacity does not exist and describes the technical uncertainties, and economic and other implications associated with the options. These options, such as treatment at a specified DOE facility, are those that appear technically feasible based on current information and do not represent DOE preferred options or reflect its intentions for treating the wastes.

4

- The FEMP also has some wastes that require further characterizations. The appropriate technologies for these wastes have not yet been identified. These wastestreams are identified in the CSTP, as well as wastestreams that the FEMP expects to generate in the future.

The CSTP's are intended to provide a starting point for discussions. While the FEMP has undertaken the development of the site treatment plan to be as thorough and accurate as possible, it should be noted that there are other factors, in particular other regulatory drivers that address and impact the treatment of mixed wastes. In addition to the FFCA, all mixed waste at the FEMP is regulated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) pursuant to the Amended Consent Agreement between USEPA and DOE. Therefore, it is imperative that evaluation and treatment processes and schedules developed for the STP be consistent with the provisions of the Amended Consent Agreement and the site CERCLA Remedial Investigation/Feasibility Study (RI/FS) process and schedule requirements. Details on the FEMP CERCLA program can be found in sections 1.2 and 1.5 of this report.

At the FEMP, all mixed wastes are considered by DOE to be "restoration" wastes because the entire site is subject to environmental remediation under the CERCLA program. However, these wastes can be divided into two general categories: "containerized" wastes which are currently in storage (much of it generated from process operations) and "remediation" wastes, which are primarily wastes to be generated from the remedial cleanup actions (mostly soil and debris). Both of these waste categories are subject to regulation under CERCLA.

The FEMP CSTP focuses on the development of treatment capacity for containerized wastes (because remediation wastes have not yet been generated). Information from the CERCLA RI/FS program was used in the preparation of this plan, and will be used for the development of the final STP. Conversely, information and data generated for the development of the site treatment plan will be used in the CERCLA RI/FS process for the evaluation of remedial alternatives for mixed wastes. This feedback process ensures that the technology options selected in the FFCA treatment plans will be consistent with the CERCLA selected remedial alternative.

In addition to integrating the STP and CERCLA technology evaluation and selection processes, the schedules for the two programs must be coordinated. The final STP is due to Ohio EPA no later than February, 1995, but the Proposed Plan for the portion of the FEMP that includes the containerized mixed wastes is not due until August, 1996 (in accordance with the Amended Consent Agreement). CERCLA does not allow any remedial activities to take place prior to the final remediation that preclude the RI/FS decision making process or are inconsistent with the final remedial action. However, for the containerized mixed wastes, it is currently the intent of the FEMP to meet the schedule requirements of the STP to allow the states to address equity and capacity concerns for these diverse wastestreams and possibly expedite treatment of mixed wastes. Details of this strategy will be worked out as the development of the STP proceeds.

5

Remediation wastes from remedial cleanup activities (mostly soil and debris) will be evaluated as they are generated and characterized. Because the majority of these wastes will not be generated until well after the final STP is due to the state, technology decisions for these wastes will be conducted under the provisions and schedules of the Amended Consent Agreement. As the remediation process proceeds, information generated from these activities will be added to the STP.

The FEMP has included all technologies and facilities in the CSTP which have been identified as potentially applicable for treating FEMP wastestreams. These options were selected based on a review of technology databases and from information on existing and planned off-site treatment facilities supplied by DOE-HQ. These options were tentatively matched with general waste matrices and contaminant classes. However, the FEMP has not compared performance data for these technologies and options with the exact chemical and physical parameters of these wastestreams.

Similarly, in other sections of the CSTP where specific information is not yet available, a description of the methods that will be used to develop this information is provided. For example, Section 2.6 of the CSTP does not include schedules for developing treatment options but does describe the criteria and methods that will be used to create these prioritized schedules.

1.2 Site History and Mission

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. 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 U. S. Department of Energy (DOE) and is operated by the Fernald Environmental Restoration Management Corporation (FERMCO). FERMCO acts as the main contractor for FEMP activities and coordinates technical support and remediation subcontractors. FERMCO reports directly to the Department of Energy Fernald Field Office (DOE-FN). 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 and waste management. In October 1990 as the focus of the facility shifted from production to environmental restoration, 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). EM provides operational guidance and program direction for the FEMP.

6

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, including mixed wastes. The CERCLA Remedial Investigation/Feasibility Study (RI/FS) process, CERCLA removal actions, RCRA closures of hazardous waste management units, and the FEMP waste management program, are the main FEMP programs geared towards site cleanup.

In July 1986, DOE and USEPA signed a Federal Facility Compliance Agreement which required the FEMP to perform an RI/FS in accordance with the guidelines of CERCLA. The FEMP was placed on the National Priorities List (NPL) on November 21, 1989. In June 1990, the USEPA and the DOE entered into a Consent Agreement. Under this agreement, the FEMP was divided into five operable units. Remediation schedules were developed for each operable unit to allow the remedial action process to proceed to completion for the most well-defined or problematic areas at the FEMP while data collection and analysis continued for other areas. In September 1991, the DOE and USEPA 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. Deadlines for some CERCLA activities were modified in April 1993 by a dispute resolution agreement between DOE and USEPA.

The management of hazardous/mixed waste onsite is also regulated by the State of Ohio. A Consent Decree signed by the State of Ohio and the DOE in December 1988, established 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/mixed waste were made to the Consent Decree. The FEMP has submitted a RCRA Part B permit application to the state seeking a RCRA permit for on-site storage.

The waste management program is 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.

1.3 Framework For Developing DOE's Site Treatment Plans

Figure 1 illustrates the relationships between the requirements that led to the process DOE is following to prepare the STPs. The key components of the framework for the plans are described below.

RCRA Land Disposal Restriction (LDR) Requirements require the treatment of hazardous waste (including the hazardous component of mixed waste) to certain standards before land disposal, and prohibit storage of hazardous wastes that do not meet LDR standards, except for the purposes of accumulating sufficient quantities to facilitate proper recovery, treatment, or disposal of the waste. DOE is currently storing mixed waste inconsistent with the LDR provisions because the treatment

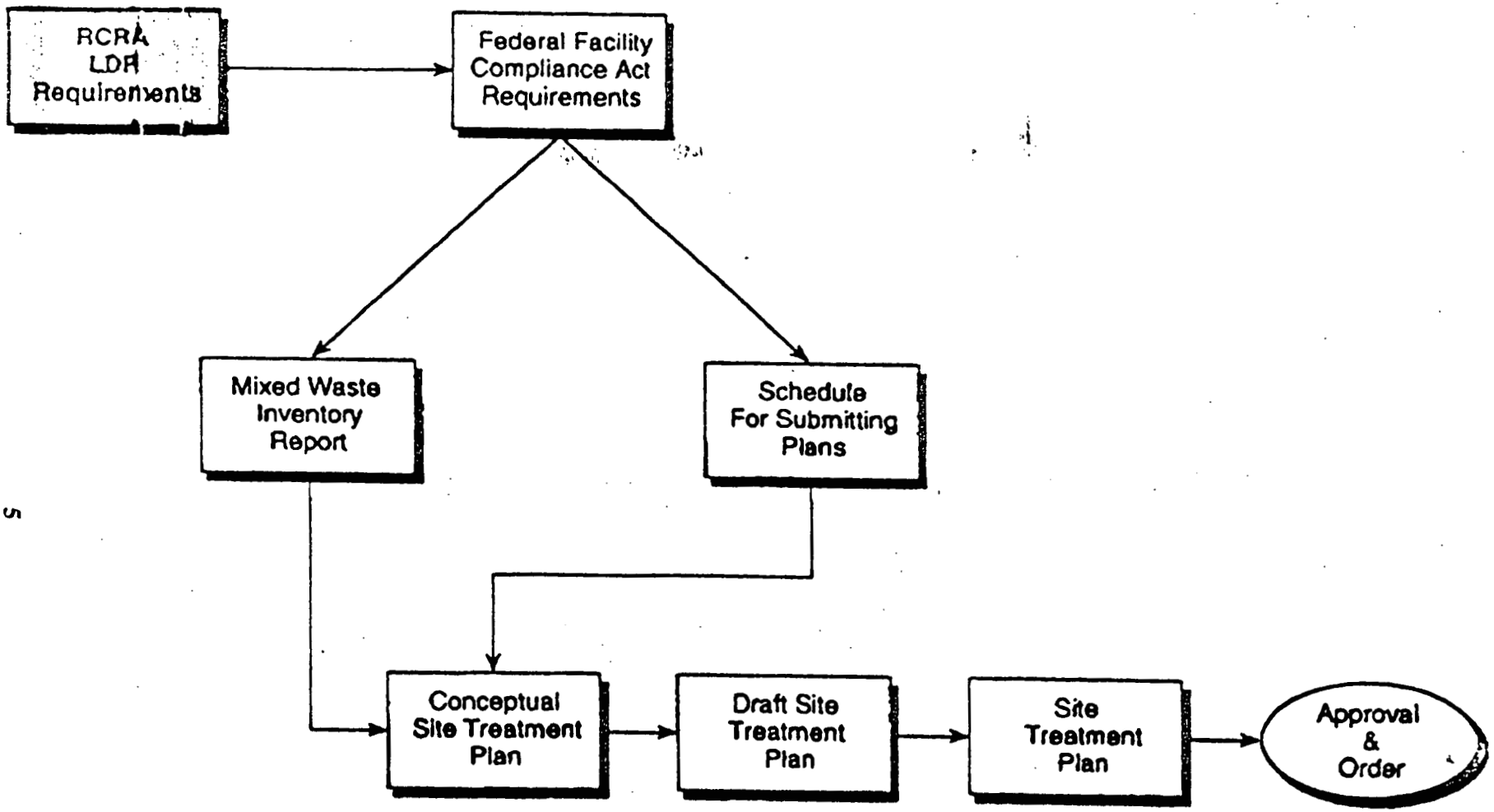


Figure 1. Framework For Developing DOE's Site Treatment Plans

6/25/93-PS-874-C1

48 86

capacity for such wastes, either at DOE sites or in the commercial sector, is not adequate or is simply unavailable at this time.

The Federal Facility Compliance Act, signed on October 6, 1992, waives sovereign immunity for fines and penalties for RCRA violations at Federal facilities. However, a provision postpones that waiver for three years for mixed wasted LDR storage prohibition violations at DOE sites and requires DOE to prepare plans for developing the required treatment capacity for mixed waste. Each plan must be approved by the State or USEPA, after consultation with other affected States and consideration of public comment, and an order issued by the regulator requiring compliance with the plan. The Act further provides that DOE will not be subject to fines and penalties for LDR storage prohibition violations for mixed waste as long as it is in compliance with an approved plan and order.

The Act specifies that the STPs must address all mixed waste at the site, regardless of the time of generation. For mixed waste for which identified treatment technologies exist, the plan must provide a schedule and milestones for constructing the necessary treatment capacity. For mixed waste without an identified existing treatment technology, the plan must include a schedule for identifying and developing technologies. The Act also requires the plan to address wastes where DOE proposes radionuclide separation and provide an estimate of the volume of waste that would exist without such separation; cost estimates and underlying assumptions must also be provided in the plan. Section 3021(b) (1)(C) of RCRA states that the plans may provide for centralized, regional or on-site treatment of mixed waste, or any combination thereof; and section 3021(b) (2) requires the States to consider the need for regional treatment facilities in reviewing the plans.

The Mixed Waste Inventory Report, required by the Act, provides an inventory of mixed waste stored or generated, or expected to be generated over the next five years, at each DOE site, and an inventory of treatment capacities and technologies. The Interim Mixed Waste Inventory Report published by DOE in April of 1993, provides information on a waste stream-by-waste stream basis for each DOE site that generates or stores mixed waste. A final Report is being prepared that reflects comments received on the Interim Report and further improvements in the data. The wastestream and technology information contained in the reports serves as the starting point for the CSTPs.

The "Schedule for Submitting Plans for the Treatment of Mixed Waste Generated or Stored at Each Site", as required by the Act, was published April 6, 1993 in the Federal Register (58 FR 17875). The published schedule specifies that DOE sites will provide the site treatment plans in three phases: this "conceptual plan" by October 1993, a "draft plan" no later than August 1994, and a "final proposed plan" no later than February 1995.

DOE arrived at this tiered approach to preparing the STPs based on discussion with the States, USEPA and other interested parties. The process provides opportunity for early involvement by the States and others in the decision making process. Most importantly, the CSTP and the draft plan provide an early opportunity for discussion

9

on technical and equity issues between the site and the regulatory agency and among affected States, USEPA, and other parties. The interim plans will provide a base of information about each site's waste, the technology needs, existing and planned treatment facilities, and treatment options, including potential options for treating off-site wastes, to facilitate these discussions.

At each stage, the STP will contain increasingly complete and detailed information. The **Conceptual STP** is focused on identifying treatment needs, capabilities, and options for treating the site's mixed waste. The **Draft STP** will identify DOE's preferred option for treating the site's mixed wastes, as well as proposed schedules for constructing capacity. The **Final Proposed STP** will be submitted to the State or USEPA for review and approval, approval with modification, or disapproval, as required by the Act. Each version of the STP will reflect State equity discussions, as well as site-specific input from the individual regulatory agency and other interested parties on the previous submittal. It is DOE's intent that the iterative process, with ample opportunity for input and discussion, will facilitate approval of the STP and issuance of the compliance order required by the Act. DOE's goal is to have all plans and orders in place by October 1995.

The public will be encouraged to comment on these plans. Public participation in the FFCA process will be integrated into the FEMP's existing public affairs program. A public participation plan has been initiated by the FEMP to address schedules and strategies for presenting FFCA information and issues to the public.

1.4 CSTP Organization

The FEMP's CSTP follows the same format as the CSTPs of other DOE sites. This common format will facilitate cross-site comparisons.

Chapter 1.0 of the CSTP provides a general discussion of the plan, including its purpose and scope.

Chapter 2.0 presents general information on technical aspects of preparing the plans, including the rationale behind the treatability groupings and a discussion of characterization issues.

Chapters 3.0 through 5.0 identify treatment technology needs and treatment options for specific waste streams. These chapters of the CSTP are organized according to the radioactive waste classification, i.e., low-level mixed waste, transuranic (TRU) mixed waste, and high-level mixed waste, defined in Section 2.2, because many of the treatment options and technology requirements are driven by the level of radioactivity associated with the waste. Not all waste classifications are present at all DOE facilities. The FEMP manages only low-level mixed wastes.

Chapter 3.0, "Low-level Mixed Waste," is further organized according to the availability of capacity and treatment technology to treat wastestreams:

48 86

3.1 Waste Streams With Existing Treatment Capacity

3.2 Waste Streams for Which Technology Exists But Without Capacity On-Site

3.3 Waste Streams for Which Technology Needs Adaption or for Which No Technology Exists.

Each section includes a description of the waste streams; an identification of the applicable treatability groups; and a description of the existing technology or the technology needs to treat the wastes, along with associated uncertainties and technical and administrative limitations.

In addition, preliminary options for wastes without existing capacity are identified to the extent possible. Options (e.g. treatment at the planned 'Mixed Waste Treatment Facility' at DOE site 'X') may include development of on-site treatment capacity, treatment in an existing facility or in capacity under development at another DOE site, the use of commercial capacity, and other regulatory compliance options.

The options identified are those that appear technically able to treat the waste, given the limits in the data on wastestreams, technologies and facilities, particularly facilities in the early planning stages. The intention has been to be all inclusive in identifying options; the options do not necessarily represent DOE's preferred option or reflect its intentions for treating the wastes.

An additional section, "**3.4 Waste Streams that Require Further Characterization or For Which Technology Assessment Has Not Been Done,**" is also included, because the appropriate treatment category for some wastes cannot be determined at this time. The section describes what is currently known about the waste streams.

Chapters 4.0 and 5.0 are reserved for TRU and high-level mixed wastes. These sections are not applicable to the FEMP which does not generate or store transuranic or high-level mixed wastes.

Chapter 6.0 discusses mixed wastes that are expected to be generated in the future, for example, wastes from environmental restoration activities. For environmental restoration wastes, the wastes and technology needs are described to the extent possible and schedules associated with conducting restoration activities identified.

Chapter 7.0 is reserved for mixed waste for which radionuclide separation may be appropriate, as required by section 3021(b)(2)(B)(iii).

Chapter 8.0 contains the following summary tables:

> **Table 8.1** summarizes the on-site mixed waste treatment capabilities for each waste discussed in Chapters 1 through 7.
> **Table 8.2** summarizes the on-site mixed waste treatment capabilities (existing, planned and unplanned), capacities, and limitations, and supplies cost

11

information for each on-site treatment system, where available.

1.5 Other Activities Closely Related to CSTP Development

Other DOE activities are closely linked to STP development. These include the Mixed Waste Inventory Report; activities conducted pursuant to the National Environmental Policy Act (NEPA); and compliance and cleanup agreements containing commitments relevant to treatment of mixed waste. Copies of documents and reports referenced below are available for public review at the following location:

Public Environmental Information Center (PEIC)
10845 Hamilton-Cleves Highway
Harrison, OH 45030
Phone: 513-738-0164

Interim Mixed Waste Inventory Report

DOE published the interim Mixed Waste Inventory Report in April 1993. The submittal of this report was required by the FFCA. The interim Mixed Waste Inventory Report provides information on a waste stream-by-waste stream basis for each DOE site that generates or stores mixed wastes. The wastestream, treatment facility, and technology information contained in the Interim Report serves as the starting point for the CSTPs, and descriptions are generally identical. However, data requirements are continually being refined. The CSTP reflects the most current and accurate data on the wastestreams and technology needs and, as a result, there may be some differences between the CSTP and the Interim Report. Any differences between the Interim Report and CSTP data are clearly noted and explained in the text.

One key difference between the Interim Report and the CSTPs for all DOE sites is the treatment facilities that were considered to be candidates for treatment options. The Interim Report only described existing DOE mixed waste treatment facilities and planned facilities in the latter stages of development. The CSTP, however, may identify as possible mixed waste treatment options not only the existing and planned facilities described in the Interim Report, but also facilities at earlier stages of development; these facilities have generally not received any formal DOE approval, but are under consideration or have been proposed by the site. As such, the future of these facilities, including the availability of funding and technical requirements, is less certain than for others. They are included as potential treatment options, with their status and stage of development made clear.

Information on candidate facilities for treatment options used by DOE is provided as Appendix B and includes the following four types of facilities:

1) Existing Facilities - Currently operating or have headquarters (HQ) approval for facility start up

2) Planned and Approved Facilities: - HQ has approved the mission need for the facility (Key Decision 0); the facility has at a minimum begun design, but hasn't yet received approval for start up

3) Planned but Unapproved Facilities: - some planning has been initiated (e.g., engineering/feasibility studies, functional design criteria), but hasn't yet received the initial approval

4) Commercial Facilities

In addition, if no on-site treatment facility is currently being considered, the on-site option would involve a facility that is not part of any planning and therefore would not be reflected in the information provided in Appendix B.

In addition to consideration of additional treatment facilities, the other differences between the FEMP's CSTP and the Interim Mixed Waste Inventory Report involve the wastestream information. Several wastestreams have been reclassified into different treatability groups from the FEMP's Interim Mixed Waste Inventory Report groupings based on further review of wastestream matrices. LDR treatment technologies have been corrected. Wastestream quantities have been updated to reflect current inventory and sixteen mixed wastestreams which have been characterized since submittal of the Interim Mixed Waste Inventory Report have been added to the appropriate sections of the CSTP. Wastestream ID #549, #50101, and #471 have been deleted because they have been recharacterized as non-hazardous and ID #668 has been replaced by #517. Specific types of changes/updates of inventory information are noted in the appropriate sections of this CSTP; and this information will be included in the Final Mixed Waste Inventory Report.

<u>The Programmatic Environmental Impact Statement for Environmental Restoration and Waste Management</u>

DOE's Office of Environmental Restoration and Waste Management (EM) is preparing a Programmatic Environmental Impact Statement (PEIS) to support complex-wide integration of environmental restoration, waste management, and technology development activities that are often now implemented on a site-by-site basis. The PEIS will analyze a broad range of programmatic alternatives involving issues such as: (1) land uses, (2) the timing of innovative technology application, (3) the selection of cleanup levels for environmental restoration activities, and (4) the configuration of waste management facilities. The PEIS is intended to present to the public, States, USEPA, and DOE an understanding of impacts to human health and the environment together with the costs associated with a wide range of alternative strategies for managing the EM program.

Development of the EM PEIS is being closely coordinated with the preparation of STPs under the Act. DOE is committed to working with the States to develop waste management PEIS alternatives (i.e., possible configurations) broadly enough to accommodate any reasonable configuration of waste treatment, storage, and disposal facilities that might emerge from the STP process. Based on preliminary input from

the States, development of possible configurations will start from the perspective of each site managing its own wastes (i.e., a "decentralized" or "onsite" option). Draft information being generated to support the PEIS (e.g., hypothetical configurations, preliminary risk analyses, and cost studies) will be discussed with and shared with States in support of STP discussions.

The Department believes that preparation of the PEIS in conjunction with the development of the STPs is the most expeditious means to meet the requirements of the National Environmental Policy Act (NEPA) and the Federal Facility Compliance Act. In this regard, the Draft PEIS is scheduled to be published in the second quarter of 1994, after submission of the CSTPs but before the August 1994 submission of Draft STPs. The alternatives in the Draft PEIS will reflect the site-specific options outlined in the CSTPs. The Draft PEIS will not identify a preferred alternative (i.e., configuration) for mixed waste facilities since this will be evolving in consultation with the States through the STP process. However, DOE believes that the PEIS analyses of potential risks and costs associated with a range of possible waste management configurations will provide valuable insight as the public, States, and DOE discuss the continued use of existing facilities and possible location of future mixed waste facilities.

DOE intends that the PEIS provide programmatic NEPA coverage for development and submission of STPs complex-wide. Therefore, the Final PEIS will be issued in the first quarter of 1995, at or near the time of DOE's submission of the final STPs to the States for approval. The preferred alternative (configuration) for mixed waste management will reflect the proposals contained in the final STPs and any agreements reached among the States and with DOE regarding equity concerns. To remain flexible and accommodate potential changes after submittal of the final STPs to the States and USEPA, the Record of Decision for the PEIS will be issued following approval of the STPs by the States.

Compliance Agreements

Additional requirements for mixed waste management which will impact the FEMP's STP are contained in the Amended Consent Agreement, signed by USEPA and DOE, and the Consent Decree and its Stipulated Amendment entered into by the State of Ohio and DOE. Schedules and requirements for completing characterization, mixed waste management, and conducting remediation activities established in these agreements must be integrated with information developed for the STP.

The RI/FS process at the FEMP is regulated by CERCLA legislation and is conducted according to USEPA guidance and regulations and the provisions of the Amended Consent Agreement. In June 1990, USEPA 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 USEPA 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. Deadlines for some CERCLA activities were modified in April 1993 by a dispute resolution agreement between DOE and USEPA. Releases and potential releases of hazardous waste and hazardous constituents associated with each operable unit that are covered under the Amended Consent Agreement will be investigated and remediated through CERCLA with RCRA considered as an Applicable or Relevant and Appropriate Requirement (ARAR).

There are five operable units (OUs) at the FEMP currently undergoing RI/FS activities which are expected to generate remediation wastes. OU definitions and schedules for submittal of RI/FS documentation, as established in the Amended Consent Agreement, are described below:

Operable Unit 1 - Waste Pits 1-6, the Clearwell, the Burn Pit, berms, liners, and associated contaminated soil within the operable unit boundaries.

Initial Screening of Alternatives: January 4, 1991
RI Report/Baseline Risk Assessment: October 12, 1993
FS Report/Comprehensive Response Action Risk Evaluation: March 7, 1994
Proposed Plan Report: March 7, 1994
Proposed Draft Record of Decision: November 6, 1994

Operable Unit 2 - the fly ash piles, other Southfield disposal areas, the lime sludge ponds, the solid waste landfill, berms, liners, and associated contaminated soil within the operable unit boundary.

Initial Screening of Alternatives: April 18, 1991
RI Report/Baseline Risk Assessment: February 18, 1994
FS Report/Comprehensive Response Action Risk Evaluation: April 29, 1994
Proposed Plan Report: April 29, 1994
Proposed Draft Record of Decision: January 5, 1995

Operable Unit 3 - the production area and production associated facilities and equipment (includes all above- and below-grade improvements) including but not limited to, all structures, equipment, utilities, drums, tanks, solid waste, waste, product, thorium, effluent lines, K-65 transfer line, wastewater treatment facilities, fire training facilities, scrap metal piles, feedstocks, and the coal pile.

RI/FS Work Plan Addendum: August 4, 1993
RI Report/Baseline Risk Assessment: March 13, 1996
FS Report/Comprehensive Response Action Risk Evaluation: August 7, 1996
Proposed Plan Report: August 7, 1996
Proposed Draft Record of Decision: April 2, 1997

In addition, the Draft Treatability Study Work Plan for OU3 is due January 15, 1994, although this date was not established by the Amended Consent Agreement.

Operable Unit 4 - 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.

Initial Screening of Alternatives: October 31, 1990
RI Report/Baseline Risk Assessment: April 19, 1993
FS Report/Comprehensive Response Action Risk Evaluation: September 10, 1993
Proposed Plan Report: September 10, 1993
Proposed Draft Record of Decision: June 10, 1994

Operable Unit 5 - environmental media: perched and regional groundwater, surface water, sediments, soils (not included in the other operable units), flora, and fauna.

Initial Screening of Alternatives: April 16, 1993
RI Report/Baseline Risk Assessment: June 24, 1994
FS Report/Comprehensive Response Action Risk Evaluation: November 16, 1994
Proposed Plan Report: November 16, 1994
Proposed Draft Record of Decision: July 3, 1995

Other Documents

A number of documents have been identified as being relevant to the development of the Site Treatment Plan. These documents include the DOE Roadmap documents, the Five Year Plan and Site-Specific Plans, the FEMP Mixed Waste Inventory, FEMP Treatability Study Work Plans, and other relevant RCRA documents. These documents must be coordinated with information that is developed for the STP.

SECTION 2.0 METHODOLOGY

The following subsections present the approach and methodology for identifying waste categories and treatability groupings, prioritizing wastestreams, performing technology options analyses, and identifying technology gaps, options, and solutions.

16

2.1 Assumptions

The following assumptions will be used by the FEMP in general construction of the CSTP and in developing and defining schedules and treatment alternatives. These assumptions may change as the plans are further developed.

General

1. DOE will continue to place the highest priority on protecting the health and safety of DOE employees, contractors, and the general public, and the environment, and is committed to complying with all applicable environmental laws and regulations.

2. DOE will continue to operate in a resource-constrained environment.

3. The Waste Isolation Pilot Plant (WIPP) will open and will operate under a RCRA no-migration petition. Wastes destined for WIPP will be treated to meet WIPP Waste Acceptance Criteria.

4. DOE will work closely with regulators throughout the STP process and will involve other stakeholders during STP development.

5. Waste generation from site mission activities will continue throughout the development, approval, and implementation of the STP.

CSTP Specific

1. Options are identified in the CSTP assuming there are no administrative or other non-technical barriers to treatment of off-site waste at any treatment facility. Such barriers, if any, would be identified in evaluating the option.

2. Treatment technologies will be identified based on whether they can treat the waste to standards required by the RCRA land disposal restrictions (LDR), or equivalent State law (or could qualify for a variance under the law). In evaluating treatment technologies for the STP, factors such as waste minimization implications, the need for further treatment of waste residues to meet LDR, and characteristics of the resulting waste form will be discussed.

3. Wastestreams, technologies, and capacities included in the CSTP are the same as those identified in the Mixed Waste Inventory Report, or an explanation of differences provided.

4. Mixed wastes generated by environmental restoration activities will be managed consistent with enforceable cleanup agreements. Identification, evaluation, and selection of treatment options for restoration mixed waste subject to enforceable cleanup agreements will reflect the process and schedules prescribed by such agreements.

5. Commitments in an existing compliance agreement, consent order, or permit

pursuant to specific treatment technology or treatment facility will be identified in the CSTP as options, but identification of options other than those contained in such an agreement are not precluded.

6. Multiple options do not need to be identified for every wastestream, particularly where a site has an established on-site treatment approach for a wastestream, such as an existing on-site facility or a facility under construction.

7. A facility with an established waste acceptance criteria (WAC) is identified as an option only for wastestreams that meet the technical requirements for the WAC.

8. Identified options are based on compliance with existing federal and state laws and regulations.

9. Waste management systems will comply with all applicable federal and state laws and regulations. Variances, exemptions, and waivers provided for in regulations are available when regulatory criteria are met.

10. Sites will be able to use available commercial facilities. If applicable, exemptions under DOE order 5820.2A can be obtained if the criteria is met.

11. For the purposes of evaluating a treatment option at an off-site DOE facility for the CSTP, it is assumed that the facility treating the waste will be responsible for management of treatment residuals, in that issues associated with such management would be covered in the off-site DOE facility's CSTP.

12. CSTPs represent currently available information. New characterization data or information on new wastestreams will be reflected in the ensuing version of the STP. STPs will be periodically updated (frequency yet to be determined) to reflect treatment needs of newly generated and newly characterized mixed wastes. The mechanism for incorporating updated wastestream inventory information into the STP has not yet been determined.

Site Specific

1. Laboratories will have the capacity to perform the needed analyses.

2.2 Definitions

Definitions of the terms used for the development of the STP can be found in Appendix C. The terms have been collected or derived from documentation for regulatory agencies, and DOE sites, as well as from environmental and other sources of regulations and documents. The words and phrases are listed alphabetically. Common abbreviations, if any, follow the term.

2.3 Treatability Groups

A treatability group is a method for categorizing DOE waste information in a consistent and technically valid manner based on waste characteristics. The treatability groupings in the CSTP are based, first, on three characteristic parameters: radiological, bulk physical/chemical matrix, and contaminants. Each of these parameters can then be divided into categories and sub-categories.

The radiological parameters reflect the activity level of the waste and will influence the design of the treatment facility to control radioactive releases and operator exposure. The primary radiological categories include low-level waste, transuranic waste, and high-level waste. Note that all of the FEMP mixed wastestreams are classified, radiologically, as contact-handled low-level mixed waste with an external surface dose rate of $\leq$ 200 mrem/hr at the surface of the container.

The bulk physical/chemical matrix parameters describe the actual make-up of the waste. This affects both the appropriate regulatory treatment requirements and the applicability of specific treatment technologies. The primary matrix categories are liquid, solid, and specific waste forms (which includes batteries, elemental lead, and explosives). There are many sub-categories under each primary category to accommodate the large numbers of variables in the matrix parameter. For example, sub-categories under solids include solids/particulates, organic and inorganic debris, and soil.

The contaminant parameter describes the regulated materials that are present in the wastestream. The contaminant categories have been established based on regulated contaminants requiring treatment, pursuant to RCRA LDR. The primary contaminant categories are toxic organics, toxic metals, cyanides, and the characteristics of ignitability, corrosivity, and reactivity.

Waste that fits the criteria for a treatability group will have the same physical, chemical, and radiological parameters. Thus treatability groups from all sites can be compared for purposes of assessing treatment technology needs, treatment capacity needs, and technology development needs.

For the CSTP, the FEMP has classified 295 mixed waste streams into 38 treatability groups based on the general waste matrices and the waste contaminant classification criteria used in the Interim Mixed Waste Inventory Report. However, several wastestreams have been reclassified into different matrix groupings (mostly affecting the debris classifications such as reclassification of inorganic debris to organic debris) based on further review of wastestream matrices. Several wastestreams have been deleted from the report as described in Section 1.5 and LDR treatment technologies for individual wastestreams have been corrected. Inventories have been updated and wastestreams that have been characterized since submittal of the Interim Mixed Waste Inventory Report have been added to the appropriate sections of the CSTP.

More detailed waste matrix subgroupings and additional categories and subcategories for waste contaminants may be developed for use across DOE sites. CSTP

wastestreams will be further categorized into these groupings, if required.

48 86

2.4 Characterization of Mixed Wastes

The Material Evaluation Form (MEF) is the primary tool used by the site for documenting waste characterizations. The MEF is completed by the process operator/project supervisor, who is responsible for the waste generation. The completed form is evaluated by FEMP personnel, along with any other identified information/documentation, to determine the adequacy of process knowledge. Additional sources of information/documentation that may be used to support process knowledge determinations include:

- Historical knowledge and/or data on similar FEMP processes;
- Conversations with personnel familiar with the process or location;
- Text books which describe the processes;
- Material Safety Data Sheets; and
- Vendor specification information.

The use of process knowledge for waste characterization must be well justified with supporting documentation for both negative and positive determinations with respect to the waste's regulatory status. Process knowledge is most appropriate for waste characterization when one or more of the following conditions exist, as identified by draft guidance issued by DOE and USEPA for the Characterization of Mixed Waste:

1) Collection of representative samples from a wastestream is difficult due to its physical nature. This applies to solid materials such as metals, glass, or wood materials.

2) Waste collection and analysis of material would result in unacceptable risk of radiation exposure. DOE policy requires that exposure to hazardous material must be maintained as low as reasonable achievable (ALARA).

3) Waste is too heterogenous in composition to the extent that collecting a representative sample is difficult.

When process knowledge is insufficient to characterize a wastestream, analytical methods are used to supplement the existing process knowledge. Each wastestream is analyzed for those parameters most likely to yield the maximum amount of chemical and physical information. In addition, specific analyses are selected based on historical knowledge, knowledge of the waste generation process, and the constituents suspected to be in the waste.

The Data Quality Objective (DQO) process is utilized to establish the quality and

20

quantity of data required to satisfy decision-making needs. The Sitewide CERCLA Quality Assurance Project Plan (SCQ) establishes the framework for ensuring that DQOs and quality assurance requirements are met for individual projects and that quality assurance requirements are implemented on a consistent basis throughout data gathering activities at the FEMP.

Additional matrix characterization may be required for wastestreams within each treatability grouping to assist in developing and defining treatment alternatives. All treatability groups will require some data evaluation to determine suitability for identified treatment options. The activities involved in data evaluation will include reviewing documents for waste information, determining required pretreatments, evaluating the suitability of the identified primary treatment for each wastestream, and identifying data gaps. In addition, an information standard must be developed to determine the type and quantity of information necessary if treatability studies are required. These activities will result in a listing of wastestreams requiring additional sampling and analysis to develop information on specific parameters needed to assess the suitability for treatment by an identified technology or process.

Many of the FEMP's treatability groupings will require additional matrix characterization to assist in defining treatment; however, debris waste will potentially require a more complete characterization than will other treatability groupings.

2.5 Treatment Options Analysis and Technology Selection Process

2.5.1 Introduction

This section describes the steps by which treatment options and technologies for the FEMP's waste streams are analyzed as they relate to this CSTP and the development of the draft and final STP. The treatment options analysis and technology selection process employed in the development of the STP consists of three sequential phases: (1) determination of the waste stream treatment requirements; (2) identification and analysis of treatment options and (3) the initiation of planning for a new treatment system or facility. The process provides the framework for assessing treatment options and identifying the issues or concerns associated with each option. The process of examining these options will provide the information necessary to point to the specific needs for new treatment facilities or systems. This examination may also indicate that an option such as a treatability variance or some other strategy is more appropriate. The need for new treatment systems or facilities will lead to the need to identify specific technology options and a means to make selections from the available options. This process will provide a smooth transition from the CSTP into the next phase of the preparation of the STP's.

As stated earlier, it is important to note that, at the FEMP, all mixed waste stored on site is included in the environmental restoration program governed by CERCLA and the September 1991 Amended Consent Agreement.

Therefore, the process used for evaluating treatment capabilities for mixed wastes under the STP must not conflict with or preclude decisions ultimately made by the CERCLA process. To ensure that the technology selection for CERCLA and the STP are consistent, the FEMP will screen and evaluate potential technologies for the STP based upon CERCLA guidance developed for analyzing remedial alternatives for the RI/FS process.

Figure 2.5.1 depicts the logic that is followed in determining the treatment options for a MLLW stream and the logic for initial technology selections for the development of new treatment systems or facilities. The three phases of the process are discussed below.

2.5.2 Phase 1: Determination of the waste stream treatment requirements.

An analysis of the treatment requirements for a waste is necessary before the treatment options for a given waste stream can be evaluated and compared. While treatment must destroy or immobilize the hazardous and radionuclide constituents, the treatment requirements for any waste are often governed by the matrix (the majority constituent). RCRA has specified technology based treatment standards (based on Best Demonstrated Available Technology - BDAT) and Concentration Based Treatment Standards (CBTSs) for the hazardous wastes under its authority. The CBTSs are based on performance standards for the BDATs. The BDATs were established for the pure hazardous wastes and may not necessarily be applicable to all of the matrix and hazardous waste combinations to be found in DOE mixed wastes. If a BDAT is not specified for a constituent, the waste's matrix will require the use of a treatment technology more suitable than a BDAT to meet the CBTS requirements. If a BDAT is specified for a constituent and the waste matrix or radioactive contaminant precludes its use, a treatment variance will be obtained. This includes the application of recovery BDATs such as RMERC (recover mercury) which would recover a material with radionuclide contamination.

Determination of the treatment requirements for a mixed waste must include consideration of the treatment needs for both the RCRA and radiological constituents. The strategy of defining treatability groups as groupings of wastes with similar treatment requirements provides a platform from which a systematic analysis of waste treatment options can be carried out. The treatability groups have been discussed in Section 2.3. Descriptions of the treatability groups and the wastestreams that are included in each group can be found in Appendix D. Overlaid on the LDR treatment requirements are the processing considerations concerning the radioactive constituents of the mixed waste which also influence the treatability groupings. Section 2.3 describes the radiological groupings into which these wastes have been categorized, e.g. Contact Handled (CH) -alpha, CH - non-alpha and Remote Handled (RH). Note that all of the FEMP's mixed wastestreams have been classified as Contact Handled.

22

48 86

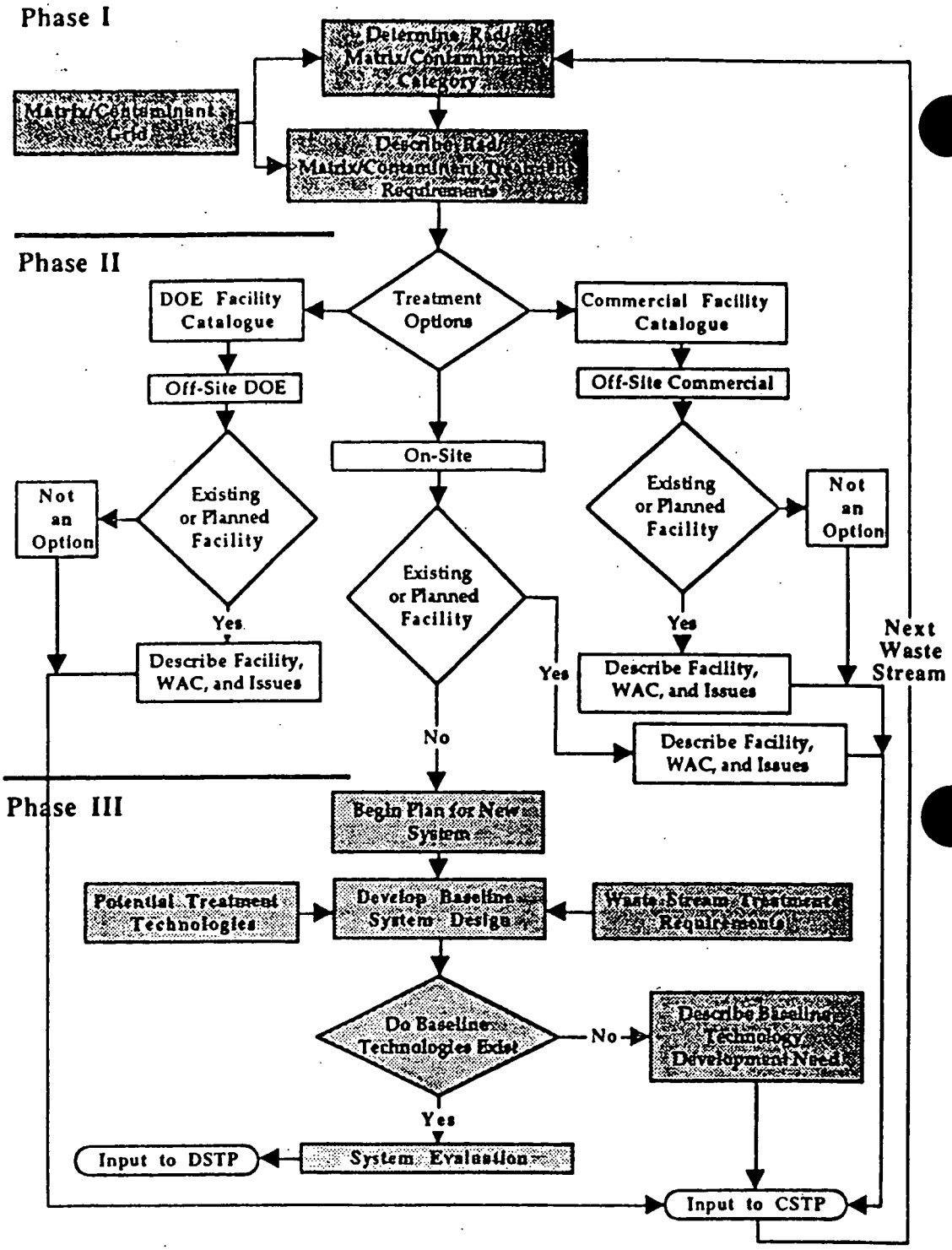


Figure 2.5.1 A decision process for evaluating treatment and technology options.

23

The States and USEPA have noted in their comments concerning the Interim Mixed Waste Inventory Report that there is insufficient characterization information to determine the treatment requirements for many DOE wastes. These wastes and their characterization plans are discussed in Section 3.4. For those waste streams which have been adequately characterized, appropriate treatability groupings have been determined and the treatment requirements are being identified.

2.5.3 Phase II: Identification and analysis of treatment options.

Identification of off-site treatment options

Figure 2.5.1 indicates two types of off-site treatment options that were considered for the CSTP: DOE facilities and commercial facilities. Facility status fell into three categories: existing facilities, planned and approved facilities, and planned unapproved facilities. The definitions of planned approved and planned unapproved facilities are provided in Section 1.5. Fact sheets on existing, planned, and commercial facilities, developed by DOE-HQ for use complex-wide, were used to assist in identifying these options. A summary of these fact sheets are presented as Appendix B.

In developing off-site options, a planned (approved or unapproved) facility may not have a detailed WAC available. In such a case a planned facility is only considered as a valid option, if the waste stream(s) under consideration matches the treatability group(s) of the waste stream(s) for which the facility is being designed. Facilities for which specific treatment parameters have not yet been defined (mostly planned but unapproved) were tentatively assigned to those treatability groupings determined to be applicable based on the limited information provided in Appendix B and knowledge of the treatment processes and limitations.

Additional information concerning the treatment requirements of the waste is found in Table 8.1 and Appendix D; treatment capabilities of each facility identified as an off-site option are provided in Appendix C. Technical and non-technical issues associated with the choice of each option are also identified in Table 8.1 and Appendix C.

The FEMP has included all off-site facilities in the CSTP which have been identified, to date, as potentially capable of treating the wastestreams in each treatability grouping (see Table 8.1). Currently, both Best Demonstrated Available Technologies (BDAT) and non-BDAT technologies are listed as options for each treatability grouping. The FEMP is continuing to collect information on available off-site treatment capacity. The FEMP has also placed a notice in the Commerce Business Daily soliciting information on available off-site capacity for treating the FEMP's mixed wastes. Responses received from this notice will incorporated into the STP evaluation process, as this information becomes available.

Identification of on-site treatment options

Potential on-site treatment options and technologies have been identified for wastestreams in each treatability grouping in the summary table of FEMP treatment needs and options provided as Table 8.1. Summary information provided by DOE-HQ (and included in the CSTP as Appendix C) and DOE's ReOpt technology database were the primary references used to identify these options. An example printout of technology information from ReOpt is included as Appendix E. Many of these technologies were identified based solely on their ability to treat the hazardous constituents and matrices of concern. It is not known, at this time, whether these technologies can be used to treat mixed waste.

Additional on-site treatment options may be generated from a Request for Proposal (RFP) which the FEMP is planning to issue, soliciting bids from commercial vendors to bring mobile treatment units on-site to treat mixed wastes. Other resources which may be used by the FEMP to identify and screen treatment technologies include reference books, business publications, and vendor information. Treatability studies may be required to fill in data gaps, although it is not anticipated that they would be conducted until after screening, as part of the final analysis of alternatives. Schedules and plans for conducting any treatability studies will be developed under and integrated into the OU3 Treatability Study Work Plan.

The FEMP has included all treatment technologies (both BDAT and non-BDAT) in the CSTP which have been identified, to date, as potentially applicable to treating the wastestreams in each treatability group. The FEMP is continuing to collect information on potential on-site treatment technologies for further evaluation using the processes described below.

Analysis of treatment options

For the CSTP, the FEMP has included both on-site and off-site options for each wastestream and treatability group for which the FEMP has not yet identified specific treatment capacity. These options represent all general categories of treatment (ie., thermal destruction, stabilization) which could potentially treat the wastestreams in each treatability grouping. Two other options, treatability variances and further characterization to demonstrate LDR compliance (not shown in Figure 2.5.1), have also been considered. No other options have been considered which would require legislative or regulatory change. The options listed in Table 8.1 form the basis for selecting potential treatment processes for the subject LDR mixed waste categories and, along with any other options that are identified through the processes described in Section 2.5.3, will comprise the group from which further selections will be made.

A two-step process is being used to reduce the number of possible treatment

processes listed in Table 8.1 for each treatability grouping to a manageable set of preferred treatment alternatives. The first step is to employ the following criteria to identify the treatment alternatives available for each treatability grouping: 1) technology is currently under development or in use by DOE or is commercially available; 2) the technology has been applied to either mixed waste or waste with similar characteristics. The technologies identified in step one will then undergo further screening to determine their specific applicability to treating FEMP wastestreams. This screening will be done in conjunction with the CERCLA RI/FS process for screening remedial alternatives.

2.5.4 Phase III: Beginning the development of new treatment capabilities.

For many wastes the evaluation of an on-site option requires analysis of the need for new treatment capabilities. Selecting the development of a new facility as an on-site option requires additional steps such as: analysis of treatment technology options, baseline system development, systems analysis, cost analysis and a number of other factors. Phase III of Figure 2.5.1 presents activities and resources, e.g. potential treatment technologies, included in the process of defining a new treatment facility. Waste stream treatment requirements are the core criteria which influence the treatment system design. All of the activities in the treatment and technology options identification process beyond this point need the waste to be characterized well enough that the treatment requirements can be specified. At a minimum the matrix and the probable range of contaminants must be known.

The baseline treatment technology choices are dictated by the waste stream treatment requirements (technical) as well as non-technical issues. Issues associated with any option such as the existence of permit restrictions or the need to revise NEPA documentation need to be evaluated. All technical and non-technical issues will be evaluated consistent with the requirements for the CERCLA RI/FS identification and screening of remedial alternatives.

In many cases a waste stream by virtue of its matrix and contaminant combination requires the specification of a system or treatment train which is comprised of more than one technology. Matching the appropriate treatment technologies to the treatment requirements for the waste can be a time consuming process which is further complicated by the number of waste streams for which a new treatment systems may be developed. The completion of the baseline technology selections is a complex task which has not been completed for most of the wastes in this CSTP.

2.6 Prioritization of Wastestreams

The FEMP will utilize several criteria in developing prioritized schedules for treating the wastestreams within each treatability group. The following considerations will be

factored into developing schedules for those treatability groups with identified treatment options:

1) Treatability groupings on a regulatory critical schedule (such as the May 8, 1994 deadline for the Case-by-Case extension for land-disposal of hazardous debris) will be addressed within the specified time frames

2) Relative availability of identified treatment options and disposal alternatives

3) Quantity of wastes that can be treated by a facility or unit

The primary factor in establishing schedules for developing treatment alternatives for those treatability groups for which specific options have not been identified will be the volume of wastes associated with each treatability grouping. The development of treatment alternatives for these wastes will be scheduled so that the largest quantity treatability groupings are addressed first. Other criteria which may be considered in developing schedules for these wastes include toxicity and the physical hazards associated with the wastestreams in each treatability grouping.

The FEMP is in the process of identifying and evaluating existing treatment capacity. Those wastestreams and treatability groupings for which existing capacity is identified, either off-site or on-site using mobile treatment units, will be scheduled for treatment first. For those wastestreams for which specific options are not identified, the FEMP will develop the required capacity based on the waste volume, toxicity, and physical hazards criteria, as discussed above.

SECTION 3.0 LOW-LEVEL MIXED WASTE STREAMS

As stated earlier in this CSTP, all mixed wastes are considered by DOE to be restoration wastes which can be divided into two general categories: containerized wastes which are currently in storage (much of it generated from process operations), and remediation wastes which are primarily wastes to be generated from the remedial cleanup actions (mostly soil and debris). This section focuses solely on treatment of containerized wastes while remediation wastes are discussed in Section 6.0.

3.1 Wastestreams with Existing Treatment Capacity

3.1.1 Description of Wastestreams and Treatability Groupings

This subsection provides information on mixed wastes that can be treated to LDR standards using existing on-site capacity or that are currently being shipped for treatment to an off-site facility. Specific information on the radiological characteristics, EPA waste codes, LDR treatment technologies and basis (ie. technology or concentration-based), current inventory, projected 5-year generation rates, and basis of characterization is provided for these wastestreams in Appendix D.1.

27

Organic Liquids, Toxic Metals w/o Mercury - TBP, Kerosene, DAAP Solution

The FEMP is currently shipping 17,000 gallons of Tributyl Phosphate (TBP), Kerosene, Diamyl-amyl-phosphonate (DAAP) solution stored on-site in tanks to the TSCA Incinerator in Oak Ridge, Tennessee for treatment by incineration. These wastes are ignitable and have been determined by sampling and analysis to contain concentrations of lead (D008) above the regulatory limit. The characterization of these wastes for treatment has been conducted in accordance with the requirements specified in the Waste Acceptance Plan and Analytical Protocol for the Toxic Substances Control Act Incinerator, K/HS-252/R2.

Aqueous Liquids, Toxic Metals w/o Mercury - Uranyl Nitrate Hydrate (UNH) Solution

To date, the FEMP has conducted elementary neutralization on approximately 20,000 gallons of uranyl nitrate hydrate (UNH) from a total inventory of 200,000 gallons of UNH. The UNH is stored in twenty tanks located in five separate areas in the Plant 2/3 process area. The UNH in each tank was characterized based on sampling and analysis for barium and chromium which, by process knowledge, were the only constituents that could be present to cause the solution to be classified as mixed waste. The results of these analyses indicate that the concentrations of these constituents are present above the regulatory limits (with total concentrations ranging from 19-404 ppm chromium and 18-216 ppm barium). UNH is also corrosive (D002) with a pH of less than 2 and contains up to 110 grams/liter of uranium at less than 1% enrichment.

3.1.2 Description of Existing Capacity

This section provides information on existing capacity available to the FEMP. Information specific to these on-site treatment options is summarized in Table 8.2. Two categories of facilities are identified in this section - existing facilities currently in use for treating mixed wastes and existing facilities which could be used to treat mixed wastes.

Existing Facilities Currently Used to Treat Mixed Wastes

TSCA Incinerator

The FEMP is currently utilizing the TSCA Incinerator located at the DOE K-25 Site in Oak Ridge, Tennessee for the treatment of tributyl phosphate (TBP), kerosene and Diamy-amyl-phosphonate (DAAP) solutions. The facility is owned by the DOE and is operated by Martin Marietta Energy Systems, Inc. (MMES). The TSCA Incinerator is a rotary kiln incinerator with a secondary combustion chamber designed

28

to treat hazardous organic components of liquid mixed low-level wastes, including polychlorinated biphenyls (PCBs) contaminated with low levels of radioactivity. Future plans for the TSCA Incinerator include modifications to burn solid materials and sludges.

In 1993, the FEMP shipped 113,484 pounds of TBP, kerosene, and DAAP solutions stored on-site in tanks, to the TSCA Incinerator for treatment. No pre-treatment of organic liquid waste was required. The final waste form was ash and scrubber sludge. To date MMES has not returned any residue from FEMP waste treated at the TSCA Incinerator.

Beginning in 1994, the FEMP will be allotted approximately 300,000 pounds of low-level mixed waste per year to be treated at the TSCA Incinerator with shipments of drummed mixed wastes scheduled to begin in April 1994. The FEMP is currently evaluating organic and aqueous liquids against the TSCA waste acceptance criteria to identify the specific wastestreams which will fill the allotted capacity. These wastestreams will be moved to Section 3.1 of the Plan as they are identified.

Existing Facilities Which Could Be Used To Treat Mixed Wastes

UNH Treatment Facility

To date, the FEMP has conducted elementary neutralization on approximately 20,000 gallons of uranyl nitrate hydrate (UNH) from a total inventory of 200,000 gallons of UNH stored in tanks onsite. During the elementary neutralization process, the solution is blended to a uniform concentration, the pH adjusted, and precipitation accomplished using magnesium hydroxide and filtering the slurry through a rotary vacuum filter press. The product filter cake is packaged into drums and analyzed for TCLP metals and radiological content. The filter cake processed, to date, has been determined to be non-hazardous low-level radioactive waste. The cake is being stored at the FEMP pending final disposition. The filtrate water is sampled and discharged through the FEMP waste water treatment system if the levels of contamination are below the National Pollution Discharge Elimination System (NPDES) permit criteria.

To date, this system has treated UNH so that only limited information is available on the technical feasibility of this system for treating other wastes. The blended feed must contain less than 100 grams of uranium/liter and less than 1% U235 to maximize filter efficiency. However, higher concentrations of uranium can be tolerated by the system if the feed is diluted prior to filtering the waste.

The elementary neutralization/stabilization process began in 1992. However, the process has been suspended since April 1993 pending the results of an investigation following an accidental release of 30 gallons of UNH. The capacity for the process is nearly 30 drums a day at 350 pounds per drum. Treatment of the UNH is being conducted as a CERCLA Removal Action so that the FEMP has not obtained a RCRA treatment permit for this unit. There are currently no plans at this time to process off-site wastes in this facility.

29

The FEMP has proposed to utilize the UNH System to treat nitric acid (Mixed Waste Inventory Report ID# 1692) that was formerly contained in a tank car in the northeast corner of the production area. The action is to be conducted as part of Removal Action 26. A joint Closure Plan Information and Data Package (CPID)/Removal Action Work Plan (RAWP) addressing closure of the tank car and its associated area has been approved by USEPA and OEPA. To date, the nitric acid has been removed from the tank car. However, treatment has been suspended pending restart of the UNH system.

The batch treatment operation for stabilizing the UNH may also be used for stabilizing thorium nitrate solution (Mixed Waste Inventory Report ID# 40181). Approximately 5,022 pounds of thorium nitrate is currently stored onsite. The FEMP is currently reviewing the use of this system to treat thorium nitrate.

Plant 8 Volatile Organic Carbon (VOC) Treatment System

The FEMP initiated operation of the Plant 8 Volatile Organic Carbon (VOC) treatment system as a CERCLA removal action to minimize the potential for the contaminated water under former production buildings to migrate to the underlying aquifer. Perched water zones beneath Plants 2/3, 6, 8, and 9 are of concern, and the FEMP began pumping operations at all locations. More than 250,000 gallons of extracted perched water were processed during 1992. A treatment system at Plant 8 uses activated carbon filters to remove VOCs from the extracted water. This water is then treated using the FEMP's existing waste water treatment system to remove uranium before it is discharged to the Great Miami River. The VOC treatment system will continue to operate until the Advanced Waste Water Treatment system becomes operational (planned for early 1995).

The Plant 8 VOC treatment system could be used to treat aqueous wastes, provided that the effluent conforms to the conditions specified in the FEMP's National Pollution Discharge Elimination System (NPDES) permit. The actual quantity of aqueous wastes which could be treated by the Plant 8 VOC treatment unit is dependant upon both the technical capabilities of the unit and the availability of the system to treat aqueous wastes. The FEMP is currently reviewing the use of this system to treat mixed aqueous wastestreams. Since perched water treatment is being conducted as a CERCLA removal action, the FEMP has not obtained a RCRA permit for this unit. There are no plans at this time to process off-site wastes in this facility.

Rotary Kiln

The Rotary Kiln will replace an existing Rotary Kiln that operated at the FEMP for over thirty years. The purpose of the kiln is to remove moisture and volume-reduce residues before shipping off-site for disposal. The Rotary Kiln is designed with Best Available Technology to minimize radionuclide and particulate emissions. The kiln has a 1400 degree Fahrenheit afterburner to burn off organics in the flue gases. The 800 - 1200 degree Fahrenheit kiln will also oxidize uranium metal that may be present in residues, thus eliminating potentially pyrophoric and/or hydrogen-generating materials. The kiln will be used primarily to dry low-level radioactive sludges prior

48 86 to shipment for disposal to the Nevada Test Site (NTS). The operation of the kiln is intended to satisfy DOE 5820.2A (Management of Low-Level Radioactive Wastes) and NTS requirements for waste disposal. The unit is scheduled to begin operating in mid 1994.

A preliminary review of design and process information on the Rotary Kiln indicates that the system is capable of processing pit wastes, soils, sludges, and liners contaminated with low concentrations of solvents (Trichloroethene (TCE) and Trichloroethane (TCA)). The review indicates that the basic concept of the kiln would be compatible with the increased throughput, but minor modifications would be required in the bulk feeding and product discharge areas. The FEMP is currently not planning to use the rotary kiln to treat mixed wastes and there are no plans at this time to process off-site wastes in this unit.

3.1.3 Treatment Options by Wastestreams/Treatability Group

This section will include other treatment options, as appropriate, for wastestreams identified in Section 3.1.1 for which treatment capacity is currently available. This information would primarily be required for those wastestreams that are currently being treated by facilities that are near obsolescence, have inadequate capacity for site wastes, or have other significant drawbacks. At this time, the FEMP has not identified other treatment options for the wastestreams listed in Section 3.1.1. However, if the UNH Treatment Facility is not restarted, the UNH may be able to be treated using one of the potential options identified for the treatability group of Aqueous Liquids, Toxic Metals w/o Mercury in Table 8.1.

3.2 Wastestreams for which Technology Exists but without Capacity On-Site

This section includes information on mixed wastes that can be treated to LDR standards using proven technologies for which there is no existing on-site capacity or that are not currently being shipped for treatment to an off-site facility. Only minor modifications of the technology, if any, would be needed to treat these wastes.

3.2.1 Description of Wastestreams and Treatability Groupings

The FEMP has included, in Table 8.1 of the CSTP, all technologies which have been identified, to date, as potentially applicable for treating the wastestreams in each treatability grouping. The FEMP will screen these technologies, and any others that are identified, using the processes and criteria described in Section 2.5, to select the most promising treatment alternatives. Those wastestreams and treatability groupings for which proven technologies are identified will be added to this section of the Plan, as this information becomes available.

31

3.2.2 Description of Needed Technology and Capacity

Recently Fernald Environmental Management Company of Ohio (FERMCO) published a solicitation in the Commerce Business Daily (CBD) seeking information on available treatment and disposal technology or capacity from commercial vendors. Several responses indicate that there may be potential capacity for treating FEMP wastes on-site in a mobile treatment unit, using stabilization technologies for inorganic solid and waste oil matrices and thermal desorption technologies for contaminated soils. The FEMP has also identified several facilities that have submitted applications for RCRA permits which may provide useful treatment capacity in the future. Based on the number of responses to the CBD listing, the FEMP is planning to issue a Request for Proposal (RFP) to solicit bids from commercial vendors to bring mobile treatment units on-site to treat mixed waste.

For the CSTP, the FEMP has included, in Table 8.1, all technologies and facilities which have been identified, to date, as potentially applicable to treating the FEMP wastestreams in each treatability grouping. These options will be evaluated, using the criteria and processes identified in Section 2.5, to identify the most promising alternatives. This section will include information on technical feasibility, characterization requirements for treatment, required capacity pretreatment processes, and final waste form for those processes identified, through the screening process, to be the most viable options for each treatability grouping.

3.2.3 Treatment Options by Wastestream/Treatability Grouping

This section will include information on technical uncertainties, associated costs, schedule impacts, the types of wastes treated, and the limitations associated with each treatment option, as it is identified in Section 3.2.2.

3.3 Wastestreams for which Technology Needs Adaptation or for which no Technology Exists

This section includes mixed wastes that may be able to be treated to LDR standards using existing technologies. However, it is currently not known whether these technologies will require significant adaptation and development before they can be used to treat the waste, generally because of the radioactive component.

3.3.1 Description of Wastestreams and Treatability Groupings

Wastestreams in this section have been organized into treatability groupings based on common matrices and contaminants as described in Section 2.2. The defining characteristics for each treatability group, and the radiological characteristics, EPA waste codes, LDR treatment technologies and basis (ie.

technology or concentration-based), current inventory, projected 5-year generation rates, and basis of characterization for wastestreams within each treatability group, are presented in Appendix D.2. Note that, at the FEMP, waste quantities are tracked by weight. Wastestream volumes for these tables were calculated using a conversion factor of 0.20 cubic meters per 55-gallon drum.

Several wastestreams in this section have been reclassified into different treatability groups from the FEMP's Interim Mixed Waste Inventory Report groupings based on a further review of wastestream matrices. LDR treatment technologies have been corrected. Wastestream quantities have been updated to reflect the current inventory and mixed wastestreams which have been characterized since submittal of the Interim Mixed Waste Inventory Report have been added. In addition, wastestream ID #549, #50101, and #471 have been deleted because they have been recharacterized as non-hazardous and ID# 668 has been replaced by #517.

Specific information on physical characteristics such as pH, flash point, Paint Filter Liquids Test (PFLT), and chemical and radiological constituents and concentrations are routinely collected as part of the waste characterization process. Additional analyses may be required in selecting and designing treatment alternatives for these wastestreams including viscosity, specific gravity, presence and concentrations of other constituents (such as sulfur content for solvents), ash content, acidity/alkalinity, and heating value. The need and types of analyses required will be identified as treatment options become further defined and schedules for conducting these analyses will be integrated into the schedules developed for initiating and implementing treatment.

3.3.2 Description of Needed Technology and Capacity

All technologies which have been identified, to date, as potentially applicable to the wastestreams in each treatability grouping are identified as possible on-site treatment options in Table 8.1. At this time, it is not certain whether these technologies will require significant adaptation prior to treating these wastes. The FEMP is currently collecting additional information, using the resources and processes described in Section 2.5, to further assess the applicability and adaptability of these processes to treating FEMP wastestreams.

3.3.3 Treatment Options by Wastestream/Treatability Group

Table 8.1 contains information on potentially suitable capacity identified for FEMP wastestreams at commercial facilities and other DOE sites. Both existing, planned and approved, and planned but unapproved facilities have been included in these tables. These facilities have been tentatively matched

with FEMP treatability groupings according to waste matrix and general classes of contaminants treated, using the processes described in Section 2.5.3.

The FEMP is continuing to collect more detailed information on current mixed waste treatment capacity to use in identifying and screening treatment alternatives using the criteria and processes described in Section 2.5. Options under consideration may include the development of on-site capacity, treatment at another DOE facility, treatment at a commercial facility, onsite treatment using commercially available mobile treatment units, joint development of treatment capacity with other DOE sites, other regulatory compliance options such as a no-migration or treatability variance, or further characterization to establish that a waste is non-hazardous or meets LDR.

3.4 Wastestreams Requiring Further Characterization or For Which Technology Assessment Has Not Been Done

This section addresses wastes that are inadequately characterized to allow the identification of appropriate treatment technologies. As these wastes are further characterized and technology assessment completed, they will be assigned to Sections 3.1 - 3.3 of the Plan.

3.4.1 Description of Wastestreams

The following wastestreams are currently undergoing additional characterization at the FEMP:

Uranium Interference

Uranium Interference wastes had characterizations based upon analytical results which are suspected of showing false positives for certain Toxicity Characteristic metals. The FEMP has compiled a listing of affected wastes and is developing parameters for resampling.

HWMU Review

The FEMP is completing an investigation of solid waste management units (SWMU) and hazardous waste management units (HWMU). During the course of this review several HWMUs were re-evaluated. This re-evaluation may cause up to seven units to be reclassified from HWMUs to SWMUs. Reclassification may impact characterizations for the wastes associated with these units.

Additional Wastes To Be Characterized

Additional wastestreams have been identified on-site that require further

characterization. The FEMP is in the initial stages of addressing these wastestreams and will include this information as it becomes available.

3.4.2 Plan for Characterizing Wastes and Undertaking Technology Assessment

As the wastes identified in Section 3.4.1 are further characterized, they will be assigned to the appropriate treatability groups and technology assessments will be conducted. Schedules for characterizing these wastes and conducting technology assessment will be developed and incorporated into the STP.

SECTION 4.0 TRU MIXED WASTESTREAMS

This section is not applicable to the FEMP which does not generate or store mixed transuranic wastes.

SECTION 5.0 HIGH-LEVEL MIXED WASTESTREAMS

This section is not applicable to the FEMP which does not generate or store mixed high-level wastes.

SECTION 6.0 FUTURE GENERATION AND TREATMENT OF MIXED WASTESTREAMS

This section describes wastes that are expected to be generated in the future, including remediation wastes which have not yet been generated from site remedial cleanup activities and wastes resulting from Decontamination and Decomissioning (D&D) activities.

6.1 Environmental Remediation Wastes

Section 6.1.1 provides preliminary information on the sources, quantities, and types of wastes expected to be generated, anticipated schedules for generation, and associated uncertainties. A discussion of technologies currently under development to treat remediation wastes is presented in Section 6.1.2.

6.1.1 Description of Environmental Remediation Wastes

Approximately 247,000 m^3 of mixed low-level sludges and soils are estimated to be generated from future environmental remediation activities. The largest volume of remediation wastes to be generated will be soils contaminated with uranium, heavy metals, and organic contaminants.

Remediation wastes will be added to the STP as they are generated/characterized. This will require periodic revisions to the plan, even after it is approved by the state and the compliance order is issued. The final disposition of these wastes will be determined via the CERCLA process.

Preliminary estimates of mixed waste types and their associated waste codes, and the quantities projected to be generated from environmental restoration activities are presented below. Estimates of quantities of wastes to be generated from the remediation of Hazardous Waste Management Units (HWMUs) will be included as this information becomes available.

Table 1. Projected Sources, Quantities and Schedules for Remediation Wastes

MIXED WASTE SOURCE	EPA WASTE CODES	QUANTITY	SCHEDULED REMEDIATION
Waste Pit 4 Sludges	DOO5	7 m^3	1998-2010
Waste Pit 5 Sludges	F001/F002	74,854 m^3	1998-2010
Soil and Clay from OUs	To Be Determined	172,035 m^3	1994-2018
Hazardous Waste Management Units (HWMUs)	Multiple Codes	Not available	1993-2018

A good faith effort has been made to estimate the volumes of such wastes. Nevertheless, the FEMP is still in the process of evaluating, through the CERCLA process, the nature and extent of contamination. Thus, the projections of mixed waste volumes subject to LDR that will require management by the FEMP will change as the remedial process advances. The volume of mixed waste that is subject to LDR will also vary according to the remedy selected; for example, insitu treatment will result in no mixed waste requiring development of treatment capacity.

6.1.2 Treatment of Remediation Mixed Wastestreams To Be Generated

Because mixed waste at Fernald that is subject to regulation under the FFCA is also regulated under CERCLA (pursuant to the Amended Consent Agreement) it is imperative that the schedule and treatment evaluation process in the STP must be completely consistent with Amended Consent Agreement milestones and the CERCLA RI/FS process.

The process for development of the STP is equivalent to the evaluation of remedial technologies and process options for general response actions, which includes treatment, under the CERCLA process. For each OU, other general response actions (e.g. no action, institutional controls, containment) will be evaluated according to the CERCLA RI/FS process. The STP will not

address these alternatives in detail but instead will include information or conclusions on such alternatives that impacts (delays, changes, specifies) treatment. Information on specific technologies developed to support remediation activities will be incorporated into the STP as it becomes available.

The FEMP is currently evaluating several treatment alternatives for mixed environmental remediation wastes to support RI/FS activities and in accordance with the provisions of the Amended Consent Agreement. Descriptions of these technologies and the evaluation process conducted in defining each option are presented below.

Soil Washing Facility

The FEMP is currently conducting pilot scale Soil Washing Treatability Studies. 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, organic and inorganic compounds from the different size fractions. The contaminants may be separated from the wash stream into a concentrated residue for further treatment (e.g., stabilization or vitrification).

Pilot testing is being performed on 55 gallon drums of soil(1 batch= 1 55 gallon drum). It is projected that the pilot plant will never be able to process more than 1/4 ton per hour at a continuous rate. A phased approach for operation of the pilot system is being adopted for the next twelve (12) months. Priorities during this period include batch process optimization, definition of Integrated Demonstration Program requirements, and the conversion of the process to a continuous operating mode.

Minimum Additive Waste Stabilization Program

The Minimum Additive Waste Stabilization (MAWS) program is an integrated waste treatment system. Vitrification is the core technology which will be used for stabilization and volume reduction of waste pit sludges and other contaminated material. This process technology is integrated with soil washing (not the soil washing facility described above) which will reduce the overall volume of waste to be vitrified. Another potential benefit of the integrated approach is to use the soil waste stream and other treatment residues as a raw material substitute for the vitrification process. The ultimate goal of the MAWS program is to demonstrate the cost-effectiveness and feasibility of the integrated treatment process.

A pilot plant has been installed in Plant 9 at the FEMP and began operations in September 1993 to obtain testing information. The pilot plant consists of a 300 to 1,000 kilogram per day vitrification unit, 0.25 to 0.50 cubic yard per hour soil washing unit, and a 100 gallon per minute wastewater treatment

system (filtration followed by ion exchange). These treatment processes will primarily produce a vitrified waste and "clean" soil. The air emissions (vitrification off-gas, soil washing process and building ventilation) and wastewater generated as a result of the MAWS operations are treated to comply with environmental discharge requirements.

6.2 D&D Wastes

This section is reserved for D&D wastestreams that are to be generated. However, at the FEMP D&D wastes are considered restoration wastes so that these wastestreams are addressed in Section 6.1.

6.3 Other Wastes

This section is reserved for other wastestreams to be generated that are not remediation wastes or D&D wastes. The FEMP currently does not expect to generate any of these wastestreams.

SECTION 7.0 MIXED WASTESTREAMS FOR WHICH RADIONUCLIDE SEPARATION MAY BE APPROPRIATE

The FEMP has not currently identified any wastestreams to be treated by radionuclide separation.

SECTION 8.0 CONCEPTUAL SITE TREATMENT PLAN SUMMARY TABLES

The following summary tables are presented in Section 8.0:

Table 8.1: Summary of Mixed Waste Treatment Needs and Options at FEMP
Table 8.2: Summary of On-site Treatment Systems at FEMP

EXPLANATION OF CSTP SUMMARY TABLE 8.1 CONTENTS

PART 1 - WASTESTREAM INFORMATION

Treatability Group: Categories of wastes based on radioactive characteristics, physical/chemical matrix, and hazardous constituent/components that affect the selection of an appropriate treatment system for the waste.

MLLW: Mixed Low-Level Waste
CH: Contact-Handled (external surface dose rate $\leq$ 200 mrem/hr)

Waste Stream(s): The ID# is the unique number for each wastestream in the Interim Mixed Waste Inventory Report. FEMP wastestreams are identified by their Material Evaluation Form (MEF) number in the Interim Mixed Waste Inventory Report to allow for cross-referencing of the inventory information with on-site characterization records. Additional wastestreams that were characterized since the submittal of the Interim Mixed Waste Inventory Report are identified by their Material Evaluation Form (MEF) number.

CSTP Chapter is the CSTP Chapter or Section that addresses the wastestream.

Waste Quantities: Quantity of waste in inventory as of December 1992, Current Inventory, Date of current inventory and, quantity of waste projected to be generated during calendar years 1993 through 1997. Quantities of wastes are reported in volume (cubic meters(m^3)) and mass (kilogram (kg)).

PART 2 - TREATMENT OPTIONS

Option Number: Sequential numbering of potential treatment options.

Treatment Type: A general term for a group of treatment technologies generally designed to destroy, remove, or immobilize similar hazardous contaminants, radioactive contaminants, or waste matrices. For this summary, the treatment types are the LDR type technologies: organics destruction, wastewater treatment for organics, wastewater treatment for metals removal, stabilization, metals recovery, mercury separation, decontamination, neutralization, and deactivation. The non-LDR treatment option provides additional treatment technologies and includes both LDR technologies, such as organics recovery, that are not listed among the general treatment types and non-LDR type technologies such as sorting and shredding.

Site: Site where treatment facility is located

Facility Name: Facility name as designated by site, RCRA Permit, etc. A facility is a building or area consisting of one or more treatment systems.

System #: Department of Energy Activity Data Sheet (ADS) number assigned to treatment system or facility in Appendix B, Mixed Waste Treatment Facility Information Sheets.

System Name: The name of the individual treatment system(s) associated with the identified treatment option. A treatment system is one or a series of operations through which any waste entering the system passes. All wastes that pass through a system are processed the same way. A system may also include functionally identical units operated in parallel if all of the wastes entering the system are combined at some point upstream of the parallel units.

System Status: The current operational status of the unit. The options are:

- Exists, In Use For Mixed Wastes. System is currently operating and treating mixed wastes.
- Exists, Could Be Used For Mixed Wastes. Existing system not currently treating this mixed waste stream. The system may be treating other waste (low-level, sanitary, etc.) or may not be operating at this time.
- Planned And Approved. System that has received, at a minimum, approval of mission need. Typically the funds for the system's conceptual design have been authorized or the system is under construction.
- Planned But Unapproved. Funds for conceptual design of the system have not been authorized.
- Unplanned. On-site systems, not part of any previous planning, conceived as part of the CSTP development.

PART 3 - ISSUES/CONCERNS

Technology Evaluation Issues/Concerns: Technical issues, such as technical feasibility and robustness of treatment, that may be of concern in evaluating a given option.

Non-Technical Issues/Concerns: Non-technical concerns such as permit restrictions, restrictions in Agreements with States, and NEPA coverage associated with a given treatment option.

Table 8.1 - (Part 1 of 3)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
MLLW CH, Aqueous Liquid, Ignitable, Reactive, or Corrosive Only	01691	3.3	16.700	80,818.000	0.200	16,678.000	09/03/93	0.000	0.000
	01692	3.3	0.400	145.000	0.200	145.000	09/03/93	0.000	0.000
	02257	3.3	0.208	155.000	0.208	155.000	09/03/93	0.000	0.000
MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury	00383	3.3	0.200	123.000	0.200	123.000	09/03/93	0.000	0.000
	00594	3.3	0.600	240.000	0.600	239.000	09/03/93	0.000	0.000
	00873	3.3	1.200	612.000	1.200	612.000	09/03/93	4.600	2,273.000
	01185	3.3	0.200	229.000	0.200	229.000	09/03/93	1.100	1,136.000
	01297	3.3	5.700	509.000	5.700	509.000	09/03/93	0.000	0.000
	01751	3.3	0.600	57.000	0.600	57.000	09/03/93	0.000	0.000
	20046	3.3	0.400	35.000	0.400	35.000	09/03/93	0.000	0.000
	30080	3.3	0.200	229.000	0.200	228.000	09/03/93	0.000	0.000
	40181	3.3	0.400	2,283.000	0.600	2,280.000	09/03/93	0.000	0.000
	00844	3.1	765.000	1,031,484.000	688.000	928,335.000	09/03/93	0.000	0.000
MLLW CH, Aqueous Liquid, Toxic Organics	01180	3.3	0.200	46.000	0.800	229.000	09/03/93	0.000	0.000

48 86

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
	01536	3.3	32.400	30,113.000	31.800	30,474.000	09/03/93	0.000	0.000
	00358	3.3	0.416	292.000	0.416	292.000	09/03/93	0.000	0.000
	10014	3.3	3.000	2,644.000	2.800	2,641.000	09/03/93	0.000	0.000
MLLW CH, Aqueous Liquid, Toxic Organics, Toxic Metals w/o Mercury	01178	3.3	0.600	460.000	1.200	752.000	09/03/93	0.000	0.000
	01707	3.3	1.300	1,317.000	1.400	1,307.000	09/03/93	0.000	0.000
	01229	3.3	3.500	3,107.000	6.600	6,019.000	09/03/93	18.100	15,909.000
	01938	3.3	0.208	170.000	0.208	170.000	09/03/93	0.000	0.000
MLLW CH, Batteries (Lead Acid, Cadmium), Toxic Metals w/ Mercury	00382	3.3	0.200	220.000	0.200	220.000	09/03/93	0.000	0.000
	00405	3.3	0.200	134.000	0.200	134.000	09/03/93	1.100	682.000
	00423	3.3	0.019	20.000	0.200	20.000	09/03/93	0.084	91.000
	00676	3.3	0.200	174.000	0.200	174.000	09/03/93	1.100	909.000
	02211	3.3	0.416	165.000	0.416	165.000	09/03/93	0.000	0.000
MLLW CH, Compressed Gas	00433	3.3	0.200	13.600	0.200	13.600	09/03/93	0.000	0.000
MLLW CH, Elemental	01987	3.3	0.019	8.000	0.400	276.000	09/03/93	0.000	0.000

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
Lead (Activated and Non-Activated)									
MLLW CH, Heterogenous Debris, Ignitable, Reactive, or Corrosive Only	50358	3.3	0.800	1,447.000	0.800	1,447.000	09/03/93	0.000	0.000
	50407	3.3	0.200	480.000	0.200	480.000	09/03/93	0.000	0.000
MLLW CH, Heterogenous Debris, Toxic Metals w/ Mercury	50361	3.3	0.800	275.000	0.800	275.000	09/03/93	0.000	0.000
MLLW CH, Heterogenous Debris, Toxic Metals w/o Mercury	00659	3.3	0.200	9.000	0.200	9.000	09/03/93	0.000	0.000
	01421	3.3	0.208	64.000	0.208	64.000	09/03/93	0.000	0.000
	10011	3.3	0.200	51.000	0.200	51.000	09/03/93	0.000	0.000
	20107	3.3	0.200	273.000	0.200	273.000	09/03/93	0.000	0.000
	30009	3.3	10.400	7,532.000	10.000	7,523.000	09/03/93	0.000	0.000
	60011	3.3	11.000	8,399.000	11.000	8,389.000	09/03/93	0.000	0.000
MLLW CH, Heterogenous Debris, Toxic Organics	00527	3.3	0.200	38.000	0.200	38.000	09/03/93	0.000	0.000
	00627	3.3	0.200	6.000	0.200	6.000	09/03/93	0.000	0.000

48 86

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
	00628	3.3	0.200	65.000	0.200	65.000	09/03/93	0.000	0.000
	00644	3.3	0.600	242.000	0.600	242.000	09/03/93	0.000	0.000
	01427	3.3	0.200	41.000	0.200	41.000	09/03/93	0.000	0.000
	01428	3.3	0.208	86.000	0.208	86.000	09/03/93	0.000	0.000
	01716	3.3	0.400	397.300	2.600	394.000	09/03/93	0.000	0.000
	20036	3.3	0.800	388.000	0.800	387.000	09/03/93	0.000	0.000
	20114	3.3	0.400	185.000	0.400	184.000	09/03/93	0.000	0.000
	30074	3.3	1.000	1,140.000	1.000	1,139.000	09/03/93	0.000	0.000
	50014	3.3	1.000	455.000	1.000	455.000	09/03/93	0.000	0.000
MLLW CH, Heterogenous Debris, Toxic Organics, Toxic Metals w/o Mercury	00399	3.3	0.208	49.000	0.208	49.000	09/03/93	0.963	227.000
	00415	3.3	0.200	35.860	0.200	35.860	09/03/93	6.300	227.000
	00417	3.3	0.200	88.000	0.200	88.000	09/03/93	0.000	0.000
	00434	3.3	1.400	395.400	1.400	395.400	09/03/93	2.400	682.000
	00460	3.3	0.200	11.000	0.200	11.000	09/03/93	0.000	0.000
	01425	3.3	0.624	134.000	0.624	134.000	09/03/93	0.000	0.000

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
	10023	3.3	3.800	3,043.160	3.800	3,043.160	09/03/93	0.000	0.000
	20094	3.3	1.700	395.000	1.700	395.000	09/03/93	0.000	0.000
	20095	3.3	1.200	287.000	1.200	287.000	09/03/93	2.000	455.000
	30053	3.3	0.200	78.000	0.200	78.000	09/03/93	0.000	0.000
MLLW CH, Inorganic Debris, Ignitable, Reactive, or Corrosive Only	40137	3.3	0.200	1.000	0.200	1.000	09/03/93	0.000	0.000
MLLW CH, Inorganic Debris, Toxic Metals w/ Mercury	00091	3.3	0.200	6.000	1.000	173.000	09/03/93	0.000	0.000
	00432	3.3	1.200	255.000	1.200	255.000	09/03/93	3.600	1,136.000
	01199	3.3	3.500	1,111.000	3.400	1,110.000	09/03/93	3.600	1,136.000
	10018	3.3	0.600	843.000	0.600	842.000	09/03/93	0.000	0.000
MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury	01080	3.3	0.200	26.000	0.200	26.000	09/03/93	0.000	0.000
	01271	3.3	7.700	6,676.000	7.600	6,771.000	09/03/93	0.000	0.000
	10005	3.3	1.700	2,393.000	1.600	2,390.000	09/03/93	0.000	0.000

48 86

59

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
	10025	3.3	30.600	34,450.000	29.600	34,680.000	09/03/93	0.000	0.000
	20151	3.3	0.600	466.000	0.600	466.000	09/03/93	0.000	0.000
	30039	3.3	0.600	450.000	0.600	449.000	09/03/93	0.000	0.000
	30065	3.3	6.400	6,855.000	6.200	6,847.000	09/03/93	0.000	0.000
	40152	3.3	0.400	58.000	0.400	58.000	09/03/93	0.000	0.000
	50031	3.3	3.300	1,295.000	3.200	1,293.000	09/03/93	0.000	0.000
	50063	3.3	1.500	2,352.000	1.400	2,349.000	09/03/93	0.000	0.000
	50367	3.3	0.200	195.000	0.200	194.000	09/03/93	0.000	0.000
	60140	3.3	0.416	965.000	0.416	965.000	09/03/93	0.000	0.000
MLLW CH, Inorganic Debris, Toxic Organics	01537	3.3	23.920	186,537.000	23.000	186,313.000	09/03/93	0.000	0.000
MLLW CH, Inorganic Debris, Toxic Organics, Toxic Metals w/o Mercury	50036	3.3	1.900	1,169.000	1.800	531.000	09/03/93	0.000	0.000
MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/ Mercury	40122	3.3	0.200	183.000	0.200	183.000	09/03/93	0.000	0.000
	50185	3.3	0.200	5.000	0.200	5.000	09/03/93	0.000	0.000

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
MLLW CH, Inorganic Sludges/Particulates, Toxic Metals w/o Mercury	00817	3.3	0.200	177.000	0.400	268.000	09/03/93	0.000	0.000
	10002	3.3	6.900	7,683.000	6.000	7,488.000	09/03/93	0.000	0.000
	10013	3.3	5.000	6,556.000	4.800	6,548.000	09/03/93	0.000	0.000
	10022	3.3	179.700	284,951.000	172.800	284,609.000	09/03/93	0.000	0.000
	20015	3.3	5.000	2,866.000	4.800	2,862.000	09/03/93	0.000	0.000
	20024	3.3	1.900	1,015.000	1.800	1,014.000	09/03/93	0.000	0.000
	20033	3.3	1.000	384.000	1.000	384.000	09/03/93	0.000	0.000
	20035	3.3	0.800	560.000	0.800	559.000	09/03/93	0.000	0.000
	20047	3.3	0.400	230.000	0.400	230.000	09/03/93	0.000	0.000
	20058	3.3	0.200	3.000	0.200	3.000	09/03/93	0.000	0.000
	20139	3.3	0.200	84.000	0.200	84.000	09/03/93	0.000	0.000
	30036	3.3	1.000	551.000	1.000	551.000	09/03/93	0.000	0.000
	30060	3.3	0.400	246.000	0.400	246.000	09/03/93	0.000	0.000
	40185	3.3	0.200	839.000	0.200	838.000	09/03/93	0.000	0.000
	40186	3.3	3.700	2,002.000	0.600	2,000.000	09/03/93	0.000	0.000

4886

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
	50091	3.3	0.200	63.000	0.200	63.000	09/03/93	0.000	0.000
	50102	3.3	0.400	54.000	0.400	54.000	09/03/93	0.000	0.000
	50148	3.3	113.800	399,799.000	109.400	110,080.000	09/03/93	0.000	5,000.000
	50165	3.3	11.900	14,962.000	11.400	14,944.000	09/03/93	0.000	0.000
	50169	3.3	0.200	202.000	0.200	202.000	09/03/93	1.000	1,136.000
	50173	3.3	3.300	4,805.000	3.200	4,799.000	09/03/93	0.000	0.000
	50174	3.3	5.400	20,042.000	10.200	9,099.000	09/03/93	0.000	0.000
	50180	3.3	7.900	10,955.000	7.600	10,942.000	09/03/93	0.000	0.000
	50188	3.3	2.500	1,888.000	2.400	1,885.000	09/03/93	0.000	0.000
	50293	3.3	5.000	3,564.000	4.800	3,560.000	09/03/93	0.000	0.000
	50314	3.3	0.200	114.000	0.200	114.000	09/03/93	0.000	0.000
	50323	3.3	142.000	111,981.000	137.200	111,846.000	09/03/93	0.000	0.000
	50349	3.3	0.200	87.000	0.200	87.000	09/03/93	0.000	0.000
	50351	3.3	0.200	267.000	0.200	267.000	09/03/93	0.000	0.000
	50387	3.3	0.400	324.000	0.400	324.000	09/03/93	0.000	0.000
	50405	3.3	0.600	1,454.000	0.800	298.000	09/03/93	0.000	0.000

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
	50406	3.3	5.600	13,565.000	5.400	2,945.000	09/03/93	0.000	0.000
	20027	3.3	0.400	245.000	0.600	245.000	09/03/93	0.000	0.000
MLLW CH, Inorganic Sludges/Particulates, Toxic Organics	00588	3.3	1.700	1,599.000	1.600	1,557.000	09/03/93	0.000	0.000
	30004	3.3	112.300	66,404.000	108.000	66,340.000	09/03/93	0.000	0.000
	50079	3.3	4.400	2,771.000	4.200	2,768.000	09/03/93	0.000	0.000
	50100	3.3	0.800	525.000	0.800	524.000	09/03/93	0.000	0.000
	50113	3.3	4.000	1,489.000	3.800	1,487.000	09/03/93	0.000	0.000
	50129	3.3	7.900	6,159.000	7.600	6,151.000	09/03/93	0.000	0.000
	50131	3.3	0.500	56.000	1.000	56.000	09/03/93	0.000	0.000
	50152	3.3	8.700	13,663.000	8.400	13,646.000	09/03/93	0.000	0.000
	50154	3.3	33.900	21,092.000	32.600	21,067.000	09/03/93	0.000	0.000
	50175	3.3	1.000	500.000	1.000	500.000	09/03/93	0.000	0.000
	50183	3.3	0.400	216.100	0.400	216.100	09/03/93	0.000	0.000
	60149	3.3	52.200	40,761.000	50.200	40,712.000	09/03/93	0.000	0.000
	60152	3.3	71.800	75,624.000	69.200	75,533.000	09/03/93	0.000	0.000

49

48 89

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
MLLW CH, Inorganic Sludges/Particulates, Toxic Organics, Toxic Metals w/o Mercury	50170	3.3	0.800	602.000	0.800	602.000	09/03/93	0.000	0.000
MLLW CH, Lab Packs w/o Metals	10034	3.3	0.200	3.000	0.200	3.000	09/03/93	0.000	0.000
	10035	3.3	0.200	20.000	0.200	20.000	09/03/93	0.000	0.000
MLLW CH, Organic Debris, Toxic Metals w/ Mercury	00389	3.3	0.200	25.000	0.200	25.000	09/03/93	2,300.000	273.000
MLLW CH, Organic Debris, Toxic Metals w/o Mercury	10017	3.3	0.600	77.000	0.600	77.000	09/03/93	0.000	0.000
	20120	3.3	0.400	190.000	0.400	190.000	09/03/93	0.000	0.000
	50058	3.3	0.200	12.000	0.200	12.000	09/03/93	0.000	0.000
	50061	3.3	0.200	50.000	0.200	50.000	09/03/93	0.000	0.000
MLLW CH, Organic Debris, Toxic Organics	00180	3.3	0.200	25.000	0.200	25.000	09/03/93	0.000	0.000
	00396	3.3	0.400	71.000	0.400	74.000	09/03/93	1,300.000	227.000
	00398	3.3	0.200	19.000	0.200	19.000	09/03/93	1,200.000	114.000
	00743	3.3	0.200	18.000	0.200	18.000	09/03/93	0.000	0.000

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
	01501	3.3	1.000	230.000	1.000	230.000	09/03/93	0.000	0.000
	10012	3.3	6.000	2,649.000	5.800	2,645.000	09/03/93	0.000	0.000
	10024	3.3	0.400	100.000	0.400	99.000	09/03/93	0.000	0.000
	30075	3.3	0.200	14.000	0.200	14.000	09/03/93	0.000	0.000
	50002	3.3	0.600	60.000	0.600	60.000	09/03/93	0.000	0.000
	50010	3.3	0.200	212.000	0.200	204.000	09/03/93	0.000	0.000
	50025	3.3	0.400	414.000	0.400	13.000	09/03/93	0.000	0.000
	50359	3.3	0.800	1,091.000	0.800	225.000	09/03/93	0.000	0.000
MLLW CH, Organic Debris, Toxic Organics, Toxic Metals w/o Mercury	00376	3.3	0.200	43.000	0.200	43.000	09/03/93	0.000	0.000
	00380	3.3	0.200	6.000	0.200	6.000	09/03/93	0.000	0.000
	00387	3.3	1.200	269.000	1.200	268.000	09/03/93	8.400	1,818.000
	00404	3.3	0.400	59.000	0.400	59.000	09/03/93	1.600	227.000
	00410	3.3	0.400	130.000	0.400	129.000	09/03/93	10.500	682.000
	00413	3.3	0.200	5.000	0.200	5.000	09/03/93	0.000	0.000
MLLW CH, Organic Liquid, Ignitable, Reactive,	00425	3.3	0.500	345.000	7.000	448.000	09/03/93	0.098	68.000

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
or Corrosive Only									
	00428	3.3	0.019	0.454	0.200	0.454	09/03/93	0.000	0.000
	00508	3.3	0.200	220.000	0.200	220.000	09/03/93	0.000	0.000
	00533	3.3	0.200	130.000	0.200	130.000	09/03/93	0.000	0.000
	00587	3.3	0.200	113.000	0.200	113.000	09/03/93	0.000	0.000
	00768	3.3	6.400	6,545.000	0.400	6,538.000	09/03/93	0.000	0.000
	00870	3.3	0.200	90.000	0.200	89.000	09/03/93	5.100	455.000
	01182	3.3	1.000	89.000	0.200	35.000	09/03/93	5.200	455.000
	01337	3.3	0.200	170.000	0.200	169.000	09/03/93	0.000	0.000
	01432	3.3	1.000	671.000	1.200	869.000	09/03/93	5.300	3,409.000
	02224	3.3	0.832	356.000	0.832	356.000	09/03/93	0.000	0.000
MLLW CH, Organic Liquid, Toxic Metals w/o Mercury	00393	3.3	0.400	317.000	0.400	316.000	09/03/93	2.100	1,591.000
	50095	3.3	0.200	168.000	0.200	168.000	09/03/93	0.000	0.000
	01952	3.1	38.100	51,467.000	38.100	51,467.000	09/03/93	0.000	0.000
MLLW CH, Organic Liquid, Toxic Organics	00385	3.3	0.200	108.000	0.200	108.000	09/03/93	0.000	0.000

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
	00386	3.3	0.416	633.000	0.416	633.000	09/03/93	1.792	2,727.000
	00397	3.3	0.200	103.000	0.200	103.000	09/03/93	1.000	455.000
	00418	3.3	0.700	607.000	9.800	758.000	09/03/93	1.200	1,023.000
	00419	3.3	0.200	114.000	2.400	299.000	09/03/93	1.000	455.000
	00421	3.3	0.200	704.000	2.000	140.000	09/03/93	0.000	0.000
	00422	3.3	0.019	15.000	0.200	15.000	09/03/93	0.000	0.000
	00426	3.3	2.900	2,065.000	36.400	2,457.000	09/03/93	5.600	4,091.000
	00438	3.3	0.200	177.000	0.200	177.000	09/03/93	0.000	0.000
	00447	3.3	0.400	207.000	0.400	207.000	09/03/93	0.000	0.000
	00455	3.3	0.208	111.000	0.208	111.000	09/03/93	0.000	0.000
	00457	3.3	0.200	224.000	0.200	224.000	09/03/93	0.000	0.000
	00459	3.3	0.200	205.000	0.200	204.000	09/03/93	0.000	0.000
	00478	3.3	0.200	144.000	0.200	143.000	09/03/93	0.000	0.000
	00485	3.3	0.200	92.000	0.200	92.000	09/03/93	0.000	0.000
	00493	3.3	0.200	58.000	0.200	57.000	09/03/93	0.000	0.000
	00507	3.3	0.200	112.000	0.200	112.000	09/03/93	0.000	0.000

48 86

53

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
	00632	3.3	0.600	318.000	0.600	318.000	09/03/93	0.000	0.000
	00633	3.3	2.500	1,292.000	2.400	1,290.000	09/03/93	0.000	0.000
	00638	3.3	0.200	142.000	0.200	142.000	09/03/93	0.000	0.000
	00658	3.3	0.200	40.000	0.200	40.000	09/03/93	0.000	0.000
	01706	3.3	1.400	1,466.000	2.200	2,035.000	09/03/93	0.000	0.000
	01708	3.3	0.200	58.000	0.400	246.000	09/03/93	0.000	0.000
	01709	3.3	0.200	161.900	0.200	1,603.000	09/03/93	1.000	455.000
	01725	3.3	0.600	468.000	1.800	1,437.000	09/03/93	0.000	0.000
	01998	3.3	0.380	34.000	1.200	104.000	09/03/93	0.285	227.000
	10027	3.3	2.900	2,507.000	2.800	2,502.000	09/03/93	0.000	0.000
	10030	3.3	0.600	82.000	0.600	82.000	09/03/93	0.000	0.000
	10032	3.3	0.400	277.000	0.400	277.000	09/03/93	0.000	0.000
	20003	3.3	58.200	56,900.000	56.000	56,832.000	09/03/93	0.000	0.000
	20021	3.3	3.100	2,640.000	3.000	2,637.000	09/03/93	0.000	0.000
	20028	3.3	10.000	2,743.000	2.000	1,245.000	09/03/93	0.000	0.000
	20054	3.3	0.200	171.000	0.200	171.000	09/03/93	0.000	0.000

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
	20055	3.3	0.200	188.000	0.200	3.000	09/03/93	0.000	0.000
	20142	3.3	0.400	15.000	0.400	15.000	09/03/93	0.000	0.000
	30033	3.3	3.500	2,547.000	3.400	2,544.000	09/03/93	0.000	0.000
	30034	3.3	17.600	12,481.000	17.000	12,466.000	09/03/93	0.000	0.000
	50022	3.3	0.200	11.000	0.200	11.000	09/03/93	0.000	0.000
	60331	3.3	4.400	3,945.000	4.200	3,941.000	09/03/93	0.000	0.000
MLLW CH, Organic Liquid, Toxic Organics, Toxic Metals w/ Mercury	00414	3.3	0.400	199.000	0.400	198.000	09/03/93	0.000	0.000
	00479	3.3	0.400	436.000	0.400	436.000	09/03/93	1.100	1,136.000
	02259	3.3	0.208	191.000	0.208	191.000	09/03/93	0.000	0.000
	10006	3.3	0.200	122.000	0.200	122.000	09/03/93	0.000	0.000
MLLW CH, Organic Liquid, Toxic Organics, Toxic Metals w/o Mercury	00379	3.3	0.200	77.000	0.200	77.000	09/03/93	0.000	0.000
	00388	3.3	6.700	5,320.000	6.400	5,313.000	09/03/93	22.800	18,182.000
	00400	3.3	0.200	105.000	0.200	105.000	09/03/93	1.100	568.000
	00402	3.3	0.800	404.000	0.800	404.000	09/03/93	6.700	682.000

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
	00408	3.3	0.200	146.000	0.200	146.000	09/03/93	1.000	682.000
	00412	3.3	0.200	10.000	0.200	10.000	09/03/93	0.000	0.000
	00514	3.3	1.200	573.000	1.200	572.000	09/03/93	0.000	0.000
	00716	3.3	0.600	443.000	0.400	267.000	09/03/93	1.600	1,136.000
	00777	3.3	0.400	268.000	0.400	268.000	09/03/93	5.100	682.000
	01412	3.3	0.208	188.000	0.200	188.000	09/03/93	0.000	0.000
	01447	3.3	0.208	56.000	0.208	56.000	09/03/93	0.000	0.000
	02235	3.3	2.080	1,749.000	2.080	1,749.000	09/03/93	0.000	0.000
	10004	3.3	4.600	3,483.000	4.400	3,479.000	09/03/93	0.000	0.000
	10029	3.3	1.700	1,389.000	1.600	1,387.000	09/03/93	0.000	0.000
	20031	3.3	1.900	1,264.000	1.800	1,263.000	09/03/93	0.000	0.000
	20038	3.3	0.400	288.000	0.400	288.000	09/03/93	0.000	0.000
	50072	3.3	0.600	672.000	0.600	671.000	09/03/93	0.000	0.000
	50096	3.3	0.200	153.000	0.200	153.000	09/03/93	0.000	0.000
	60068	3.3	0.600	498.000	0.800	510.000	09/03/93	0.000	0.000
	60069	3.3	2.700	1,885.000	2.600	1,883.000	09/03/93	0.000	0.000

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
MLLW CH, Organic Sludges/Particulates, Ignitable, Reactive, or Corrosive Only	30045	3.3	0.600	423.000	0.600	423.000	09/03/93	0.000	0.000
	30081	3.3	0.200	387.000	0.200	387.000	09/03/93	0.000	0.000
	50008	3.3	32.200	36,887.000	31.000	36,832.000	09/03/93	0.000	0.000
	50068	3.3	14.000	14,037.000	13.400	13,990.000	09/03/93	0.000	0.000
	50346	3.3	0.400	292.000	0.400	292.000	09/03/93	0.000	0.000
	50347	3.3	0.200	180.000	0.200	179.000	09/03/93	0.000	0.000
	50355	3.3	3.300	3,680.000	3.200	3,675.000	09/03/93	0.000	0.000
MLLW CH, Organic Sludges/Particulates, Toxic Metals w/o Mercury	20007	3.3	64.700	31,763.000	62.200	31,716.000	09/03/93	0.000	0.000
	20145	3.3	0.400	271.000	0.400	271.000	09/03/93	0.000	0.000
	50177	3.3	0.800	835.000	0.800	834.000	09/03/93	0.000	0.000
	50202	3.3	0.200	88.000	0.200	88.000	09/03/93	0.000	0.000
	50204	3.3	0.200	153.000	0.200	153.000	09/03/93	0.000	0.000
	30047	3.3	1.000	79.000	0.200	36.000	09/03/93	0.000	0.000
MLLW CH, Organic	00194	3.3	0.200	195.000	0.200	194.000	09/03/93	0.000	0.000

48 86

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
Sludges/Particulates, Toxic Organics									
	00390	3.3	0.800	470.000	0.800	469.000	09/03/93	1.400	795.000
	00448	3.3	0.200	260.000	0.200	260.000	09/03/93	0.000	0.000
	00456	3.3	0.400	508.000	0.400	508.000	09/03/93	0.000	0.000
	00584	3.3	1.700	1,117.000	1.600	1,115.000	09/03/93	0.000	0.000
	01532	3.3	423.000	386,391.000	408.000	387,117.000	09/03/93	0.000	0.000
	10003	3.3	2.900	2,593.000	2.800	2,590.000	09/03/93	0.000	0.000
	10010	3.3	109.600	77,771.000	105.800	77,667.000	09/03/93	0.000	0.000
	10026	3.3	9.600	7,792.000	9.200	7,782.000	09/03/93	0.000	0.000
	10031	3.3	0.600	595.000	0.600	594.000	09/03/93	0.000	0.000
	20006	3.3	26.400	16,417.000	25.400	16,397.000	09/03/93	0.000	0.000
	20037	3.3	0.600	363.000	0.600	362.000	09/03/93	0.000	0.000
	20045	3.3	0.200	50.000	0.200	50.000	09/03/93	0.000	0.000
	20048	3.3	0.200	9.000	0.200	9.000	09/03/93	0.000	0.000
	30005	3.3	16.400	15,563.000	15.800	15,541.000	09/03/93	0.000	0.000
	30010	3.3	11.000	10,624.000	10.600	10,611.000	09/03/93	0.000	0.000

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
	30026	3.3	5.400	3,972.000	5.400	3,968.000	09/03/93	0.000	0.000
	30037	3.3	0.800	455.000	0.800	454.000	09/03/93	0.000	0.000
	30042	3.3	0.800	593.000	0.800	592.000	09/03/93	0.000	0.000
	30046	3.3	2.100	1,866.000	2.000	1,864.000	09/03/93	0.000	0.000
	50085	3.3	0.200	56.000	0.200	56.000	09/03/93	0.000	0.000
	50101	3.3	145.400	160,076.000	139.800	161,866.000	09/03/93	0.000	0.000
	50200	3.3	0.200	90.000	0.200	90.000	09/03/93	0.000	0.000
	50339	3.3	2.300	1,603.000	2.200	1,601.000	09/03/93	0.000	0.000
	60119	3.3	3.300	2,972.000	3.200	2,968.000	09/03/93	0.000	0.000
	60123	3.3	0.200	40.000	0.200	40.000	09/03/93	0.000	0.000
	00517	3.3	0.400	426.000	0.400	426.000	09/03/93	0.000	0.000
	30018	3.3	4.400	3,235.000	4.200	3,231.000	09/03/93	0.000	0.000
MLLW CH, Organic Sludges/Particulates, Toxic Organics, Toxic Metals w/o Mercury	10007	3.3	0.600	430.000	0.600	430.000	09/03/93	0.000	0.000
	10009	3.3	0.400	133.000	0.400	133.000	09/03/93	0.000	0.000
	10016	3.3	1.200	1,353.000	1.200	1,352.000	09/03/93	0.000	0.000

48 86

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
	10021	3.3	0.400	311.000	0.400	311.000	09/03/93	0.000	0.000
	10028	3.3	2.100	1,478.000	2.000	1,476.000	09/03/93	0.000	0.000
	50070	3.3	0.400	333.000	0.400	332.000	09/03/93	0.000	0.000
MLLW CH, Reactive Metals	00700	3.3	0.200	75.000	0.200	75.000	09/03/93	0.000	0.000
	30051	3.3	0.200	20.000	0.200	7.000	09/03/93	0.000	0.000
	50089	3.3	35.200	13,238.000	34.000	13,348.000	09/03/93	0.000	0.000
	50090	3.3	2.300	966.000	2.200	965.000	09/03/93	0.000	0.000
MLLW CH, Soils, Toxic Metals w/o Mercury	00538	3.3	0.200	296.000	0.200	296.000	09/03/93	0.000	0.000
	00539	3.3	0.400	692.000	0.400	691.000	09/03/93	0.000	0.000
	00540	3.3	0.200	331.000	0.200	331.000	09/03/93	0.000	0.000
	00541	3.3	0.400	570.000	0.400	569.000	09/03/93	0.000	0.000
	00542	3.3	0.200	305.000	0.200	304.000	09/03/93	0.000	0.000
	00543	3.3	0.200	259.000	0.200	259.000	09/03/93	0.000	0.000
	00545	3.3	0.200	305.000	0.200	304.000	09/03/93	0.000	0.000
	30027	3.3	1.900	2,870.000	1.800	2,867.000	09/03/93	0.000	0.000

Table 8.1 - (Part 1 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Treatability Groups	Waste Stream(s)		Inventory as of December 1992		Current Inventory		Current Inv. Date	Projected Generation (1993-1997)	
	ID #	CSTP Chap.	m3	kg	m3	kg		m3	kg
	50098	3.3	26.600	35,720.000	25.600	35,677.000	09/03/93	0.000	0.000
MLLW CH, Soils, Toxic Organics	00580	3.3	0.400	382.000	0.400	382.000	09/03/93	0.000	0.000
	00661	3.3	0.200	216.000	0.200	216.000	09/03/93	0.000	0.000
	00720	3.3	0.200	250.000	0.200	250.000	09/03/93	0.000	0.000
	00776	3.3	0.200	155.000	0.200	154.000	09/03/93	0.000	0.000
	00819	3.3	0.400	414.000	0.400	414.000	09/03/93	0.000	0.000
	01841	3.3	1.200	1,514.000	1.200	1,512.000	09/03/93	0.000	0.000
	01842	3.3	0.200	19.000	0.200	19.000	09/03/93	0.000	0.000

Table 8.1 - (Part 2 of 3)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01691 MLLW, CH Aqueous Liquid, Ignitable, Reactive, or Corrosive Only	1	Deactivation	On-Site	UNH Treatment Facility	UNH Treatment Facility	0347	Exists, Could be Used for Mixed Wastes
		Non-LDR treatment - Precipitation	On-Site	UNH Treatment Facility	UNH Treatment Facility	0347	Exists, Could be Used for Mixed Wastes
		Non-LDR treatment - Filtration	On-Site	UNH Treatment Facility	UNH Treatment Facility	0347	Exists, Could be Used for Mixed Wastes
	2	Deactivation	On-Site	On-Site Treatment Unit	Neutralization	XXXX	Unplanned
	3	Non-LDR treatment - Liquid Extraction	On-Site	On-Site Treatment Unit	Liquid Extraction	XXXX	Unplanned
	4	Non-LDR treatment - Chemical Precipitation	On-Site	On-Site Treatment Unit	Chemical Precipitation	XXXX	Unplanned
	5	Deactivation	On-Site	On-Site Treatment Unit	Ion Exchange	XXXX	Unplanned
	6	Deactivation	On-Site	On-Site Treatment Unit	Reverse Osmosis	XXXX	Unplanned
	7	Non-LDR treatment - Calcination Pretreatment	On-Site	On-Site Treatment Unit	Calcination Pretreatment	XXXX	Unplanned
	8	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	9	Non-LDR treatment - Filtration	On-Site	On-Site Treatment Unit	Filtration	XXXX	Unplanned
	10	Non-LDR treatment -	On-Site	On Site Treatment Unit	Stabilization	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01691 MLLW CH, Aqueous Liquid, Ignitable, Reactive, or Corrosive Only		Stabilization					
	11	Non-LDR treatment - Adsorption	On-Site	On-Site Treatment Unit	Adsorption	XXXX	Unplanned
	12	Non-LDR treatment - Centrifugation	On-Site	On-Site Treatment Unit	Centrifugation	XXXX	Unplanned
	13	Deactivation	Hanford Site	300 Area Waste Acid Treatment System	PH Adjustment, Centrifugation, and Filtration	0534	Exists, Could be Used for Mixed Wastes
	14	Deactivation	Hanford Site	Mixed Waste Treatment Facility	Separation, Distillation	0537	Exists, Could be Used for Mixed Wastes
	15	Non-LDR treatment - Separation	Hanford Site	Mixed Waste Treatment Facility	Separation, Distillation	0537	Exists, Could be Used for Mixed Wastes
	16	Non-LDR treatment - Drying	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	17	Non-LDR treatment - Filtration	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	18	Deactivation	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	19	Non-LDR treatment - UV Oxidation	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	20	Non-LDR treatment - Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01691 MLLW CH, Aqueous Liquid, Ignitable, Reactive, or Corrosive Only	21	Non-LDR treatment - Stabilization	Hanford Site	Grout Treatment Facility	Grout Treatment Facility	0121	Exists, In Use for Mixed Wastes
	22	Non-LDR treatment - Stabilization	Hanford Site	Hanford Waste Vitrification Plant	Hanford Waste Vitrification Plant	0126	Planned and Approved
	23	Non-LDR treatment - Adsorption	Hanford Site	Waste Receiving and Processing Facility	WRAP I	0325	Planned and Approved
	24	Non-LDR treatment - Centrifugation	Hanford Site	300 Area Waste Acid Treatment System	PH Adjustment, Centrifugation, and Filtration	0534	Exists, Could be Used for Mixed Wastes
	25	Non-LDR treatment - Filtration	Hanford Site	300 Area Waste Acid Treatment System	PH Adjustment, Centrifugation, and Filtration	0534	Exists, Could be Used for Mixed Wastes
01692 MLLW CH, Aqueous Liquid, Ignitable, Reactive, or Corrosive Only	1	Deactivation	On-Site	UNH Treatment Facility	UNH Treatment Facility	0347	Exists, Could be Used for Mixed Wastes
		Non-LDR treatment - Precipitation	On-Site	UNH Treatment Facility	UNH Treatment Facility	0347	Exists, Could be Used for Mixed Wastes
		Non-LDR treatment - Filtration	On-Site	UNH Treatment Facility	UNH Treatment Facility	0347	Exists, Could be Used for Mixed Wastes
	2	Deactivation	On-Site	On-Site Treatment Unit	Neutralization	XXXX	Unplanned
	3	Non-LDR treatment - Liquid Extraction	On-Site	On-Site Treatment Unit	Liquid Extraction	XXXX	Unplanned
	4	Non-LDR treatment -	On-Site	On-Site Treatment Unit	Chemical Precipitation	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01692 MLLW CH, Aqueous Liquid, Ignitable, Reactive, or Corrosive Only		Chemical Precipitation					
	5	Deactivation	On-Site	On-Site Treatment Unit	Ion Exchange	XXXX	Unplanned
	6	Deactivation	On-Site	On-Site Treatment Unit	Reverse Osmosis	XXXX	Unplanned
	7	Non-LDR treatment - Calcination Pretreatment	On-Site	On-Site Treatment Unit	Calcination Pretreatment	XXXX	Unplanned
	8	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	9	Non-LDR treatment - Filtration	On-Site	On-Site Treatment Unit	Filtration	XXXX	Unplanned
	10	Non-LDR treatment - Reduction	On-Site	On-Site Treatment Unit	Reduction	XXXX	Unplanned
	11	Non-LDR treatment - Biodegradation	On-Site	On-Site Treatment Unit	Biodegradation	XXXX	Unplanned
	12	Non-LDR treatment - Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	13	Non-LDR treatment - Adsorption	On-Site	On-Site Treatment Unit	Adsorption	XXXX	Unplanned
	14	Non-LDR treatment - Centrifugation	On-Site	On-Site Treatment Unit	Centrifugation	XXXX	Unplanned
	15	Non-LDR treatment -	Hanford Site	300 Area Waste Acid	PH Adjustment,	0534	Exists, Could be Used

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01692 MLLW CH, Aqueous Liquid, Ignitable Reactive, or Corrosive Only		Filtration		Treatment System	Centrifugation, and Filtration		for Mixed Wastes
	16	Deactivation	Hanford Site	300 Area Waste Acid Treatment System	PH Adjustment, Centrifugation, and Filtration	0534	Exists, Could be Used for Mixed Wastes
	17	Deactivation	Hanford Site	Mixed Waste Treatment Facility	Separation, Distillation	0537	Exists, Could be Used for Mixed Wastes
	18	Non-LDR treatment - Separation	Hanford Site	Mixed Waste Treatment Facility	Separation, Distillation	0537	Exists, Could be Used for Mixed Wastes
	19	Non-LDR treatment - Drying	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	20	Non-LDR treatment - Filtration	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	21	Deactivation	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	22	Non-LDR treatment - UV Oxidation	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	23	Non-LDR treatment - Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned but UnApproved
	24	Non-LDR treatment - Stabilization	Hanford Site	Grout Treatment Facility	Grout Treatment Facility	0121	Exists, In Use for Mixed Wastes
	25	Non-LDR treatment -	Hanford Site	Hanford Waste Vitrification	Hanford Waste Vitrification	0126	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01692 MLLW CH, Aqueous Liquid, Ignitable, Reactive, or Corrosive Only		Vitrification		Plant	Plant		
	26	Non-LDR treatment - Adsorption	Hanford Site	Waste Receiving and Processing Facility	WRAP I	0325	Planned and Approved
	27	Non-LDR treatment - Centrifugation	Hanford Site	300 Area Waste Acid Treatment System	PH Adjustment, Centrifugation, and Filtration	0534	Exists, Could be Used for Mixed Wastes
	28	Non-LDR treatment - Filtration	Hanford Site	300 Area Waste Acid Treatment System	PH Adjustment, Centrifugation, and Filtration	0534	Exists, Could be Used for Mixed Wastes
02257	See ID# 1691						
00383 MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury	1	Neutralization	On-Site	UNH Treatment Facility	UNH Treatment Facility	0347	Exists, Could be Used for Mixed Wastes
		WW trtment for metals removal (aq liqs)	On-Site	UNH Treatment Facility	UNH Treatment Facility	0347	Exists, Could be Used for Mixed Wastes
		Non-LDR treatment - Filtration	On-Site	UNH Treatment Facility	UNH Treatment Facility	0347	Exists, Could be Used for Mixed Wastes
	2	WW trtment for metals removal (aq liqs)	On-Site	On-Site Treatment Unit	Adsorption	XXXX	Unplanned
	3	WW trtment for metals removal (aq liqs)	On-Site	On-Site Treatment Unit	Chemical Precipitation	XXXX	Unplanned
	4	WW trtment for metals removal (aq liqs)	On-Site	On-Site Treatment Unit	Demineralization	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00383 MLLW CH, Aqueous Liquid, Toxic Metals w/oMercury	5	WW trtment for metals removal (aq liqs)	On-Site	On-Site Treatment Unit	Flocculation	XXXX	Unplanned
	6	WW trtment for metals removal (aq liqs)	On-Site	On-Site Treatment Unit	Ion Exchange	XXXX	Unplanned
	7	WW trtment for metals removal (aq liqs)	On-Site	On-Site Treatment Unit	Oxidation/Reduction	XXXX	Unplanned
	8	WW trtment for metals removal (aq liqs)	On-Site	On-Site Treatment Unit	Reverse Osmosis	XXXX	Unplanned
	9	WW trtment for metals removal (aq liqs)	On-Site	On-Site Treatment Unit	Salts Dissolution	XXXX	Unplanned
	10	Non-LDR treatment - Calcination Pretreatment	On-Site	On-Site Treatment Unit	Calcination Pretreatment	XXXX	Unplanned
	11	Non-LDR treatment - Filtration	On-Site	On-Site Treatment Unit	Filtration	XXXX	Unplanned
	12	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	13	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	14	Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	15	Non-LDR treatment - Centrifugation	On-Site	On-Site Treatment Unit	Centrifugation	XXXX	Unplanned
	16	Non-LDR treatment -	On-Site	On-Site Treatment Unit	Chemical Fractionation	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00383 MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury		Chemical Fractionation					
	17	Non-LDR treatment - UV Oxidation	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	18	WW trtment for metals removal (aq liqs)	Hanford Site	300 Area Waste Acid Treatment System	Chromium Reduction	0533	Exists, Could be Used for Mixed Wastes
	19	Non-LDR treatment - Centrifugation	Hanford Site	300 Area Waste Acid Treatment System	PH Adjustment, Centrifugation and Filtration	0534	Exists, Could be Used for Mixed Wastes
	20	Non-LDR treatment - Filtration	Hanford Site	300 Area Waste Acid Treatment System	PH Adjustment, Centrifugation and Filtration	0534	Exists, Could be Used for Mixed Wastes
	21	Neutralization	Hanford Site	300 Area Waste Acid Treatment System	PH Adjustment, Centrifugation and Filtration	0534	Exists, Could be Used for Mixed Wastes
	22	Stabilization	Hanford Site	Grout Treatment Facility	Grout Treatment Facility	0121	Exists, In Use for Mixed Wastes
	23	Stabilization	Hanford Site	Hanford Waste Vitrification Plant	Hanford Waste Vitrification Plant	0126	Planned and Approved
	24	Non-LDR treatment - Distillation	Hanford Site	Mixed Waste Treatment Facility	Separation, Distillation	0537	Exists, Could be Used for Mixed Wastes
	25	Non-LDR treatment - Separation	Hanford Site	Mixed Waste Treatment Facility	Separation, Distillation	0537	Exists, Could be Used for Mixed Wastes
	26	Non-LDR treatment - Carbon Adsorption	Hanford Site	Pu Finishing Plant Water Disposal	Filtration, Ion Exchange, and Activated Charcoal	0538	Exists, Could be Used for Mixed Wastes

69

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00383 MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury	27	Non-LDR treatment - Filtration	Hanford Site	Pu Finishing Plant Water Disposal	Filtration, Ion Exchange, and Activated Charcoal	0538	Exists, Could be Used for Mixed Wastes
	28	WW trtment for metals removal (aq liqs)	Hanford Site	Pu Finishing Plant Water Disposal	Filtration, Ion Exchange, and Activated Charcoal	0538	Exists, Could be Used for Mixed Wastes
	29	Stabilization	Hanford Site	Waste Receiving and Process Facility	WRAP II A&B	0326	Planned and Approved
	30	WW trtment for metals removal (aq liqs)	Idaho National Engineering Lab	Bench Scale Treatments	Bench Scale Treatments	0248	Planned and Approved
	31	WW trtment for metals removal (aq liqs)	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	32	Neutralization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	33	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	34	Stabilization	Idaho National Engineering Lab	Idaho Waste Immobilization Facility	Idaho Waste Immobilization Facility	0260	Planned but UnApproved
	35	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
	36	Non-LDR treatment - Thermal Destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
	37	Non-LDR treatment - Chemical Fractionation	Idaho National Engineering Lab	Liquid Effluent Treatment and Disposal (LET&D)	Liquid Effluent Treatment and Disposal (LET&D)	0241	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00383 MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury	38	WW trtment for metals removal (aq liqs)	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	39	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	40	Non-LDR treatment - Calcination Pretreatment	Idaho National Engineering Lab	New Waste Calcining Facility	New Waste Calcining Facility	0240	Exists, In Use for Mixed Wastes
	41	Non-LDR treatment - Carbon Adsorption	Idaho National Engineering Lab	Portable Water Treatment System (PWTU)	Portable Water Treatment System (PWTU)	0239	Exists, In Use for Mixed Wastes
	42	Non-LDR treatment - Filtration	Idaho National Engineering Lab	Portable Water Treatment System (PWTU)	Portable Water Treatment System (PWTU)	0239	Exists, In Use for Mixed Wastes
	43	WW trtment for metals removal (aq liqs)	Idaho National Engineering Lab	Portable Water Treatment System (PWTU)	Portable Water Treatment System (PWTU)	0239	Exists, In Use for Mixed Wastes
	44	Neutralization	Idaho National Engineering Lab	Portable Water Treatment System (PWTU)	Portable Water Treatment System (PWTU)	0239	Exists, In Use for Mixed Wastes
	45	WW trtment for metals removal (aq liqs)	Idaho National Engineering Lab	TAN 726-A Treatment	TAN 726-A Treatment	0254	Exists, Could be Used for Mixed Wastes
	46	Non-LDR treatment - Incineration	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	47	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00383 MLLW CH, Aqueous Liquid, Toxic Metals w/oMercury	48	Neutralization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	49	Stabilization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	50	Neutralization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Neutralization Unit	0501	Planned but UnApproved
	51	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	52	Non-LDR treatment - Filtration	Lawrence Livermore National Lab	Area 514 WWFU	Area 514 WWFU	0230	Exists, In Use for Mixed Wastes
	53	Non-LDR treatment - Incineration	Los Alamos National Lab	Controlled Air Incinerator	Liquid Feed System	0312	Exists, Could be Used for Mixed Wastes
	54	WW trtment for metals removal (aq liqs)	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Detox Skid	0208	Planned and Approved
	55	WW trtment for metals removal (aq liqs)	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	56	WW trtment for metals removal (aq liqs)	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Plating Wastes Acids/Bases Skid	0207	Planned and Approved
	57	Neutralization	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Plating Wastes Acids/Bases Skid	0207	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00383 MLLW CH, Aqueous Liquid, Toxic Metals w/oMercury	58	Non-LDR treatment - Crushing	Los Alamos National Lab	Scintillation Vial Crusher - TA-84, Area L	Scintillation Vial Crusher	0204	Exists, In Use for Mixed Wastes
	59	Stabilization	Mound Facility	Mound Glass Melter	Mound Glass Melter	0261	Exists, Could be Used for Mixed Wastes
	60	Non-LDR treatment - Evaporation	Nevada Test Site	Nevada Test Site	Liquid Waste Treatment System	0511	Planned and Approved
	61	Neutralization	Oak Ridge K-25 Site	Central Neutralization Facility	Central Neutralization Facility	0155	Exists, In Use for Mixed Wastes
	62	WW trtment for metals removal (aq liqs)	Oak Ridge K-25 Site	K-25	K-1232 Wastewater Treatment Facility	0519	Exists, Could be Used for Mixed Wastes
	63	Non-LDR treatment - Evaporation	Oak Ridge K-25 Site	K-25	K-1232 Wastewater Treatment Facility	0519	Exists, Could be Used for Mixed Wastes
	64	Neutralization	Oak Ridge K-25 Site	K-25	K-1232 Wastewater Treatment Facility	0519	Exists, Could be Used for Mixed Wastes
	65	WW trtment for metals removal (aq liqs)	Oak Ridge K-25 Site	K-25	Non-Radiological Waste Treatment Plant	0520	Exists, In Use for Mixed Wastes
	66	Neutralization	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	67	Non-LDR treatment - Evaporation	Oak Ridge National Lab	Liquid Low Level Waste Evaporation Facility	Liquid Low Level Waste Evaporation Facility	0105	Exists, In Use for Mixed Wastes
	68	WW trtment for metals removal (aq liqs)	Oak Ridge National Lab	Liquid Low Level Waste Evaporation Facility	Liquid Low Level Waste Evaporation Facility	0105	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00383 MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury	69	Stabilization	Oak Ridge National Lab	Melton Valley Low-Level Waste Immobilization Facility	Melton Valley Low-Level Waste Immobilization Facility	0102	Exists, In Use for Mixed Wastes
	70	WW trtment for metals removal (aq liqs)	Oak Ridge National Lab	Process Waste Treatment Plant	Process Waste Treatment Plant	0104	Exists, In Use for Mixed Wastes
	71	Non-LDR treatment - Carbon Adsorption	Oak Ridge Y-12 Plant	Central Pollution Control Facility (CPCF)	Mopwater and Concentrated Waste System	0216	Exists, In Use for Mixed Wastes
	72	Neutralization	Oak Ridge Y-12 Plant	Central Pollution Control Facility (CPCF)	Mopwater and Concentrated Waste System	0216	Exists, In Use for Mixed Wastes
	73	Non-LDR treatment - Oil/Water Separation	Oak Ridge Y-12 Plant	Disposal Area Remedial Actions Liquid Storage Treatment	Disposal Area Remedial Actions Liquid Storage Treatment	0330	Exists, In Use for Mixed Wastes
	74	Non-LDR treatment - Air Stripping	Oak Ridge Y-12 Plant	Groundwater Treatment Facility	Groundwater Treatment Facility	0319	Exists, In Use for Mixed Wastes
	75	WW trtment for metals removal (aq liqs)	Oak Ridge Y-12 Plant	Plating Rinsewater Treatment Facility	Plating Rinsewater Treatment Facility	0221	Exists, In Use for Mixed Wastes
	76	Non-LDR treatment - Filtration	Oak Ridge Y-12 Plant	Plating Rinsewater Treatment Facility	Plating Rinsewater Treatment Facility	0221	Exists, In Use for Mixed Wastes
	77	Neutralization	Oak Ridge Y-12 Plant	Plating Rinsewater Treatment Facility	Plating Rinsewater Facility	0221	Exists, In Use for Mixed Wastes
	78	Non-LDR treatment - Biodenitrification	Oak Ridge Y-12 Plant	West End Treatment Facility	Wastewater Treatment	0224	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00383 MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury	79	WW trtment for metals removal (aq liqs)	Oak Ridge Y-12 Plant	West End Treatment Facility	Wastewater Treatment	0224	Exists, In Use for Mixed Wastes
	80	Neutralization	Oak Ridge Y-12 Plant	West End Treatment Facility	Wastewater Treatment	0224	Exists, In Use for Mixed Wastes
	81	WW trtment for metals removal (aq liqs)	Paducah Gaseous Diffusion Plant	C-400-D Lime Precipitation Unit	C-400-D Lime Precipitation Unit	0262	Exists, In Use for Mixed Wastes
	82	Neutralization	Paducah Gaseous Diffusion Plant	C-400-D Lime Precipitation Unit	C-400-D Lime Precipitation Unit	0262	Exists, In Use for Mixed Wastes
	83	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	84	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	85	WW trtment for metals removal (aq liqs)	Portsmouth Gaseous Diffusion Plant	x-616 Liquid Effluent Control Facility	x-616 Liquid Effluent Control Facility	0512	Exists, Could be Used for Mixed Wastes
	86	Non-LDR treatment - Filtration	Porstmouth Gaseous Diffusion Plant	x-616 Liquid Effluent Control Facility	x-616 Liquid Effluent Control Facility	0512	Exists, Could be Used for Mixed Wastes
	87	Non-LDR treatment - Filtration	Portsmouth Gaseous Diffusion Plant	x-705 Decontamination Facility	Microfiltration	0313	Exists, In Use for Mixed Wastes
	88	Neutralization	Portsmouth Gaseous	x-705 Decontamination Facility	Microfiltration	0313	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00383 MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury			Diffusion Plant				
	89	Non-LDR treatment - Biodenitrification	Portsmouth Gaseous Diffusion Plant	x-705 Decontamination Facility	Uranium Recovery System	0311	Exists, In Use for Mixed Wastes
	90	Non-LDR treatment - Filtration	Portsmouth Gaseous Diffusion Plant	x-705 Decontamination Facility	Uranium Recovery System	0311	Exists, In Use for Mixed Wastes
	91	WW trtment for metals removal (aq liqs)	Portsmouth Gaseous Diffusion Plant	x-705 Decontamination Facility	Uranium Recovery System	0311	Exists, In Use for Mixed Wastes
	92	Non-LDR treatment - Liquid Extraction	Portsmouth Gaseous Diffusion Plant	x-705 Decontamination Facility	Uranium Recovery System	0311	Exists, In Use for Mixed Wastes
	93	Neutralization	Portsmouth Gaseous Diffusion Plant	x-705 Decontamination Facility	Uranium Recovery System	0311	Exists, In Use for Mixed Wastes
	94	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	95	WW trtment for metals removal (aq liqs)	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	96	Deactivation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	97	Non-LDR treatment -	Rocky Flats Plant	Aqueous Process Waste	Wastewater	0001	Exists, In Use for

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
		Filtration		Treatment: Building 774			Mixed Wastes
00383	See ID# 594 for additional options						
00594 MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury	98	Neutralization	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	99	Deactivation	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	100	Non-LDR treatment - Decontamination	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	101	Non-LDR treatment - Evaporation	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	102	Stabilization	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	103	Neutralization	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	104	Non-LDR treatment - Filtration	Rocky Flats Plant	Fabric Filtration: Buildings 444, 447, and 460	Fabric Filtration: Buildings 444, 447, and 460	0006	Exists, In Use for Mixed Wastes
	105	Stabilization	Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	0341	Planned but UnApproved
	106	Stabilization	Rocky Flats Plant	Miscellaneous Waste Handling and Immobilization: Bldg 774	Miscellaneous Waste Handling and Immobilization: Bldg. 774	0338	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00594 MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury	107	WW trtment for metals removal (aq liqs)	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	108	Stabilization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	109	Neutralization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	110	Non-LDR treatment - Evaporation	Rocky Flats Plant	Modular Surge Tanks and Building 910 Evaporator	Evaporation/Immobilization	0543	Exists, In Use for Mixed Wastes
	111	Stabilization	Rocky Flats Plant	Modular Surge Tanks and Building 910 Evaporator	Evaporation/Immobilization	0543	Exists, In Use for Mixed Wastes
	112	Stabilization	Rocky Flats Plant	Pondcrete Solidification Process: Building 788	Pondcrete Solidification Process: Building 788	0018	Exists, Could be Used for Mixed Wastes
	113	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	114	Non-LDR treatment - Thermal Destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	115	Non-LDR treatment - Compaction	Sandia National Lab - New Mexico	Radioactive and Mixed Waste Management Facility	Radioactive and Mixed Waste Management Facility	0213	Planned and Approved
	116	Stabilization	Savannah River Site	Consolidated Incineration Facility	CIF Ashcrete	0143	Planned and Approved
	117	WW trtment for metals removal (aq liqs)	Savannah River Site	Consolidated Incineration Facility (CIF)	CIF Blowdown Treatment System	0531	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00594 MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury	118	Non-LDR treatment - Incineration	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Liquid Feed System	0361	Planned and Approved
	119	Non-LDR treatment - Carbon Adsorption	Savannah River Site	F/H Area Effluent Treatment Facility	F/H Area Effluent Treatment Facility	0300	Exists, In Use for Mixed Wastes
	120	WW trtment for metals removal (aq liqs)	Savannah River Site	F/H Area Effluent Treatment Facility	F/H Area Effluent Treatment Facility	0300	Exists, In Use for Mixed Wastes
	121	Non-LDR treatment - Evaporation	Savannah River Site	F/H Area Effluent Treatment Facility	F/H Area Effluent Treatment Facility	0300	Exists, In Use for Mixed Wastes
	122	Non-LDR treatment - Filtration	Savannah River Site	F/H Area Effluent Treatment System	F/H Area Effluent Treatment Facility	0300	Exists, In Use for Mixed Wastes
	123	Neutralization	Savannah River Site	F/H Area Effluent Treatment Facility	F/H Area Effluent Treatment Facility	0300	Exists, In Use for Mixed Wastes
	124	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Stabilization/Solidification Unit	0148	Planned and Approved
	125	WW trtment for metals removal (aq liqs)	Savannah River Site	M-Area Liquid Effluent Treatment Facility	M-Area Liquid Effluent Treatment Facility	0027	Exists, In Use for Mixed Wastes
	126	Non-LDR treatment - Filtration	Savannah River Site	M-Area Liquid Effluent Treatment Facility	M-Area Liquid Effluent Treatment Facility	0027	Exists, In Use for Mixed Wastes
	127	Neutralization	Savannah River Site	M-Area Effluent Treatment Facility	M-Area Effluent Treatment Facility	0027	Exists, In Use for Mixed Wastes
	128	Stabilization	Savannah River Site	M-Area Vendor Treatment	M-Area Vendor Treatment	0150	Planned and Approved

8

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00594 MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury	129	WW trtment for metals removal (aq liqs)	Savannah River Site	SRL Ion Exchange Treatment Probe	High Activity	0116	Exists, In Use for Mixed Wastes
	130	WW trtment for metals removal (aq liqs)	Savannah River Site	SRL Ion Exchange Treatment Probe	Low Activity	0301	Exists, In Use for Mixed Wastes
	131	Stabilization	Savannah River Site	Z-Area Saltstone Facility	Z-Area Saltstone Facility	0120	Exists, In Use for Mixed Wastes
	132	Non-LDR treatment - Incineration	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	133	Stabilization	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Stabilization - Commercial	0515	Exists, In Use for Mixed Wastes
	134	Non-LDR treatment - Carbon Adsorption	Oak Ridge Y-12 Plant	Groundwater Treatment Facility	Groundwater Treatment Facility	319	Exists, In Use for Mixed Wastes
	135	Non-LDR treatment - Drying	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	136	Non-LDR treatment - Evaporation	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	137	Non-LDR treatment - Filtration	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	138	WW trtment for metals removal (aq liqs)	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
00873	See ID# 383 and 594						

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01185	See ID#s 383 and 594						
01297	See ID# 383 and 594						
01751	See ID#s 383 and 594						
20046	See ID#s 383 and 594						
30080	See ID#s 383 and 594						
40181	See ID#s 383 and 594						
00844	See ID#s 383 and 594						
01180 MLLW CH, Aqueous Liquid, Toxic Organics	98	Organics destruction	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Liquid Feed System	0361	Planned and Approved
	99	WW trtment for organics (aq liqs)	Savannah River Site	F/H Area Effluent Treatment System	F/H Area Effluent Treatment System	0300	Exists, In Use for Mixed Wastes
	100	Non-LDR treatment - Chemical Precipitation	Savannah River Site	F/H Area Effluent Treatment System	F/H Area Effluent Treatment System	0300	Exists, In Use for Mixed Wastes
	101	Non-LDR treatment - Evaporation	Savannah River Site	F/H Area Effluent Treatment System	F/H Area Effluent Treatment System	0300	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01180 MLLW CH, Aqueous Liquid, Toxic Organics	102	Non-LDR treatment - Filtration	Savannah River Site	F/H Area Effluent Treatment System	F/H Area Effluent Treatment System	0300	Exists, In Use for Mixed Wastes
	103	Neutralization	Savannah River Site	F/H Area Effluent Treatment System	F/H Area Effluent Treatment System	0300	Exists, In Use for Mixed Wastes
	104	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Stabilization/Solidification Unit	0148	Planned and Approved
	105	Non-LDR treatment - Ion Exchange	Savannah River Site	SRL Ion Exchange Treatment Probe	High Activity	0116	Exists, In Use for Mixed Wastes
	106	Non-LDR treatment - Ion Exchange	Savannah River Site	SRL Ion Exchange Treatment Probe	Low Activity	0301	Exists, In Use for Mixed Wastes
	107	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	108	Non-LDR treatment - Ion Exchange	Savannah River Site	F/H Area Effluent Treatment System	F/H Area Effluent Treatment System	300	Exists, In Use for Mixed Wastes
	109	Non-LDR treatment - Evaporation	Rocky Flats Plant	Modular Surge Tanks and Building 910 Evaporator	Evaporation/Immobilization	0543	Exists, In Use for Mixed Wastes
	110	Stabilization	Rocky Flats Plant	Modular Surge Tanks and Building 910 Evaporator	Evaporation/Immobilization	0543	Exists, In Use for Mixed Wastes
	111	Stabilization	Rocky Flats Plant	Pondcrete Solidification Process: Building 788	Pondcrete Solidification Process: Building 788	0018	Exists, Could be Used for Mixed Wastes
	112	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01180 MLLW CH, Aqueous Liquid, Toxic Organics	113	Organics destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	114	Non-LDR treatment - Compaction	Sandia National Lab - New Mexico	Radioactive and Mixed Waste Management Facility	Radioactive and Mixed Waste Management Facility	0213	Planned and Approved
01536	See Waste Stream ID#s 358 and 1180						
00358 MLLW CH, Aqueous Liquid, Toxic Organics	1	WW trtment for organics (aq liqs)	On-Site	Plant 8 VOC Treatment System	Plant 8 VOC Treatment System	XXXX	Exists, Could be Used for Mixed Wastes
	2	WW trtment for organics (aq liqs)	On-Site	On-Site Treatment Unit	Adsorption	XXXX	Unplanned
	3	WW trtment for organics (aq liqs)	On-Site	On-Site Treatment Unit	Air Stripping	XXXX	Unplanned
	4	WW trtment for organics (aq liqs)	On-Site	On-Site Treatment Unit	Carbon Adsorption	XXXX	Unplanned
	5	WW trtment for organics (aq liqs)	On-Site	On-Site Treatment Unit	Liquid Extraction	XXXX	Unplanned
	6	WW trtment for organics (aq liqs)	On-Site	On-Site Treatment Unit	UV Oxidation	XXXX	Unplanned
	7	Organics destruction	On-Site	On-Site Treatment Unit	Biodegradation	XXXX	Unplanned
	8	Organics destruction	On-Site	On-Site Treatment Unit	Chemical Oxidation	XXXX	Unplanned
	9	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned

48 86

83

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00358 MLLW CH, Aqueous Liquid, Toxic Organics	10	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	11	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Treatment	XXXX	Unplanned
	12	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	13	Non-LDR treatment - Filtration	On-Site	On-Site Treatment Unit	Filtration	XXXX	Unplanned
	14	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	15	Non-LDR treatment - Evaporation	On-Site	On-Site Treatment Unit	Evaporation	XXXX	Unplanned
	16	Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	17	Non-LDR treatment - Evaporation	Energy Technology Engineering Centr	Radioactive Materials Disposal Facility	Evaporation/Ion Exchange	0508	Exists, Could be Used for Mixed Wastes
	18	Non-LDR treatment - Drying	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	19	Non-LDR treatment - Evaporation	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	20	Non-LDR treatment - Filtration	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	21	Non-LDR treatment - Ion Exchange	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00358 MLLW CH, Aqueous Liquid, Toxic Organics	22	Non-LDR treatment - Reverse Osmosis	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	23	Organics destruction	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	24	Stabilization	Hanford Site	Grout Treatment Facility	Grout Treatment Facility	0121	Exists, In Use for Mixed Wastes
	25	Stabilization	Hanford Site	Hanford Waste Vitrification Plant	Hanford Waste Vitrification Plant	0126	Planned and Approved
	26	Non-LDR treatment - Distillation	Hanford Site	Mixed Waste Treatment Facility	Separation, Distillation	0537	Exists, Could be Used for Mixed Wastes
	27	Non-LDR treatment - Separation	Hanford Site	Mixed Waste Treatment Facility	Separation, Distillation	0537	Exists, Could be Used for Mixed Wastes
	28	WW trtment for organics (aq liqs)	Hanford Site	Pu Finishing Plant Water Disposal	Filtration, Ion Exchange, and Activated Charcoal	0538	Exists, Could be Used for Mixed Wastes
	29	Non-LDR treatment - Filtration	Hanford Site	Pu Finishing Plant Water Disposal	Filtration, Ion Exchange, and Activated Charcoal	0538	Exists, Could be Used for Mixed Wastes
	30	Non-LDR treatment - Ion Exchange	Hanford Site	Pu Finishing Plant Water Disposal	Filtration, Ion Exchange, and Activated Charcoal	0538	Exists, Could be Used for Mixed Wastes
	31	Organics destruction	Hanford Site	Thermal Treatment Facility	Incineration	0532	Planned but UnApproved
	32	WW trtment for organics (aq liqs)	Hanford Site	Waste Receiving and Processing Facility	WRAP I	0325	Planned and Approved

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00358 MLLW CH, Aqueous Liquid, Toxic Organics	33	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP I	0325	Planned and Approved
	34	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	35	Non-LDR treatment - Ion Exchange	Idaho National Engineering Lab	Bench Scale Treatments	Bench Scale Treatments	0248	Planned and Approved
	36	Non-LDR treatment - Ion Exchange	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	37	Neutralization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	38	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	39	Stabilization	Idaho National Engineering Lab	Idaho Waste Immobilization Facility	Idaho Waste Immobilization Facility	0260	Planned but UnApproved
	40	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
	41	Organics destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
	42	Non-LDR treatment - Chemical Fractionation	Idaho National Engineering Lab	Liquid Effluent Treatment and Diposal (LET&D)	Liquid Effluent Treatment and Disposal (LET&D)	0241	Exists, In Use for Mixed Wastes
	43	Non-LDR treatment - Chemical Precipitation	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility	Mixed Low-Level Waste Treatment Facility	0324	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00358 MLLW CH, Aqueous Liquid, Toxic Organics				(MLLWTF)	(MLLWTF)		
	44	Organics destruction	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	45	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	46	Non-LDR treatment - Calcination Pretreatment	Idaho National Engineering Lab	New Waste Calcining Facility	New Waste Calcining Facility	0240	Exists, In Use for Mixed Wastes
	47	WW trtment for organics (aq liqs)	Idaho National Engineering Lab	Portable Water Treatment System (PWTU)	Portable Water Treatment System (PWTU)	0239	Exists, In Use for Mixed Wastes
	48	Non-LDR treatment - Filtration	Idaho National Engineering Lab	Portable Water Treatment System (PWTU)	Portable Water Treatment System (PWTU)	0239	Exists, In Use for Mixed Wastes
	49	Non-LDR treatment - Ion Exchange	Idaho National Engineering Lab	Portable Water Treatment System (PWTU)	Portable Water Treatment System (PWTU)	0239	Exists, In Use for Mixed Wastes
	50	Neutralization	Idaho National Engineering Lab	Portable Water Treatment System (PWTU)	Portable Water Treatment System (PWTU)	0239	Exists, In Use for Mixed Wastes
	51	Organics destruction	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	52	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	53	Neutralization	Idaho National	Waste Characterization	Waste Characterization	0259	Planned and Approved

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00358 MLLW CH, Aqueous Liquid, Toxic Organics			Engineering Lab	Facility	Facility		
	54	Stabilization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	55	Neutralization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Neutralization Unit	0501	Planned but UnApproved
	56	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	57	Non-LDR treatment - Filtration	Lawrence Livermore National Lab	Area 514 WWFU	Area 514 WWFU	0230	Exists, In Use for Mixed Wastes
	58	WW trtment for organics (aq liqs)	Lawrence Livermore National Lab	Area 514-1	Carbon Adsorption Unit	0236	Planned but UnApproved
	59	Organics destruction	Los Alamos National Lab	Controlled Air Incinerator	Liquid Feed System	0312	Exists, Could be Used for Mixed Wastes
	60	Organics destruction	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Detox Skid	0208	Planned and Approved
	61	Non-LDR treatment - Oxidation/Reduction	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	62	Non-LDR treatment - Crushing	Los Alamos National Lab	Scintillation Vial Crusher - TA-84, Area L	Scintillation Vial Crusher	0204	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00358 MLLW CH, Aqueous Liquid, Toxic Organics	63	Stabilization	Mound Facility	Mound Glass Melter	Mound Glass Melter	0261	Exists, Could be Used for Mixed Wastes.
	64	Non-LDR treatment - Evaporation	Nevada Test Site	Nevada Test Site	Liquid Waste Treatment System	0511	Planned and Approved
	65	Non-LDR treatment - Chemical Precipitation	Oak Ridge K-25 Site	K-25	K-1232 Wastewater Treatment Facility	0519	Exists, Could be Used for Mixed Wastes
	66	Non-LDR treatment - Evaporation	Oak Ridge K-25 Site	K-25	K-1232 Wastewater Treatment Facility	0519	Exists, Could be Used for Mixed Wastes
	67	Neutralization	Oak Ridge K-25 Site	K-25	K-1232 Wastewater Treatment Facility	0519	Exists, Could be Used for Mixed Wastes
	68	Non-LDR treatment - Ion Exchange	Oak Ridge K-25 Site	K-25	Non-Radiological Waste Treatment Plant	0520	Exists, In Use for Mixed Wastes
	69	Neutralization	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	70	Organics destruction	Oak Ridge K-25 Site	K-25 Site TSCA Incinerator	K-25 Site TSCA Incinerator	0305	Exists, In Use for Mixed Wastes
	71	Non-LDR treatment - Ion Exchange	Oak Ridge National Lab	Process Waste Treatment Plant	Process Waste Treatment Plant	0104	Exists, In Use for Mixed Wastes
	72	WW trtment for organics (aq liqs)	Oak Ridge Y-12 Plant	Central Pollution Control Facility (CPCF)	Mopwater and Concentrated Waste System	0216	Exists, In Use for Mixed Wastes
	73	Neutralization	Oak Ridge Y-12 Plant	Central Pollution Control Facility (CPCF)	Mopwater and Concentrated Waste System	0216	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00358 MLLW CH, Aqueous Liquid, Toxic Organics	74	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	75	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	76	WW trtment for organics (aq liqs)	Portsmouth Gaseous Diffusion Plant	x-622 Groundwater Treatment Facility	x-622 Groundwater Treatment Facility	0310	Exists, In Use for Mixed Wastes
	77	WW trtment for organics (aq liqs)	Portsmouth Gaseous Diffusion Plant	x-622T Groundwater Treatment Facility	x-622T Groundwater Treatment Facility	0315	Planned and Approved
	78	WW trtment for organics (aq liqs)	Portsmouth Gaseous Diffusion Plant	x-623 Groundwater Treatment Facility	x-623 Groundwater Treatment Facility	0316	Planned and Approved
	79	WW trtment for organics (aq liqs)	Portsmouth Gaseous Diffusion Plant	x-624 Groundwater Treatment Facility	x-624 Groundwater Treatment Facility	0308	Exists, In Use for Mixed Wastes
	80	WW trtment for organics (aq liqs)	Portsmouth Gaseous Diffusion Plant	x-701E Groundwater Treatment Facility	x-701E Groundwater Treatment Facility	0307	Exists, In Use for Mixed Wastes
	81	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	82	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00358 MLLW CH, Aqueous Liquid, Toxic Organics	83	Deactivation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	84	Non-LDR treatment - Filtration	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	85	Neutralization	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	86	Deactivation	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	87	Decontamination	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	88	Non-LDR treatment - Evaporation	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	89	Stabilization	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	90	Neutralization	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	91	Non-LDR treatment - Filtration	Rocky Flats Plant	Fabric Filtration: Buildings 444, 447, and 460	Fabric Filtration: Buildings 444, 447, and 460	0006	Exists, In Use for Mixed Wastes
	92	WW trtment for organics (aq liqs)	Rocky Flats Plant	Granular Activated Carbon Treatment	Carbon Adsorption	0544	Planned and Approved
	93	Stabilization	Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	0341	Planned but UnApproved

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00358 MLLW CH, Aqueous Liquid, Toxic Organics	94	Stabilization	Rocky Flats Plant	Miscellaneous Waste Handling and Immobilization: Bldg. 774	Miscellaneous Waste Handling and Immobilization: Bldg. 774	0338	Exists, In Use for Mixed Wastes
	95	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	96	Stabilization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	97	Neutralization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
10014	See Waste Stream ID#'s 358 and 1180						
01178 MLLW CH, Aqueous Liquid, Toxic Organics, Toxic Metals w/o Mercury	1	WW trtment for organics (aq liqs)	On-Site	On-Site Treatment Unit	Carbon Adsorption	XXXX	Unplanned
	2	WW trtment for organics (aq liqs)	On-Site	On-Site Treatment Unit	Oil/Water Separation	XXXX	Unplanned
	3	WW trtment for metals removal (aq liqs)	On-Site	On-Site Treatment Unit	Ion Exchange	XXXX	Unplanned
	4	WW trtment for metals removal (aq liqs)	On-Site	On-Site Treatment Unit	Reverse Osmosis	XXXX	Unplanned
	5	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	6	Non-LDR treatment -	On-Site	On-Site Treatment Unit	Filtration	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01178 MLLW CH, Aqueous Liquid, Toxic Organics, Toxic Metals w/o Mercury		Filtration					
	7	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	8	Non-LDR treatment - Calcination Pretreatment	On-Site	On-Site Treatment Unit	Calcination Pretreatment	XXXX	Unplanned
	9	Non-LDR treatment - Evaporation	On-Site	On-Site Treatment Unit	Evaporation	XXXX	Unplanned
	10	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	11	WW trtment for organics (aq liqs)	On-Site	On-Site Treatment Unit	UV Oxidation	XXXX	Unplanned
	12	WW trtment for metals removal (aq liqs)	On-Site	On-Site Treatment Unit	Chemical Precipitation	XXXX	Unplanned
	13	WW trtment for metals removal (aq liqs)	On-Site	On-Site Treatment Unit	Oxidation/Reduction	XXXX	Unplanned
	14	Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	15	Non-LDR treatment - Distillation	Hanford Site	Mixed Waste Treatment Facility	Separation, Distillation	0537	Exists, Could be Used for Mixed Wastes
	16	Non-LDR treatment - Separation	Hanford Site	Mixed Waste Treatment Facility	Separation, Distillation	0537	Exists, Could be Used for Mixed Wastes
	17	WW trtment for organics (aq liqs)	Hanford Site	Pu Finishing Plant Water Disposal	Filtration, Ion Exchange, and Activated Charcoal	0538	Exists, Could be Used for Mixed Wastes

48 86

93

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01178 MLLW CH, Aqueous Liquid, Toxic Organics, Toxic Metals w/o Mercury	18	Non-LDR treatment - Filtration	Hanford Site	Pu Finishing Plant Water Disposal	Filtration, Ion Exchange, and Activated Charcoal	0538	Exists, Could be Used for Mixed Wastes
	19	WW trtment for metals removal (aq liqs)	Hanford Site	Pu Finishing Plant Water Disposal	Filtration, Ion Exchange, and Activated Charcoal	0538	Exists, Could be Used for Mixed Wastes
	20	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	21	WW trtment for metals removal (aq liqs)	Idaho National Engineering Lab	Bench Scale Treatments	Bench Scale Treatments	0248	Planned and Approved
	22	WW trtment for metals removal (aq liqs)	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	23	Neutralization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	24	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	25	Stabilization	Idaho National Engineering Lab	Idaho Waste Immobilization Facility	Idaho Waste Immobilization Facility	0260	Planned but UnApproved
	26	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
	27	Organics destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
	28	Non-LDR treatment - Chemical Fractionation	Idaho National Engineering Lab	Liquid Effluent Treatment and Disposal (LET&D)	Liquid Effluent Treatment and Disposal (LET&D)	0241	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01178 MLLW CH, Aqueous Liquid, Toxic Organics, Toxic Metals w/o Mercury	29	WW trtment for metals removal (aq liqs)	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	30	Organics destruction	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	31	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	32	Non-LDR treatment - Calcination Pretreatment	Idaho National Engineering Lab	New Waste Calcining Facility	New Waste Calcining Facility	0240	Exists, In Use for Mixed Wastes
	33	WW trtment for organics (aq liqs)	Idaho National Engineering Lab	Portable Water Treatment System (PWTU)	Portable Water Treatment System (PWTU)	0239	Exists, In Use for Mixed Wastes
	34	Non-LDR treatment - Filtration	Idaho National Engineering Lab	Portable Water Treatment System (PWTU)	Portable Water Treatment System (PWTU)	0239	Exists, In Use for Mixed Wastes
	35	WW trtment for metals removal (aq liqs)	Idaho National Engineering Lab	Portable Water Treatment System (PWTU)	Portable Water Treatment System (PWTU)	0239	Exists, In Use for Mixed Wastes
	36	Neutralization	Idaho National Engineering Lab	Portable Water Treatment System (PWTU)	Portable Water Treatment System (PWTU)	0239	Exists, In Use for Mixed Wastes
	37	Organics destruction	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	38	Stabilization	Idaho National	WERF Waste Stabilization	WERF Waste Stabilization	0252	Exists, Could be Used

95

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01178 MLLW CH, Aqueous Liquid, Toxic Organics, Toxic Metals w/o Mercury			Engineering Lab	Unit	Unit		for Mixed Wastes
	39	Stabilization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	40	Neutralization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Neutralization Unit	0501	Planned but UnApproved
	41	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	42	Non-LDR treatment - Filtration	Lawrence Livermore National Lab	Area 514 WWFU	Area 514 WWFU	0230	Exists, In Use for Mixed Wastes
	43	Organics destruction	Los Alamos National Lab	Controlled Air Incinerator	Liquid Feed System	0312	Exists, Could be Used for Mixed Wastes
	44	WW trtment for metals removal (aq liqs)	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Detox Skid	0208	Planned and Approved
	45	WW trtment for metals removal (aq liqs)	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	46	Non-LDR treatment - Crushing	Los Alamos National Lab	Scintillation Vial Crusher - TA-84, Area L	Scintillation Vial Crusher	0204	Exists, In Use for Mixed Wastes
	47	Stabilization	Mound Facility	Mound Glass Melter	Mound Glass Melter	0261	Exists, Could be Used for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01178 MLLW CH, Aqueous Liquid, Toxic Organics, Toxic Metals w/o Mercury	48	Non-LDR treatment - Evaporation	Nevada Test Site	Nevada Test Site	Liquid Waste Treatment System	0511	Planned and Approved
	49	WW trtment for metals removal (aq liqs)	Oak Ridge K-25 Site	K-25	K-1232 Wastewater Treatment Facility	0519	Exists, Could be Used for Mixed Wastes
	50	Non-LDR treatment - Evaporation	Oak Ridge K-25 Site	K-25	K-1232 Wastewater Treatment Facility	0519	Exists, Could be Used for Mixed Wastes
	51	Neutralization	Oak Ridge K-25 Site	K-25	K-1232 Wastewater Treatment Facility	0519	Exists, Could be Used for Mixed Wastes
	52	WW trtment for metals removal (aq liqs)	Oak Ridge K-25 Site	K-25	Non-Radiological Waste Treatment Plant	0520	Exists, In Use for Mixed Wastes
	53	Neutralization	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	54	WW trtment for metals removal (aq liqs)	Oak Ridge National Lab	Process Waste Treatment Plant	Process Waste Treatment Plant	0104	Exists, In Use for Mixed Wastes
	55	WW trtment for organics (aq liqs)	Oak Ridge Y-12 Plant	Central Pollution Control Facility (CPCF)	Mopwater and Concentrated Waste System	0216	Exists, In Use for Mixed Wastes
	56	Neutralization	Oak Ridge Y-12 Plant	Central Pollution Control Facility (CPCF)	Mopwater and Concentrated Waste System	0216	Exists, In Use for Mixed Wastes
	57	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	58	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01178 MLLW CH, Aqueous Liquid, Toxic Organics, Toxic Metals w/o Mercury	59	Stabilization	Ramp Insutries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	60	WW trtment for metals removal (aq liqs)	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	61	Deactivation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	62	Non-LDR treatment - Filtration	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	63	Neutralization	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	64	Deactivation	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	65	Decontamination	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	66	Non-LDR treatment - Evaporation	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	67	Stabilization	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	68	Neutralization	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	69	Non-LDR treatment - Filtration	Rocky Flats Plant	Fabric Filtration: Buildings 444, 447, and 460	Fabric Filtration: Buildings 444, 447, and 460	0006	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01108 MLLW CH, Aqueous Liquid, Toxic Organics, Toxic Metals w/o Mercury	70	Stabilization	Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	0341	Planned but UnApproved
	71	Stabilization	Rocky Flats Plant	Miscellaneous Waste Handling and Immobilization: Bldg. 774	Miscellaneous Waste Handling and Immobilization: Bldg. 774	0338	Exists, In Use for Mixed Wastes
	72	WW trtment for metals removal (aq liqs)	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	73	Stabilization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	74	Neutralization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	75	Non-LDR treatment - Evaporation	Rocky Flats Plant	Modular Surge Tanks and Building 910 Evaporator	Evaporation/Immobilization	0543	Exists, In Use for Mixed Wastes
	76	Stabilization	Rocky Flats Plant	Modular Surge Tanks and Building 910 Evaporator	Evaporation/Immobilization	0543	Exists, In Use for Mixed Wastes
	77	Stabilization	Rocky Flats Plant	Pondcrete Solidification Process: Building 788	Pondcrete Solidification Process: Building 788	0018	Exists, Could be Used for Mixed Wastes
	78	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	79	Organics destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	80	Non-LDR treatment -	Sandia National	Radioactive and Mixed	Radioactive and Mixed	0213	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01178 MLLW CH, Aqueous Liquid, Toxic Organics, Toxic Metals w/o Mercury		Compaction	Lab - New Mexico	Waste Management Facility	Waste Management Facility		
	81	Organics destruction	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Liquid Feed System	0361	Planned and Approved
	82	WW trtment for organics (aq liqs)	Savannah River Site	F/H Area Effluent Treatment Facility	F/H Area Effluent Treatment Facility	0300	Exists, In Use for Mixed Wastes
	83	WW trtment for metals removal (aq liqs)	Savannah River Site	F/H Area Effluent Treatment Facility	F/H Area Effluent Treatment Facility	0300	Exists, In Use for Mixed Wastes
	84	Non-LDR treatment - Evaporation	Savannah River Site	F/H Area Effluent Treatment Facility	F/H Area Effluent Treatment Facility	0300	Exists, In Use for Mixed Wastes
	85	Non-LDR treatment - Filtration	Savannah River Site	F/H Area Effluent Treatment Facility	F/H Area Effluent Treatment Facility	0300	Exists, In Use for Mixed Wastes
	86	Neutralization	Savannah River Site	F/H Area Effluent Treatment Facility	F/H Area Effluent Treatment Facility	0300	Exists, In Use for Mixed Wastes
	87	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Stabilization/Solidification Unit	0148	Planned and Approved
	88	WW trtment for metals removal (aq liqs)	Savannah River Site	SRL Ion Exchange Treatment Probe	High Activity	0116	Exists, In Use for Mixed Wastes
	89	WW trtment for metals removal (aq liqs)	Savannah River Site	SRL Ion Exchange Treatment Probe	Low Activity	0301	Exists, In Use for Mixed Wastes
	90	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01178 MLLW CH, Aqueous Liquid, Toxic Organics, Toxic Metals w/o Mercury	91	Non-LDR treatment - Drying	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	92	Non-LDR treatment - Evaporation	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	93	Non-LDR treatment - Filtration	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	94	WW trtment for metals removal (aq liqs)	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	95	WW trtment for organics (aq liqs)	Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	0129	Planned and Approved
	96	Stabilization	Hanford Site	Grout Treatment Facility	Grout Treatment Facility	0121	Exists, In Use for Mixed Wastes
	97	Stabilization	Hanford Site	Hanford Waste Vitrification Plant	Hanford Waste Vitrification Plant	0126	Planned and Approved
01707	See ID# 1178						
01229	See ID# 1178						
01938	See ID# 1178						
00382 MLLW CH, Batteries (Lead Acid, Cadmium), Toxic Metals w/ Mercury	1	Mercury separation	On-Site	On-Site Treatment Unit	Hg Roasting/Retorting	XXXX	Unplanned
	2	Metals recovery	On-Site	On-Site Treatment Unit	Leaching	XXXX	Unplanned
	3	Metals recovery	On-Site	On-Site Treatment Unit	Electrochemical Metal Removal	XXXX	Unplanned

101

F-48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00382 MLLW CH, Batteries (Lead Acid, Cadmium), Toxic Metals w/ Mercury	4	Metals recovery	On-Site	On-Site Treatment Unit	Metal Melting	XXXX	Unplanned
	5	Neutralization	On-Site	On-Site Treatment Unit	Neutralization	XXXX	Unplanned
	6	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	7	Stabilization	On-Site	On-Site Treatment Unit	Solidification	XXXX	Unplanned
	8	Stabilization	On-Site	On-Site Treatment Unit	Grouting	XXXX	Unplanned
	9	Stabilization	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	10	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
00405	See ID# 382						
00423	See ID# 382						
00676	See ID# 382						
02211	See ID# 382						
00433 MLLW CH, Compressed Gas	1	Deactivation	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	2	Deactivation	On-Site	On-Site Treatment Unit	Adsorption	XXXX	Unplanned
		Deactivation	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	3	Deactivation	On-Site	On-Site Treatment Unit	Adsorption	XXXX	Unplanned
		Deactivation	On-Site	On-Site Treatment Unit	Chemical Oxidation/Reduction	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00433 MLLW CH, Compressed Gas	4	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
01987 MLLW CH, Elemental Lead (Activated and Non-Activated)	1	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	2	Non-LDR treatment - Immobilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	3	Non-LDR treatment - Recycling	On-Site	On-Site Treatment Unit	Recycling	XXXX	Unplanned
	4	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	5	Non-LDR treatment - Size Reduction	On-Site	On-Site Treatment Unit	Size Reduction	XXXX	Unplanned
	6	Non-LDR treatment - Stabilization (not Macroencapsulation)	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	7	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	8	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Unit2: CO2 Decontamination System	0257	Planned and Approved
	9	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Water Washing System	0303	Planned and Approved
	10	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes

103

F-48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01987 MLLW CH, Elemental Lead (Activated and Non-Activated)	11	Decontamination	Idaho National Engineering Lab	Idaho Waste Processing Facility	Debris Decontamination System	0304	Planned but UnApproved
	12	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Macroencapsulation System	0335	Planned but UnApproved
	13	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Sizing System	0504	Planned but UnApproved
	14	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	15	Non-LDR treatment - Recycling	Idaho National Engineering Lab	TAN 607	TAN 607 Recycling	0506	Planned but UnApproved
	16	Non-LDR treatment - Repackaging	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	17	Non-LDR treatment - Sorting	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	18	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Debris Sizing Unit	0503	Planned but UnApproved
	19	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Macroencapsulation Unit - INEL	0323	Planned but UnApproved
	20	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01987 MLLW CH, Elemental Lead (Activated and Non-Activated)	21	Decontamination	Los Alamos National Lab	Lead Decontamination Trailer	Lead Decontamination Trailer	0203	Exists, In Use for Mixed Wastes
	22	Non-LDR treatment - Recycling	Los Alamos National Lab	Lead Decontamination Trailer	Lead Decontamination Trailer	0203	Exists, In Use for Mixed Wastes
	23	Non-LDR treatment - Vitrification	Los Alamos National Lab	Waste Immobilization Facility	Waste Immobilization Facility	0510	Planned but UnApproved
	24	Non-LDR treatment - Stabilization	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment - Fixation/Stabilization	0219	Planned but UnApproved
	25	Non-LDR treatment - Size Reduction	Rocky Flats Plant	Size Reduction Vault: Building 776	Size Reduction Vault: Building 776	0012	Exists, In Use for Mixed Wastes
	26	Non-LDR treatment - Immobilization	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk Lead Treatment	0344	Planned but UnApproved
	27	Non-LDR treatment - Separation	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk Lead Treatment	0344	Planned but UnApproved
	28	Non-LDR treatment - Stabilization (not Macroencapsulation)	Sandia National Lab - New Mexico	Radioactive and Mixed Waste Management Facility	Radioactive and Mixed Waste Management Facility	0213	Planned and Approved
	29	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Macroencapsulation Unit - SRS	0144	Planned and Approved
	30	Non-LDR treatment - Stabilization (Macroencapsulation)	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Stabilization - Commercial	0515	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01987 MLLW CH, Elemental Lead (Activated and Non-Activated)	31	Non-LDR treatment - Stabilization (not Macroencapsulation)	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	32	Non-LDR treatment - Solidification	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
50358 MLLW CH, Heterogenous Debris, Ignitable Reactive, or Corrosive Only	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Decontamination	On-Site	On-Site Treatment Unit	CO2 Decontamination	XXXX	Unplanned
	3	Decontamination	On-Site	On-Site Treatment Unit	Debris Decontamination	XXXX	Unplanned
	4	Decontamination	On-Site	On-Site Treatment Unit	Surface Treatment	XXXX	Unplanned
	5	Decontamination	On-Site	On-Site Treatment Unit	Water Washing	XXXX	Unplanned
	6	Decontamination	On-Site	On-Site Treatment Unit	Thermal Desorption	XXXX	Unplanned
	7	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	8	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	9	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	10	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	11	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	12	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50358 MLLW CH, Heterogenous Debris, Ignitable Reactive, or Corrosive Only	13	Non-LDR treatment - Repackaging	On-Site	On-Site Treatment Unit	Repackaging	XXXX	Unplanned
	14	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	15	Non-LDR treatment - Shredding	On-Site	On-Site Treatment Unit	Shredding	XXXX	Unplanned
	16	Non-LDR treatment - Size Reduction	On-Site	On-Site Treatment Unit	Size Reduction	XXXX	Unplanned
	17	Non-LDR treatment - Sorting	On-Site	On-Site Treatment Unit	Sorting	XXXX	Unplanned
	18	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
50407	See ID# 50358						
50361 MLLW CH, Heterogenous Debris, Toxic Metals w/ Mercury	1	Decontamination	On-Site	On-Site Treatment Unit	CO2 Decontamination	XXXX	Unplanned
	2	Decontamination	On-Site	On-Site Treatment Unit	Debris Decontamination	XXXX	Unplanned
	3	Decontamination	On-Site	On-Site Treatment Unit	Surface Treatment	XXXX	Unplanned
	4	Decontamination	On-Site	On-Site Treatment Unit	Water Washing	XXXX	Unplanned
	5	Decontamination	On-Site	On-Site Treatment Unit	Thermal Desorption	XXXX	Unplanned
	6	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50361 MLLW CH, Heterogenous Debris, Toxic Metasl w/ Mercury	7	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	8	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	9	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	10	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	11	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned
	12	Non-LDR treatment - Repackaging	On-Site	On-Site Treatment Unit	Repackaging	XXXX	Unplanned
	13	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	14	Non-LDR treatment - Shredding	On-Site	On-Site Treatment Unit	Shredding	XXXX	Unplanned
	15	Non-LDR treatment - Size Reduction	On-Site	On-Site Treatment Unit	Size Reduction	XXXX	Unplanned
	16	Non-LDR treatment - Sorting	On-Site	On-Site Treatment Unit	Sorting	XXXX	Unplanned
	17	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	18	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50361 MLLW CH, Heterogenous Debris, Toxic Metals w/ Mercury	19	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	CO2 Decontamination System	0257	Planned and Approved
	20	Metals recovery	Idaho National Engineering Lab	HEPA Filter Leaching System (CPP-659)	HEPA Filter Leaching System (CPP-659)	0238	Exists, In Use for Mixed Wastes
	21	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Water Washing System	0303	Planned and Approved
	22	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	23	Decontamination	Idaho National Engineering Lab	Idaho Waste Processing Facility	Debris Decontamination System	0304	Planned but UnApproved
	24	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Macroencapsulation System	0335	Planned but UnApproved
	25	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Sizing System	0504	Planned but UnApproved
	26	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
	27	Non-LDR treatment - Thermal Destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
	28	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	29	Non-LDR treatment -	Idaho National	Mixed Low-Level Waste	Mixed Low-Level Waste	0324	Planned but

109

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50361 MLLW CH, Heterogenous Debris, Toxic Metals w/ Mercury		Incineration	Engineering Lab	Treatment Facility (MLLWTF)	Treatment Facility (MLLWTF)		UnApproved
	30	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	31	Metals recovery	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	32	Non-LDR treatment - Incineration	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	33	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	34	Non-LDR treatment - Repackaging	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	35	Non-LDR treatment - Sorting	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	36	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Debris Sizing Unit	0503	Planned but UnApproved
	37	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Macroencapsulation Unit - INEL	0323	Planned but UnApproved
	38	Stabilization	Idaho National	Waste Engineering	Stabilization Unit	0322	Exists, Could be Used

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50361 MLLW CH, Heterogenous Debris, Toxic Metals w/ Mercury			Engineering Lab	Development Facility (WEDF)			for Mixed Wastes
	39	Non-LDR treatment - Incineration	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	40	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	41	Non-LDR treatment - Compaction	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	42	Stabilization	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Fixation/Stabilization	0219	Planned but UnApproved
	43	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	44	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	45	Stabilization	Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	0341	Planned but UnApproved
	46	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	47	Non-LDR treatment - Thermal Drestruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	48	Stabilization	Savannah River	Consolidated Incineration	CIF Ashcrete	0143	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50361 MLLW CH, Heterogenous Debris, Toxic Metals w/ Mercury			Site	Facility			
	49	Non-LDR treatment - Compaction	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	50	Non-LDR treatment - Shredding	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	51	Non-LDR treatment - Size Reduction	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	52	Non-LDR treatment - Sorting	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
00659 MLLW CH, Heterogenous Debris, Toxic Metals w/o Mercury	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Decontamination	On-Site	On-Site Treatment Unit	CO2 Decontamination	XXXX	Unplanned
	3	Decontamination	On-Site	On-Site Treatment Unit	Debris Decontamination	XXXX	Unplanned
	4	Decontamination	On-Site	On-Site Treatment Unit	Surface Treatment	XXXX	Unplanned
	5	Decontamination	On-Site	On-Site Treatment Unit	Water Washing	XXXX	Unplanned
	6	Decontamination	On-Site	On-Site Treatment Unit	Thermal Desorption	XXXX	Unplanned
	7	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	8	Non-LDR treatment -	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00659 MLLW CH, Heterogenous Debris, Toxic Metals w/o Mercury		Thermal Destruction					
	9	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	10	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	11	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	12	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned
	13	Non-LDR treatment - Repackaging	On-Site	On-Site Treatment Unit	Repackaging	XXXX	Unplanned
	14	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	15	Non-LDR treatment - Shredding	On-Site	On-Site Treatment Unit	Shredding	XXXX	Unplanned
	16	Non-LDR treatment - Size Reduction	On-Site	On-Site Treatment Unit	Size Reduction	XXXX	Unplanned
	17	Non-LDR treatment - Sorting	On-Site	On-Site Treatment Unit	Sorting	XXXX	Unplanned
	18	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	19	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00659 MLLW CH, Heterogenous Debris, Toxic Metals w/o Mercury	20	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	CO2 Decontamination System	0257	Planned and Approved
	21	Metals recovery	Idaho National Engineering Lab	HEPA Filter Leaching System (CPP-659)	HEPA Filter Leaching System (CPP-659)	0238	Exists, In Use for Mixed Wastes
	22	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Water Washing System	0303	Planned and Approved
	23	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	24	Decontamination	Idaho National Engineering Lab	Idaho Waste Processing Facility	Debris Decontamination	0304	Planned but UnApproved
	25	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Macroencapsulation System	0335	Planned but UnApproved
	26	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Sizing System	0504	Planned but UnApproved
	27	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
	28	Non-LDR treatment - Thermal Destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
	29	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	30	Non-LDR treatment -	Idaho National	Mixed Low-Level Waste	Mixed Low-Level Waste	0324	Planned but

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00659 MLLW CH, Heterogenous Debris, Toxic Metals w/o Mercury		Incineration	Engineering Lab	Treatment Facility (MLLWTF)	Treatment Facility (MLLWTF)		UnApproved
	31	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	32	Metals recovery	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	33	Non-LDR treatment - Incineration	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	34	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	35	Non-LDR treatment - Repackaging	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	36	Non-LDR treatment - Sorting	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	37	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Debris Sizing Unit	0503	Planned but UnApproved
	38	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Macroencapsulation Unit - INEL	0323	Planned but UnApproved
	39	Stabilization	Idaho National	Waste Engineering	Stabilization Unit	0322	Exists, Could be Us

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00659 MLLW CH, Heterogenous Debris, Toxic Metals w/o Mercury			Engineering Lab	Development Facility (WEDF)			for Mixed Wastes
	40	Non-LDR treatment - Incineration	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	41	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	42	Non-LDR treatment - Compaction	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	43	Stabilization	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Fixation/Stabilization	0219	Planned but UnApproved
	44	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	45	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	46	Stabilization	Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	0341	Planned but UnApproved
	47	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	48	Non-LDR treatment - Thermal Destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	49	Stabilization	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk	0344	Planned but

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00659 MLLW CH, Heterogenous Debris, Toxic Metals w/o Mercury					Lead Treatment		UnApproved
	50	Non-LDR treatment - Separation	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves And Bulk Lead Treatment	0344	Planned but UnApproved
	51	Stabilization	Sandia National Lab - New Mexico	Radioactive and Mixed Waste Management Facility	Radioactive and Mixed Waste Management Facility	0213	Planned and Approved
	52	Stabilization	Savannah River Site	Consolidated Incineration Facility	CIF Ashcrete	0143	Planned and Approved
	53	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Macroencapsulation Unit - SRS	0144	Planned and Approved
	54	Non-LDR treatment - Compaction	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	55	Non-LDR treatment - Shredding	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	56	Non-LDR treatment - Size Reduction	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	57	Non-LDR treatment - Sorting	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	58	Non-LDR treatment - Incineration	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	59	Stabilization	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Stabilization - Commercial	0515	Exists, In Use for Mixed Wastes

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00659 MLLW CH, Heterogenous Debris, Toxic Metals w/o Mercury	60	Non-LDR treatment - Compaction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Ultracompactor/TRUPress - Commercial	0540	Planned and Approved
01421	See ID# 659						
10011	See ID# 659						
20107	See ID# 659						
30009	See ID# 659						
60011	See ID# 659						
00527 MLLW CH, Heterogenous Debris, Toxic Organics	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Decontamination	On-Site	On-Site Treatment Unit	CO2 Decontamination	XXXX	Unplanned
	3	Decontamination	On-Site	On-Site Treatment Unit	Debris Decontamination	XXXX	Unplanned
	4	Decontamination	On-Site	On-Site Treatment Unit	Surface Treatment	XXXX	Unplanned
	5	Decontamination	On-Site	On-Site Treatment Unit	Water Washing	XXXX	Unplanned
	6	Decontamination	On-Site	On-Site Treatment Unit	Thermal Desorption	XXXX	Unplanned
	7	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	8	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	9	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00527 MLLW CH, Heterogenous Debris, Toxic Organics	10	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	11	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	12	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned
	13	Non-LDR treatment - Repackaging	On-Site	On-Site Treatment Unit	Repackaging	XXXX	Unplanned
	14	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	15	Non-LDR treatment - Shredding	On-Site	On-Site Treatment Unit	Shredding	XXXX	Unplanned
	16	Non-LDR treatment - Size Reduction	On-Site	On-Site Treatment Unit	Size Reduction	XXXX	Unplanned
	17	Non-LDR treatment - Sorting	On-Site	On-Site Treatment Unit	Sorting	XXXX	Unplanned
	18	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	19	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	20	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Unit 2: CO2 Decontamination System	0257	Planned and Approved
	21	Non-LDR treatment -	Idaho National	HEPA Filter Leaching	HEPA Filter Leaching	0238	Exists, In Use for

119

48886

130

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00527 MLLW CH, Heterogenous Debris, Toxic Organics		Chemical Extraction	Engineering Lab	System (CPP-659)	System (CPP-659)		Mixed Wastes
	22	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Water Washing System	0303	Planned and Approved
	23	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	24	Decontamination	Idaho National Engineering Lab	Idaho Waste Processing Facility	Debris Decontamination System	0304	Planned but UnApproved
	25	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Macroencapsulation System	0335	Planned but UnApproved
	26	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Sizing System	0504	Planned but UnApproved
	27	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
	28	Organics destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
	29	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	30	Organics destruction	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	31	Stabilization	Idaho National	Mixed Low-Level Waste	Mixed Low-Level Waste	0324	Planned but

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00527 MLLW CH, Heterogenous Debris, Toxic Organics			Engineering Lab	Treatment Facility (MLLWTF)	Treatment Facility (MLLWTF)		UnApproved
	32	Non-LDR treatment - Melt Recycling	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	33	Organics destruction	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	34	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	35	Non-LDR treatment - Repackaging	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	36	Non-LDR treatment - Sorting	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	37	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Debris Sizing Unit	0503	Planned but UnApproved
	38	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Macroencapsulation Unit -INEL	0323	Planned but UnApproved
	39	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	40	Organics destruction	Los Alamos	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00527 MLLW CH, Heterogenous Debris, Toxic Organics			National Lab				for Mixed Wastes
	41	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	42	Non-LDR treatment - Compaction	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	43	Organics destruction	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment - Incineration	0527	Planned but UnApproved
	44	Non-LDR treatment - Size Reduction/Sorting	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Sizing and Segragation	0542	Planned but UnApproved
	45	Decontamination	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Surface Decontamination	0526	Planned but UnApproved
	46	Decontamination	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Thermal Desorption	0528	Planned but UnApproved
	47	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	48	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	49	Stabilization	Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	0341	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00527 MLLW CH, Heterogenous Debris, Toxic Organics	50	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	51	Organics destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	52	Stabilization	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk Lead Treatment	0344	Planned but UnApproved
	53	Non-LDR treatment - Separation	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk Lead Treatment	0344	Planned but UnApproved
	54	Stabilization	Sandia National Lab - New Mexico	Radioactive and Mixed Waste Management Facility	Radioactive and Mixed Waste Management Facility	0213	Planned and Approved
	55	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Macroencapsulation Unit - SRS	0144	Planned and Approved
	56	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator	0517	Planned and Approved
	57	Non-LDR treatment - Compaction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Ultracompactor/TRUPress - Commercial	0540	Planned and Approved
00627	See ID# 527						
00628	See ID# 527						
00644	See ID# 527						
01427	See ID# 527						

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01428	See ID# 527						
01716	See ID# 527						
20036	See ID# 527						
20114	See ID# 527						
30074	See ID# 527						
50014	See ID# 527						
00399 MLLW CH, Heterogenous Debris, Toxic Organics, Toxic Metals w/o Mercury	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Decontamination	On-Site	On-Site Treatment Unit	CO2 Decontamination	XXXX	Unplanned
	3	Decontamination	On-Site	On-Site Treatment Unit	Surface Treatment	XXXX	Unplanned
	4	Decontamination	On-Site	On-Site Treatment Unit	Water Washing	XXXX	Unplanned
	5	Decontamination	On-Site	On-Site Treatment Unit	Thermal Desorption	XXXX	Unplanned
	6	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	7	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	8	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00399 MLLW CH, Heterogenous Debris, Toxic Organics, Toxic Metals w/o Mercury	9	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	10	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	11	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned
	12	Non-LDR treatment - Repackaging	On-Site	On-Site Treatment Unit	Repackaging	XXXX	Unplanned
	13	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	14	Non-LDR treatment - Shredding	On-Site	On-Site Treatment Unit	Shredding	XXXX	Unplanned
	15	Non-LDR treatment - Size Reduction	On-Site	On-Site Treatment Unit	Size Reduction	XXXX	Unplanned
	16	Non-LDR treatment - Sorting	On-Site	On-Site Treatment Unit	Sorting	XXXX	Unplanned
	17	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	18	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	19	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	CO2 Decontamination System	0257	Planned and Approved
	20	Metals recovery	Idaho National	HEPA Filter Leaching	HEPA Filter Leaching	0238	Exists, In Use for

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00399 MLLW CH, Heterogenous Debris, Toxic Organics, Toxic Metals w/o Mercury			Engineering Lab	System (CPP-659)	System (CPP-659)		Mixed Wastes
	21	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Water Washing System	0303	Planned and Approved
	22	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	23	Decontamination	Idaho National Engineering Lab	Idaho Waste Processing Facility	Debris Decontamination System	0304	Planned but UnApproved
	24	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Macroencapsulation System	0335	Planned but UnApproved
	25	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Sizing System	0504	Planned but UnApproved
	26	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
	27	Organics destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
	28	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	29	Organics destruction	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	30	Stabilization	Idaho National	Mixed Low-Level Waste	Mixed Low-Level Waste	0324	Planned but

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00399 MLLW CH, Heterogenous Debris, Toxic Organics, Toxic Metals w/o Mercury			Engineering Lab	Treatment Facility (MLLWTF)	Treatment Facility (MLLWTF)		UnApproved
	31	Metals recovery	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	32	Organics destruction	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	33	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	34	Non-LDR treatment - Repackaging	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	35	Non-LDR treatment - Sorting	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	36	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Debris Sizing Unit	0503	Planned but UnApproved
	37	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Macroencapsulation Unit - INEL	0323	Planned but UnApproved
	38	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	39	Organics destruction	Los Alamos	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used

48886

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00399 MLLW CH, Heterogenous Debris, Toxic Organics, Toxic Metals w/o Mercury			National Lab				for Mixed Wastes
	40	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	41	Non-LDR treatment - Compaction	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	42	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	43	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	44	Stabilization	Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	0341	Planned but UnApproved
	45	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	46	Organics destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	47	Stabilization	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves And Bulk Lead Treatment	0344	Planned but UnApproved
	48	Non-LDR treatment - Separation	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk Lead Treatment	0344	Planned but UnApproved
	49	Stabilization	Sandia National Lab - New Mexico	Radioactive and Mixed Waste Management Facility	Radioactive and Mixed Waste Management Facility	0213	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00399 MLLW CH, Heterogenous Debris, Toxic Organics, Toxic Metals w/o Mercury	50	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Macroencapsulation Unit - SRS	0144	Planned and Approved
	51	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	52	Non-LDR treatment - Compaction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Ultracompactor/TRUPress - Commercial	0540	Planned and Approved
00415	See ID# 399						
00417	See ID# 399						
00434	See ID# 399						
00460	See ID# 399						
01425	See ID# 399						
10023	See ID# 399						
20094	See ID# 399						
20095	See ID# 399						
30053	See ID# 399						
40137 MLLW CH, Inorganic Debris Ignitable, Reactive, or Corrosive Only	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Decontamination	On-Site	On-Site Treatment Unit	CO2 Decontamination	XXXX	Unplanned

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
40137 MLLW CH, Inorganic Debris Ignitable, Reactive, or Corrosive Only	3	Decontamination	On-Site	On-Site Treatment Unit	Debris Decontamination	XXXX	Unplanned
	4	Decontamination	On-Site	On-Site Treatment Unit	Surface Treatment	XXXX	Unplanned
	5	Decontamination	On-Site	On-Site Treatment Unit	Water Washing	XXXX	Unplanned
	6	Decontamination	On-Site	On-Site Treatment Unit	Thermal Desorption	XXXX	Unplanned
	7	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	8	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	9	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	10	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	11	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	12	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned
	13	Non-LDR treatment - Repackaging	On-Site	On-Site Treatment Unit	Repackaging	XXXX	Unplanned
	14	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	15	Non-LDR treatment - Shredding	On-Site	On-Site Treatment Unit	Shredding	XXXX	Unplanned
	16	Non-LDR treatment - Size Reduction	On-Site	On-Site Treatment Unit	Size Reduction	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
40137 MLLW CH, Inorganic Debris Ignitable, Reactive, or Corrosive Only	17	Non-LDR treatment - Sorting	On-Site	On-Site Treatment Unit	Sorting	XXXX	Unplanned
	18	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	19	Stabilization	Hanford Site	Concretion Facility	Solidification	0536	Exists, Could be Used for Mixed Wastes
00091 MLLW CH, Inorganic Debris Toxic Metals w/ Mercury	19	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Unit 2: CO2 Decontamination System	0257	Planned and Approved
	1	Decontamination	On-Site	On-Site Treatment Unit	Debris Decontamination	XXXX	Unplanned
	2	Decontamination	On-Site	On-Site Treatment Unit	Surface Treatment	XXXX	Unplanned
	3	Decontamination	On-Site	On-Site Treatment Unit	Water Washing	XXXX	Unplanned
	4	Decontamination	On-Site	On-Site Treatment Unit	Thermal Desorption	XXXX	Unplanned
	5	Metals recovery	On-Site	On-Site Treatment Unit	Acid Leaching	XXXX	Unplanned
	6	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	7	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	8	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	9	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned

48 86

132

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00091 MLLW CH, Inorganic Debris Toxic Metals w/ Mercury	10	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	11	Decontamination	On-Site	On-Site Treatment Unit	CO2 Decontamination	XXXX	Unplanned
	12	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned
	13	Non-LDR treatment - Repackaging	On-Site	On-Site Treatment Unit	Repackaging	XXXX	Unplanned
	14	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	15	Non-LDR treatment - Shredding	On-Site	On-Site Treatment Unit	Shredding	XXXX	Unplanned
	16	Non-LDR treatment - Size Reduction	On-Site	On-Site Treatment Unit	Size Reduction	XXXX	Unplanned
	17	Non-LDR treatment - Sorting	On-Site	On-Site Treatment Unit	Sorting	XXXX	Unplanned
	18	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	20	Metals recovery	Idaho National Engineering Lab	HEPA Filter Leaching System (CPP-659)	HEPA Filter Leaching System (CPP-659)	0238	Exists, In Use for Mixed Wastes
	21	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Water Washing System	0303	Planned and Approved
	22	Stabilization	Idaho National	INEL Waste Generator	Waste Generator Treatment	0244	Exists, In Use for

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00091 MLLW CH, Inorganic Debris Toxic Metals w/ Mercury			Engineering Lab	Treatment	Plant		Mixed Wastes
	23	Decontamination	Idaho National Engineering Lab	Idaho Waste Processing Facility	Debris Decontamination System	0304	Planned but UnApproved
	24	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Macroencapsulation System	0335	Planned but UnApproved
	25	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Sizing System	0504	Planned but UnApproved
	26	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
	27	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	28	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	29	Metals recovery	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	30	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	31	Non-LDR treatment - Repackaging	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved

4886

34

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00091 MLLW CH, Inorganic Debris Toxic Metals w/ Mercury	32	Non-LDR treatment - Sorting	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	33	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Debris Sizing Unit	0503	Planned but UnApproved
	34	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Macroencapsulation Unit - INEL	0323	Planned but UnApproved
	35	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	36	Non-LDR treatment - Incineration	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	37	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	38	Non-LDR treatment - Compaction	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	39	Stabilization	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Fixation/Stabilization	0219	Planned but UnApproved
	40	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	41	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00091 MLLW CH, Inorganic Debris Toxic Metals w/ Mercury							for Mixed Wastes
	42	Non-LDR treatment - Size Reduction	Rocky Flats Plant	Advanced Size Reduction Facility: Building 776	Advanced Size Reduction Facility: Building 776	0014	Exists, Could be Used for Mixed Wastes
	43	Non-LDR treatment - Compaction	Rocky Flats Plant	Low Level Mixed Waste Baler: Building 889	Low-Level Mixed Waste Baler: Building 889	0339	Exists, Could be Used for Mixed Wastes
	44	Stabilization	Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	0341	Planned but UnApproved
	45	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	46	Stabilization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	47	Neutralization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	48	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	49	Non-LDR treatment - Thermal Destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	50	Non-LDR treatment - Compaction	Rocky Flats Plant	Supercompaction and Repackaging Facility: Building 776	Supercompaction and Repackaging Facility: Building 776	0019	Exists, In Use for Mixed Wastes
	51	Stabilization	Savannah River Site	Consolidated Incineration Facility	CIF Ashcrete	0143	Planned and Approved

136

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00091 MLLW CH, Inorganic Debris Toxic Metals w/ Mercury	52	Metals recovery	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Acid Leaching and Chemical Precipitation Unit	0147	Planned and Approved
	53	Non-LDR treatment - Chemical Precipitation	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Acid Leaching and Chemical Precipitation Unit	0147	Planned and Approved
	54	Non-LDR treatment - Compaction	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	55	Non-LDR treatment - Shredding	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	56	Non-LDR treatment - Size Reduction	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	57	Non-LDR treatment - Sorting	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Sorting	0151	Planned and Approved
	58	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Stabilization/Solidification Unit	0148	Planned and Approved
	59	Stabilization	Savannah River Site	Z-Area Saltstone Facility	Z-Area Saltstone Facility	0120	Exists, In Use for Mixed Wastes
00432	See ID# 091						
01199	See ID# 091						
10018	See ID# 091						
01080 MLLW CH, Inorganic Debris ~~Toxic Metals w/o~~ Mercury	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01080 MLLW CH, Inorganic Debris Toxic Metals w/o Mercury	2	Decontamination	On-site	On-Site Treatment Unit	CO2 Decontamination	XXXX	Unplanned
	3	Decontamination	On-Site	On-Site Treatment Unit	Debris Decontamination	XXXX	Unplanned
	4	Decontamination	On-Site	On-Site Treatment Unit	Surface Treatment	XXXX	Unplanned
	5	Decontamination	On-Site	On-Site Treatment Unit	Water Washing	XXXX	Unplanned
	6	Decontamination	On-Site	On-Site Treatment Unit	Thermal Desorption	XXXX	Unplanned
	7	Metals recovery	On-Site	On-Site Treatment Unit	Acid Leaching	XXXX	Unplanned
	8	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	9	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	10	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	11	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	12	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	13	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned
	14	Non-LDR treatment - Repackaging	On-Site	On-Site Treatment Unit	Repackaging	XXXX	Unplanned
	15	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01080 MLLW CH, Inorganic Debris Toxic Metals w/o Mercury	16	Non-LDR treatment - Shredding	On-Site	On-Site Treatment Unit	Shredding	XXXX	Unplanned
	17	Non-LDR treatment - Size Reduction	On-Site	On-Site Treatment Unit	Size Reduction	XXXX	Unplanned
	18	Non-LDR treatment - Sorting	On-Site	On-Site Treatment Unit	Sorting	XXXX	Unplanned
	19	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	20	Stabilization	Hanford Site	Concretion Facility	Solidification	0536	Exists, Could be Used for Mixed Wastes
	21	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	22	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Unit 2: CO2 Decontamination System	0257	Planned and Approved
	23	Metals recovery	Idaho National Engineering Lab	HEPA Filter Leaching System (CPP-659)	HEPA Filter Leaching System (CPP-659)	0238	Exists, In Use for Mixed Wastes
	24	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Water Washing System	0303	Planned and Approved
	25	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	26	Decontamination	Idaho National Engineering Lab	Idaho Waste Processing Facility	Debris Decontamination System	0304	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01080 MLLW CH, Inorganic Debris Toxic Metals w/o Mercury	27	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Macroencapsulation System	0335	Planned but UnApproved
	28	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Sizing System	0504	Planned but UnApproved
	29	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
	30	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	31	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	32	Metals recovery	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	33	Non-LDR treatment - Recycling	Idaho National Engineering Lab	TAN 607	TAN 607 Recycling	0366	Planned but UnApproved
	34	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	35	Non-LDR treatment - Repackaging	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	36	Non-LDR treatment - Sorting	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01080 MLLW CH, Inorganic Debris Toxic Metals w/o Mercury	37	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Debris Sizing Unit	0503	Planned but UnApproved
	38	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Macroencapsulation Unit - INEL	0323	Planned but UnApproved
	39	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	40	Non-LDR treatment - Incineration	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	41	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	42	Non-LDR treatment - Compaction	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	43	Decontamination	Oak Ridge K-25 Site	K-25 Uranium Decon Facility	K-25 Uranium Decon Facility	0518	Exists, Could be Used for Mixed Wastes
	44	Stabilization	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Fixation/Stabilization	0219	Planned but UnApproved
	45	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	46	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01080 MLLW CH, Inorganic Debris Toxic Metals w/o Mercury							for Mixed Wastes
	47	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	48	Non-LDR treatment - Size Reduction	Rocky Flats Plant	Advanced Size Reduction Facility: Building 776	Advanced Size Reduction Facility: Building 776	0014	Exists, Could be Used for Mixed Wastes
	49	Stabilization	Rocky Flats Plant	Chip Cementation: Building 447	Chip Cementation: Building 447	0020	Exists, Could be Used for Mixed Wastes
	50	Non-LDR treatment - Compaction	Rocky Flats Plant	Low-Level Mixed Waste Baler: Building 889	Low-Level Mixed Waste Baler: Building 889	0339	Exists, Could be Used for Mixed Wastes
	51	Stabilization	Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	0341	Planned but UnApproved
	52	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	53	Stabilization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	54	Neutralization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	55	Non-LDR treatment - Size Reduction	Rocky Flats Plant	Size Reduction Vault: Building 776	Size Reduction Vault: Building 776	0012	Exists, In Use for Mixed Wastes
	56	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01080 MLLW CH, Inorganic Debris Toxic Metals w/o Mercury	57	Non-LDR treatment - Thermal Destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	58	Non-LDR treatment - Compaction	Rocky Flats Plant	Supercompaction and Repackaging Facility: Building 776	Supercompaction and Repackaging Facility: Building 776	0019	Exists, In Use for Mixed Wastes
	59	Stabilization	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk Lead Treatment	0344	Planned but UnApproved
	60	Non-LDR treatment - Separation	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk Lead Treatment	0344	Planned but UnApproved
	61	Stabilization	Sandia National Lab - New Mexico	Radioactive and Mixed Waste Management Facility	Radioactive and Mixed Waste Management Facility	0213	Planned and Approved
	62	Stabilization	Savannah River Site	Consolidated Incineration Facility	CIF Ashcrete	0143	Planned and Approved
	63	Metals recovery	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Acid Leaching and Chemical Precipitation Unit	0147	Planned and Approved
	64	Non-LDR treatment - Chemical Precipitation	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Acid Leaching and Chemical Precipitation Unit	0147	Planned and Approved
	65	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Macroencepsulation Unit - SRS	0144	Planned and Approved
	66	Non-LDR treatment - Compaction	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	67	Non-LDR treatment -	Savannah River	Hazardous Waste/Mixed	Size Reduction	0151	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01080 MLLW CH, Inorganic Debris Toxic Metals w/o Mercury		Shredding	Site	Waste Disposal Facility			
	68	Non-LDR treatment - Size Reduction	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	69	Non-LDR treatment - Sorting	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	70	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Stabilization/Solidification Unit	0148	Planned and Approved
	71	Stabilization	Savannah River Site	Z-Area Saltstone Facility	Z-Area Saltstone Facility	0120	Exists, In Use for Mixed Wastes
	72	Non-LDR treatment - Incineration	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	73	Stabilization	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Stabilization - Commercial	0515	Exists, In Use for Mixed Wastes
	74	Non-LDR treatment - Compaction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Ultracompactor/TRUPress - Commercial	0540	Planned and Approved
01271	See ID# 1080						
10005	See ID# 1080						
10025	See ID# 1080						
20151	See ID# 1080						
30039	See ID# 1080						

4886

144

488697

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
30065	See ID# 1080						
40152	See ID# 1080						
50031	See ID# 1080						
50063	See ID# 1080						
50367	See ID# 1080						
60140	See ID# 1080						
01537 MLLW CH, Inorganic Debris Toxic Organics	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Decontamination	On-Site	On-Site Treatment Unit	CO2 Decontamination	XXXX	Unplanned
	3	Decontamination	On-Site	On-Site Treatment Unit	Debris Contamination	XXXX	Unplanned
	4	Decontamination	On-Site	On-Site Treatment Unit	Surface Treatment	XXXX	Unplanned
	5	Decontamination	On-Site	On-Site Treatment Unit	Water Washing	XXXX	Unplanned
	6	Decontamination	On-Site	On-Site Treatment Unit	Thermal Desorption	XXXX	Unplanned
	7	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	8	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	9	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	10	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01537 MLLW CH, Inorganic Debris, Toxic Organics	11	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	12	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned
	13	Non-LDR treatment - Repackaging	On-Site	On-Site Treatment Unit	Repackaging	XXXX	Unplanned
	14	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	15	Non-LDR treatment - Shredding	On-Site	On-Site Treatment Unit	Shredding	XXXX	Unplanned
	16	Non-LDR treatment - Size Reduction	On-Site	On-Site Treatment Unit	Size Reduction	XXXX	Unplanned
	17	Non-LDR treatment - Sorting	On-Site	On-Site Treatment Unit	Sorting	XXXX	Unplanned
	18	Non-LDR treatment - Solvent Extraction	On-Site	On-Site Treatment Unit	Solvent Extraction	XXXX	Unplanned
	19	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	20	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	21	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Unit 2: CO2 Decontamination System	0257	Planned and Approved

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01537 MLLW CH, Inorganic Debris, Toxic Organics	22	Non-LDR treatment - Chemical Extraction	Idaho National Engineering Lab	HEPA Filter Leaching System (CPP-659)	HEPA Filter Leaching System (CPP-659)	0238	Exists, In Use for Mixed Wastes
	23	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Water Washing System	0303	Planned and Approved
	24	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	25	Decontamination	Idaho National Engineering Lab	Idaho Waste Processing Facility	Debris Decontamination System	0304	Planned but UnApproved
	26	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Macroencapsulation System	0335	Planned but UnApproved
	27	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Sizing System	0504	Planned but UnApproved
	28	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
	29	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	30	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	31	Non-LDR treatment - Melt Recycling	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01537 MLLW CH, Inorganic Debris, Toxic Organics	32	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	33	Non-LDR treatment - Repackaging	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	34	Non-LDR treatment - Sorting	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	35	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Debris Sizing Unit	0503	Planned but UnApproved
	36	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Macroencapsulation Unit - INEL	0323	Planned but UnApproved
	37	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	38	Organics destruction	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	39	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	40	Non-LDR treatment - Compaction	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	41	Non-LDR treatment - Size	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment	MW Treatment Facility - Sizing and Segragation	0542	Planned but UnApproved

4886

147

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01537 MLLW CH, Inorganic Debris, Toxic Organics		Reduction/Separation		Facility			
	42	Decontamination	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Thermal Desorption	0528	Planned but UnApproved
	43	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	44	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	45	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	46	Non-LDR treatment - Size Reduction	Rocky Flats Plant	Advanced Size Reduction Facility: Building 776	Advanced Size Reduction Facility: Building 776	0014	Exists, Could be Used for Mixed Wastes
	47	Non-LDR treatment - Compaction	Rocky Flats Plant	Building 776 Low-Level Mixed Waste Baler	Building 776 Low-Level Mixed Waste Baler	[illegible]	Exists, Could be Used for Mixed Wastes
	48	Stabilization	Rocky Flats Plant	Chip Cementation: Building 447	Chip Cementation: Building 447	0020	Exists, Could be Used for Mixed Wastes
	49	Non-LDR treatment - Compaction	Rocky Flats Plant	Low-Level Mixed Waste Baler: Building 889	Low-Level Mixed Waste Baler: Building 889	0339	Exists, Could be Used for Mixed Wastes
	50	Stabilization	Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	0341	Planned but UnApproved
	51	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01537 MLLW CH, Inorganic Debris, Toxic Organics	52	Stabilization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	53	Neutralization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	54	Non-LDR treatment - Size Reduction	Rocky Flats Plant	Size Reduction Vault: Building 776	Size Reduction Vault: Building 776	0012	Exists, In Use for Mixed Wastes
	55	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	56	Organics destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	57	Non-LDR treatment - Compaction	Rocky Flats Plant	Supercompaction And Repackaging Facility: Building 776	Supercompaction and Repackaging Facility: Building 776	0019	Exists, In Use for Mixed Wastes
	58	Stabilization	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk Lead Treatment	0344	Planned but UnApproved
	59	Non-LDR treatment - Separation	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk Lead Treatment	0344	Planned but UnApproved
	60	Stabilization	Sandia National Lab - New Mexico	Radioactive and Mixed Waste Treatment Facility	Radioactive and Mixed Waste Treatment Facility	0213	Planned and Approved
	61	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Macroencapsulation Unit - SRS	0144	Planned and Approved
	62	Stabilization	Savannah River	Hazardous Waste/Mixed	Stabilization/Solidification	0148	Planned and Approved

149

4886

150

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01537 MLLW CH, Inorganic Debris, Toxic Organics			Site	Waste Disposal Facility	Unit		
	63	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	64	Non-LDR treatment - Compaction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Ultracompactor/TRUPress - Commercial	0540	Planned and Approved
50036 MLLW CH, Inorganic Debris Toxic Organics, Toxic Metals w/o Mercury	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Decontamination	On-Site	On-Site Treatment Unit	CO2 Decontamination	XXXX	Unplanned
	3	Decontamination	On-Site	On-Site Treatment Unit	Surface Treatment	XXXX	Unplanned
	4	Decontamination	On-Site	On-Site Treatment Unit	Water Washing	XXXX	Unplanned
	5	Decontamination	On-Site	On-Site Treatment Unit	Thermal Desorption	XXXX	Unplanned
	6	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	7	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	8	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	9	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	10	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50036 MLLW CH, Inorganic Debris, Toxic Organics, Toxic Metals w/o Mercury	11	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned
	12	Non-LDR treatment - Repackaging	On-Site	On-Site Treatment Unit	Repackaging	XXXX	Unplanned
	13	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	14	Non-LDR treatment - Shredding	On-Site	On-Site Treatment Unit	Shredding	XXXX	Unplanned
	15	Non-LDR treatment - Size Reduction	On-Site	On-Site Treatment Unit	Size Reduction	XXXX	Unplanned
	16	Non-LDR treatment - Sorting	On-Site	On-Site Treatment Unit	Sorting	XXXX	Unplanned
	17	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	18	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	19	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Unit 2: CO2 Decontamination System	0257	Planned and Approved
	20	Metals recovery	Idaho National Engineering Lab	HEPA Filter Leaching System (CPP-659)	HEPA Filter Leaching System (CPP-659)	0238	Exists, In Use for Mixed Wastes
	21	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Water Washing System	0303	Planned and Approved

4886

151

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50036 MLLW CH, Inorganic Debris, Toxic Organics, Toxic Metals w/o Mercury	22	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	23	Decontamination	Idaho National Engineering Lab	Idaho Waste Processing Facility	Debris Decontamination System	0304	Planned but UnApproved
	24	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Macroencapsulation System	0335	Planned but UnApproved
	25	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Sizing System	0504	Planned but UnApproved
	26	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
	27	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	28	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	29	Metals recovery	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	30	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	31	Non-LDR treatment - Repackaging	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50036 MLLW CH, Inorganic Debris, Toxic Organics, Toxic Metals w/o Mercury	32	Non-LDR treatment - Sorting	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	33	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Debris Sizing Unit	0503	Planned but UnApproved
	34	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Macroencapsulation Unit - INEL	0323	Planned but UnApproved
	35	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	36	Organics destruction	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	37	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	38	Non-LDR treatment - Compaction	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	39	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	40	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	41	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50036 MLLW CH, Inorganic Debris, Toxic Organics, Toxic Metals w/o Mercury	42	Non-LDR treatment - Size Reduction	Rocky Flats Plant	Advanced Size Reduction Facility: Building 776	Advanced Size Reduction Facility: Building 776	0014	Exists, Could be Used for Mixed Wastes
	43	Stabilization	Rocky Flats Plant	Chip Cementation: Building 447	Chip Cementation: Building 447	0020	Exists, Could be Used for Mixed Wastes
	44	Non-LDR treatment - Compaction	Rocky Flats Plant	Low-Level Mixed Waste Baler: Building 889	Low-Level Mixed Waste Baler: Building 889	0339	Exists, Could be Used for Mixed Wastes
	45	Stabilization	Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	0341	Planned but UnApproved
	46	Non-LDR treatment - Size Reduction	Rocky Flats Plant	Size Reduction Vault: Building 776	Size Reduction Vault: Building 776	0012	Exists, In Use for Mixed Wastes
	47	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	48	Organics destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	49	Non-LDR treatment - Compaction	Rocky Flats Plant	Supercompaction and Repackaging Facility: Building 776	Supercompaction and Repackaging Facility: Building 776	0019	Exists, In Use for Mixed Wastes
	50	Stabilization	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk Lead Treatment	0344	Planned but UnApproved
	51	Non-LDR treatment - Separation	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk Lead Treatment	0344	Planned but UnApproved
	52	Stabilization	Sandia National	Radioactive and Mixed	Radioactive and Mixed	0213	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50036 MLLW CH, Inorganic Debris, Toxic Organics, Toxic Metals w/o Mercury			Lab - New Mexico	Waste Management Facility	Waste Management Facility		
	53	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Macroencapsulation Unit - SRS	0144	Planned and Approved
	54	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Stabilization/Solidification Unit	0148	Planned and Approved
	55	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	56	Non-LDR treatment - Compaction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Ultracompactor/TRUPress - Commercial	0540	Planned and Approved
40122 MLLW CH, Inorganic Sludge/ Particulates, Toxic Metals w/ Mercury	1	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	2	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	3	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	4	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	5	Stabilization	On-Site	On-Site Treatment Unit	Solidification	XXXX	Unplanned
	6	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	7	Non-LDR treatment - Calcination Pretreatment	On-Site	On-Site Treatment Unit	Calcination Pretreatment	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
40122 MLLW CH, Inorganic Sludge/ Particulates, Toxic Metals w/ Mercury	8	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	9	Metals recovery	On-Site	On-Site Treatment Unit	Leaching	XXXX	Unplanned
	10	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	11	Non-LDR treatment - Chemical Precipitation	On-Site	On-Site Treatment Unit	Chemical Precipitation	XXXX	Unplanned
	12	Non-LDR treatment - Drying	On-Site	On-Site Treatment Unit	Drying	XXXX	Unplanned
	13	Non-LDR treatment - Filtration	On-Site	On-Site Treatment Unit	Filtration	XXXX	Unplanned
	14	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	15	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	16	Non-LDR treatment - Calcination Pretreatment	Idaho National Engineering Lab	New Waste Calcining Facility	New Waste Calcining Facility	0240	Exists, In Use for Mixed Wastes
	17	Non-LDR treatment - Incineration	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	18	Stabilization	Idaho National	WERF Waste Stabilization	WERF Waste Stabilization	0252	Exists, Could be Used

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
40122 MLLW CH, Inorganic Sludge/ Particulates, Toxic Metals w/ Mercury			Engineering Lab	Unit	Unit		for Mixed Wastes
	19	Stabilization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	20	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	21	Stabilization	Lawrence Livermore National Lab	Building 513	Solidification Facility	0228	Planned but UnApproved
	22	Non-LDR treatment - Incineration	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	23	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	24	Stabilization	Los Alamos National Lab	Waste Immobilization Facility	Waste Immobilization Facility	0510	Planned but UnApproved
	25	Neutralization	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	26	Stabilization	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Fixation/Stabilization	0219	Planned but UnApproved
	27	Non-LDR treatment - Drying	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Soil/Sludge Dewatering	0529	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
40122 MLLW CH, Inorganic Sludge/ Particulates, Toxic Metals w/ Mercury	28	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	29	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	30	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	31	Deactivation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	32	Non-LDR treatment - Filtration	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	33	Neutralization	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	34	Deactivation	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	35	Decontamination	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	36	Non-LDR treatment - Evaporation	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	37	Stabilization	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	38	Neutralization	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
40122 MLLW CH, Inorganic Sludge/ Particulates, Toxic Metals w/ Mercury	39	Stabilization	Rocky Flats Plant	Halliburton NUS B&C Process Trains	Immobilization	0545	Planned and Approved
	40	Stabilization	Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	0341	Planned but UnApproved
	41	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	42	Stabilization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	43	Neutralization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	44	Stabilization	Rocky Flats Plant	Pondcrete Solidification Process: Building 788	Pondcrete Solidification Process: Building 788	0018	Exists, Could be Used for Mixed Wastes
	45	Stabilization	Rocky Flats Plant	Pondcrete/Saltcrete Reprocessing Facility: 750PAD	Pondcrete/Saltcrete Reprocessing Facility: 750PAD	0016	Exists, Could be Used for Mixed Wastes
	46	Stabilization	Rocky Flats Plant	Pondcrete/Saltcrete Reprocessing Facility: 904PAD	Pondcrete/Saltcrete Reprocessing Facility: 904PAD	0017	Exists, Could be Used for Mixed Wastes
	47	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	48	Non-LDR treatment - Thermal Destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved

4886

159

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
40122 MLLW CH, Inorganic Sludge/ Particulates, Toxic Metals w/ Mercury	49	Stabilization	Savannah River Site	Consolidated Incineration Facility	CIF Ashcrete	0143	Planned and Approved
	50	Non-LDR treatment - Incineration	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Solid Feed System	0142	Planned and Approved
	51	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Stabilization/Solidification Unit	0148	Planned and Approved
	52	Stabilization	Savannah River Site	M-Area Vendor Treatment	M-Area Vendor Treatment	0150	Planned and Approved
	53	Non-LDR treatment - Repackaging	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	54	Non-LDR treatment - Sorting	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	55	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	56	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	57	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	58	Stabilization	Idaho National Engineering Lab	Idaho Waste Immobilization Facility	Idaho Waste Immobilization Facility	0260	Planned but UnApproved
	59	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50185	See ID# 40122						
00817 MLLW CH, Inorganic Sludge/Particulates, Toxic Metals w/o Mercury	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	3	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	4	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	5	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	6	Stabilization	On-Site	On-Site Treatment Unit	Solidification	XXXX	Unplanned
	7	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	8	Non-LDR treatment - Calcination Pretreatment	On-Site	On-Site Treatment Unit	Calcination Pretreatment	XXXX	Unplanned
	9	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	10	Metals recovery	On-Site	On-Site Treatment Unit	Leaching	XXXX	Unplanned
	11	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	12	Non-LDR treatment -	On-Site	On-Site Treatment Unit	Chemical Precipitation	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00817 MLLW CH, Inorganic Sludge/ Particulates, Toxic Metals w/o Mercury		Chemical Precipitation					
	13	Non-LDR treatment - Drying	On-Site	On-Site Treatment Unit	Drying	XXXX	Unplanned
	14	Non-LDR treatment - Filtration	On-Site	On-Site Treatment Unit	Filtration	XXXX	Unplanned
	15	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	16	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	17	Stabilization	Idaho National Engineering Lab	Idaho Waste Immobilization Facility	Idaho Waste Immobilization Facility	0260	Planned but UnApproved
	18	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
	19	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	20	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	21	Non-LDR treatment - Calcination Pretreatment	Idaho National Engineering Lab	New Waste Calcining Facility	New Waste Calcining Facility	0240	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00817 MLLW CH, Inorganic Sludge/ Particulates, Toxic Metals w/o Mercury	22	Non-LDR treatment - Incineration	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	23	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	24	Stabilization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	25	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	26	Stabilization	Lawrence Livermore National Lab	Building 513	Solidification Facility	0228	Planned but UnApproved
	27	Non-LDR treatment - Incineration	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	28	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	29	Stabilization	Los Alamos National Lab	Waste Immobilization Facility	Waste Immobilization Facility	0510	Planned but UnApproved
	30	Stabilization	Mound Facility	Mound Glass Melter	Mound Glass Melter	0261	Exists, Could be Used for Mixed Wastes
	31	Non-LDR treatment - Evaporation	Nevada Test Site	Nevada Test Site	Liquid Waste Treatment System	0511	Planned and Approved

48 86

163

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00817 MLLW CH, Inorganic Sludge/ Particulates, Toxic Metals w/o Mercury	32	Stabilization	Oak Ridge K-25 Site	K-25	Sludge Fixation Unit	0521	Exists, Could be Used for Mixed Wastes
	33	Neutralization	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	34	Metals recovery	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Acid Dissolution - U Removal	0525	Planned but UnApproved
	35	Stabilization	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Fixation/Stabilization	0219	Planned but UnApproved
	36	Non-LDR treatment - Drying	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Soil/Sludge Dewatering	0529	Planned but UnApproved
	37	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	38	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	39	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	40	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	41	Deactivation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00817 MLLW CH, Inorganic Sludge/ Particulates, Toxic Metals w/o Mercury	42	Non-LDR treatment - Filtration	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	43	Neutralization	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	44	Deactivation	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	45	Decontamination	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	46	Non-LDR treatment - Evaporation	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	47	Stabilization	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	48	Neutralization	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	49	Stabilization	Rocky Flats Plant	Building 374/774 Salt and Sludge Treatment	Building 374/774 Salt and Sludge Treatment	0343	Planned but UnApproved
	50	Stabilization	Rocky Flats Plant	Halliburton NUS B&C Process Trains	Immobilization	0545	Planned and Approved
	51	Stabilization	Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	0341	Planned but UnApproved
	52	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved

165

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00817 MLLW CH, Inorganic Sludge/ Particulates, Toxic Metals w/o Mercury	53	Stabilization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	54	Neutralization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	55	Stabilization	Rocky Flats Plant	Pondcrete Solidification Process: Building 788	Pondcrete Solidification Process: Building 788	0018	Exists, Could be Used for Mixed Wastes
	56	Stabilization	Rocky Flats Plant	Pondcrete/Saltcrete Reprocessing Facility: 750PAD	Pondcrete/Saltcrete Reprocessing Facility: 750PAD	0016	Exists, Could be Used for Mixed Wastes
	57	Stabilization	Rocky Flats Plant	Pondcrete/Saltcrete Reprocessing Facility: 904PAD	Pondcrete/Saltcrete Reprocessing Facility: 904PAD	0017	Exists, Could be Used for Mixed Wastes
	58	Stabilization	Rocky Flats Plant	Solidified Bypass Sludge Treatment	Solidified Bypass Sludge Treatment	0342	Planned but UnApproved
	59	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	60	Non-LDR treatment - Thermal Destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	61	Stabilization	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk Lead Treatment	0344	Planned but UnApproved
	62	Non-LDR treatment - Separation	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk Lead Treatment	0344	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00817 MLLW CH, Inorganic Sludge/ Particulates, Toxic Metals w/o Mercury	63	Stabilization	Sandia National Lab - New Mexico	Radioactive and Mixed Waste Management Facilitiy	Radioactive and Mixed Waste Management Facility	0213	Planned and Approved
	64	Stabilization	Savannah River Site	Consolidated Incineration Facility	CIF Ashcrete	0143	Planned and Approved
	65	Non-LDR treatment - Incineration	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Solid Feed System	0142	Planned and Approved
	66	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Stabilization/Solidification	0148	Planned and Approved
	67	Stabilization	Savannah River Site	M-Area Vendor Treatment	M-Area Vendor Treatment	0150	Planned and Approved
	68	Non-LDR treatment - Repackaging	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	69	Non-LDR treatment - Sorting	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	70	Non-LDR treatment - Incineration	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	71	Stabilization	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Stabilization - Commercial	0515	Exists, In Use for Mixed Wastes
	72	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	73	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00817 MLLW CH, Inorganic Sludge/ Particulates, Toxic Metals w/o Mercury	74	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	75	Stabilization	Idaho National Engineering Lab	Idaho Waste Immobilization Facility	Idaho Waste Immobilization Facility	0260	Planned but UnApproved
	76	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
10002	See ID# 817						
10013	See ID# 817						
10022	See ID# 817						
20015	See ID# 817						
20024	See ID# 817						
20033	See ID# 817						
20035	See ID# 817						
20047	See ID# 817						
20058	See ID# 817						
20139	See ID# 817						
30036	See ID# 817						
30060	See ID# 817						

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
40185	See ID# 817						
40186	See ID# 817						
50091	See ID# 817						
50102	See ID# 817						
50148	See ID# 817						
50165	See ID# 817						
50169	See ID# 817						
50173	See ID# 817						
50174	See ID# 817						
50180	See ID# 817						
50188	See ID# 817						
50293	See ID# 817						
50314	See ID# 817						
50323	See ID# 817						
50349	See ID# 817						
50351	See ID# 817						
50387	See ID# 817						

169

48 86

170

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50405	See ID# 817						
50406	See ID# 817						
20027	See ID# 817						
00588 MLLW CH, Inorganic Sludge/ Particulates, Toxic Organics	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Non-LDR treatment - Evaporation Drying	On-Site	Rotary Kiln	Rotary Kiln	0513	Exists, Could be Used for Mixed Wastes
	3	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	4	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	5	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Treatment	XXXX	Unplanned
	6	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	7	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	8	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	9	Non-LDR treatment - Dehalogenation	On-Site	On-Site Treatment Unit	Dehalogenation	XXXX	Unplanned
	10	Non-LDR treatment - Leaching	On-Site	On-Site Treatment Unit	Leaching	XXXX	Unplanned
	11	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00588 MLLW CH, Inorganic Sludge/ Particulates, Toxic Organics	12	Non-LDR treatment - Solvent Extraction	On-Site	On-Site Treatment Unit	Solvent Extraction	XXXX	Unplanned
	13	Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	14	Stabilization	Hanford Site	Hanford Waste Vitrification Plant	Hanford Waste Vitrification Plant	0126	Planned and Approved
	15	Non-LDR treatment - Distillation	Hanford Site	Mixed Waste Treatment Facility	Separation, Distillation	0537	Exists, Could be Used for Mixed Wastes
	16	Non-LDR treatment - Separation	Hanford Site	Mixed Waste Treatment Facility	Separation, Distillation	0537	Exists, Could be Used for Mixed Wastes
	17	Organics destruction	Hanford Site	Thermal Treatment Facility	Incineration	0532	Planned but UnApproved
	18	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	19	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	20	Stabilization	Idaho National Engineering Lab	Idaho Waste Immobilization Facility	Idaho Waste Immobilization Facility	0260	Planned but UnApproved
	21	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
	22	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved

4886

171

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00588 MLLW CH, Inorganic Sludge/ Particulates, Toxic Organics	23	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	24	Non-LDR treatment - Calcination Pretreatment	Idaho National Engineering Lab	New Waste Calcining Facility	New Waste Calcining Facility	0240	Exists, In Use for Mixed Wastes
	25	Organics destruction	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	26	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	27	Stabilization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	28	Stabilization	Idaho National Engineering Lab	Waste Engineering Developement Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	29	Stabilization	Lawrence Livermore National Lab	Building 513	Solidification Facility	0228	Planned but UnApproved
	30	Organics destruction	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	31	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	32	Stabilization	Los Alamos	Waste Immobilization	Waste Immobilization	0510	Planned but

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00588 MLLW CH, Inorganic Sludge/ Particulates, Toxic Organics			National Lab	Facility	Facility		UnApproved
	33	Stabilization	Mound Facility	Mound Glass Melter	Mound Glass Melter	0261	Exists, Could be Used for Mixed Wastes
	34	Non-LDR treatment - Evaporation	Nevada Test Site	Nevada Test Site	Liquid Waste Treatment System	0511	Planned and Approved
	35	Neutralization	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	36	Organics destruction	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Incineration	0527	Planned but UnApproved
	37	Non-LDR treatment - Size Reduction/Sorting	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Sizing & Segragation	0542	Planned but UnApproved
	38	Non-LDR treatment - Drying	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Soil/Sludge Dewatering	0529	Planned but UnApproved
	39	Decontamination	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Thermal Desorption	0528	Planned but UnApproved
	40	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	41	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes

73

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00588 MLLW CH, Inorganic Sludge/ Particulates, Toxic Organics	42	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	43	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	44	Deactivation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	45	Non-LDR treatment - Filtration	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	46	Neutralization	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	47	Deactivation	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	48	Decontamination	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	49	Non-LDR treatment - Evaporation	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	50	Stabilization	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	51	Neutralization	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	52	Stabilization	Rocky Flats Plant	Building 374/774 Salt and Sludge Treatment	Building 374/774 Salt and Sludge Treatment	0343	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00588 MLLW CH, Inorganic Sludge/ Particulates, Toxic Organics	53	Stabilization	Rocky Flats Plant	Halliburton NUS B&C Process Trains	Immobilization	0545	Planned and Approved
	54	Stabilization	Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	0341	Planned but UnApproved
	55	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	56	Stabilization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	57	Neutralization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	58	Stabilization	Rocky Flats Plant	Pondcrete Solidification Process: Building 788	Pondcrete Solidification Process: Building 788	0018	Exists, Could be Used for Mixed Wastes
	59	Stabilization	Rocky Flats Plant	Pondcrete/Saltcrete Reprocessing Facility: 750PAD	Pondcrete/Saltcrete Reprocessing Facility: 750PAD	0016	Exists, Could be Used for Mixed Wastes
	60	Stabilization	Rocky Flats Plant	Pondcrete/Saltcrete Reprocessing Facility: 904PAD	Pondcrete/Saltcrete Reprocessing Facility: 904PAD	0017	Exists, Could be Used for Mixed Wastes
	61	Stabilization	Rocky Flats Plant	Solidified Bypass Sludge Treatment	Solidified Bypass Sludge Treatment	0342	Planned but UnApproved
	62	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved

175

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00588 MLLW CH, Inorganic Sludge/ Particulates, Toxic Organics	63	Organics destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	64	Stabilization	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk Lead Treatment	0344	Planned but UnApproved
	65	Non-LDR treatment - Separation	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves and Bulk Lead Treatment	0344	Planned but UnApproved
	66	Stabilization	Sandia National Lab - New Mexico	Radioactive and Mixed Waste Management Facility	Radioactive and Mixed Waste Management Facility	0213	Planned and Approved
	67	Organics destruction	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Solid Feed System	0142	Planned and Approved
	68	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Stabilization/Solidification Unit	0148	Planned and Approved
	69	Non-LDR treatment - Repackaging	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	70	Non-LDR treatment - Sorting	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	71	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	72	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
30004	See ID# 588						
50079	See ID# 588						

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50100	See ID# 588						
50113	See ID# 588						
50129	See ID# 588						
50131	See ID# 588						
50152	See ID# 588						
50154	See ID# 588						
50175	See ID# 588						
50183	See ID# 588						
60149	See ID# 588						
60152	See ID# 588						
50170 MLLW CH, Inorganic Sludge/ Particulates, Toxic Organics, Toxic Metals w/o Mercury	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	3	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	4	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned

178

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50170 MLLW CH, Inorganic Sludge/ Particulates, Toxic Organics, Toxic Metals w/o Mercury	5	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	6	Stabilization	On-Site	On-Site Treatment Unit	Solidification	XXXX	Unplanned
	7	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	8	Non-LDR treatment - Calcination Pretreatment	On-Site	On-Site Treatment Unit	Calcination Pretreatment	XXXX	Unplanned
	9	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	10	Metals recovery	On-Site	On-Site Treatment Unit	Leaching	XXXX	Unplanned
	11	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	12	Non-LDR treatment - Chemical Precipitation	On-Site	On-Site Treatment Unit	Chemical Precipitation	XXXX	Unplanned
	13	Non-LDR treatment - Drying	On-Site	On-Site Treatment Unit	Drying	XXXX	Unplanned
	14	Non-LDR treatment - Evaporation	On-Site	On-Site Treatment Unit	Evaporation	XXXX	Unplanned
	15	Non-LDR treatment - Filtration	On-Site	On-Site Treatment Unit	Filtration	XXXX	Unplanned
	16	Stabilization	Idaho National Engineering Lab	Idaho Waste Immobilization Facility	Idaho Waste Immobilization Facility	0260	Planned but UnApproved
	17	Stabilization	Idaho National	Idaho Waste Processing	Stabilization System	0336	Planned but

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50170 MLLW CH, Inorganic Sludge/ Particulates, Toxic Organics, Toxic Metals w/o Mercury			Engineering Lab	Facility			UnApproved
	18	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	19	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	20	Non-LDR treatment - Calcination Pretreatment	Idaho National Engineering Lab	New Waste Calcining Facility	New Waste Calcining Facility	0240	Exists, In Use for Mixed Wastes
	21	Organics destruction	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	22	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	23	Stabilization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	24	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	25	Stabilization	Lawrence Livermore National Lab	Building 513	Solidification Facility	0228	Planned but UnApproved
	26	Organics destruction	Los Alamos	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used

179

4886

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50170 MLLW CH, Inorganic Sludge/ Particulates, Toxic Organics, Toxic Metals w/o Mercury			National Lab				for Mixed Wastes
	27	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	28	Stabilization	Los Alamos National Lab	Waste Immobilization Facility	Waste Immobilization Facility	0510	Planned but UnApproved
	29	Stabilization	Mound Facility	Mound Glass Melter	Mound Glass Melter	0261	Exists, Could be Used for Mixed Wastes
	30	Non-LDR treatment - Evaporation	Nevada Test Site	Nevada Test Site	Liquid Waste Treatment System	0511	Planned and Approved
	31	Neutralization	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	32	Non-LDR treatment - Drying	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Soil/Sludge Dewatering	0529	Planned but UnApproved
	33	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	34	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	35	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	36	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50170 MLLW CH, Inorganic Sludge/ Particulates, Toxic Organics, Toxic Metals w/o Mercury	37	Deactivation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	38	Non-LDR treatment - Filtration	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	39	Neutralization	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	40	Deactivation	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	41	Decontamination	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	42	Non-LDR treatment - Evaporation	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	43	Stabilization	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	44	Neutralization	Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	0007	Exists, In Use for Mixed Wastes
	45	Stabilization	Rocky Flats Plant	Building 374/774 Salt and Sludge Treatment	Building 374/774 Salt and Sludge Treatment	0343	Planned but UnApproved
	46	Stabilization	Rocky Flats Plant	Halliburton NUS B&C Process Trains	Immobilization	0545	Planned and Approved
	47	Stabilization	Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	0341	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50170 MLLW CH, Inorganic Sludge/ Particulates, Toxic Organics, Toxic Metals w/o Mercury	48	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	49	Stabilization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	50	Neutralization	Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	0345	Planned but UnApproved
	51	Stabilization	Rocky Flats Plant	Pondcrete Solidification Process: Building 788	Pondcrete Solidification Process: Building 788	0018	Exists, Could be Used for Mixed Wastes
	52	Stabilization	Rocky Flats Plant	Pondcrete/Saltcrete Reprocessing Facility: 750PAD	Pondcrete/Saltcrete Reprocessing Facility: 750PAD	0016	Exists, Could be Used for Mixed Wastes
	53	Stabilization	Rocky Flats Plant	Pondcrete/Saltcrete Reprocessing Facility: 904PAD	Pondcrete/Saltcrete Reprocessing Facility: 904PAD	0017	Exists, Could be Used for Mixed Wastes
	54	Stabilization	Rocky Flats Plant	Solidified Bypass Sludge Treatment	Solidified Bypass Sludge Treatment	0342	Planned but UnApproved
	55	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	56	Organics destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	57	Stabilization	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves, and Bulk Lead Treatment	0344	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50170 MLLW CH, Inorganic Sludge/ Particulates, Toxic Organics, Toxic Metals w/o Mercury	58	Non-LDR treatment - Separation	Rocky Flats Plant	Surface Organic Removal	Leaded Gloves, and Bulk Lead Treatment	0344	Planned but UnApproved
	59	Stabilization	Sandia National Lab - New Mexico	Radioactive and Mixed Waste Management Facility	Radioactive and Mixed Waste Management Facility	0213	Planned and Approved
	60	Organics destruction	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Solid Feed System	0142	Planned and Approved
	61	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Stabilization/Solidification Unit	0148	Planned and Approved
	62	Non-LDR treatment - Repackaging	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	63	Non-LDR treatment - Sorting	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	64	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	65	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	66	Stabilization	Hanford Site	Concretion Facility	Solidification	0536	Exists, Could be Used for Mixed Wastes
	67	Stabilization	Hanford Site	Hanford Waste Vitrification Plant	Hanford Waste Vitrification Plant	0126	Planned and Approved
	68	Non-LDR treatment - Distillation	Hanford Site	Mixed Waste Treatment Facility	Separation, Distillation	0537	Exists, Could be Used for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50170 MLLW CH, Inorganic Sludge/Particulate Toxic Organics, Toxic Metals w/o Mercury	69	Non-LDR treatment - Separation	Hanford Site	Mixed Waste Treatment Facility	Separation, Distillation	0537	Exists, Could be Used for Mixed Wastes
	70	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
10034 MLLW CH, Lab Packs w/o Metals	1	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	2	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	3	Non-LDR treatment - Bulking	On-Site	On-Site Treatment Unit	Bulking	XXXX	Unplanned
	4	Non-LDR treatment - Solvent Extraction	On-Site	On-Site Treatment Unit	Solvent Extraction	XXXX	Unplanned
	5	Organics destruction	Hanford Site	Thermal Treatment Facility	Incineration	0532	Planned but UnApproved
	6	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	7	Organics destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
	8	Organics destruction	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	9	Organics destruction	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
10034 MLLW CH, Lab Packs w/o Metals	10	Organics destruction	Los Alamos National Lab	Controlled Air Incinerator	Liquid Feed System	0312	Exists, Could be Used for Mixed Wastes
	11	Organics destruction	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	12	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	13	Non-LDR treatment - Bulking	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	14	Organics destruction	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Incineration	0527	Planned but UnApproved
	15	Non-LDR treatment - Size Reduction/Separation	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Sizing and Segragation	0542	Planned but UnApproved
	16	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
10035	See ID# 10034						
00389 MLLW CH, Organic Debris, Toxic Metals w/ Mecury	1	Decontamination	On-Site	On-Site Treatment Unit	CO2 Decontamination	XXXX	Unplanned
	2	Decontamination	On-Site	On-Site Treatment Unit	Debris Decontamination	XXXX	Unplanned
	3	Decontamination	On-Site	On-Site Treatment Unit	Surface Treatment	XXXX	Unplanned
	4	Decontamination	On-Site	On-Site Treatment Unit	Water Washing	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00389 MLLW CH, Organic Debris, Toxic Metals w/ Mercury	5	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	6	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	7	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	8	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	9	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	10	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned
	11	Non-LDR treatment - Repackaging	On-Site	On-Site Treatment Unit	Repackaging	XXXX	Unplanned
	12	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	13	Non-LDR treatment - Shredding	On-Site	On-Site Treatment Unit	Shredding	XXXX	Unplanned
	14	Non-LDR treatment - Size Reduction	On-Site	On-Site Treatment Unit	Size Reduction	XXXX	Unplanned
	15	Non-LDR treatment - Sorting	On-Site	On-Site Treatment Unit	Sorting	XXXX	Unplanned
	16	Stabilization	Envirocare of	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00389 MLLW CH, Organic Debris, Toxic Metals w/ Mercury			Utah				Mixed Wastes
	17	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	18	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Unit 2: CO2 Decontamination System	0257	Planned and Approved
	19	Metals recovery	Idaho National Engineering Lab	HEPA Filter Leaching System (CPP-659)	HEPA Filter Leaching System (CPP-659)	0238	Exists, In Use for Mixed Wastes
	20	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Water Washing System	0303	Planned and Approved
	21	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	22	Decontamination	Idaho National Engineering Lab	Idaho Waste Processing Facility	Debris Decontamination System	0304	Planned but UnApproved
	23	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Macroencapsulation System	0335	Planned but UnApproved
	24	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Sizing System	0504	Planned but UnApproved
	25	Non-LDR treatment - Thermal Destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
	26	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00389 MLLW CH, Organic Debris, Toxic Metals w/ Mercury	27	Non-LDR treatment - Incineration	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	28	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	29	Non-LDR treatment - Incineration	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	30	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	31	Non-LDR treatment - Sorting	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	32	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Debris Sizing Unit	0503	Planned but UnApproved
	33	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Macroencapsulation Unit - INEL	0323	Planned but UnApproved
	34	Non-LDR treatment - Incineration	Los Alamos National Lab	Controlled Air Incinerator	Liquid Feed System	0312	Exists, Could be Used for Mixed Wastes
	35	Non-LDR treatment - Incineration	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	36	Non-LDR treatment -	Los Alamos	Hazardous Waste	Future Skids	0541	Planned but

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00389 MLLW CH, Organic Debris, Toxic Metals w/ Mercury		Leaching	National Lab	Treatment Facility (HWTF)			UnApproved
	37	Non-LDR treatment - Compaction	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	38	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	39	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	40	Non-LDR treatment - Size Reduction	Rocky Flats Plant	Advanced Size Reduction Facility: Building 776	Advanced Size Reduction Facility: Building 776	0014	Exists, Could be Used for Mixed Wastes
	41	Non-LDR treatment - Compaction	Rocky Flats Plant	Low-Level Mixed Waste Baler: Building 889	Low-Level Mixed Waste Baler: Building 889	0339	Exists, Could be Used for Mixed Wastes
	42	Non-LDR treatment - Compaction	Rocky Flats Plant	Supercompaction and Repackaging Facility: Building 776	Supercompaction and Repackaging Facility: Building 776	0019	Exists, In Use for Mixed Wastes
	43	Non-LDR treatment - Incineration	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Solid Feed System	0142	Planned and Approved
	44	Non-LDR treatment - Compaction	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	45	Non-LDR treatment - Size Reduction	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	46	Non-LDR treatment - Sorting	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00389 MLLW CH, Organic Debris, Toxic Metals w/ Mercury	47	Non-LDR treatment - Repackaging	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	48	Non-LDR treatment - Sorting	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
10017 MLLW CH, Organic Debris, Toxic Metals w/o Mercury	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Decontamination	On-Site	On-Site Treatment Unit	CO2 Decontamination	XXXX	Unplanned
	3	Decontamination	On-Site	On-Site Treatment Unit	Debris Decontamination	XXXX	Unplanned
	4	Decontamination	On-Site	On-Site Treatment Unit	Surface Treatment	XXXX	Unplanned
	5	Decontamination	On-Site	On-Site Treatment Unit	Water Washing	XXXX	Unplanned
	6	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	7	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	8	Neutralization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	9	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	10	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	11	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
10017 MLLW CH, Organic Debris, Toxic Metals w/o Mercury	12	Non-LDR treatment - Repackaging	On-Site	On-Site Treatment Unit	Repackaging	XXXX	Unplanned
	13	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	14	Non-LDR treatment - Shredding	On-Site	On-Site Treatment Unit	Shredding	XXXX	Unplanned
	15	Non-LDR treatment - Size Reduction	On-Site	On-Site Treatment Unit	Size Reduction	XXXX	Unplanned
	16	Non-LDR treatment - Sorting	On-Site	On-Site Treatment Unit	Sorting	XXXX	Unplanned
	17	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	18	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	19	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Unit 2: CO2 Decontamination	0257	Planned and Approved
	20	Metals recovery	Idaho National Engineering Lab	HEPA Filter Leaching System (CPP-659)	HEPA Filter Leaching System (CPP-659)	0238	Exists, In Use for Mixed Wastes
	21	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Water Washing System	0303	Planned and Approved
	22	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
10017 MLLW CH, Organic Debris, Toxic Metals w/o Mercury	23	Decontamination	Idaho National Engineering Lab	Idaho Waste Processing Facility	Debris Decontamination System	0304	Planned but UnApproved
	24	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Macroencapsulation System	0335	Planned but UnApproved
	25	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Sizing System	0504	Planned but UnApproved
	26	Non-LDR treatment - Thermal Destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
	27	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	28	Non-LDR treatment - Incineration	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	29	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	30	Non-LDR treatment - Incineration	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	31	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	32	Non-LDR treatment - Sorting	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
10017 MLLW CH, Organic Debris, Toxic Metals w/o Mercury	33	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Debris Sizing Unit	0503	Planned but UnApproved
	34	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Macroencapsulation Unit - INEL	0323	Planned but UnApproved
	35	Non-LDR treatment - Incineration	Los Alamos National Lab	Controlled Air Incinerator	Liquid Feed System	0312	Exists, Could be Used for Mixed Wastes
	36	Non-LDR treatment - Incineration	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	37	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	38	Non-LDR treatment - Compaction	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	39	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	40	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	41	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	42	Non-LDR treatment - Size Reduction	Rocky Flats Plant	Advanced Size Reduction Facility: Building 776	Advanced Size Reduction Facility: Building 776	0014	Exists, Could be Used for Mixed Wastes
	43	Non-LDR treatment -	Rocky Flats Plant	Low-Level Mixed Waste	Low-Level Mixed Waste	0339	Exists, Could be Used

153

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
10017 MLLW CH, Organic Debris, Toxic Metals w/o Mercury		Compaction		Baler: Building 889	Baler: Building 889		for Mixed Wastes
	44	Non-LDR treatment - Size Reduction	Rocky Flats Plant	Size Reduction Vault: Building 776	Size Reduction Vault: Building 776	0012	Exists, In Use for Mixed Wastes
	45	Non-LDR treatment - Compaction	Rocky Flats Plant	Supercompaction and Repackaging Facility: Building 776	Supercompaction and Repackaging Facility: Building 776	0019	Exists, In Use for Mixed Wastes
	46	Stabilization	Sandia National Lab - New Mexico	Radioactive and Mixed Waste Management Facility	Radioactive and Mixed Waste Management Facility	0213	Planned and Approved
	47	Non-LDR treatment - Incineration	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Solid Feed System	0142	Planned and Approved
	48	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Macroencapsulation Unit - SRS	0144	Planned and Approved
	49	Non-LDR treatment - Compaction	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	50	Non-LDR treatment - Size Reduction	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	51	Non-LDR treatment - Size Reduction	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Size Reduction	0151	Planned and Approved
	52	Non-LDR treatment - Repackaging	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	53	Non-LDR treatment - Sorting	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
10017 MLLW CH, Organic Debris, Toxic Metals w/o Mercury	54	Non-LDR treatment - Incineration	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
20120	See ID# 10017						
50058	See ID# 10017						
50061	See ID# 10017						
00180 MLLW CH, Organic Debris, Toxic Organics	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Decontamination	On-Site	On-Site Treatment Unit	CO2 Decontamination	XXXX	Unplanned
	3	Decontamination	On-Site	On-Site Treatment Unit	Debris Decontamination	XXXX	Unplanned
	4	Decontamination	On-Site	On-Site Treatment Unit	Surface Treatment	XXXX	Unplanned
	5	Decontamination	On-Site	On-Site Treatment Unit	Water Washing	XXXX	Unplanned
	6	Decontamination	On-Site	On-Site Treatment Unit	Thermal Desorption	XXXX	Unplanned
	7	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	8	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	9	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	10	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	11	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00180 MLLW CH, Organic Debris, Toxic Organics	12	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned
	13	Non-LDR treatment - Repackaging	On-Site	On-Site Treatment Unit	Repackaging	XXXX	Unplanned
	14	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	15	Non-LDR treatment - Shredding	On-Site	On-Site Treatment Unit	Shredding	XXXX	Unplanned
	16	Non-LDR treatment - Size Reduction	On-Site	On-Site Treatment Unit	Size Reduction	XXXX	Unplanned
	17	Non-LDR treatment - Sorting	On-Site	On-Site Treatment Unit	Sorting	XXXX	Unplanned
	18	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	19	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	20	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Unit 2: CO2 Decontamination System	0257	Planned and Approved
	21	Non-LDR treatment - Chemical Extraction	Idaho National Engineering Lab	HEPA Filter Leaching System (CPP-659)	HEPA Filter Leaching System (CPP-659)	0238	Exists, In Use for Mixed Wastes
	22	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Water Washing System	0303	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00180 MLLW CH, Organic Debris, Toxic Organics	23	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	24	Decontamination	Idaho National Engineering Lab	Idaho Waste Processing Facility	Debris Decontamination System	0304	Planned but UnApproved
	25	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Macroencapsulation System	0335	Planned but UnApproved
	26	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Sizing System	0504	Planned but UnApproved
	27	Organics destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
	28	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	29	Organics destruction	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	30	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	31	Organics destruction	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	32	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00180 MLLW CH, Organic Debris, Toxic Organics	33	Non-LDR treatment - Sorting	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	34	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Debris Sizing Unit	0503	Planned but UnApproved
	35	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Macroencapsulation Unit - INEL	0323	Planned but UnApproved
	36	Organics destruction	Los Alamos National Lab	Controlled Air Incinerator	Liquid Feed System	0312	Exists, Could be Used for Mixed Wastes
	37	Organics destruction	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	38	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	39	Non-LDR treatment - Compaction	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	40	Organics destruction	Oak Ridge K-25 Site	K-25 Site TSCA Incinerator	K-25 Site TSCA Incinerator	0305	Exists, In Use for Mixed Wastes
	41	Organics destruction	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Incineration	0527	Planned but UnApproved
	42	Non-LDR treatment - Size	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment	MW Treatment Facility - Sizing and Segragation	0542	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00180 MLLW CH, Organic Debris, Toxic Organics		Reduction/Separation		Facility			
	43	Decontamination	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Thermal Desorption	0528	Planned but UnApproved
	44	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	45	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	46	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	47	Non-LDR treatment - Size Reduction	Rocky Flats Plant	Advanced Size Reduction Facility: Building 776	Advanced Size Reduction Facility: Building 776	0014	Exists, Could be Used for Mixed Wastes
	48	Non-LDR treatment - Compaction	Rocky Flats Plant	Building 776 Low-Level Mixed Waste Baler	Building 776 Low-Level Mixed Waste Baler	0013	Exists, Could be Used for Mixed Wastes
	49	Non-LDR treatment - Compaction	Rocky Flats Plant	Low-Level Mixed Waste Baler: Building 889	Low-Level Mixed Waste Baler: Building 889	0339	Exists, Could be Used for Mixed Wastes
	50	Non-LDR treatment - Size Reduction	Rocky Flats Plant	Size Reduction Vault: Building 776	Size Reduction Vault: Building 776	0012	Exists, In Use for Mixed Wastes
	51	Non-LDR treatment - Compaction	Rocky Flats Plant	Supercompaction and Repackaging Facility: Building 776	Supercompaction and Repackaging Facility: Building 776	0019	Exists, In Use for Mixed Wastes
	52	Stabilization	Sandia National	Radioactive and Mixed	Radioactive and Mixed	0213	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00180 MLLW CH, Organic Debris, Toxic Organics			Lab - New Mexico	Waste Management Facility	Waste Management Facility		
	53	Organics destruction	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Solid Feed System	0142	Planned and Approved
	54	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Macroencapsulation Unit - SRS	0144	Planned and Approved
	55	Non-LDR treatment - Repackaging	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	56	Non-LDR treatment - Sorting	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	57	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	58	Non-LDR treatment - Compaction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Ultracompactor/TRUPress - Commercial	0540	Planned and Approved
00396	See ID# 180						
00398	See ID# 180						
00743	See ID# 180						
01501	See ID# 180						
10012	See ID# 180						
10024	See ID# 180						

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
30075	See ID# 180						
50002	See ID# 180						
50010	See ID# 180						
50025	See ID# 180						
50359	See ID# 180						
00376 MLLW CH, Organic Debris, Toxic Organics, Toxic Metals w/o Mercury	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Decontamination	On-Site	On-Site Treatment Unit	CO2 Decontamination	XXXX	Unplanned
	3	Decontamination	On-Site	On-Site Treatment Unit	Debris Decontamination	XXXX	Unplanned
	4	Decontamination	On-Site	On-Site Treatment Unit	Surface Treatment	XXXX	Unplanned
	5	Decontamination	On-Site	On-Site Treatment Unit	Water Washing	XXXX	Unplanned
	6	Decontamination	On-Site	On-Site Treatment Unit	Thermal Desorption	XXXX	Unplanned
	7	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	8	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	9	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00376 MLLW CH, Organic Debris, Toxic Organics, Toxic Metals w/o Mercury	10	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	11	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	12	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned
	13	Non-LDR treatment - Repackaging	On-Site	On-Site Treatment Unit	Repackaging	XXXX	Unplanned
	14	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	15	Non-LDR treatment - Shredding	On-Site	On-Site Treatment Unit	Shredding	XXXX	Unplanned
	16	Non-LDR treatment - Size Reduction	On-Site	On-Site Treatment Unit	Size Reduction	XXXX	Unplanned
	17	Non-LDR treatment - Sorting	On-Site	On-Site Treatment Unit	Sorting	XXXX	Unplanned
	18	Non-LDR treatment - Chemical Extraction	On-Site	On-Site Treatment Unit	Chemical Extraction	XXXX	Unplanned
	19	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	20	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	21	Decontamination	Idaho National	ICPP Decontamination	Unit2: CO2	0257	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00376 MLLW CH, Organic Debris, Toxic Organics, Toxic Metals w/o Mercury			Engineering Lab	Facility	Decontamination System		
	22	Metals recovery	Idaho National Engineering Lab	HEPA Filter Leaching System (CPP-659)	HEPA Filter Leaching System (CPP-659)	0238	Exists, In Use for Mixed Wastes
	23	Decontamination	Idaho National Engineering Lab	ICPP Decontamination Facility	Water Washing System	0303	Planned and Approved
	24	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	25	Decontamination	Idaho National Engineering Lab	Idaho Waste Processing Facility	Debris Decontamination System	0304	Planned but UnApproved
	26	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Macroencapsulation System	0335	Planned but UnApproved
	27	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Sizing System	0504	Planned but UnApproved
	28	Decontamination	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
	29	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	30	Organics destruction	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	31	Organics destruction	Idaho National	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00376 MLLW CH, Organic Debris, Toxic Organics, Toxic Metals w/o Mercury			Engineering Lab				for Mixed Wastes
	32	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	33	Non-LDR treatment - Sorting	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	34	Non-LDR treatment - Size Reduction	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Debris Sizing Unit	0503	Planned but UnApproved
	35	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Macroencapsulation Unit - INEL	0322	Planned but UnApproved
	36	Organics destruction	Los Alamos National Lab	Controlled Air Incinerator	Liquid Feed System	0312	Exists, Could be Used for Mixed Wastes
	37	Organics destruction	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	38	Non-LDR treatment - Leaching	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	39	Non-LDR treatment - Compaction	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	40	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	41	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00376 MLLW CH, Organic Debris, Toxic Organics, Toxic Metals w/o Mercury							for Mixed Wastes
	42	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	43	Non-LDR treatment - Size Reduction	Rocky Flats Plant	Advanced Size Reduction Facility: Building 776	Advanced Size Reduction Facility: Building 776	0014	Exists, Could be Used for Mixed Wastes
	44	Non-LDR treatment - Compaction	Rocky Flats Plant	Low-Level Mixed Waste Baler: Building 889	Low-Level Mixed Waste Baler: Building 889	0339	Exists, Could be Used for Mixed Wastes
	45	Non-LDR treatment - Size Reduction	Rocky Flats Plant	Size Reduction Vault: Building 776	Size Reduction Vault: Building 776	0012	Exists, In Use for Mixed Wastes
	46	Non-LDR treatment - Compaction	Rocky Flats Plant	Supercompaction and Repackaging Facility: Building 776	Supercompaction and Repackaging Facility: Building 776	0019	Exists, In Use for Mixed Wastes
	47	Stabilization	Sandia National Lab - New Mexico	Radioactive and Mixed Waste Management Facility	Radioactive and Mixed Waste Management Facility	0213	Planned and Approved
	48	Organics destruction	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Solid Feed System	0142	Planned and Approved
	49	Stabilization	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Macroencapsulation Unit - SRS	0144	Planned and Approved
	50	Non-LDR treatment - Repackaging	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	51	Non-LDR treatment - Sorting	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00376 MLLW CH, Organic Debris, Toxic Organics, Toxic Metals w/o Mercury	52	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	53	Non-LDR treatment - Compaction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Ultracompactor/TRUPress - Commercial	0540	Planned and Approved
00380	See ID# 376						
00387	See ID# 376						
00404	See ID# 376						
00410	See ID# 376						
00413	See ID# 376						
00425 MLLW CH, Organic Liquid, Ignitable, Reactive, or Corrosive Only	1	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	2	Deactivation	On-Site	On-Site Treatment Unit	Neutralization	XXXX	Unplanned
	3	Non-LDR treatment - Filtration	On-Site	On-Site Treatment Unit	Filtration	XXXX	Unplanned
	4	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	5	Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	6	Non-LDR treatment - Adsorption	On-Site	On-Site Treatment Unit	Adsorption	XXXX	Unplanned
	7	Organics destruction	Hanford Site	Thermal Treatment Facility	Incineration	0532	Planned but

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00425 MLLW CH, Organic Liquid, Ignitable, Reactive or Corrosive Only							UnApproved
	8	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP I	0325	Planned and Approved
	9	Non-LDR treatment - Adsorption	Los Alamos National Lab	Hazardous Waste Treatment Facility	Future Skids	0541	Planned and Approved
	10	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
00428 MLLW CH, Organic Liquid, Ignitable, Reactive, or Corrosive Only	1	Organics destruction	On-Site	On-Site Treatment Unit	Chemical Oxidation	XXXX	Unplanned
	2	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	3	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	4	Organics destruction	On-Site	On-Site Treatment Unit	UV/Oxidation	XXXX	Unplanned
	5	Non-LDR treatment - Ditillation	On-Site	On-Site Treatment Unit	Distillation	XXXX	Unplanned
	6	Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	7	Organics destruction	Hanford Site	Thermal Treatment Facility	Incineration	0532	Planned but UnApproved
	8	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
00508	See ID# 428						
00533	See ID# 428						

222

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00587	See ID# 428						
00768	See ID# 428						
00870	See ID# 428						
01182	See ID# 428						
01337	See ID# 428						
01432	See ID# 428						
02224	See ID# 428						
00393 MLLW CH, Organic Liquid, Toxic Metals w/o Mercury	1	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	2	Non-LDR treatment - Calcination Pretreatment	On-Site	On-Site Treatment Unit	Calcination Pretreatment	XXXX	Unplanned
	3	Non-LDR treatment - Filtration	On-Site	On-Site Treatment Unit	Filtration	XXXX	Unplanned
	4	Non-LDR treatment - Reduction	On-Site	On-Site Treatment Unit	Reduction	XXXX	Unplanned
	5	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	6	Non-LDR treatment -	On-Site	On-Site Treatment Unit	Biodenitrification	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00393 MLLW CH, Organic Liquid, Toxic Metals w/o Mercury		Biodenitrification					
	7	Non-LDR treatment - Oxidation	On-Site	On-Site Treatment Unit	Oxidation	XXXX	Unplanned
	8	Non-LDR treatment - Chemical Precipitation	On-Site	On-Site Treatment Unit	Chemical Precipitation	XXXX	Unplanned
	9	Non-LDR treatment - Evaporation	On-Site	On-Site Treatment Unit	Evaporation	XXXX	Unplanned
	10	Non-LDR treatment - Ion Exchange	On-Site	On-Site Treatment Unit	Ion Exchange	XXXX	Unplanned
	11	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	12	Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	13	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	14	Stabilization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	15	Neutralization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Neutralization Unit	0501	Planned but UnApproved
	16	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00393 MLLW CH, Organic Liquid, Toxic Metals w/o Mercury	17	Non-LDR treatment - Incineration	Los Alamos National Lab	Controlled Air Incinerator	Liquid Feed System	0312	Exists, Could be Used for Mixed Wastes
	18	Non-LDR treatment - Chemical Oxidation	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Detox Skid	0208	Planned and Approved
	19	Non-LDR treatment - Crushing	Los Alamos National Lab	Scintillation Vial Crusher - TA-84, Area L	Scintillation Vial Crusher	0204	Exists, In Use for Mixed Wastes
	20	Stabilization	Mound Facility	Mound Glass Melter	Mound Glass Melter	0261	Exists, Could be Used for Mixed Wastes
	21	Non-LDR treatment - Chemical Precipitation	Oak Ridge K-25 Site	K-25	Non-Radiological Waste Treatment Plant	0520	Exists, In Use for Mixed Wastes
	22	Non-LDR treatment - Filtration	Oak Ridge K-25 Site	K-25	Non-Radiological Waste Treatment Plant	0520	Exists, In Use for Mixed Wastes
	23	Neutralization	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	24	Non-LDR treatment - Evaporation	Oak Ridge National Lab	Liquid Low Level Waste Evaporation Facility	Liquid Low Level Waste Evaporation Facility	0105	Exists, In Use for Mixed Wastes
	25	Non-LDR treatment - Ion Exchange	Oak Ridge National Lab	Liquid Low Level Waste Evaporation Facility	Liquid Low Level Waste Evaporation Facility	0105	Exists, In Use for Mixed Wastes
	26	Non-LDR treatment - Ion Exchange	Oak Ridge National Lab	Process Waste Treatment Plant	Process Waste Treatment Plant	0104	Exists, In Use for Mixed Wastes
	27	Non-LDR treatment - Oxidation/Reduction	Oak Ridge Y-12 Plant	Plating Rinsewater Treatment Facility	Plating Rinsewater Treatment Facility	0221	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00393 MLLW CH, Organic Liquid, Toxic Metals w/o Mercury	28	Non-LDR treatment - Filtration	Oak Ridge Y-12 Plant	Plating Rinsewater Treatment Facility	Plating Rinsewater Treatment Facility	0221	Exists, In Use for Mixed Wastes
	29	Neutralization	Oak Ridge Y-12 Plant	Plating Rinsewater Treatment Facility	Plating Rinsewater Treatment Facility	0221	Exists, In Use for Mixed Wastes
	30	Non-LDR treatment - Biodenitrification	Oak Ridge Y-12 Plant	West End Treatment Facility	Wastewater Treatment	0224	Exists, In Use for Mixed Wastes
	31	Non-LDR treatment - Chemical Precipitation	Oak Ridge Y-12 Plant	West End Treatment Facility	Wastewater Treatment	0224	Exists, In Use for Mixed Wastes
	32	Neutralization	Oak Ridge Y-12 Plant	West End Treatment Facility	Wastewater Treatment	0224	Exists, In Use for Mixed Wastes
	33	Stabilization	Ramp Industries, Denver, Co	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	34	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	35	Deactivation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	36	Non-LDR treatment - Filtration	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	37	Neutralization	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	38	Stabilization	Rocky Flats Plant	Organic and Sludge Immobilization System:	Organic and Sludge Immobilization System:	0005	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00393 MLLW CH, Organic Liquid, Toxic Metals w/o Mercury				Building 774	Building 774		
	39	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	40	Non-LDR treatment - Thermal Destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	41	Non-LDR treatment - Incineration	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Liquid Feed System	0361	Planned and Approved
	42	Non-LDR treatment - Repackaging	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	43	Non-LDR treatment - Sorting	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	44	Non-LDR treatment - Incineration	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	45	Non-LDR treatment - Incineration	Oak Ridge K-25 Site	K-25 Site TSCA Incinerator	K-25 Site TSCA Incinerator	0305	Exists. In Use for Mixed Wastes
	46	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	47	WW trtment for metals removal (aq liqs)	Idaho National Engineering Lab	Bench Scale Treatments	Bench Scale Treatments	0248	Planned and Approved
	48	Non-LDR treatment - Thermal Destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00393 MLLW CH, Organic Liquid, Toxic Metals w/o Mercury	49	WW trtment for metals removal (aq liqs)	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	50	Non-LDR treatment - Incineration	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	51	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	52	Non-LDR treatment - Incineration	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	53	Neutralization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
50095	See ID# 393						
01952 MLLW CH, Organic Liquid, Toxic Metals w/o	1	Non-LDR treatment - Incineration	Oak Ridge K-25 Site	K-25 Site TSCA Incinerator	K-25 Site TSCA Incinerator	0305	Exists, In Use for Mixed Wastes
00385 MLLW CH, Organic Liquid, Toxic Organics	1	Organics destruction	On-Site	On-Site Treatment Unit	Chemical Oxidation	XXXX	Unplanned
	2	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	3	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	4	Organics destruction	On-Site	On-Site Treatment Unit	UV Oxidation	XXXX	Unplanned
	5	Organics destruction	On-Site	On-Site Treatment Unit	Biodegradation	XXXX	Unplanned

48866

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00385 MLLW CH, Organic Liquid, Toxic Organics	6	Non-LDR treatment - Air Stripping	On-Site	On-Site Treatment Unit	Air Stripping	XXXX	Unplanned
	7	Non-LDR treatment - Dehalogenation	On-Site	On-Site Treatment Unit	Dehalogenation	XXXX	Unplanned
	8	Non-LDR treatment - Distillation	On-Site	On-Site Treatment Unit	Distillation	XXXX	Unplanned
	9	Non-LDR treatment - Evaporation	On-Site	On-Site Treatment Unit	Evaporation	XXXX	Unplanned
	10	Non-LDR treatment - Filtration	On-Site	On-Site Treatment Unit	Filtration	XXXX	Unplanned
	11	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	12	Non-LDR treatment - Solvent Extraction	On-Site	On-Site Treatment Unit	Solvent Extraction	XXXX	Unplanned
	13	Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	14	Neutralization	On-Site	On-Site Treatment Unit	Neutralization	XXXX	Unplanned
	15	Non-LDR treatment - Carbon Adsorption	On-Site	On-Site Treatment Unit	Carbon Adsorption	XXXX	Unplanned
	16	Non-LDR treatment - Chemical Precipitation	On-Site	On-Site Treatment Unit	Chemical Precipitation	XXXX	Unplanned
	17	Non-LDR treatment - Chemical Precipitation	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility	Mixed Low-Level Waste Treatment Facility	0324	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00385 MLLW CH, Organic Liquid, Toxic Organics				(MLLWTF)	(MLLWTF)		
	18	Organics destruction	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	19	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	20	Organics destruction	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	21	Neutralization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	22	Stabilization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	23	Neutralization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Neutralization Unit	0501	Planned but UnApproved
	24	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	25	Non-LDR treatment - Carbon Adsorption	Lawrence Livermore National Lab	Area 514-1	Carbon Adsorption Unit	0236	Planned but UnApproved
	26	Organics destruction	Los Alamos	Controlled Air Incinerator	Liquid Feed System	0312	Exists, Could be Used

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00385 MLLW CH, Organic Liquid, Toxic Organics			National Lab				for Mixed Wastes
	27	Organics destruction	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Detox Skid	0208	Planned and Approved
	28	Non-LDR treatment - Crushing	Los Alamos National Lab	Scintillation Vial Crusher - TA-84, Area L	Scintillation Vial Crusher	0204	Exists, In Use for Mixed Wastes
	29	Stabilization	Mound Facility	Mound Glass Melter	Mound Glass Melter	0261	Exists, Could be Used for Mixed Wastes
	30	Non-LDR treatment - Chemical Precipitation	Oak Ridge K-25 Site	K-25	Non-Radiological Waste Treatment Plant	0520	Exists, In Use for Mixed Wastes
	31	Non-LDR treatment - Filtration	Oak Ridge K-25 Site	K-25	Non-Radiological Waste Treatment Plant	0520	Exists, In Use for Mixed Wastes
	32	Neutralization	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	33	Organics destruction	Oak Ridge K-25 Site	K-25 Site TSCA Incinerator	K-25 Site TSCA Incinerator	0305	Exists, In Use for Mixed Wastes
	34	Non-LDR treatment - Ion Exchange	Oak Ridge National Lab	Process Waste Treatment Plant	Process Waste Treatment Plant	0104	Exists, In Use for Mixed Wastes
	35	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	36	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00385 MLLW CH, Organic Liquid, Toxic Organics	37	Deactivation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	38	Non-LDR treatment - Filtration	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	39	Neutralization	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	40	Stabilization	Rocky Flats Plant	Organic and Sludge Immobilization System: Building 774	Organic and Sludge Immobilization System: Building 774	0005	Exists, In Use for Mixed Wastes
	41	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	42	Organics destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	43	Organics destruction	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Liquid Feed System	0361	Planned and Approved
	44	Non-LDR treatment - Repackaging	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	45	Non-LDR treatment - Sorting	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	46	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	47	Organics destruction	Hanford Site	Thermal Treatment Facility	Incineration	0532	Planned but

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00385 MLLW CH, Organic Liquid, Toxic Organics							UnApproved
	48	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	49	Non-LDR treatment - Ion Exchange	Idaho National Engineering Lab	Bench Scale Treatments	Bench Scale Treatments	0248	Planned and Approved
	50	Organics destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
00386	See ID# 385						
00397	See ID# 385						
00418	See ID# 385						
00419	See ID# 385						
00421	See ID# 385						
00422	See ID# 385						
00426	See ID# 385						
00438	See ID# 385						
00447	See ID# 385						
00455	See ID# 385						
00457	See ID# 385						

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00459	See ID# 385						
00478	See ID# 385						
00485	See ID# 385						
00493	See ID# 385						
00507	See ID# 385						
00632	See ID# 385						
00633	See ID# 385						
00638	See ID# 385						
00658	See ID# 385						
01706	See ID# 385						
01708	See ID# 385						
01709	See ID# 385						
01725	See ID# 385						
01998	See ID# 385						
10027	See ID# 385						
10030	See ID# 385						
10032	See IDd# 385						

219

48 of 5

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
20003	See ID# 385						
20021	See ID# 385						
20028	See ID# 385						
20054	See ID# 385						
20055	See ID# 385						
20142	See ID# 385						
30033	See ID# 385						
30034	See ID# 385						
50022	See ID# 385						
60331	See ID# 385						
00414 MLLW CH, Organic Liquid, Toxic Organics, Toxic Metals w/ Mercury	1	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	2	Organics destruction	On-Site	On-Site Treatment Unit	Chemical Oxidation	XXXX	Unplanned
	3	Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	4	Stabilization	On-Site	On-Site Treatment Unit	Vitrification	XXXX	Unplanned
	5	Non-LDR treatment - Calcination Pretreatment	On-Site	On-Site Treatment Unit	Calcination Pretreatment	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00414 MLLW CH, Organic Liquid, Toxic Organics, Toxic Metals w/ Mercury	6	Non-LDR treatment - Filtration	On-Site	On-Site Treatment Unit	Filtration	XXXX	Unplanned
	7	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	8	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	9	Non-LDR treatment - Chemical Precipitation	On-Site	On-Site Treatment Unit	Chemical Precipitation	XXXX	Unplanned
	10	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	11	WW trtment for metals removal (aq liqs)	Idaho National Engineering Lab	Bench Scale Treatments	Bench Scale Treatments	0248	Planned and Approved
	12	Organics destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
	13	WW trtment for metals removal (aq liqs)	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	14	Organics destruction	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	15	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved

48 86

22

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00414 MLLW CH, Organic Liquid, Toxic Organics, Toxic Metals w/ Mercury	16	Organics destruction	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	17	Neutralization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	18	Stabilization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	19	Neutralization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Neutralization Unit	0501	Planned but UnApproved
	20	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	21	Organics destruction	Los Alamos National Lab	Controlled Air Incinerator	Liquid Feed System	0312	Exists, Could be Used for Mixed Wastes
	22	Organics destruction	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Detox Skid	0208	Planned and Approved
	23	Non-LDR treatment - Crushing	Los Alamos National Lab	Scintillation Vial Crusher - TA-84, Area L	Scintillation Vial Crusher	0204	Exists, In Use for Mixed Wastes
	24	Neutralization	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	25	WW trtment for metals removal (aq liqs)	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00414 MLLW CH, Organic Liquid, Toxic Organics, Toxic Metals w/ Mercury	26	Deactivation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	27	Non-LDR treatment - Filtration	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	28	Neutralization	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774			not specified
	29	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	30	Organics destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	31	Organics destruction	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Liquid Feed System	0361	Planned and Approved
	32	Non-LDR treatment - Repackaging	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
	33	Non-LDR treatment - Sorting	Savannah River Site	Transuranic Waste Facility	Transuranic Waste Facility	0152	Planned and Approved
00479	See ID # 414						
02259	See ID# 414						
10006	See ID# 414						
00379 MLLW CH, Organic Liquid, Toxic Organics, Toxic Metals w/o Mercury	1	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned

48 86

223

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00379 MLLW CH, Organic Liquid, Toxic Organics, Toxic Metals w/o Mercury	2	Organics destruction	On-Site	On-Site Treatment Unit	Chemical Oxidation	XXXX	Unplanned
	3	Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	4	Stabilization	On-Site	On-Site Treatment Unit	Vitrification	XXXX	Unplanned
	5	Non-LDR treatment - Calcination Pretreatment	On-Site	On-Site Treatment Unit	Calcination Pretreatment	XXXX	Unplanned
	6	Non-LDR treatment - Biodenitrification	On-Site	On-Site Treatment Unit	Biodenitrification	XXXX	Unplanned
	7	Non-LDR treatment - Oxidation	On-Site	On-Site Treatment Unit	Oxidation	XXXX	Unplanned
	8	Non-LDR treatment - Chemical Precipitation	On-Site	On-Site Treatment Unit	Chemical Precipitation	XXXX	Unplanned
	9	Non-LDR treatment - Evaporation	On-Site	On-Site Treatment Unit	Evaporation	XXXX	Unplanned
	10	Non-LDR treatment - Ion Exchange	On-Site	On-Site Treatment Unit	Ion Exchange	XXXX	Unplanned
	11	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	12	Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	13	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	14	Non-LDR treatment -	Idaho National	Idaho Waste Processing	Thermal Destruction System	0259	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00379 MLLW CH, Organic Liquid, Toxic Organics, Toxic Metals w/o Mercury		Thermal Destruction	Engineering Lab	Facility			
	15	Organics destruction	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	16	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	17	Organics destruction	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	18	Neutralization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	19	Stabilization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	20	Neutralization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Neutralization Unit	0501	Planned but UnApproved
	21	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	22	Organics destruction	Los Alamos National Lab	Controlled Air Incinerator	Liquid Feed System	0312	Exists, Could be Used for Mixed Wastes
	23	Organics destruction	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Detox Skid	0208	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00379 MLLW CH, Organic Liquid, Toxic Organics, Toxic Metals w/o Mercury	24	Non-LDR treatment - Crushing	Los Alamos National Lab	Scintillation Vial Crusher - TA-84, Area L	Scintillation Vial Crusher	0204	Exists, In Use for Mixed Wastes
	25	Stabilization	Mound Facility	Mound Glass Melter	Mound Glass Melter	0261	Exists, Could be Used for Mixed Wastes
	26	Non-LDR treatment - Chemical Precipitation	Oak Ridge K-25 Site	K-25	Non-Radiological Waste Treatment Plant	0520	Exists, In Use for Mixed Wastes
	27	Non-LDR treatment - Filtration	Oak Ridge K-25 Site	K-25	Non-Radiological Waste Treatment Plant	0520	Exists, In Use for Mixed Wastes
	28	Neutralization	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	29	Non-LDR treatment - Ion Exchange	Oak Ridge National Lab	Process Waste Treatment Plant	Process Waste Treatment Plant	0104	Exists, In Use for Mixed Wastes
	30	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	31	Non-LDR treatment - Chemical Precipitation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	32	Deactivation	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	33	Non-LDR treatment - Filtration	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes
	34	Neutralization	Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	0001	Exists, In Use for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00379 MLLW CH, Organic Liquid, Toxic Organics, Toxic Metals w/o Mercury	35	Stabilization	Rocky Flats Plant	Organic and Sludge Immobilization System: Building 774	Organic and Sludge Immobilization System: Building 774	0005	Exists, In Use for Mixed Wastes
	37	Organics destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	38	Organics destruction	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Liquid Feed System	0361	Planned and Approved
	39	Non-LDR treatment - Repackaging	Savannah River Site	Transuranic Waste System	Transuranic Waste System	0152	Planned and Approved
	40	Non-LDR treatment - Sorting	Savannah River Site	Transuranic Waste System	Transuranic Waste System	0152	Planned and Approved
	41	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	42	Organics destruction	Oak Ridge K-25 Site	K-25 Site TSCA Incinerator	K-25 Site TSCA Incinerator	0305	Exists, In Use for Mixed Wastes
	43	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	44	Non-LDR treatment - Ion Exchange	Idaho National Engineering Lab	Bench Scale Treatments	Bench Scale Treatments	0248	Planned and Approved
00388	See ID# 379						
00400	See ID# 379						
00402	See ID# 379						

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00408	See ID# 379						
00412	See ID# 379						
00514	See ID# 379						
00716	See ID# 379						
00777	See ID# 379						
01412	See ID# 379						
01447	See ID# 379						
02235	See ID# 379						
10004	See ID# 379						
10029	See ID# 379						
20031	See ID# 379						
20038	See ID# 379						
50072	See ID# 379						
50096	See ID# 379						
60068	See ID# 379						
60069	See ID# 379						
30045	1	Stabilization	On-Site	Minimum Additive Waste	Vitrification	0350	Planned but

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
30045 MLLW CH, Organic Sludge/ Particulates, Ignitable, Reavtive, or Corrosive Only				Stabilization Facility (MAWS)			UnApproved
	2	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	3	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	4	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Treatment	XXXX	Unplanned
	5	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	6	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	7	Non-LDR treatment - Solvent Extraction	On-Site	On-Site Treatment Unit	Solvent Extraction	XXXX	Unplanned
	8	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	9	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	10	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	11	Stabilization	On-Site	On-Site Treatment Unit	Solidification	XXXX	Unplanned
	12	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	13	Organics destruction	Hanford Site	Thermal Treatment Facility	Incineration	0532	Planned but UnApproved
30081	1	Non-LDR treatment - Vitrification	On-Site	Mixed Additive Waste Stabilization Facility	Vitrification	0350	Planned but UnApproved

229

4886

230

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
30081 MLLW CH, Organic Sludge/ Particulates, Ignitable, Reactive, or Corrosive Only				(MAWS)			
	2	Non-LDR treatment - Thermal Treatment	On-Site	On-Site Treatment Unit	Thermal Treatment	XXXX	Unplanned
	3	Non-LDR treatment - Biodegradation	On-Site	On-Site Treatment Unit	Biodegradation	XXXX	Unplanned
	4	Deactivation	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	5	Deactivation	On-Site	On-Site Treatment Unit	Neutralization	XXXX	Unplanned
	6	Non-LDR treatment - Encapsulation	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	7	Non-LDR treatment - Macroencapsulation	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	8	Non-LDR treatment - Solidification	On-Site	On-Site Treatment Unit	Solidification	XXXX	Unplanned
	9	Non-LDR treatment - Calcination Pretreatment	On-Site	On-Site Treatment Unit	Calcination Pretreatment	XXXX	Unplanned
	10	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	11	Non-LDR treatment - Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	12	Deactivation	Hanford Site	Thermal Treatment Facility	Incineration	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50008	See ID# 30045						
50068	See ID# 30045						
50346	See ID# 30045						
50347	See ID# 30045						
50355	See ID# 30045						
20007 MLLW CH, Organic Sludge/ Particulates, Toxic Metals w/o Mercury	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	3	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	4	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	5	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	6	Stabilization	On-Site	On-Site Treatment Unit	Solidification	XXXX	Unplanned
	7	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	8	Non-LDR treatment - Calcining Pretreatment	On-Site	On-Site Treatment Unit	Calcining Pretreatment	XXXX	Unplanned
	9	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned

232

4886

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
20007 MLLW CH, Organic Sludge/ Particulates, Toxic Metals w/o Mercury	10	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	11	Non-LDR treatment - Drying	On-Site	On-Site Treatment Unit	Drying	XXXX	Unplanned
	12	Non-LDR treatment - Thermal Destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
	13	Non-LDR treatment - Incineration	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	14	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	15	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	16	Non-LDR treatment - Calcination Pretreatment	Idaho National Engineering Lab	New Waste Calcining Facility	New Waste Calcining Facility	0240	Exists, In Use for Mixed Wastes
	17	Non-LDR treatment - Incineration	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	18	Stabilization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	19	Stabilization	Idaho National	Waste Engineering	Stabilization Unit	0322	Exists, Could be Used

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
20007 MLLW CH, Organic Sludge/ Particulates, Toxic Metals w/o Mercury			Engineering Lab	Development Facility (WEDF)			for Mixed Wastes
	20	Stabilization	Lawrence Livermore National Lab	Building 513	Solidification Facility	0228	Planned but UnApproved
	21	Non-LDR treatment - Incineration	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	22	Stabilization	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Detox Skid	0541	Planned but UnApproved
	23	Stabilization	Los Alamos National Lab	Waste Immobilization Facility	Waste Immobilization Facility	0510	Planned but UnApproved
	24	Stabilization	Mound Facility	Mound Glass Melter	Mound Glass Melter	0261	Exists, Could be Used for Mixed Wastes
	25	Neutralization	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	26	Non-LDR treatment - Drying	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Soil/Sludge Dewatering	0529	Planned but UnApproved
	27	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	28	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes

234

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
20007 MLLW CH, Organic Sludge/ Particulates, Toxic Metals w/o Mercury	29	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	30	Stabilization	Rocky Flats Plant	Organic and Sludge Immobilization System: Building 774	Organic and Sludge Immobilization System: Building 774	0005	Exists, In Use for Mixed Wastes
	31	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	32	Non-LDR treatment - Thermal Destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	33	Stabilization	Savannah River Site	Consolidated Incineration Facility	CIF Ashcrete	0143	Planned and Approved
	34	Non-LDR treatment - Incineration	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Solid Feed System	0142	Planned and Approved
	35	Non-LDR treatment - Incineration	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
20007 MLLW CH, Organic Sludge/Particul-ates, Toxic Metals w/o Mercury	36						
	37	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	38	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
20145	See ID# 20007						
50177	See ID# 20007						

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50202	See ID# 20007						
50204	See ID# 20007						
30047	See ID# 20007						
00194 MLLW CH, Organic Sludge/ Particulates, Toxic Organics	1	Non-LDR treatment - Evaporation Drying	On-Site	Rotary Kiln	Rotary Kiln	0513	Exists, Could be Used for Mixed Wastes
	2	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	3	Organics destruction	On-Site	On-Site Treatment Unit	Biodegradation	XXXX	Unplanned
	4	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	5	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	6	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Treatment	XXXX	Unplanned
	7	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	8	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	9	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	10	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	11	Non-LDR treatment - Dehalogenation	On-Site	On-Site Treatment Unit	Dehalogenation	XXXX	Unplanned
	12	Non-LDR treatment -	On-Site	On-Site Treatment Unit	Leaching	XXXX	Unplanned

48-86

235

236

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00194 MLLW CH, Organic Sludge/ Particulates, Toxic Organics		Leaching					
	13	Non-LDR treatment - Solvent Extraction	On-Site	On-Site Treatment Unit	Solvent Extraction	XXXX	Unplanned
	14	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	15	Non-LDR treatment - Calcination Pretreatment	On-Site	On-Site Treatment Unit	Calcination Pretreatment	XXXX	Unplanned
	16	Organics destruction	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	17	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	18	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	19	Non-LDR treatment - Calcination Pretreatment	Idaho National Engineering Lab	New Waste Calcining Facility	New Waste Calcining Facility	0240	Exists, In Use for Mixed Wastes
	20	Organics destruction	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	21	Stabilization	Idaho National	Waste Characterization	Waste Characterization	0259	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00194 MLLW CH, Organic Sludge/ Particulates, Toxic Organics			Engineering Lab	Facility	Facility		
	22	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	23	Stabilization	Lawrence Livermore National Lab	Building 513	Solidification Facility	0228	Planned but UnApproved
	24	Organics destruction	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes
	25	Stabilization	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	26	Stabilization	Los Alamos National Lab	Waste Immobilization Facility	Waste Immobilization Facility	0510	Planned but UnApproved
	27	Stabilization	Mound Facility	Mound Glass Melter	Mound Glass Melter	0261	Exists, Could be Used for Mixed Wastes
	28	Neutralization	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	29	Organics destruction	Oak Ridge K-25 Site	K-25 Site TSCA Incinerator	K-25 Site TSCA Incinerator	0305	Exists, In Use for Mixed Wastes
	30	Organics destruction	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Incineration	0527	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00194 MLLW CH, Organic Sludge/ Particulates, Toxic Organics	31	Non-LDR treatment - Size Reduction/Separation	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Sizing and Segragation	0542	Planned but UnApproved
	32	Non-LDR treatment - Drying	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Soil/Sludge Dewatering	0529	Planned but UnApproved
	33	Decontamination	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Thermal Desorption	0528	Planned but UnApproved
	34	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	35	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	36	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	37	Stabilization	Rocky Flats Plant	Organic and Sludge Immobilization System: Building 774	Organic and Sludge Immobilization System: Building 774	0005	Exists, In Use for Mixed Wastes
	38	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	39	Organics destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	40	Organics destruction	Savannah River	Consolidated Incineration	CIF Incinerator - Solid Feed	0142	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00194 MLLW CH, Organic Sludge/ Particulates, Toxic Organics			Site	Facility	System		
	41	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	42	Non-LDR treatment - Ion Exchange	Energy Technology Engineering Centr	Radioactive Materials Disposal Facility	Evaporation/Ion Exchange	0508	Exists, Could be Used for Mixed Wastes
	43	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	44	Organics destruction	Hanford Site	Thermal Treatment Facility	Incineration	0532	Planned but UnApproved
	45	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	46	Organics destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
00390	See ID# 194						
00448	See ID# 194						
00456	See ID# 194						
00584	1						
01532	See ID# 194						
10003	See ID# 194						

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
10010	See ID# 194						
10026	See ID# 194						
10031	See ID# 194						
20006	See ID# 194						
20037	See ID# 194						
20045	See ID# 194						
20048	See ID# 194						
30005	See ID# 194						
30010	See ID# 194						
30026	See ID# 194						
30037	See ID# 194						
30042	See ID# 194						
30046	See ID# 194						
50085	See ID# 194						
50101	See ID# 194						
50200	See ID# 194						
50339	See ID# 194						

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
60119	See ID# 194						
60123	See ID# 194						
00517	See ID# 194						
30018	See ID# 194						
10007 MLLW CH, Organic Sludge/ Particulates, Toxic Organics, Toxic Metals.w/o Mercury	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Organics destruction	On-Site	On-Site Treatment Unit	Biodegradation	XXXX	Unplanned
	3	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatmetn Unit	Stabilization	XXXX	Unplanned
	4	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	5	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	6	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	7	Stabilization	On-Site	On-Site Treatment Unit	Immobilization	XXXX	Unplanned
	8	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	9	Metals recovery	On-Site	On-Site Treatment Unit	Leaching	XXXX	Unplanned
	10	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Treatment	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
10007 MLLW CH, Organic Sludge/ Particulates, Toxic Organics, Toxic Metals w/o Mercury	11	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	12	Stabilization	On-Site	On-Site Treatment Unit	Solidification	XXXX	Unplanned
	13	Non-LDR treatment - Calcination Pretreatment	On-Site	On-Site Treatment Unit	Calcination Pretreatment	XXXX	Unplanned
	14	Non-LDR treatment - Drying	On-Site	On-Site Treatment Unit	Drying	XXXX	Unplanned
	15	Non-LDR treatment - Calcination Pretreatment	Idaho National Engineering Lab	New Waste Calcining Facility	New Waste Calcining Facility	0240	Exists, In Use for Mixed Wastes
	16	Organics destruction	Idaho National Engineering Lab	WERF Incinerator	WERF Incinerator	0251	Exists, Could be Used for Mixed Wastes
	17	Stabilization	Idaho National Engineering Lab	Waste Characterization Facility	Waste Characterization Facility	0259	Planned and Approved
	18	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	19	Stabilization	Lawrence Livermore National Lab	Building 513	Solidification Facility	0228	Planned but UnApproved
	20	Organics destruction	Los Alamos National Lab	Controlled Air Incinerator	Solid Feed System	0309	Exists, Could be Used for Mixed Wastes

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
10007 MLLW CH, Organic Sludge/ Particulates, Toxic Organics, Toxic Metals w/o Mercury	21	Stabilization	Los Alamos National Lab	Hazardous Waste Treatment Facility (HWTF)	Future Skids	0541	Planned but UnApproved
	22	Stabilization	Los Alamos National Lab	Waste Immobilization Facility	Waste Immobilization Facility	0510	Planned but UnApproved
	23	Stabilization	Mound Facility	Mound Glass Melter	Mound Glass Melter	0261	Exists, Could be Used for Mixed Wastes
	24	Neutralization	Oak Ridge K-25 Site	K-25 ORNL	Waste Staging Facility	0522	Planned and Approved
	25	Non-LDR treatment - Drying	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Soil/Sludge Dewatering	0529	Planned but UnApproved
	26	Stabilization	Pantex Plant	Building 11-15A	Building 11-15A	0108	Exists, Could be Used for Mixed Wastes
	27	Stabilization	Pantex Plant	Building 11-9	Building 11-9	0107	Exists, Could be Used for Mixed Wastes
	28	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	29	Stabilization	Rocky Flats Plant	Organic and Sludge Immobilization System: Building 774	Organic and Sludge Immobilization System: Building 774	0005	Exists, In Use for Mixed Wastes
	30	Non-LDR treatment - Non-Thermal	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
10007 MLLW CH, Organic Sludge/ Particulates, Toxic Organics, Toxic Metals w/o Mercury	31	Organics destruction	Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	0340	Planned but UnApproved
	32	Organics destruction	Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Solid Feed System	0142	Planned and Approved
	33	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	34	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	35	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	36	Organics destruction	Idaho National Engineering Lab	Idaho Waste Processing Facility	Thermal Destruction System	0334	Planned but UnApproved
	37	Organics destruction	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	38	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	39	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
10009	See ID# 10007						

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
10016	See ID# 10007						
10021	See ID# 10007						
10028	See ID# 10007						
50070	See ID# 10007						
00700 MLLW CH, Reactive Metals	1	Deactivation	On-Site	On-Site Treatment Unit	Chemical Oxidation	XXXX	Unplanned
	2	Deactivation	On-Site	On-Site Treatment Unit	Chemical Reduction	XXXX	Unplanned
	3	Deactivation	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	4	Deactivation	On-Site	On-Site Treatment Unit	Wet Air Oxidation	XXXX	Unplanned
	5	Non-LDR treatment - Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	6	Non-LDR treatment - Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	7	Non-LDR treatment - Neutralization	Hanford Site	Maintenance and Storage Facility	Maintenance and Storage Facility	0119	Exists, Could be Used for Mixed Wastes
30051 MLLW CH, Reactive Metals	1	Deactivation	On-Site	On-Site Treatment Unit	Chemical Oxidation	XXXX	Unplanned
	2	Deactivation	On-Site	On-Site Treatment Unit	Chemical Reduction	XXXX	Unplanned
	3	Deactivation	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	4	Deactivation	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned

4886

245

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
30051 MLLW CH, Reactive Metals	5	Deactivation	On-Site	On-Site Treatment Unit	Wet Air Oxidation	XXXX	Unplanned
	6	Deactivation	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
50089	See ID# 30051						
50090	See ID# 30051						
00538 MLLW CH, Soils, Toxic Metals w/o Mercury	1	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	2	Non-LDR treatment - Soil Washing	On-Site	Soil Washing Facility	Soil Washing Facility	0358	Planned but UnApproved
	3	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
		Stabilization	On-Site	On-Site Treatment Unit	Stabilization	XXXX	Unplanned
	4	Non-LDR treatment - Thermal Destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	5	Non-LDR treatment - Thermal Treatment	On-Site	On-Site Treatment Unit	Thermal Treatment	XXXX	Unplanned
	6	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	7	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	8	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	9	Stabilization	On-Site	On-Site Treatment Unit	Solidification	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00538 MLLW CH, Soils, Toxic Metals w/o Mercury	10	Non-LDR treatment - Acid Dissolution	On-Site	On-Site Treatment Unit	Acid Dissolution	XXXX	Unplanned
	11	Non-LDR treatment - Calcination	On-Site	On-Site Treatment Unit	Calcination	XXXX	Unplanned
	12	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned
	13	Non-LDR treatment - Grouting	On-Site	On-Site Treatment Unit	Grouting	XXXX	Unplanned
	14	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	15	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	16	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved
	17	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	18	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
	19	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	20	Decontamination	Idaho National	Mixed Low-Level Waste	Mixed Low-Level Waste	0324	Planned but

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00538 MLLW CH, Soils, Toxic Metals w/o Mercury			Engineering Lab	Treatment Facility (MLLWTF)	Treatment Facility (MLLWTF)		UnApproved
	21	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	22	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes.
	23	Stabilization	Lawrence Livermore National Lab	Building 513	Solidification Facility	0228	Planned but UnApproved
	24	Stabilization	Los Alamos National Lab	Waste Immobilization Facility	Waste Immobilization Facility	0510	Planned but UnApproved
	25	Stabilization	Oak Ridge K-25 Site	K-25	Sludge Fixation Unit	0521	Exists, Could be Used for Mixed Wastes
	26	Non-LDR treatment - Acid Dissolution	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Acid Dissolution - U Removal	0525	Planned but UnApproved
	27	Stabilization	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Fixation/Stabilization	0219	Planned but UnApproved
	28	Non-LDR treatment - Drying	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Soil/Sludge Dewatering	0529	Planned but UnApproved

4886

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00538 MLLW CH, Soils, Toxic Metals w/o Mercury	29	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	30	Stabilization	Savannah River Site	Consolidated Incineration Facility	CIF Ashcrete	0143	Planned and Approved
	31	Metals recovery	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Soil Washing	0149	Planned and Approved
	32	Non-LDR treatment - Incineration	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	33	Stabilization	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Stabilization - Commercial	0515	Exists, In Use for Mixed Wastes
	34	Non-LDR treatment - Compaction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Ultracompactor/TRUPress - Commercial	0540	Planned and Approved
00539	See ID# 538						
00540	See ID# 538						
00541	See ID# 538						
00542	See ID# 538						
00543	See ID# 538						
00545	See ID# 538						
30027	See ID# 538						

48 86

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
50098	See ID# 538						
00580 MLLW CH, Soils, Toxic Organics	1	Non-LDR treatment - Evaporation Drying	On-Site	Rotary Kiln	Rotary Kiln	0513	Exists, Could be Used for Mixed Wastes
	2	Stabilization	On-Site	Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	0350	Planned but UnApproved
	3	Non-LDR treatment - Soil Washing	On-Site	Soil Washing Facility	Soil Washing Facility	0358	Planned but UnApproved
	4	Organics destruction	On-Site	On-Site Treatment Unit	Biodegradation	XXXX	Unplanned
	5	Organics destruction	On-Site	On-Site Treatment Unit	Incineration	XXXX	Unplanned
	6	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Destruction	XXXX	Unplanned
	7	Organics destruction	On-Site	On-Site Treatment Unit	Thermal Treatment	XXXX	Unplanned
	8	Organics destruction	On-Site	On-Site Treatment Unit	UV Oxidation	XXXX	Unplanned
	9	Neutralization	On-Site	On-Site Treatment Unit	Water Reaction	XXXX	Unplanned
	10	Stabilization	On-Site	On-Site Treatment Unit	Encapsulation	XXXX	Unplanned
	11	Stabilization	On-Site	On-Site Treatment Unit	Macroencapsulation	XXXX	Unplanned
	12	Stabilization	On-Site	On-Site Treatment Unit	Solidification	XXXX	Unplanned
	13	Non-LDR treatment - Compaction	On-Site	On-Site Treatment Unit	Compaction	XXXX	Unplanned

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00580 MLLW CH, Soils, Toxic Organics	14	Non-LDR treatment - Dehalogenation	On-Site	On-Site Treatment Unit	Dehalogenation	XXXX	Unplanned
	15	Non-LDR treatment - Grouting	On-Site	On-Site Treatment Unit	Grouting	XXXX	Unplanned
	16	Non-LDR treatment - Leaching	On-Site	On-Site Treatment Unit	Leaching	XXXX	Unplanned
	17	Non-LDR treatment - Separation	On-Site	On-Site Treatment Unit	Separation	XXXX	Unplanned
	18	Non-LDR treatment - Solvent Extraction	On-Site	On-Site Treatment Unit	Solvent Extraction	XXXX	Unplanned
	19	Non-LDR treatment - Soil Washing	Energy Technology Engineering Centr	Radioactive Materials Disposal Facility	Thermal Treatment	0509	Planned and Approved
	20	Stabilization	Energy Technology Engineering Centr	Radioactive Materials Disposal Facility	Thermal Treatment	0509	Planned and Approved
	21	Organics destruction	Energy Technology Engineering Centr	Radioactive Materials Disposal Facility	Thermal Treatment	0509	Planned and Approved
	22	Stabilization	Envirocare of Utah	Envirocare of Utah	Envirocare of Utah	0516	Exists, In Use for Mixed Wastes
	23	Stabilization	Hanford Site	Waste Receiving and Processing Facility	WRAP II A&B	0326	Planned and Approved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00580 MLLW CH, Soils, Toxic Organics	24	Stabilization	Idaho National Engineering Lab	INEL Waste Generator Treatment	Waste Generator Treatment Plant	0244	Exists, In Use for Mixed Wastes
	25	Stabilization	Idaho National Engineering Lab	Idaho Waste Processing Facility	Stabilization System	0336	Planned but UnApproved
	26	Stabilization	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility (MLLWTF)	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	27	Decontamination	Idaho National Engineering Lab	Mixed Low-Level Waste Treatment Facility	Mixed Low-Level Waste Treatment Facility (MLLWTF)	0324	Planned but UnApproved
	28	Stabilization	Idaho National Engineering Lab	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	0252	Exists, Could be Used for Mixed Wastes
	29	Stabilization	Idaho National Engineering Lab	Waste Engineering Development Facility (WEDF)	Stabilization Unit	0322	Exists, Could be Used for Mixed Wastes
	30	Stabilization	Lawrence Livermore National Lab	Building 513	Solidification Facility	0228	Planned but UnApproved
	31	Stabilization	Los Alamos National Lab	Waste Immobilization Facility	Waste Immobilization Facility	0510	Planned but UnApproved
	32	Organics destruction	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Incineration	0527	Planned but UnApproved

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
00580 MLLW CH, Soils, Toxic Organics	33	Non-LDR treatment - Size Reduction/Separation	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Sizing and Segragation	0542	Planned but UnApproved
	34	Non-LDR treatment - Drying	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Soil/Sludge Dewatering	0529	Planned but UnApproved
	35	Decontamination	Oak Ridge Y-12 Plant	Oak Ridge Reservation Mixed Waste Treatment Facility	MW Treatment Facility - Thermal Desorption	0528	Planned but UnApproved
	36	Stabilization	Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	0514	Exists, In Use for Mixed Wastes
	37	Non-LDR treatment - Soil Washing	Savannah River Site	Hazardous Waste/Mixed Waste Disposal Facility	Soil Washing	0149	Planned and Approved
	38	Organics destruction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	0517	Planned and Approved
	39	Non-LDR treatment - Compaction	Scientific Ecology Group-Oak Ridge	Scientific Ecology Group - Oak Ridge, TN	SEG Ultracompactor/TRUPress - Commercial	0540	Planned and Approved
00661	See ID# 580						
00720	See ID# 580						
00776	See ID# 580						
00819	See ID# 580						

Table 8.1 - (Part 2 of 3)(Continued)

Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#	Treatment Option						
	Option Number	Treatment Type	Site	Facility Name	System Name	System #	System Status
01841	See ID# 580						
01842	See ID# 580						

Table 8.1 (Part 3 of 3) : Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#s	Option	Technology Evaluation Issues/Concerns Associated with the Options Identified	Documented Non-Technical Issues/Concerns Associated with the Options Identified
All Waste Streams contained in the following treatability groupings:			
1. MLLW CH, Heterogenous Debris, Ignitable, Reactive, or Corrosive Only	Minimum Additive Waste Stabilization Facility (MAWS)	To Be Determined	The FEMP is currently conducting pilot scale testing of this unit. MAWS is being evaluated, along with other technologies and general response actions, as part of the CERCLA RI/FS process. The FEMP is currently not planning to obtain a RCRA treatment permit or to treat off-site wastes in this facility.
2. MLLW CH, Heterogenous Debris, Toxic Metals w/ Mercury	MAWS	See Above	See Above
3. MLLW CH, Heterogenous Debris, Toxic Metals w/o Mercury	MAWS	See Above	See Above
4. MLLW CH, Heterogenous Debris, Toxic Organics	MAWS	See Above	See Above
5. MLLW CH, Heterogenous Debris, Toxic Organics, Toxic Metals w/o Mercury	MAWS	See Above	See Above
6. MLLW CH, Inorganic Debris, Ignitable, Reactive, or Corrosive Only	MAWS	See Above	See Above
7. MLLW CH, Inorganic Debris, Toxic Metals w/o Mercury	MAWS	See Above	See Above

48 86

Table 8.1 (Part 3 of 3) : Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project			
Waste Stream ID#s	**Option**	**Technology Evaluation Issues/Concerns Associated with the Options Identified**	**Documented Non-Technical Issues/Concerns Associated with the Options Identified**
8. MLLW CH, Inorganic Debris, Toxic Organics	Minimum Additive Waste Stabilization Facility (MAWS)	To Be Determined	The FEMP is currently conducting pilot scale testing of this unit. MAWS is being evaluated, along with other technologies and general response actions, as part of the CERCLA RI/FS process. The FEMP is currently not planning to obtain a RCRA treatment permit or to treat off-site wastes in this facility.
9. MLLW CH, Inorganic Debris, Toxic Organics, Toxic Metals w/o Mercury	MAWS	See Above	See Above
10. MLLW CH, Inorganic Sludges/ Particulates, Toxic Metals w/o Mercury	MAWS	See Above	See Above
11. MLLW CH, Inorganic Sludges/ Particulates, Toxic Organics	MAWS	See Above	See Above
12. MLLW CH, Inorganic Sludges/ Particulates, Toxic Organics, Toxic Metals w/o Mercury	MAWS	See Above	See Above
13. MLLW CH, Organic Debris, Toxic Metals w/o Mercury	MAWS	See Above	See Above
14. MLLW CH, Organic Debris, Toxic Organics	MAWS	See Above	See Above
15. MLLW CH, Organic Debris, Toxic Organics, Toxic Metals w/o Mercury	MAWS	See Above	See Above

48 00

359

Table 8.1 (Part 3 of 3) : Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#s	Option	Technology Evaluation Issues/Concerns Associated with the Options Identified	Documented Non-Technical Issues/Concerns Associated with the Options Identified
16. MLLW CH, Organic Sludges/ Particulates, Ignitable, Reactive, or Corrosive Only	Minimum Additive Waste Stabilization Facility (MAWS)	To Be Determined	The FEMP is currently conducting pilot scale testing of this unit. MAWS is being evaluated, along with other technologies and general response actions, as part of the CERCLA RI/FS process. The FEMP is currently not planning to obtain a RCRA treatment permit or to treat off-site wastes in this facility.
17. MLLW CH, Organic Sludges/ Particulates, Toxic Metals w/o Mercury	MAWS	See Above	See Above
18. MLLW CH, Organic Sludges/ Particulates, Toxic Organics	MAWS	See Above	See Above
19. MLLW CH, Organic Sludges/ Particulates, Toxic Organics, Toxic Metals w/o Mercury	MAWS	See Above	See Above
20. MLLW CH, Soils, Toxic Organics w/o Mercury	MAWS	See Above	See Above
21. MLLW CH, Soils, Toxic Organics	MAWS	See Above	See Above

4886

257

Table 8.1 (Part 3 of 3) : Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#s	Option	Technology Evaluation Issues/Concerns Associated with the Options Identified	Documented Non-Technical Issues/Concerns Associated with the Options Identified
All waste streams contained in the following treatability groupings:			
1. MLLW CH, Aqueous Liquid, Ignitable, Reactive, or Corrosive Only	UNH Treatment Facility	UNH Treatment Facility was specifically designed to treat UNH so that technical limitations for this unit have not been determined.	Treatment is being conducted as a CERCLA Removal Action and is specific to the treatment of UNH. The FEMP does not have a RCRA treatment permit for this unit. Operation of the UNH Treatment Facility has been suspended since April 1993 pending further investigation. The FEMP is currently not planning to obtain a RCRA treatment permit or to treat off-site waste in this facility.
2. MLLW CH, Aqueous Liquid, Toxic Metals w/o Mercury	UNH Treatment Facility	See Above	See Above
All waste streams contained in the following treatability groupings:			
1. MLLW CH, Inorganic Sludges/ Particulates, Toxic Organics	Rotary Kiln	To Be Determined	Current plans are to dry/oxidize only non-RCRA radiological residues so material can be shipped. The unit can do performance testing, but will require approval of Air Pollution Control permit prior to initiating treatment. The permit will not address the treatment of mixed wastes.
2. MLLW CH, Organic Sludges/ Particulates, Toxic Organics	Rotary Kiln	See Above	See Above
3. MLLW CH, Soils, Toxic Organics	Rotary Kiln	See Above	See Above

48 86

258

Table 8.1 (Part 3 of 3) : Summary of Potential Mixed Waste Treatment Needs and Options at Fernald Environmental Management Project

Waste Stream ID#s	Option	Technology Evaluation Issues/Concerns Associated with the Options Identified	Documented Non-Technical Issues/Concerns Associated with the Options Identified
All waste streams contained in the following treatability groupings:			
1. MLLW CH, Soils, Toxic Metals w/o Mercury	Soil Washing Facility	To Be Determined	The FEMP is currently conducting pilot scale testing of this unit. Soil Washing is being evaluated, along with other technologies and general response actions, as part of the CERCLA RI/FS process. The FEMP is currently not planning to obtain a RCRA treatment permit or to treat off-site wastes in this facility.
2. MLLW CH, Soils, Toxic Organics	Soil Washing Facility	See Above	See Above
All waste streams contained in the following treatability groupings:			
1. MLLW CH, Aqueous Liquid, Toxic Organics	Plant 8 VOC Treatment System	Since the Plant 8 VOC Treatment System was specifically designed to treat perched water, performance criteria and maximum contaminant levels for this unit have not been established. Use of system to treat other wastes must be assessed on a case-by-case basis.	Unit is operated as a CERCLA Removal Action for perched water treatment pursuant to the Amended Consent Agreement. The capacity for mixed waste treatment is dependant upon the availability of the unit to treat wastes other than perched water. NPDES criteria must be met prior to discharge. The FEMP is currently not planning to obtain a RCRA treatment permit or to treat off-site wastes in this unit. System is scheduled to shut down in late 1995.
All Waste Streams	Additional on-site treatment options identified in Table 8.1 (Part 2 of 3)	To Be Determined	To Be Determined
All Waste Streams	Additional off-site treatment options identified in Table 8.1 (Part 2 of 3)	See Candidate Mixed Waste Treatment Information Sheets in Appendix B for technical issues and concerns associated with each identified off-site option.	See Candidate Mixed Waste Treatment System Information Sheets in Appendix B for non-technical issues and concerns associated with each identified off-site option.

48 86

239

EXPLANATION OF CSTP SUMMARY TABLE 8.2 CONTENTS

Facility Name: Facility name as designated by site, RCRA Permit, etc. A facility is a building or area consisting of one or more treatment systems.

System Name: The name of the individual treatment system(s) associated with the identified treatment option. A treatment system is one or a series of operations through which any waste entering the system passes. All wastes that pass through a system are processed the same way. A system may also include functionally identical units operated in parallel if all of the wastes entering the system are combined at some point upstream of the parallel units.

System #: Department of Energy Activity Data Sheet (ADS) number assigned to treatment system or facility in Appendix B, Mixed Waste Treatment Facility Information Sheets.

System Status: The current operational status of the unit. The options are:

- Exists, In Use For Mixed Wastes. System is currently operating and treating mixed wastes.
- Exists, Could Be Used For Mixed Wastes. Existing system not currently treating this mixed waste stream. The system may be treating other waste (low-level, sanitary, etc.) or may not be operating at this time.
- Planned And Approved. System that has received, at a minimum, approval of mission need. Typically the funds for the system's conceptual design have been authorized or the system is under construction.
- Planned But Unapproved. Funds for conceptual design of the system have not been authorized.
- Unplanned. On-site systems, not part of any previous planning, conceived as part of the CSTP development.

On-Line Date: Date on which system operation started or is anticipated to start.

Treatability Group: Categories of wastes based on radioactive characteristics, physical/chemical matrix, and hazardous constituent/components that affect the selection of an appropriate treatment system for the waste.

MLLW: Mixed Low-Level Waste
CH: Contact-Handled (external surface dose rate $\leq$ 200 mrem/hr)

Treatment Type: A general term for a group of treatment technologies generally designed to destroy, remove, or immobilize similar hazardous contaminants, radioactive contaminants, or waste matrices. For this summary, the treatment types are the LDR type technologies: organics destruction, wastewater treatment for organics, wastewater treatment for metals removal, stabilization, metals recovery, mercury separation, decontamination, neutralization, and deactivation. Non-LDR treatment options such as evaporation and filtration are also identified.

Waste Form(s) Generated: The forms(s) of the treatment residual(s) from the process.

Secondary Treatment Type Required: Types of treatment the expected residual waste form(s) must undergo to meet LDR standards.

Capital Costs: Capital cost to design, permit, and build planned-approved, planned-unapproved, and unplanned systems. Capital costs include all costs from the design stage through start-up.

Operating Costs: Unit operating cost of treating waste stream(s) for all existing, planned-approved, planned-unapproved, and unplanned on-site treatment systems.

Budget Impact: Impact that the system's capital and operating costs will have on the site's budget. Options are:

- Low. Cost largely covered under currently anticipated budget profile.
- Medium. Cost partly covered under currently anticipated budget profile but may require reprioritization of future programs.
- High. Cost for this option not included in anticipated budgets.

Maximum Technical Capacity: For existing systems, this is the maximum amount of waste a system could realistically/technically/safely treat without changes to existing equipment, if permit limits were lifted and staffing and operating time were increased to the maximum the equipment could handle. For other systems, this represents the design capacity.

Normal Operating Capacity: The maximum amount of waste a system can treat under normal operating conditions. Normal operating conditions include existing staffing/operating shifts, permit limits, and any existing physical or operational constraints on the amount of waste a system can treat.

Utilized Capacity: The amount of waste currently being treated.

Possible Upgrades:	Identifies capital upgrades to increase existing system or to accept additional waste streams/treatability groups. Identifies the on-site upgrade, describes the additional capacity/capability to be achieved, provides the current status, and indicates the impact the system upgrade will have on the site's budget. Options for status are the same as "System Status" and Budget Impact options are the same as used for capital and operating costs.
Technical Limitations:	Describes the technical feed stream limitations for the treatment system.
Non-Technical Limitations:	Identifies non-technical feed stream limitations for the treatment system such as defined by effluent permits, applicable NEPA documentation, and restrictions in legal agreements for radioactivity, matrix, and physical contaminants.
On-site Issues/Concerns:	Other issues that may be of concern in evaluating this system as a treatment option.

263

Table 8.2: Summary of On-site Treatment Systems at Fernald Environmental Management Project Part 1 of 5

Facility Name	System Name	Sys. #	System Status	On-line Date	MLLW, CH: Treatability Group	Treatment Type	Waste Form(s) Generated	Secondary Treatment Type Required	Cost		
									Capital $	Operating ($/kg or $/m³)	Budget Impact
UNH Treatment Facility	UNH Treatment Facility	347	Exists, Could be used for mixed waste	TBD	MLLW, CH: Aqueous liquid: toxic metals w/o Hg, corrosive	Neutralization, Wastewater Treatment for Organics (aqueous liquids), Other - Filtration	Filter Cake Water	TBD None	N/A	N/A	Low
Plant 8 VOC Treatment System	Plant 8 VOC Treatment System	XXX	Exists, could be used for mixed wastes	6/91	Aqueous liquid: toxic organics	Wastewater treatment for organics (aqueous liquids)	Spent carbon	None	N/A	$6.28/m³	Low
Rotary Kiln	Rotary Kiln	513	Exists, could be used for mixed wastes	1994	MLLW, CH Organic Sludges/ Particulates: Toxic Organics; Inorganic Sludges/ Particulates, Toxic Organics; Soils: Toxic Organics	Other - Evaporation, Drying	LLW residue	None	N/A	$2/kg	Low
Minimum Additive Waste Stabilization Facility (MAWS)	Vitrification	350	Planned but unapproved	TBD	MLLW, CH: Organic Sludges/Particulates, Inorganic Sludges/Particulates, Organic Debris, Inorganic Debris, Heterogenous Debris, Soil with < 50% Debris, Soils, Calcine Solids, Inorganic Solids, Organic Solids: Toxic Organics and Toxic Metals w/o Mercury, Ignitable, Reactive, or Corrosive Only	Stabilization	Vitrified Waste	None	2.645 million	N/A	Low

N/A = Not Applicable or Not Available
TBD = To Be Determined
TBS = To Be Supplied
N/P = None Planned

4888

Table 8.2: Summary of On-site Treatment Systems at Fernald Environmental Management Project

Facility Name	System Name	Sys. #	System Status	On-line Date	MLLW, CH: Treatability Group	Treatment Type	Waste Form(s) Generated	Secondary Treatment Type Required	Cost		
									Capital $	Operating ($/kg or $/m³)	Budget Impact
Soil Washing Facility	Soil Washing Facility	358	Planned but unapproved	TBD	MLLW, CH: Soils, Soil with < 50% debris: Toxic Organics and Toxic Metals w/ and w/o Hg, Ignitable, Reactive, Corrosive	Soil Washing	LLW residue Water	TBD Wastewater treatment for metals removal (aqueous liquids)	20 million	$0.27/kg	Low
On-Site Treatment Unit	TBD	XXX	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A	High

N/A = Not Applicable or Not Available
TBD = To Be Determined
TBS = To Be Supplied
N/P = None Planned

48 86

Table 8.2 (continued) -

Sys.#	Throughput Capacity: Maximum Technical Capacity: All Wastes m³/yr	Maximum Technical Capacity: All Wastes kg/yr	Maximum Technical Capacity: Mixed Wastes m³/yr	Maximum Technical Capacity: Mixed Wastes kg/yr	Normal Operating Capacity: All Wastes m³/yr	Normal Operating Capacity: All Wastes kg/yr	Normal Operating Capacity: Mixed Wastes m³/yr	Normal Operating Capacity: Mixed Wastes kg/yr	Utilized Capacity: All Wastes m³/yr	Utilized Capacity: All Wastes kg/yr	Utilized Capacity: Mixed Wastes m³/yr	Utilized Capacity: Mixed Wastes kg/yr	Possible Upgrades of Existing Facilities: Item	Capacity/ Capability Added	Status	Budget Impact
347	N/A	N/A	N/A	N/A	765	1031484	765	1031484	76.5	103148	76.5	103148	N/P	N/P	N/P	High
XXX	23,862	$2.38X10^7$	N/A	N/A	23,862	$2.38X10^7$	0	0	946	945,515	0	0	N/P	N/P	N/P	High
513	N/A	$3.8x10^6$	N/A	N/A	N/A	$3.8x10^6$	N/A	N/A	N/A	N/A	N/A	N/A	New unit/ modification to increase capacity	500,000	N/P	High
350	40,000	N/A	40,000	N/A	40,000	N/A	40,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/P	High
358	90,000	$1.58x10^8$	90,000	$1.58x10^8$	67,500	$1.19x10^8$	TBD	TBD	N/A	N/A	N/A	N/A	N/A	N/A	N/P	High
XXX	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/P	High

N/A = Not Applicable or Not Available
TBD = To Be Determined
TBS = To Be Supplied
N/P = None Planned

Table 8.2 (continued) -

Sys. #	Technical Limitations: Radiation		Matrix/Physical		Contaminant Limits		Other Technical
	TRU Alpha	Beta-gamma	Property	Limit	Name	Max. Conc.	
347	N/A	N/A	N/A	N/A	Uranium U-235 Other contaminants	<100 g U/liter < 1.00% N/A	UNH System has only tested UNH so that maximum limits have not been established. Maximum uranium concentrations are based on blending criteria for UNH feed. However, higher concentrations of uranium can be tolerated if the feed is diluted prior to filtering the waste.
XXX	N/A	N/A	N/A	N/A	Trichloroethene 1,1-Dichloroethene 1,2-Dichloroethene 1,1-Dichloroethane 1,1,1-Trichloroethane Tetrachloroethene Tributyl phosphate Aluminum Cadmium Chromium Silver Iron Manganese Total Suspended Solids (TSS) Oil and Grease Alkalinity	101.0 ppb 4.2 ppb 0.6 ppb 0.8 ppb 0.9 ppb 4.0 ppb 81.6 ppb 859.0 ppb 12.5 ppb 233.0 ppb 94.0 ppb 94.8 ppb 555.0 ppb 72.2 mg/l 0.117 mg/l pH = 6-8	Values listed for maximum contaminant concentrations and matrix/physical limits are based on combined characteristics of the influent. Since the unit was specifically designed to treat perched water with these characteristics, maximum values have not been established for each constituent. Use of system to treat other wastes must be assessed on a case-by-case basis.
513	N/A	TBD	TBD	TBD	TBD	TBD	TBD
350	N/A	TBD	TBD	TBD	TBD	TBD	TBD
358	N/A	TBD	TBD	TBD	TBD	TBD	TBD
XXX	TBD	TBD	TBD	TBD	TBD	TBD	TBD

N/A = Not Applicable or Not Available
TBD = To Be Determined
TBS = To Be Supplied
N/P = None Planned

Table 8.2 (continued) - Part 4 of 5

Non-Technical Limitations

Sys. #	Radiation		Matrix/Physical		Contaminant Limits		Other Non-Technical
	TRU Alpha	Beta-gamma	Property	Limit	Name	Max. Conc.	
347	N/A	N/A	N/A	N/A	N/A	N/A	Filtrate from process is treated through site's wastewater treatment system. Must meet NPDES criteria prior to discharge.
XXX	N/A	N/A	N/A	N/A	N/A	N/A	NPDES permit criteria must be met prior to discharge.
513	N/A	TBD	TBD	TBD	TBD	TBD	Awaiting Air Pollution Control Permit. No feed stream limitations specified.
350	N/A	TBD	TBD	TBD	TBD	TBD	TBD
358	N/A	TBD	TBD	TBD	TBD	TBD	TBD
XXX	TBD	TBD	TBD	TBD	TBD	TBD	TBD

N/A = Not Applicable or Not Available
TBD = To Be Determined
TBS = To Be Supplied
N/P = None P

Table 8-2 (continued) -	Part 5 of 5
System #	**On-site Treatment Capability Issues/Concerns (List issues associated with on-site treatment capability, capacity, or costs).**
347	UNH Treatment is being conducted as a CERCLA Removal Action. Operation of this unit has been suspended since April 1993, pending further investigation. The FEMP is currently not planning to obtain a RCRA treatment permit or to treat off-site waste in this facility.
XXX	Unit is operated as a CERCLA Removal action for perched water treatment pursuant to the Amended Consent Agreement. The capacity for mixed waste treatment is dependant upon the availability of the unit to treat wastes other than perched water. The FEMP is currently not planning to obtain a RCRA treatment permit or to treat off-site wastes in this unit. System is scheduled to shut down in 1995.
513	The Rotary Kiln will be used to dry/oxidize only non-RCRA radiological residues so material can be shipped. The unit can do performance testing, but will require approval of Air Pollution Control Permit prior to initiating treatment. The FEMP is currently not planning to obtain a RCRA treatment permit or to treat off-site waste in this facility.
350	The FEMP is currently conducting pilot scale testing of this unit. MAWS is being evaluated, along with other technologies and general response actions, as part of the CERCLA RI/FS process. The FEMP is currently not planning to obtain a RCRA treatment permit or to treat off-site waste in this facility.
358	The FEMP is currently conducting pilot scale testing of this unit. Soil washing is being evaluated, along with other technologies and general response actions, as part of the CERCLA RI/FS process. The FEMP is currently not planning to obtain a RCRA treatment permit or to treat off-site waste in this unit.
XXX	The FEMP is evaluating on-site treatment options for the STP and as part of the CERCLA RI/FS process and will include these options as they are identified.

N/A = Not Applicable or Not Available
TBD = To Be Determined
TBS = To Be Supplied
N/P = None Planned

4886

APPENDIX A

List of Environmental Restoration Sites for which Conceptual Site Treatment Plans are Required

APPENDIX A

Sites at Which DOE Generates or Stores Mixed Waste (or May Generate within the Next 5 Years) Preparing Conceptual Site Treatment Plans		
Facility	**State**	**Agency to Receive Plan (EPA/State)**
Energy Technology Engineering Center (ETEC)	California	State
General Atomics		
•• General Electric Vallectos		
Lawrence Livermore National Laboratory		
Lawrence Berkeley Laboratory		
Laboratory For Energy-Related Health Research		
Mare Island Naval Shipyard		
Sandia National Laboratory - California		
Grand Junction Project Office	Colorado	State
Rocky Flats Plant		
•• Knolls Atomic Power Laboratory, Windsor	Connecticut	State
Pinellas Plant	Florida	State
Pearl Harbor Naval Shipyard	Hawaii	EPA
Argonne National Laboratory - West	Idaho	State
Idaho National Engineering Laboratory		
Ames Laboratory	Iowa	EPA
Argonne National Laboratory - East	Illinois	State
•• Site A/Plot M, Palos Forest Preserve		
Paducah Gaseous Diffusion Plant	Kentucky	State
Portsmouth Naval Shipyard	Maine	EPA
Kansas City Plant	Missouri	State
Weldon Spring Site Remedial Action Project		
University of Missouri		
Nevada Test Site	Nevada	State
Middlesex Sampling Plant	New Jersey	EPA
•• Princeton Plasma Physics Laboratory		
Inhalation Toxicology Research Institute	New Mexico	State
Los Alamos National Laboratory		
Sandia National Laboratory - New Mexico		

APPENDIX A

Sites at Which DOE Generates or Stores Mixed Waste (or May Generate within the Next 5 Years) Preparing Conceptual Site Treatment Plans		
Facility	**State**	**Agency to Receive Plan (EPA/State)**
Brookhaven National Laboratory	New York	State
Colonie Interim Storage Site		
Knolls Atomic Power Laboratory, Kesselring		
Knolls Atomic Power Laboratory, Schenectady		
West Valley Demonstration Project		
** Battelle Columbus Laboratories Decommissioning Project	Ohio	State
Fernald Environmental Management Project		
Mound Plant		
Portsmouth Gaseous Diffusion Plant		
RMI Titanium Inc.		
Bettis Atomic Power Laboratory	Pennsylvania	EPA
Charleston Naval Shipyard	South Carolina	State
Savannah River Site		
K-25 Site, Oak Ridge Reservation	Tennessee	State
Oak Ridge National Laboratory, Oak Ridge Reservation		
Y-12 Plant, Oak Ridge Reservation		
Pantex Plant	Texas	State
** Norfolk Naval Shipyard	Virginia	EPA
Puget Sound Naval Shipyard	Washington	State

**Denotes a site that is not currently generating or storing mixed waste but may generate or store mixed waste within the next five years.

Note: The Hanford Site in the State of Washington, which currently stores and generates mixed waste, has an agreement that includes the State covering treatment of mixed waste and therefore is not required to prepare a site treatment plan.

The Waste Isolation Pilot Plant (WIPP) in New Mexico, identified in the Interim Inventory Report as a future generator of mixed waste, is not preparing a conceptual site treatment plan because mixed waste to be managed at WIPP will not be subject to LDR treatment requirements since WIPP is subject to a RCRA No Migration variance.

Charleston Naval Shipyard in South Carolina, identified as a future generator in the Interim Inventory Report, has subsequently generated mixed waste.

APPENDIX B

Candidate Mixed Waste Treatment System Information Sheets

APPENDIX B

Candidate Mixed Waste Treatment System Information Sheets

Introduction

One of DOE's key objectives in the preparation of the Conceptual Site Treatment Plans (CSTPs), was to identify potential treatment options for a site's mixed waste. Options for both on-site and off-site treatment were to be identified. During development of the CSTPS it became clear that DOE's Field Offices had limited information about potential treatment options at other DOE sites. As a result, information sheets for candidate mixed waste treatment systems, (originally referred to as "Table A"), were developed as an information source that provides linkages between the standard waste treatability groups in the Interim Mixed Waste Inventory Report and treatment systems at potential treatment facilities. The primary purpose of these treatment system information sheets are to provide DOE Field Offices with a tool to assist in the preliminary identification of off-site treatment facilities for its mixed waste. Using the information sheets, waste streams could be matched to potential treatment facilities based solely on the technical capabilities of the treatment facilities. In response to comments received at the September meeting in Albuquerque between the States and DOE, the information sheets were updated to include information on administrative and regulatory limitations relevant to treatment facilities.

Treatment Facility Status

The information sheets identify the status of the facilities. The two broad facility status categories are "existing" and "planned." Existing facilities are further divided into "existing operating" and "existing, could be used to treat mixed waste." The latter category are those facilities that have the technical capability to treat mixed waste, but either the facility is not currently operating or is not currently treating mixed waste. Facilities in this category would include those undergoing plant modification, permit or other regulatory reviews, in the process of restarting, etc.

The planned facility category encompasses a broad range of potential treatment facilities. One of the main purposes of the information sheets is to provide a tool to identify numerous preliminary treatment options for a DOE site's mixed waste. As such, the approach taken was to include as many potential treatment facilities as possible in the planned category. Any potential treatment facility for which any strategic planning or feasibility analysis has taken place could be included as a planned facility.

Planned facilities are further categorized as "approved" or "unapproved" An approved facility is one that has formally entered the DOE line item construction project process as described in DOE Order 4700.1. A schematic diagram depicting DOE's line item construction process is given in Figure B-1.

Management and approval of construction projects are carried out by "Key Decisions" (KD) The first decision is KD-0 (Approval of Mission Need).

It should be emphasized that, as used in the information sheets, the term "approved" only signifies that the facility has formally entered the DOE line item process (i.e., has received KD-0 approval); it does not connote any State or regulatory authority approval of the facility, completion of NEPA documentation, permit issuance, etc.

Unapproved facilities are those that have not formally entered DOE's construction project process (have not received KD-0 approval). Generally, some strategic planning, research and development, engineering studies, etc. have been conducted to assess the need and feasibility of these potential facilities.

A summary of the definitions of the four facility status categories is given below:

Existing Operating - System is currently (as of 10/19/93) operating and treating mixed waste.

Existing, could be used for mixed waste - Existing system not currently treating mixed waste. System may be treating other waste, or may not be operational at this time.

Planned Approved - System has reached, at a minimum, Key Decision Zero (KD-0, Approval of Mission Need). Typically, the funds for the system's conceptual or detailed design have been authorized, or the system is under construction.

Planned Unapproved - System has not reached the KD-0 approval stage, or funds for the system's conceptual design have not been authorized.

Basis of the Treatment System Information Sheets

- A separate questionnaire was completed for each candidate treatment system. Information regarding the waste matrices, radiological categories, and contaminants that could potentially be treated in each of the site's treatment systems was requested. The information sheets were subsequently modified to include information on administrative and regulatory limitations on the facility. All information collected on the questionnaires appears on the information sheets. No summarization or collating of information has occurred.

- The primary objective of the information sheets is to identify candidate facilities that might technically be able to treat wastes in a given treatability group. For facilities in the early planning stage, professional and engineering judgement were used to complete the questionnaires. The information is subject to change and refinement as more detailed data is developed regarding the technical capabilities of facilities and their ability to treat specific waste streams.

274

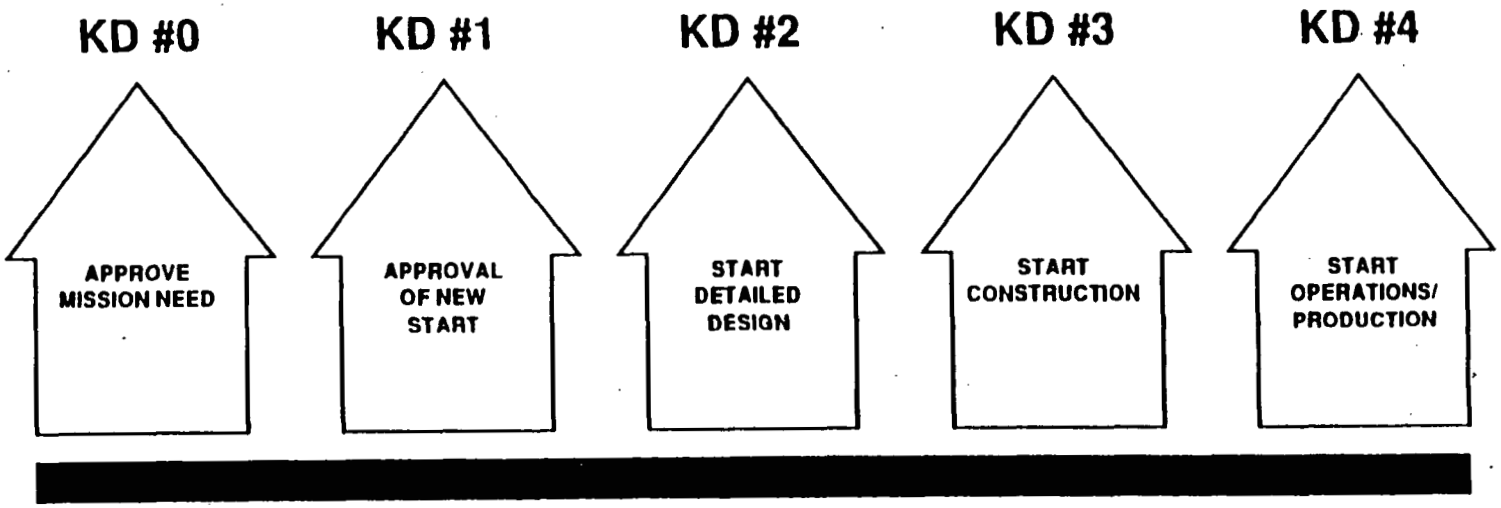
- The sections addressing administrative and technical limitations were not intended to be a detailed or comprehensive description of the system's waste acceptance criteria. These sections were intended to identify major permit restrictions and technical limitations.

- The information sheets are meant to be used only as a tool to enable preliminary matching of waste streams to potential treatment options. Some treatment facilities may not be able to treat all wastes within a treatability group identified as potentially applicable. In addition, some proposed facilities may never be constructed. More specific treatment options for a given waste stream will be selected as part of the process of developing the Draft Site Treatment Plans.

A table of definitions of terms used in the candidate treatment system information sheets can be found at the end of this appendix.

Key Decision Process Overview

Figure B - 1



INITIATE CONCEPTUAL DESIGN

INITIATE NEPA

CDR

- SCOPE
- COST
- SCHEDULE

COMMENCE TITLE II

FINAL WORKING DRAWINGS, SPECS, ESTIMATES
NEPA COMPLETE

COMMENCE TITLE III

ENGINEERING SUPPORT OF CONSTRUCTION
ENSURE CONSTRUCTION ACCORDING TO PLANS & SPECS
PSAR COMPLETE

TRANSITION TO OPERATIONS

DEMONSTRATED CAPABILITY TO MEET TECH PERFORMANCE GOALS IN BASELINE
FSAR COMPLETE

48 86

CANDIDATE MIXED WASTE TREATMENT SYSTEM INFORMATION SHEETS

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Argonne National Laboratory - East
FACILITY: Alkali Metal Reaction Booth
SYSTEM: 00114, Alkali Metal Reaction Booth
CONTACT: Ken Chiu 708-252-7966

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

	DESIGN	PERMIT
M3/YR	0	0

System Capacity
PERMIT [Other UNIT of MEASURE]: 40 pounds/hr

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	N	N	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part A App	IL EPA	04/30/82	/ /
CAA	Air Permit	IL EPA	06/19/89	05/31/94
RCRA	Part B App	IEPA/USEPA	12/20/90	/ /

OTHER INFORMATION

Design capacity = 40 pounds per hour.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

RCRA permit limits operation to 40 pds per hour. Facility has not operated for several years. The laboratory (ANL) is planning to bring this system on line in January, 1994. Facility cannot accept PCB mixed waste. The facility will initially treat back logged waste of approximately 0.60 cubic meters of alkali metals.

OTHER PERMIT LIMITATIONS & COMMENTS

The RCRA Part B permit application indicates that offsite waste will not be stored or treated at ANL-E. Therefore, the Part B permit, when issued, will prohibit acceptance of offsite waste.

TECHNOLOGY	MATRIX
Chemical Oxidation	Reactive Metals

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Argonne National Laboratory - West
FACILITY: Radioactive Sodium Waste Process Facility
SYSTEM: 00545, Radioactive Sodium Waste Process Facility
CONTACT: Ray Lang 708-252-2230

	DESIGN	PERMIT
M3/YR	0	0

— System Capacity —

ADS NUMBER: CH-1604
STATUS: Planned Unapproved

HLW	LLW	TRU	-TRU- ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	N	Y

OTHER INFORMATION
Capacity to be determined. Would convert elemental sodium to nonhazardous sodium carbonate.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
A conceptual design report for the facility was done in 1982 and is currently being revised.
RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
ANL-W is required to provide treatment technology for sodium-contaminated components stored on site.

TECHNOLOGY	MATRIX
Chemical Oxidation	Reactive Metals

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: BNFL (England)
FACILITY: BNFL (England)
SYSTEM: 00505, BNFL Deactivation
CONTACT:

ADS NUMBER:
STATUS: Existing Operating Commercial

		DESIGN	PERMIT
System Capacity	M3/YR	0	0

HLW	LLW	TRU	-TRU- ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	B	N	N	N	Y	N	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Export	EPA	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Transport to England for treatment would require export permit for hazardous waste export.

TECHNOLOGY	MATRIX
Water Reaction	Reactive Metals

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: DSSI, Oak Ridge, TN
FACILITY: Diversified Scientific Services
SYSTEM: 00546, Diversified Scientific Services
CONTACT: Jack Koontz 615-376-0084

ADS NUMBER:
STATUS: Existing Operating Commercial

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	-TRU- ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
	Y									

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

TECHNOLOGY MATRIX

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Energy Technology Engineering Center
FACILITY: Radioactive Materials Disposal Facility
SYSTEM: 00117, Amalgamation Process
CONTACT: B. Bassat 818-586-5556

ADS NUMBER:
STATUS: Existing Operating

	DESIGN	PERMIT
M3/YR	0	0

System Capacity
PERMIT [Other UNIT of MEASURE]: 1 liter/day

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	Y	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part A App	EPA	07/08/92	/ /

OTHER INFORMATION
Design capacity = 1 liter/day.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Has been used to amalgamate mercury. All mercury onsite has been processed.
OTHER PERMIT LIMITATIONS & COMMENTS
Permitted to treat waste generated on site only.

Permit status is uncertain with the State of California. This system is not included in the March 1989 Part A application Interim Status authority to operate. It is included in the July 1992 amendment which has not been approved and therefore is considered as a non-approved activity according to DTSC interpretation.

TECHNOLOGY	MATRIX
Amalgamation	Liquid Mercury

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Energy Technology Engineering Center
FACILITY: Radioactive Materials Disposal Facility
SYSTEM: 00508, Evaporation/Ion Exchange
CONTACT: B. Bassat 818-586-5556

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

	DESIGN	PERMIT
M3/YR	345	345

System Capacity
[Other UNIT of MEASURE]: 250 gal/day

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	EPA	04/01/89	/ /

OTHER INFORMATION
Design capacity = 250 gal/day.
Approximate annual throughput achievable = 9000 gal.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Evaporator; an approved disposal site for the mixed waste sludge resulting from the process (evaporation).
Ion exchange; needs to be reassembled.
OTHER PERMIT LIMITATIONS & COMMENTS
Permitted to treat waste generated on site only.

Permit status is uncertain with the State of California. This system was included in the March 1989 Part A application Interim Status authority to operate. It is not included in the July 1992 amendment.

TECHNOLOGY	MATRIX
Evaporation	Aqueous Liquids
Ion Exchange	Organic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Energy Technology Engineering Center
FACILITY: Radioactive Materials Disposal Facility
SYSTEM: 00124, Neutralization Process
CONTACT: B. Bassat 818-586-5556

	DESIGN	PERMIT
M3/YR	332	332

System Capacity
PERMIT [Other UNIT of MEASURE]: 10 gal/hour

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part A App	EPA	07/08/92	/ /

OTHER INFORMATION
Design capacity = 10 gal/hr.
Approximate annual throughput achievable = 1800 gal.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Approval of the treatability study.
OTHER PERMIT LIMITATIONS & COMMENTS
Permitted to treat waste generated on site only.

Permit status is uncertain with the State of California. This system is not included in the March 1989 Part A application Interim Status authority to operate. It is included in the July 1992 amendment which has not been approved and therefore is considered as a non-approved activity according to DTSC interpretation.

TECHNOLOGY	MATRIX
Neutralization	Aqueous Liquids
	Reactive Metals

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Energy Technology Engineering Center
FACILITY: Radioactive Materials Disposal Facility
SYSTEM: 00509, Thermal Treatment
CONTACT: B. Bassat 818-586-5556

ADS NUMBER:
STATUS: Planned Unapproved

System Capacity	DESIGN	PERMIT
M3/YR	1200	1200

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part A App	EPA	07/08/92	/ /

OTHER INFORMATION
Design capacity = 800 gal/day.
Plan date of operation = FY94.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Commercially available, turn key operation. Pending approval of State of California (DTSC) for construction, operating and air permits. Expect that facility will be operational by May, 1994.
OTHER PERMIT LIMITATIONS & COMMENTS
Permitted to treat waste generated on site only.

Permit status is uncertain with the State of California. This facility is not included in the March 1989 Part A application Interim Status authority to operate. It is included in the July 1992 amendment which has not been approved and therefore is considered as a non-approved activity.

TECHNOLOGY	MATRIX
Phase Separation	Soil with <50% Debris
Soil Washing	Soils
Stabilization	Soil with <50% Debris Soils
Thermal Destruction	Soil with <50% Debris Soils
Unspecified	Liquid Mercury

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Envirocare of Utah, Clive, UT

FACILITY: Envirocare Treatment & Disposal Facility

SYSTEM: 00516, Treatment & Disposal Facility

CONTACT: Sue Rice 801-532-1330

System Capacity	DESIGN	PERMIT
M3/YR	0	0

ADS NUMBER:

STATUS: Existing Operating Commercial

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Final		/ /	/ /

OTHER INFORMATION

Approximate annual throughput achievable = 45,000 tons/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Envirocare's license amendment for this treatment is pending. License issuance is scheduled for October 1993.

Envirocare also has the capability of disposing of mixed waste based on its RCRA Part B for disposal.

Treatment limitations: Envirocare will treat solid phase waste. No liquid treatment.

TECHNOLOGY	MATRIX
Stabilization	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Cemented Solids
	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Soil with <50% Debris
	Soils
	Reactive Metals
	Elemental Lead
	Beryllium Dust
	Calcine Solids
	Inorganic Solids
	Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Fernald Environmental Management Project				
FACILITY:	Minimum Additive Waste Stabilization Facility				
SYSTEM:	00350, Minimum Additive Waste Stabilization Facility		M3/YR	40000	0
CONTACT:	Barry Ko	513-738-6786			

System Capacity

ADS NUMBER: 49-B2
STATUS: Planned Unapproved

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH		N				

OTHER INFORMATION

Information needed for this section is still being investigated and will become available as treatability studies progress towards completion.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

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 clean-up process. The agreement also established schedules for implementing near-term clean-up actions while final clean-up 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. 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.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

Conducting treatability study (pilot scale study).

OTHER PERMIT LIMITATIONS & COMMENTS

Facility/system being developed pursuant to CERCLA agreement - no permit required.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

1988 Consent Decree states that offsite waste cannot be treated at the FEMP without prior approval of the State of Ohio. Thus, the FEMP is planning to only treat FEMP waste streams at this time.

TECHNOLOGY	MATRIX
Vitrification	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Soil with <50% Debris
	Soils
	Calcine Solids
	Inorganic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Fernald Environmental Management Project				
FACILITY:	Plant 8 VOC Treatment System				
SYSTEM:	00550, Plant 8 VOC Treatment System		M3/YR	23862	0
CONTACT:	Barry Ko	513-738-6786			
				System Capacity	

ADS NUMBER:

STATUS: Existing Could be used for mixed waste

		-TRU-						RCRA CHARACTERISTICS		
HLW	LLW	TRU	ALPHA	HANDLING	METALS	MERCURY	ORGANICS	IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH			Y			

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

The remedial action workplan would have to be revised and approved by USEPA; RCRA treatment permit would have to be approved by OEPA; NPDES permit may have to be changed.

OTHER PERMIT LIMITATIONS & COMMENTS

System is being operated pursuant to CERCLA agreement - no permit required.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Unit is operated as a CERCLA removal action for perched water pursuant to the Amended Consent Agreement. The FEMP is not planning to obtain a RCRA treatment permit. The 1988 Consent Decree states that offsite waste cannot be treated at the FEMP without prior approval of the State of Ohio. Thus, the FEMP is planning to only treat FEMP waste streams at this time.

TECHNOLOGY	MATRIX
Carbon Adsorption	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Fernald Environmental Management Project
FACILITY: Rotary Kiln
SYSTEM: 00513, Rotary Kiln
CONTACT: Barry Ko 513-738-6786

System Capacity	DESIGN	PERMIT
M3/YR	0	0

ADS NUMBER: 16-C3
STATUS: Existing Could be used for mixed waste

-TRU-						RCRA CHARACTERISTICS		
HLW	LLW	TRU	ALPHA	HANDLING	METALS	MERCURY	ORGANICS	IGNITABLE	CORROSIVE	REACTIVE

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
CAA	PTO	OEPA	03/02/90	/ /

OTHER INFORMATION
Design capacity = 3,800,000 kg/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Performance testing can be done, but full operation will require approval of air pollution control permit. Will be used to dry only non-RCRA radiological residues. The rotary kiln is to be used for drying/oxidizing so material can be shipped. It is not an incinerator.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
There are no plans to treat mixed waste in this facility. RCRA permit would be required to treat mixed wastes.

OTHER PERMIT LIMITATIONS & COMMENTS
Facility does not have a permit to treat hazardous waste or mixed waste.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
1988 Consent Decree states that offsite waste cannot be treated at the FEMP without prior approval of the State of Ohio. Thus, the FEMP is planning to only treat FEMP waste streams at this time.

TECHNOLOGY	MATRIX
Evaporation	Unspecified

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Fernald Environmental Management Project				
FACILITY:	Soil Washing Process Facility				
SYSTEM:	00358, Soil Washing Process Facility		M3/YR	90000	0
CONTACT:	Barry Ko	513-738-6786			

System Capacity

ADS NUMBER:

STATUS: Planned Unapproved

HLW	LLW	TRU	TRU ALPHA HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH					

OTHER INFORMATION

Pilot plant design capacity = 1.58 x 10E8 kg/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

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 clean-up process. The agreement also established schedules for implementing near-term clean-up actions while final clean-up 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. 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.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

Conducting treatability study (pilot scale study).

OTHER PERMIT LIMITATIONS & COMMENTS

Facility/system being developed pursuant to CERCLA agreement - no permit required.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

1988 Consent Decree states that offsite waste cannot be treated at the FEMP without prior approval of the State of Ohio. Thus, the FEMP is planning to only treat FEMP waste streams at the time.

TECHNOLOGY	MATRIX
Soil Washing	Soil with <50% Debris
	Soils

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Fernald Environmental Management Project
FACILITY: UNH Treatment Facility
SYSTEM: 00347, UNH Treatment Facility
CONTACT: Barry Ko 513-738-6786

	DESIGN	PERMIT
M3/YR	765	0

System Capacity

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	Y	N

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Operation of this unit has been suspended since April 1993, pending further investigation.
OTHER PERMIT LIMITATIONS & COMMENTS
Facility/system being operated pursuant to CERCLA agreement - no permit required. RCRA or NPDES permit modification may be required to treat mixed waste streams other than those specified in CERCLA workplan.
RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
1988 Consent Decree states that offsite waste cannot be treated at the FEMP without prior approval of the State of Ohio. Thus, the FEMP is planning to only treat specific FEMP waste streams at this time.

TECHNOLOGY	MATRIX
Filtration	Aqueous Liquids
Neutralization	Aqueous Liquids
Precipitation	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Hanford Site
FACILITY: 242-A Evaporator
SYSTEM: 00123, 242-A Evaporator
CONTACT: Dale Black 509-376-8458

	DESIGN	PERMIT
M3/YR	0	0

System Capacity
PERMIT [Other UNIT of MEASURE]: 11.4 m3/hour

ADS NUMBER: 1260
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
Y	Y	Y	Y	RH	N	N	N	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B App	WA DOE	06/26/91	/ /
WAC246/247	Registratn	DOH	07/28/93	/ /

OTHER INFORMATION
Design capacity = 11.4 m3/hr. Restart - FY94. Tank waste only.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Expected to begin operation in FY 94 (will treat Hanford's radioactive tank wastes).
OTHER PERMIT LIMITATIONS & COMMENTS
WAC 246/247 is Radioactive Air Emission Permit, issued by Department of Health.
RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Required under Tri-Party Agreement Milestone M-17.

TECHNOLOGY	MATRIX
Evaporation	Organic Liquids
	Aqueous Liquids
Ion Exchange	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Hanford Site
FACILITY: 242-A/Purex Effluent Treatment Facility
SYSTEM: 00129, Effluent Treatment Facility
CONTACT:

		DESIGN	PERMIT
	M3/YR	0	0

System Capacity

ADS NUMBER: 2300
STATUS: Planned Approved
PERMIT [Other UNIT of MEASURE]: 17 m3/hour

KEY DECISION STATUS: KD-3 DATE STATUS ACHIEVED: 08/01/92 CONSTRUCTION COMPLETION DATE: 06/94

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	CH	Y	N	Y	Y	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B App	WA DOE	06/26/91	/ /

OTHER INFORMATION
Design capacity = 17 m3/hr. Plan date operation = FY94.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
None identified.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
Under construction. Hot startup required by 10/94.
RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Required by TPA milestone M-17-14.

TECHNOLOGY	MATRIX
Drying	Aqueous Liquids
Evaporation	Aqueous Liquids
Filtration	Aqueous Liquids
Ion Exchange	Aqueous Liquids
Reverse Osmosis	Aqueous Liquids
UV Oxidation	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Hanford Site
FACILITY: 300 Area Waste Acid Treatment System
SYSTEM: 00533, Chromium Reduction
CONTACT:

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

		DESIGN	PERMIT
M3/YR		0	1000

System Capacity
PERMIT [Other UNIT of MEASURE]: .03 m3/hour

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Closure	WA DOE	06/29/90	/ /

OTHER INFORMATION
Approximate annual throughput achievable = 1,000 to 1,000,000 kg/yr. Design capacity = 0.03 m3/hr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Non-operational. Permit status is closure.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Revise RCRA closure permit application to treatment and obtain State approval.
Revise Tri-Party agreement.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Closure plan was required by TPA milestone M-20.

TECHNOLOGY	MATRIX
Chromium Reduction	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Hanford Site
FACILITY: 300 Area Waste Acid Treatment System
SYSTEM: 00534, pH Adjustment, Centrifugation and Filtration
CONTACT:

		DESIGN	PERMIT
System Capacity	M3/YR	0	1000

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Closure	WA DOE	06/29/90	/ /

OTHER INFORMATION
Approximate annual throughput achievable = 1,000,000 kg/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Non-operational. Permit status is closure. Residual waste may still remain in the centrifuge unit processes.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Revise RCRA closure permit application to treatment and obtain State approval.
Revise TPA.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Closure plan was required by TPA milestone M-20.

TECHNOLOGY	MATRIX
Centrifugation	Aqueous Liquids
Filtration	Aqueous Liquids
Neutralization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Hanford Site
FACILITY: 303-M Oxide Facility
SYSTEM: 00535, Calcination
CONTACT:

	DESIGN	PERMIT
M3/YR	0	0

System Capacity
PERMIT [Other UNIT of MEASURE]: 91 kg/hour

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B App	WA DOE	05/19/88	/ /

OTHER INFORMATION
Design capacity = 91 kg/hr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Non-operational. Facility was used to treat uranium and zirconium fines which resulted from the fuel fabrication process.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Obtain RCRA operating permit, currently non-operational.

TECHNOLOGY	MATRIX
Calcination	Beryllium Dust

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Hanford Site
FACILITY: Concretion Facility
SYSTEM: 00536, Solidification
CONTACT:

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

	DESIGN	PERMIT
M3/YR	0	0

System Capacity
PERMIT [Other UNIT of MEASURE]: .09 m3/hour

HLW	LLW	TRU	-TRU- ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	Y	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Closure	WA DOE	06/21/90	/ /

OTHER INFORMATION
Design capacity = 0.09 m3/hr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Non-operational. Permit status is closure.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Revise RCRA closure permit application to treatment and obtain State approval.
Revise TPA.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Closure plan required by TPA M-20.

TECHNOLOGY
Solidification

MATRIX
Inorganic Sludges/Particulates
Inorganic Debris
Beryllium Dust
Inorganic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Hanford Site				
FACILITY:	Grout Treatment Facility				
SYSTEM:	00121, Grout Treatment Facility		M3/YR	15000	0
CONTACT:	Dale Black	509-376-8458			

System Capacity

ADS NUMBER: 1230

PERMIT [Other UNIT of MEASURE]: 4 million gal/yr

STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	RH	Y	N	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B App	WA DOE	07/22/92	/ /
WAC246/247	Registratn	DOH	07/28/93	/ /

OTHER INFORMATION

Design capacity = 4 million gal/yr. Restart - FY94. Likely to be terminated as a result of renegotiated TPA. Rebaseline will be performed mid FY94. Tank waste only.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

State/EPA approval; renegotiate expected changes to TPA.

OTHER PERMIT LIMITATIONS & COMMENTS

WAC 246/247 is the Radioactive Air Emission Permit.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Currently required by TPA milestone M-01. Renegotiations on TPA, currently underway, are expected to cancel operation of this facility and replace it with a second vitrification plant for low-level waste.

TECHNOLOGY	MATRIX
Stabilization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Hanford Site
FACILITY: Hanford Waste Vitrification Plant
SYSTEM: 00126, Hanford Waste Vitrification Plant
CONTACT: Dale Black 509-376-8458

	DESIGN	PERMIT
M3/YR	1200	1200

System Capacity

ADS NUMBER: 1240
STATUS: Planned Approved
KEY DECISION STATUS: KD-4 DATE STATUS ACHIEVED: 03/01/93 CONSTRUCTION COMPLETION DATE: 12/98

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
Y	Y	Y	Y	RH	Y	N	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B App	WA DOE	10/01/91	/ /
CAA	Rad.	WA DOH	03/19/93	/ /
CAA	Non. Rad.	WA DOE	/ /	/ /

OTHER INFORMATION
Plan date operation - FY99. Tank waste only.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
On hold pending renegotiation of TPA. Likely to be delayed until 2009 due to renegotiated TPA. Rebaseline will be performed mid FY94.
OTHER PERMIT LIMITATIONS & COMMENTS
CAA permit types are Notice of Construction - Rad and Non-Rad. The Non-Rad permit has been submitted, but not approved.
RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Required by TPA milestone M-03, currently being renegotiated. TPA stipulates construction completion in 1998.

TECHNOLOGY
Vitrification

MATRIX
Aqueous Liquids
Inorganic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Hanford Site

FACILITY: Maintenance & Storage Facility

SYSTEM: 00119, Maintenance & Storage Facility

CONTACT: Dale Black 509-376-8458

	DESIGN	PERMIT
M3/YR	0	0

System Capacity

PERMIT [Other UNIT of MEASURE]: 0.08 m3/hour

ADS NUMBER:

STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	N	N	N	N	N	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B App	WA DOE	11/16/87	/ /
WAC246/247	Registratn	DOH	07/28/93	/ /

OTHER INFORMATION

Construction complete.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

Approval of permit application. Note that facility capacity is very small.

OTHER PERMIT LIMITATIONS & COMMENTS

WAC 246/247 is the Radioactive Air Emission permit.

TECHNOLOGY	MATRIX
Water Reaction	Reactive Metals

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Hanford Site
FACILITY: Mixed Waste Treatment Facility
SYSTEM: 00537, Separation, Distillation
CONTACT:

		DESIGN	PERMIT
		System Capacity	
M3/YR		20	20

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	B	Y	N	Y	Y	Y	N

OTHER INFORMATION
Construction complete.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Prepare and obtain RCRA permit approval.
OTHER PERMIT LIMITATIONS & COMMENTS
This is a pilot plant-type operation (operated by PNL).

TECHNOLOGY	MATRIX
Distillation	Aqueous Liquids
	Inorganic Sludges/Particulates
Separation	Aqueous Liquids
	Inorganic Sludges/Particulates

301

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Hanford Site				
FACILITY:	Pu Finishing Plant Water Disposal				
SYSTEM:	00538, Filtration, Ion Exchange, and Activated Charcoal		M3/YR	30000	30000
CONTACT:	Don McBride	509-373-5698			

System Capacity

ADS NUMBER:

STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	CH	Y	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
WAC246/247	Registratn	DOH	07/28/93	/ /

OTHER INFORMATION

Start up - FY94.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Not permitted to treat mixed wastes.

Design is limited to pretreatment of plant effluent prior to discharge to the 216-Z-20 crib.

In June, 1995, the effluent will be discharged to the 200 Area Treated Effluent Disposal Facility.

The facility can only accept trace organics and trace metals.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

Permit for mixed waste treatment.

OTHER PERMIT LIMITATIONS & COMMENTS

Design is limited to pretreatment of plant effluent prior to discharge to 216-Z-20 crib.

TECHNOLOGY	MATRIX
Carbon Adsorption	Aqueous Liquids
Filtration	Aqueous Liquids
Ion Exchange	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Hanford Site
FACILITY: Thermal Treatment Facility
SYSTEM: 00532, Incineration
CONTACT: B.G. Place 509-372-1372

ADS NUMBER: 2250
STATUS: Planned Unapproved

	DESIGN	PERMIT
M3/YR	550	0
System Capacity		

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	N	B	N	N	Y	Y	Y	N

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Free liquids are presently not accepted for storage at Hanford.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Needed for treatment of some wastes.

Previous project accomplishments: (1) Engineering Study (Technology Assessment) completed: FY 92; (2) Hazard Classification completed: FY 93; (3) Engineering Study (Site-Specific Facility) draft completed in FY 93 but not approved; and (4) FDC draft completed in FY 93 but not approved.

Current FY 94 activities: Waste characterization of RMW; Privatization of thermal treatment; and Complete Engineering Safety Study.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
No direct tie to TPA. However, a facility such as this will be needed to treat some cleanup wastes that will be generated due to compliance with the TPA.

TECHNOLOGY
Incineration

MATRIX
Organic Liquids
Aqueous Liquids
Organic Sludges/Particulates
Inorganic Sludges/Particulates
Lab Packs with Metals
Lab Packs without Metals
Explosives
Batteries (Lead Acid, Cadmium)

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Hanford Site
FACILITY: Waste Receiving And Processing Facility
SYSTEM: 00325, WRAP I
CONTACT: Dale Black 509-376-8458

System Capacity	DESIGN	PERMIT
M3/YR	1400	1400

ADS NUMBER: 2220
STATUS: Planned Approved
KEY DECISION STATUS: KD-2 DATE STATUS ACHIEVED: 02/01/91 CONSTRUCTION COMPLETION DATE: 12/96

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	N	N	N	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B	WA DOE	10/31/91	/ /
WAC173-460	NOC	WA DOE	03/30/93	/ /
WAC246/247	NOC	DOH	03/30/93	09/07/93
NESHAPS	NOC	EPA	04/02/93	05/10/93

OTHER INFORMATION
Pretreatment only. Prepares retrieved/stored TRU and LLW for disposal. Plan date operation - FY97.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
Title II Design is completed. Bid package preparation has been initiated for construction. Breaking ground/starting construction in Nov. 1993 is expected.
OTHER PERMIT LIMITATIONS & COMMENTS
WAC 173-460 is the Toxic Air Pollutants permit. WAC 246/247 is the Radioactive Air Emission permit. NESHAPS regulation is 40 CFR 61.07.
RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Required by TPA milestone M-18.

TECHNOLOGY	MATRIX
Adsorption	Organic Liquids Aqueous Liquids Inorganic Debris Heterogeneous Debris
Compaction	Organic Debris Inorganic Debris
Packaging	Organic Debris Inorganic Debris Heterogeneous Debris
Stabilization	Organic Liquids Aqueous Liquids Organic Debris Heterogeneous Debris

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Hanford Site
FACILITY: Waste Receiving And Processing Facility
SYSTEM: 00326, WRAP II A & B
CONTACT: Owen Kruger 509-372-1463

System Capacity	DESIGN	PERMIT
M3/YR	1500	1500

ADS NUMBER: 2230
STATUS: Planned Approved
KEY DECISION STATUS: KD-0 DATE STATUS ACHIEVED: / / CONSTRUCTION COMPLETION DATE: /

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	N	B	Y	Y	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B App	WA DOE	10/31/91	/ /
CAA	NOC	WA DOE	/ /	/ /

OTHER INFORMATION

Design capacity = 1500 m3/yr LLW or 1100 m3/yr TRU

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

a.Free liquids are not presently accepted for storage at Hanford.
b.Cannot treat ignitable/reactives (except waste containing potassium and sodium)
c.Cannot accept low TOC ignitable liquids.
d.Oxidizers are generally acceptable however, large quantities of ignitables/oxidizers are not acceptable (particularly perchlorates).
e.Reactive metals excludes highly reactive wastes.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

Conceptual design work is complete for WRAP IIA. KD-1 will be obtained for WRAP IIA in December 1993.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

WRAP IIB is being evaluated in site-wide integration plan.

OTHER PERMIT LIMITATIONS & COMMENTS

The WRAP II concept has been approved by the State & EPA. However, the split into Parts A & B is not yet approved. (change request submitted).

The CAA Notice of Construction (NOC) is not yet submitted.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Required by TPA milestone M-19. The facility is required by the TPA and needed for site cleanup.

TECHNOLOGY	MATRIX
Grouting	Organic Liquids
	Aqueous Liquids
	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Cemented Solids
	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Soil with <50% Debris
	Soils
	Lab Packs with Metals
	Lab Packs without Metals

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

			DESIGN	PERMIT
SITE:	Idaho National Engineering Laboratory			
FACILITY:	HEPA Filter Leaching System (CPP-659)			
SYSTEM:	00238, HEPA Filter Leaching System (CPP-659)	M3/YR	83	83
CONTACT:	Keith Kristofferson 208-526-9363			
			System Capacity	

ADS NUMBER: 1001WN

STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
Y	Y	Y	Y	B	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B	State	05/01/93	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

"B" under Handling means Both CH and RH.

The HEPA Filter Leaching System (HFLS) must obtain a regulatory determination under the Debris Rule to allow the treated filters to be disposed of as LLW. The testing of the system will start in approximately 1/94 with the State of Idaho's regulatory determination based on the sample results by 6/94. Testing of the system will begin when the State accepts the waste analysis plan for the HFLS. Therefore, it is uncertain if the LDR treatment standards will be met by this treatment for some of the contaminants listed above.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

System testing using mixed waste. Development of analytical technologies to analyze treated waste. Determination from State concerning insoluble organic constituents. Installation of new equipment to optimize throughput and incorporate system testing input.

OTHER PERMIT LIMITATIONS & COMMENTS

Currently no air permits required. However, will be included in the Permit to Operate (PTO) for INEL. The PTO will address all air emissions at INEL. Submittal of application unknown at this time. This facility does not operate 24 hours/day, 365 days/year. Assume specific gravity of 1.0.

1.0 x 60 gal/day x (3.785 x 10E-3) x 365 days/yr = 82.8915 m3/year.

TECHNOLOGY	MATRIX
Chemical Extraction	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Inorganic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: ICPP Decontamination Facility
SYSTEM: 00257, Unit2: CO2 Decontamination System
CONTACT: Keith Kristofferson 208-526-9363

System Capacity	DESIGN	PERMIT
M3/YR	0	0

ADS NUMBER: 1008WN
STATUS: Planned Approved
KEY DECISION STATUS: KD-0 DATE STATUS ACHIEVED: 05/01/93 CONSTRUCTION COMPLETION DATE: 09/94

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
Y	Y	N	Y	B	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	02/01/93	/ /

OTHER INFORMATION
Design and permit capacities are to be determined.
Startup - FY94.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
"B" under Handling means both CH and RH. Presently the limitations of the facility are not known until testing is complete in late FY 94. Therefore, it is not known if the system can treat debris below LDR standards in all cases.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
Technology demonstration operations in progress. Facility status is based on success of demonstration operations. There are no key decisions to be made. The technology demonstration is part of the conceptual design. Based on the results of the demonstration, the design will be finalized and the equipment installed.

OTHER PERMIT LIMITATIONS & COMMENTS
Request for Interim status sent 02/93.

This currently is a demonstration project. No air permits identified for this activity at this time. RCRA Part A permit modification has been submitted which identifies this treatment unit as "CPP-659 NWCF Decontamination Area Debris Treatment and Containment Storage Area." Until this modification is approved, debris treatment will proceed on a less than 90 day basis as allowed by 40 CFR 262.34. This request for interim status indicates a total treatment capacity for the ICPP Decon Facility of 10 m3/day. There is no break-down for individual treatments which may occur in the ICPP Decon Facility. This facility does not operate 365 days/year, 24 hours/day. Presently the limitations of the facility are not known until testing is complete in late FY 94.

TECHNOLOGY	MATRIX
CO2 Decontamination	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Elemental Lead
	Inorganic Solids
	Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: ICPP Decontamination Facility
SYSTEM: 00303, Water Washing System
CONTACT: Keith Kristofferson 208-526-9396

	DESIGN	PERMIT
M3/YR	0	0

System Capacity

ADS NUMBER:
STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
Y	Y	Y	Y	B	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	02/01/93	/ /

OTHER INFORMATION
Design and permit capacities are to be determined.
Startup - FY94.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
"B" under Handling means Both RH and CH. The limitations of the facility are not known until testing is complete in late FY 94. Therefore, it is not known if the system can treat debris below LDR standards in all cases.

OTHER PERMIT LIMITATIONS & COMMENTS
Request for Interim status sent 02/93.

No air permits identified for this activity at this time. RCRA Part A modification has been submitted which identifies this treatment unit as "CPP-659 NWCF Decontamination Area Debris Treatment and Containment Storage Area." Until the modification is approved, debris treatment will proceed on a less than 90 day basis as allowed by 40 CFR 262.34. The request for interim status indicates a total treatment capacity for the ICPP Decon Facility of 10 m3/day. There is no break-down for individual treatments which may occur in the ICPP Decon Facility. This facility does not operate 365 days/year, 24 hours/day. The limitations of the facility are not known until testing is completed in late FY 94.

TECHNOLOGY	MATRIX
Water Washing	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Elemental Lead
	Inorganic Solids
	Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: INEL Waste Generator Treatment
SYSTEM: 00244, INEL Generator Treatment Under 40 CFR 262.34
CONTACT: Jack Depperschmidt 208-526-5053

ADS NUMBER:
STATUS: Existing Operating

	DESIGN	PERMIT
M3/YR	0	0

System Capacity

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	CH	Y	Y	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	262.34	State	/ /	/ /

OTHER INFORMATION

Design capacity is developed and implemented on an as needed basis.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Generator treatment is acceptable for treatment of waste by the generator under 40 CFR 262.34 limitations. Waste from other sites is not acceptable for treatment under these plans.

OTHER PERMIT LIMITATIONS & COMMENTS

Waste cannot be accepted from offsite facilities. INEL Generator Treatments under 40 CFR 262.34 is applicable only to treatment of wastes as it is generated or accumulated prior to shipment or storage. For each individual process, a 30-day notice and waste analysis plan must be supplied to the regulator.

TECHNOLOGY	MATRIX
Ion Exchange	Aqueous Liquids
Macroencapsulation	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Elemental Lead
Neutralization	Aqueous Liquids
Stabilization	Aqueous Liquids
	Inorganic Sludges/Particulates
	Inorganic Debris
	Heterogeneous Debris
	Soil with <50% Debris
	Soils

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Idaho Waste Processing Facility
SYSTEM: 00551, Amalgamation
CONTACT: Dave Eaton 208-526-7002

System Capacity	DESIGN	PERMIT
M3/YR	0	0

ADS NUMBER: 4302
STATUS: Planned Unapproved

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	B	N	Y	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B	State	01/01/99	/ /

OTHER INFORMATION
Small volumes of remote handled material may be accepted on a case by case basis.

Design and permit capacities are to be determined.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Feasibility studies.

TECHNOLOGY	MATRIX
Amalgamation	Liquid Mercury

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Idaho Waste Processing Facility
SYSTEM: 00304, Debris Decontamination System
CONTACT: Dave Eaton 208-526-7002

ADS NUMBER: 4302
STATUS: Planned Unapproved

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	B	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B	State	01/01/99	/ /

OTHER INFORMATION

Small volumes of remote handled material may be accepted on a case by case basis.

Design and permit capacities are to be determined.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

Feasibility studies.

TECHNOLOGY	MATRIX
Decontamination	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Elemental Lead

311

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Idaho Waste Processing Facility
SYSTEM: 00335, Macroencapsulation System
CONTACT: Dave Eaton 208-526-7002

ADS NUMBER: 4302
STATUS: Planned Unapproved

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	B	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B	State	01/01/99	/ /

OTHER INFORMATION

Small volumes of remote handled material may be accepted on a case by case basis.

Design and permit capacities are to be determined.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

Feasibility studies.

TECHNOLOGY	MATRIX
Macroencapsulation	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Elemental Lead

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Idaho Waste Processing Facility
SYSTEM: 00504, Sizing System
CONTACT: Dave Eaton 208-526-7002

ADS NUMBER: 4302
STATUS: Planned Unapproved

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	B	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA/TSCA	Part B	State	01/01/99	/ /

OTHER INFORMATION
Design and permit capacities to be determined.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Feasibility studies.

TECHNOLOGY	MATRIX
Size Reduction	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Elemental Lead

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Idaho Waste Processing Facility
SYSTEM: 00336, Stabilization System
CONTACT: Dave Eaton 208-526-7002

ADS NUMBER: 4302
STATUS: Planned Unapproved

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	B	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA/TSCA	Part B	State	01/01/99	/ /

OTHER INFORMATION

Small volumes of remote handled material may be accepted on a case by case basis.

Design and permit capacities are to be determined.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

Feasibility studies.

TECHNOLOGY

Stabilization

MATRIX

Aqueous Liquids
Inorganic Sludges/Particulates
Cemented Solids
Inorganic Debris
Heterogeneous Debris
Soil with <50% Debris
Soils
Inorganic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Idaho Waste Processing Facility
SYSTEM: 00552, Thermal Desorbtion
CONTACT: Dave Eaton 208-526-7002

System Capacity	DESIGN	PERMIT
M3/YR	0	0

ADS NUMBER: 4302
STATUS: Planned Unapproved

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	N	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B	State	01/01/99	/ /

OTHER INFORMATION
Small volumes of remote handled material may be accepted on a case by case basis.

Design and permit capacities are to be determined.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Feasibility studies.

TECHNOLOGY	MATRIX
Thermal Desorbtion	Organic Sludges/Particulates
	Organic Debris
	Heterogeneous Debris
	Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Idaho Waste Processing Facility
SYSTEM: 00334, Thermal Destruction System
CONTACT: Dave Eaton 208-526-7002

System Capacity	DESIGN	PERMIT
M3/YR	0	0

ADS NUMBER: 4302
STATUS: Planned Unapproved

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B	State	01/01/99	/ /
TSCA	PCB	EPA	01/01/99	/ /

OTHER INFORMATION
Design and permit capacities are to be determined.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Feasibility studies.

TECHNOLOGY
Incineration

MATRIX
Organic Liquids
Aqueous Liquids
Organic Sludges/Particulates
Organic Debris
Heterogeneous Debris
Lab Packs with Metals
Lab Packs without Metals
Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Liquid Effluent Treatment And Disposal (LET&D)
SYSTEM: 00241, Liquid Effluent Treatment And Disposal (LET&D)
CONTACT:

ADS NUMBER:
STATUS: Existing Operating

		DESIGN	PERMIT
System Capacity	M3/YR	36472	36472

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B	State	05/01/93	/ /
CAA	NESHAP	EPA	03/01/91	/ /
CAA	PSD	State	10/01/93	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Treatment in LET&D in many cases will not meet LDR for some of the contaminants such as the trace quantity of organics which require specified treatment technologies.

OTHER PERMIT LIMITATIONS & COMMENTS

LET&D emissions are also included in the PSD for FPR. The capacity listed is the design capacity listed in the Part A submitted with the LET&D Part B permit application in May 1993.

1.0 x 26,400 gal/day x (3.785 x 10E-3 m3/gal) x 365 days = 36,472 m3/year.

The annual (any consecutive 12 months) cumulative throughput of hazardous waste in the LET&D acid recycle tank shall not exceed 250 tons per year. Note: This is based on operating the two fractionators simultaneously, 24 hours/day. Usually only one fractionator is used at a time and they do not operate every day; only when sufficient feed available. Since FPR will not operate the PSD may be revised. Assume specific gravity of 1.0.

TECHNOLOGY	MATRIX
Chemical Fractionation	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Mixed Low-Level Waste Treatment Facility (MLLWTF)
SYSTEM: 00324, Mixed Low-Level Waste Treatment Facility (NLLWTF)
CONTACT:

		DESIGN	PERMIT
System Capacity	M3/YR	60	60

ADS NUMBER: 5-E2
STATUS: Planned Unapproved

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
40CFR-H	NESHAPS	EPA	09/30/98	/ /
CAA	PTC/PSD	State	09/30/00	/ /
40CFR264	RCRA App	State	09/30/00	/ /
40CFR-R	TSCA App	EPA	09/30/00	/ /

OTHER INFORMATION

Restart of WERF is scheduled for FY94. Until the liquid feed system modification are completed, all liquids must be absorbed prior to incineration.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

The Mixed and Low Level Waste Treatment Facility (MLLWTF) has been thoroughly evaluated by completing a series of pre-conceptual activities. Waste streams have been identified, waste treatment processes have been identified using the Best Demonstrated Available Treatment (BDAT) identified in the EPA regulations. Many treatment options have been evaluated with life cycle costs calculated. Environmental activities have been initiated by submittal of an Environmental Checklist. Because the BDAT for some of the hazardous components is incineration, DOE orders require that an Environmental Impact Statement (EIS) be conducted. Preliminary siting criteria have been developed and studies have been completed with three potential sites identified as being suitable. Additional site specific parameters have been obtained to determine suitability of the identified sites. A final site selection has not been made at this time.

Funding for FY94 and FY95 has been reduced to $0. Several competing activities including the Private Sector Participation Initiative (PSPI) and the Idaho Waste Processing Facility (a DOE-owned and -operated facility) are being evaluated. The project is on hold until these activities have proven to not be suitable. The project will be terminated if these initiatives prove fruitful.

OTHER PERMIT LIMITATIONS & COMMENTS

The permit issuance/application submission dates are the dates of the last planning activity. The project has been delayed at least two years. Consequently, these dates will be slipped based upon project restart.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

This project is not listed in the INEL 180 Day report or the Conceptual Site Treatment Plan as a preferred alternative for any of the mixed wastes at INEL.

TECHNOLOGY	MATRIX
Amalgamation	Liquid Mercury

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Mixed Low-Level Waste Treatment Facility (MLLWTF)
SYSTEM: 00324, Mixed Low-Level Waste Treatment Facility (MLLWTF)
CONTACT:

		DESIGN	PERMIT
System Capacity	M3/YR	60	60

ADS NUMBER: 5-E2
STATUS: Planned Unapproved

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	Y	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
40CFR-H	NESHAPS	EPA	09/30/98	/ /
CAA	PTC/PSD	State	09/30/00	/ /
40CFR264	RCRA App	State	09/30/00	/ /
40CFR-R	TSCA App	EPA	09/30/00	/ /

OTHER INFORMATION

Restart of WERF is scheduled for FY94. Until the liquid feed system modifications are completed, all liquids must be absorved prior to incineration.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

The Mixed and Low Level Waste Treatment Facility (MLLWTF) has been thoroughly evaluated by completing a series of pre-conceptual activities. Waste streams have been identified, waste treatment processes have been identified using the Best Demonstrated Available Treatment (BDAT) identified in the EPA regulations. Many treatment options have been evaluated with life cycle costs calculated. Environmental activities have been initiated by submittal of an Environmental Checklist. Because the BDAT for some of the hazardous components is incineration, DOE orders require that an Environmental Impact Statement (EIS) be conducted. Preliminary siting criteria have been developed and studies have been completed with three potential sites identified as being suitable. Additional site specific parameters have been obtained to determine suitability of the identified sites. A final site selection has not been made at this time.

Funding for FY94 and FY95 has been reduced to $0. Several competing activities including the Private Sector Participation Initiative (PSPI) and the Idaho Waste Processing Facility (a DOE-owned and -operated facility) are being evaluated. The project is on hold until these activities have proven to not be suitable. The project will be terminated if these initiatives prove fruitful.

OTHER PERMIT LIMITATIONS & COMMENTS

The permit issuance/application submission dates are the dates of the last planning activity. The project has been delayed at least two years. Consequently, these dates will be slipped based upon project restart.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

This project is not listed in the INEL 180 Day report or the Conceptual Site Treatment Plan as a preferred alternative for any of the mixed wastes at INEL.

TECHNOLOGY	MATRIX
Chemical Precipitation	Organic Liquids
	Aqueous Liquids
Decontamination	Organic Debris
	Inorganic Debris

Organic Debris
Inorganic Debris
Heterogeneous Debris
Soil with <50% Debris
Soils
Lab Packs with Metals
Lab Packs without Metals
Reactive Metals
Liquid Mercury
Elemental Lead
Beryllium Dust
Batteries (Lead Acid, Cadmium)
Calcine Solids
Inorganic Solids
Organic Solids

	Reactive Metals
	Liquid Mercury
	Elemental Lead
	Beryllium Dust
	Batteries (Lead Acid, Cadmium)
	Calcine Solids
	Inorganic Solids
	Organic Solids
Macroencapsulation	Organic Liquids
	Aqueous Liquids
	Organic Sludges/Particulates
	Cemented Solids
	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Soil with <50% Debris
	Soils
	Lab Packs with Metals
	Lab Packs without Metals
	Reactive Metals
	Liquid Mercury
	Elemental Lead
	Beryllium Dust
	Batteries (Lead Acid, Cadmium)
	Calcine Solids
	Inorganic Solids
	Organic Solids
Solidification	Organic Liquids
	Aqueous Liquids
	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Cemented Solids
	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Soil with <50% Debris
	Soils
	Lab Packs with Metals
	Lab Packs without Metals
	Reactive Metals
	Liquid Mercury
	Elemental Lead
	Beryllium Dust
	Batteries (Lead Acid, Cadmium)
	Calcine Solids
	Inorganic Solids
	Organic Solids
Stabilization	Organic Liquids
	Aqueous Liquids
	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Cemented Solids

	Heterogeneous Debris
	Elemental Lead
Incineration	Organic Liquids
	Aqueous Liquids
	Organic Sludges/Particulates
	Organic Debris
	Heterogeneous Debris
	Lab Packs with Metals
	Lab Packs without Metals
	Organic Solids
Macroencapsulation	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Elemental Lead
	Inorganic Solids
	Organic Solids
Melt Recycling	Elemental Lead
Neutralization	Organic Liquids
	Aqueous Liquids
Sizing	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Elemental Lead
	Inorganic Solids
	Organic Solids
Stabilization	Organic Liquids
	Aqueous Liquids
	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Cemented Solids
	Heterogeneous Debris
	Soil with <50% Debris
	Soils
	Beryllium Dust
	Inorganic Solids
	Organic Solids
Thermal Desorption	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Cemented Solids
	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Soil with <50% Debris
	Soils
	Inorganic Solids
	Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: New Waste Calcining Facility
SYSTEM: 00240, New Waste Calcining Facility
CONTACT: Keith Kristofferson 208-526-9363

ADS NUMBER:
STATUS: Existing Operating

System Capacity	DESIGN	PERMIT
M3/YR	8620	8620

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
Y	Y	Y	Y	B	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B App	State	10/01/91	/ /
CAA	NESHAP	EPA	10/01/90	/ /
CAA	PSD	State	10/01/93	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

"B" under Handling means both CH and RH.

The aqueous liquid fed to the NWCF must be acidic and the amount of sodium and potassium will not exceed 5.3 mole percent of the feed solution.

Calcination is not the specified technology for LDR High Level Waste, or the specified technology for some of the trace organics in the feed. Deactivation was remanded as LDR treatment.

OTHER PERMIT LIMITATIONS & COMMENTS

The NWCF emissions are included with the NESHAPs for the ICPP Main Stack and the PSD for FPR. Since FPR will not operate the PSD may be revised. Capacity is based upon the design capacity identified in the Part B application submitted 10/91 and a specific gravity of 1.2 for the feed to the facility. The facility does not always operate 24 hours/day, 365 days/year. 5200 gal/day x (3.785 x 10E-3 m3/gal) x 365 days/year x 1.2. Air permit requirements; current NOx emissions limits are 388 pounds in an hour and 1700 tons per year.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Consent Order for NOW (Docket No. 1090-1-24-6601). Dated 04/03/93, effective date 04/03/92, between DOE and the State of Idaho and approved by EPA. Required operation of NWCF by January 1993, 6 month progress reports, and continued operation every three years until waste tank farm tanks not having adequate secondary containment are empty. NEPA injunction order modifying order of June 28, 1993, issued to DOE, effective 09/21/93. The following is ordered: DOE shall accelerate activities related to the treatment and disposal of high-level radioactive wastes stored at INEL. In support of this: (a) DOE will calcine all high-level liquid radioactive waste that does not contain sodium on or before January 1, 1998; (b) DOE will calcine or otherwise process as much sodium-bearing high-level liquid radioactive waste (sodium liquid waste) as DOE and the State of Idaho mutually agree is practicable by Janyary 1, 1998; (c) DOE will identify a limited number of potential technologies to calcine or process sodium liquid waste on or before November 15, 1993, and thereafter evaluate and conduct tests to determine the viability of the competing technologies; (d) DOE will select a technology for calcining or processing sodium liquid waste, including a pretreatment technology (if appropriate), in conjunction with the record of decision for the EIS required by the order entered June 28, 1993; (e) DOE will select a technology for converting calcined waste into an appropriate form for disposal in conjunction with the record of decision for the EIS required by the order entered June 28, 1993; (f) DOE will construct facilities necessary to implement the technologies selected for calcining or processing sodium liquid waste and for converting calcined waste into an appropriate form for disposal in accordance with a schedule to be negotiated with the State of Idaho.

TECHNOLOGY

Calcination Pretreatment

MATRIX

Aqueous Liquids
Organic Sludges/Particulates
Inorganic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Portable Water Treatment System (PWTU)
SYSTEM: 00239, Portable Water Treatment System (PWTU)
CONTACT: Dave Eaton 208-526-7002

System Capacity	DESIGN	PERMIT
M3/YR	187	187

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	01/01/90	/ /
RCRA	Part B App	State	11/01/95	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
The PWTU has RCRA interim status. An EA is currently being prepared for the unit. Upon completion of the EA, the PWTU will be available for miscellaneous aqueous mixed waste.
OTHER PERMIT LIMITATIONS & COMMENTS
Awaiting completion of Environmental Assessment.

TECHNOLOGY	MATRIX
Carbon Adsorption	Aqueous Liquids
Filtration	Aqueous Liquids
Ion Exchange	Aqueous Liquids
Neutralization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Idaho National Engineering Laboratory				
FACILITY:	Rad. Sodium Waste Processing Facility (RSWPF)				
SYSTEM:	00366, Rad. Sodium Waste Processing Facility (RSWPF)		M3/YR	0	0
CONTACT:	M. T. Wallace	208-533-7902			

System Capacity

ADS NUMBER: 1601/1605

STATUS: Planned Unapproved

			-TRU-					RCRA CHARACTERISTICS		
HLW	LLW	TRU	ALPHA	HANDLING	METALS	MERCURY	ORGANICS	IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	B	Y	Y	Y	Y	Y	Y

OTHER INFORMATION

Design and permit capacities are to be determined.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

FY 93 review of conceptual design is in progress. Some FY 94 funding is available to start NEPA documentation preparation. There is no further funding in place at this time.

TECHNOLOGY	MATRIX
Deactivation	Reactive Metals
Water Reaction	Reactive Metals

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: TAN 726-A Treatment
SYSTEM: 00254, TAN 726-A Treatment Unit
CONTACT: Dave Eaton 208-526-7002

System Capacity	DESIGN	PERMIT
M3/YR	126	126

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	01/01/87	/ /

OTHER INFORMATION
Restart FY94.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
System to undergo closure in FY94.
OTHER PERMIT LIMITATIONS & COMMENTS
Scheduled to be closed under interim status in FY94.

TECHNOLOGY	MATRIX
Ion Exchange	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: WERF Incinerator
SYSTEM: 00251, WERF Incinerator
CONTACT: Dave Eaton 208-526-7002

		DESIGN	PERMIT
		System Capacity	
M3/YR		49625	49625

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	Y	Y	N	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	01/01/85	/ /
RCRA	Part B App	State	10/30/92	/ /

OTHER INFORMATION
Restart - FY94.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Awaiting approval of Operational Readiness Review.
OTHER PERMIT LIMITATIONS & COMMENTS
The WERF Environmental Assessment limits the receipt fo offsite mixed wastes to 5 m3/year.

TECHNOLOGY
Incineration

MATRIX
Organic Liquids
Aqueous Liquids
Organic Sludges/Particulates
Inorganic Sludges/Particulates
Organic Debris
Heterogeneous Debris
Lab Packs with Metals
Lab Packs without Metals
Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: WERF Waste Stabilization Unit
SYSTEM: 00252, WERF Waste Stabilization Unit
CONTACT: Dave Eaton 208-526-7002

	DESIGN	PERMIT
M3/YR	2765	2765

System Capacity

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	01/01/85	/ /
RCRA	Part B App	State	10/30/92	/ /

OTHER INFORMATION
Restart - FY94.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Awaiting approval of Operational Readiness Review.
OTHER PERMIT LIMITATIONS & COMMENTS
The WERF Environmental Assessment limits the receipt of offsite mixed waste to 5 m3/year.

TECHNOLOGY
Stabilization

MATRIX
Aqueous Liquids
Inorganic Sludges/Particulates
Cemented Solids
Organic Debris
Inorganic Debris
Heterogeneous Debris
Soil with <50% Debris
Soils
Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Waste Characterization Facility
SYSTEM: 00259, Waste Characterization Facility
CONTACT: Dave Eaton 208-526-7002

ADS NUMBER:
STATUS: Planned Approved

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	Y	Y	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	01/01/92	/ /
RCRA	Part B App	State	02/28/94	/ /

OTHER INFORMATION

Design capacity - Stabilization - 0.33 gal/hour; Amalgamation - 0.55 gal/hour; Neutralization - 40 gal/day; Absorption - 100 gal/day.
Plan date operation - FY98.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

OTHER PERMIT LIMITATIONS & COMMENTS

Treatment at the WCF is being designed to be ancilliary to the waste characterization process. As a general rule, no waste will be shipped to the WCF. Only waste that is found to require treatment during characterization is expected to be treated.

TECHNOLOGY	MATRIX
Amalgamation	Liquid Mercury
Characterization	To Be Determined
Neutralization	Organic Liquids Aqueous Liquids
Repackaging	Inorganic Debris Heterogeneous Debris Elemental Lead
Sorting	Organic Debris Inorganic Debris Heterogeneous Debris Elemental Lead
Stabilization	Organic Liquids Aqueous Liquids Organic Sludges/Particulates Inorganic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Waste Engineering Development Facility (WEDF)
SYSTEM: 00502, Amalgamation Unit
CONTACT: Dave Eaton 208-526-7002

ADS NUMBER: 18-E1
STATUS: Planned Unapproved

	DESIGN	PERMIT
M3/YR	0	0

System Capacity
PERMIT [Other UNIT of MEASURE]: .0004 tons/hour

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	Y	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	01/01/91	/ /
RCRA	Part B App	State	11/01/95	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Complete facility upgrade, EA and begin operations.
OTHER PERMIT LIMITATIONS & COMMENTS
INEL has requested interim status for amalgamation at WEDF.

TECHNOLOGY	MATRIX
Amalgamation	Liquid Mercury

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Waste Engineering Development Facility (WEDF)
SYSTEM: 00503, Debris Sizing Unit
CONTACT: Dave Eaton 208-526-7002

	DESIGN	PERMIT
M3/YR	0	0

System Capacity

ADS NUMBER: 18-E1
STATUS: Planned Unapproved

PERMIT [Other UNIT of MEASURE]: 5000 pounds/day

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	01/01/93	/ /
RCRA	Part B App	State	11/01/95	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

Complete facility upgrades, EA and begin operation.

OTHER PERMIT LIMITATIONS & COMMENTS

Interim status has been requested with the State of Idaho for treatment of debris.

TECHNOLOGY

Size Reduction

MATRIX

Cemented Solids
Organic Debris
Inorganic Debris
Heterogeneous Debris
Elemental Lead

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Waste Engineering Development Facility (WEDF)
SYSTEM: 00323, Macroencapsulation Unit
CONTACT: Dave Eaton 208-526-7002

ADS NUMBER: 18-E1
STATUS: Planned Unapproved

	DESIGN	PERMIT
M3/YR	864	0

System Capacity
PERMIT [Other UNIT of MEASURE]: 5000 pounds/day

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	01/01/92	/ /
RCRA	Part B App	State	11/01/95	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Complete facility upgrades, EA and begin operations.
OTHER PERMIT LIMITATIONS & COMMENTS
Interim status has been requested with the State of Idaho for macroencapsulation.

TECHNOLOGY	MATRIX
Macroencapsulation	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Elemental Lead

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Waste Engineering Development Facility (WEDF)
SYSTEM: 00501, Neutralization Unit
CONTACT: Dave Eaton 208-526-7002

ADS NUMBER: 18-E1
STATUS: Planned Unapproved

	DESIGN	PERMIT
M3/YR	0	0

System Capacity
PERMIT [Other UNIT of MEASURE]: 80 gallons/day

HLW	LLW	TRU	-TRU- ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	01/01/91	/ /
RCRA	Part B App	State	11/01/95	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Complete facility upgrades, EA and begin operations.

OTHER PERMIT LIMITATIONS & COMMENTS
Interim status has been requested with the State of Idaho for neutralization.

TECHNOLOGY	MATRIX
Neutralization	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Idaho National Engineering Laboratory
FACILITY: Waste Engineering Development Facility (WEDF)
SYSTEM: 00322, Stabilization Unit
CONTACT: Dave Eaton 208-526-7002

ADS NUMBER: 18-E1
STATUS: Existing Could be used for mixed waste

	DESIGN	PERMIT
M3/YR	2765	0

System Capacity
PERMIT [Other UNIT of MEASURE]: 2000 gal/day

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	01/01/87	/ /
RCRA	Part B App	State	11/01/95	/ /

OTHER INFORMATION

Permitted capacity = 2,500 tons/year.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Stabilization unit will utilize both sulfur polymer cement and Portland Cement.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

WEDF is undergoing facility upgrades and an EA is being prepared for the facility.

OTHER PERMIT LIMITATIONS & COMMENTS

WEDF is currently undergoing facility upgrades and an EA is being prepared. Once these two activities are completed, WEDF will begin operations.

TECHNOLOGY	MATRIX
Stabilization	Organic Liquids
	Aqueous Liquids
	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Cemented Solids
	Inorganic Debris
	Heterogeneous Debris
	Soil with <50% Debris
	Soils
	Inorganic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

			DESIGN	PERMIT
SITE:	Idaho National Engineering Laboratory			
FACILITY:	Waste Immobilization Facility			
SYSTEM:	00260, Waste Immobilization Facility	M3/YR	0	0
CONTACT:				
		System Capacity		

ADS NUMBER:

STATUS: Planned Unapproved

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
Y	Y	Y	Y	B	Y	Y	Y	N	Y	N

OTHER INFORMATION

Design and permit capacities are to be determined.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Presently, the final treatment has not been selected. Until the final treatment is selected, the limitation cannot be listed.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

System is undergoing technical evaluation to determine configuration of system and treatment methods to be selected.

OTHER PERMIT LIMITATIONS & COMMENTS

The WIF is a planned/unapproved facility at this time. Therefore, no permit applications have been submitted and capacity unknown. Presently, the final treatment has not been selected. Until the final treatment is selected, the limitations cannot be listed.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Consent Order for NOW (Docket No. 1090-1-24-6601). Dated 04/03/93, effective date 04/03/92, between DOE and the State of Idaho and approved by EPA. Requires operation of New Waste Calcine Facility by January 1993, 6 month progress reports, and continued operation every three years until waste tank farm tanks not having adequate secondary containment are empty. NEPA injunction order modifying order of June 28, 1993, issued to DOE, effective 09/21/93. The following is ordered: DOE shall accelerate activities related to the treatment and disposal of high-level radioactive wastes stored at INEL. In support of this: (a) DOE will calcine all high-level liquid radioactive waste that does not contain sodium on or before January 1, 1998; (b) DOE will calcine or otherwise process as much sodium-bearing high-level liquid radioactive waste (sodium liquid waste) as DOE and the State of Idaho mutually agree is practicable by January 1, 1998; (c) DOE will identify a limited number of potential technologies to calcine or process sodium liquid waste on or before November 15, 1993, and thereafter evaluate and conduct tests to determine the viability of the competing technologies; (d) DOE will select a technology for calcining or processing sodium liquid waste, including a pretreatment technology (if appropriate), in conjunction with the record of decision for the EIS required by the order entered June 28, 1993; (e) DOE will select a technology for converting calcined waste into an appropriate form for disposal in conjunction with the record of decision for the EIS required by the order entered June 28, 1993; (f) DOE will construct facilities necessary to implement the technologies selected for calcining or processing sodium liquid waste and for converting calcined waste into an appropriate form for disposal in accordance with a schedule to be negotiated with the State of Idaho.

TECHNOLOGY	MATRIX
Vitrification	Aqueous Liquids
	Inorganic Sludges/Particulates
	Calcine Solids
	Inorganic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Lawrence Berkeley Laboratory
FACILITY: Building 75
SYSTEM: 00165, Unit 131 AFH
CONTACT: Mark Lasartemay 510-486-6825

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

	DESIGN	PERMIT
M3/YR	69	69

System Capacity
PERMIT [Other UNIT of MEASURE]: 50 gallons/day

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Final	State	05/04/93	05/03/03

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

Onsite mixed waste is currently being characterized. Upon completion of characterization will begin treatment.

OTHER PERMIT LIMITATIONS & COMMENTS

Permit states no offsite wastes are to be accepted at the LBL Hazardous Waste Handling Facility, which includes 131 AFH.

The technology permitted on May 4, 1993 for the 131 AFH is Consolidation and Neutralization. Permitted capacity is 1 gallon at a time and 50 gallons per day.

TECHNOLOGY	MATRIX
Consolidation	Aqueous Liquids
Neutralization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Lawrence Berkeley Laboratory
FACILITY: Building 75
SYSTEM: 00164, Unit 131 E
CONTACT: Mark Lasartemay 510-486-6825

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

		DESIGN	PERMIT
	M3/YR	760	760

System Capacity
PERMIT [Other UNIT of MEASURE]: 550 gallons/day

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Final	State	05/04/93	05/03/03

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

Onsite mixed waste is currently being characterized. Upon completion of characterization, treatment will begin.

OTHER PERMIT LIMITATIONS & COMMENTS

Permit states no offsite wastes are to be accepted at the LBL Hazardous Waste Handling Facility, which includes Unit 131 E.

The technology permitted on May 4, 1993 for the system 131 E is Solidification and Consolidation. Permitted capacity is 55 gallons at a time and 550 gallons per day.

TECHNOLOGY	MATRIX
Consolidation	Aqueous Liquids
Solidification	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Lawrence Berkeley Laboratory
FACILITY: Building 85
SYSTEM: 00162, Unit MW-6
CONTACT: Tim Wan 510-486-7073

	DESIGN	PERMIT
M3/YR	72	72

System Capacity
PERMIT [Other UNIT of MEASURE]: 72 gallons/day

ADS NUMBER:
STATUS: Planned Approved
KEY DECISION STATUS: KD-3 DATE STATUS ACHIEVED: / / CONSTRUCTION COMPLETION DATE: 03/96

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Final	State	05/04/93	05/03/03

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Part of the state-of-the-art Hazardous Waste Handling Facility (HWHF).
Plan date operation - FY96.
STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
Title I design has been submitted to DOE for review - 100% complete.
Site work construction - 75% complete.

OTHER PERMIT LIMITATIONS & COMMENTS
Permit states no offsite wastes are to be accepted at the LBL Hazardous Waste Handling Facility, which includes Unit MW-6.

The technology permitted on May 4, 1993 for Unit MW-6 is Neutralization only. Permitted capacity is 1 gallon at a time and 72 gallons per day.

TECHNOLOGY	MATRIX
Neutralization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Lawrence Berkeley Laboratory
FACILITY: Building 85
SYSTEM: 00163, Unit MW-7
CONTACT: Tim Wan 510-486-7073

System Capacity	DESIGN	PERMIT
M3/YR	550	550

ADS NUMBER:
STATUS: Planned Approved
KEY DECISION STATUS: KD-1 DATE STATUS ACHIEVED: 02/01/88 CONSTRUCTION COMPLETION DATE: 03/96

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Final	State	05/04/93	05/03/03

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Part of the state-of-the-art Hazardous Waste Handling Facility (HWHF).
Plan date operation - FY96.
STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
Title I design has been submitted to DOE for review - 100% complete.
Site work construction - 75% complete.
OTHER PERMIT LIMITATIONS & COMMENTS
Permit states no offsite wastes are to be accepted at the LBL Hazardous Waste Handling Facility, which includes Unit MW-7.

TECHNOLOGY	MATRIX
Consolidation	Unspecified
Solidification	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Lawrence Livermore National Laboratory
FACILITY: Area 514 WWFU
SYSTEM: 00230, Area 514 WWFU
CONTACT: J. S. Bowers 510-422-7756

ADS NUMBER: 3941
STATUS: Existing Operating

	DESIGN	PERMIT
M3/YR	3396	3396

System Capacity
PERMIT [Other UNIT of MEASURE]: 896,000 gal/yr

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	01/15/93	/ /

OTHER INFORMATION
Metals are <1%, Mercury <20 ppm, and Organics <1000 ppm.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
No administrative limitations for Section 3.1 Treatment Units. Currently operating under interim status.

The systems have no technical design limitations with regard to existing regulatory criteria used for LDR standards, POTW requirements, and/or BAAQMD standards. The technical limitations of these systems are governed by the principles of chemical equilibrium (i.e., constituents that may leach into the environment will do so based on solubility products and adsorption forces).

There are administrative limitations on design. Design changes that cause administrative actions (such as supplying regulatory documents) do not preclude meeting LDR standards. They only preclude timely implementation of improvements to design.

OTHER PERMIT LIMITATIONS & COMMENTS
Part B permit application and Interim Status Document prohibit acceptance of offsite wastes from other DOE facilities.

Note: Revised Part B permit application to be submitted by 12/15/93. Revised Part A permit application (12/16/91 revision) approved 1/15/93.

Other unit of measure for permitted capacity: 4,480 gal/day.

TECHNOLOGY	MATRIX
Filtration	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Lawrence Livermore National Laboratory				
FACILITY:	Area 514 WWFU				
SYSTEM:	00231, Area 514 WWTTF		M3/YR	6822	6822
CONTACT:	J. S. Bowers	510-422-7756			

System Capacity

ADS NUMBER: 3941

STATUS: Existing Operating

PERMIT [Other UNIT of MEASURE]: 1,800,000 gal/year

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	01/15/93	/ /

OTHER INFORMATION

Metals are <1%, mercury <20 ppm, and Organics <1000 ppm.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

No administrative limitations for Section 3.1 Treatment Units. Currently operating under interim status.

The systems have no technical design limitations with regard to existing regulatory criteria used for LDR standards, POTW requirements, and/or BAAQMD standards. The technical limitations of these systems are governed by the principles of chemical equilibrium (i.e. constituents that may leach into the environment will do so based on solubility products and adsorption forces).

There are administrative limitations on design. Design changes that cause administrative actions (such as supplying regulatory documents) do not preclude meeting LDR standards. They only preclude timely implementation of improvements to design.

OTHER PERMIT LIMITATIONS & COMMENTS

Part B permit application and Interim status document prohibit acceptance of offsite wastes from other DOE facilities.

Note: Revised Part B permit application to be submitted by 12/15/93. Revised Part A permit application (12/16/91 revision) approved 1/15/93.

Other unit of measure for permitted capacity: 9,000 gallons/day.

TECHNOLOGY	MATRIX
Equalization	Aqueous Liquids
Neutralization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Lawrence Livermore National Laboratory
FACILITY: Area 514-1
SYSTEM: 00236, Carbon Adsorption Unit
CONTACT:

		DESIGN	PERMIT
	M3/YR	147000	147000

System Capacity

ADS NUMBER: 3941
PERMIT [Other UNIT of MEASURE]: 38,000,000 gal/yr
STATUS: Planned Approved
KEY DECISION STATUS: KD-3 DATE STATUS ACHIEVED: 10/01/93 CONSTRUCTION COMPLETION DATE: 06/94

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	04/30/93	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
RCRA Part B permit application revision to be submitted to State by 12/15/93.
OTHER PERMIT LIMITATIONS & COMMENTS
Part B Permit Application prohibits acceptance of offsite wastes from other DOE facilities.

Note: Part B permit required. Part B permit application submitted 4/30/93. Revised Part B Permit Application to be submitted to State by 12/15/93; however, it will still prohibit acceptance of offsite wastes.

Other unit of measure for permitted capacity: 194,400 gal/day.

TECHNOLOGY	MATRIX
Carbon Adsorption	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Lawrence Livermore National Laboratory
FACILITY: Area 514-1
SYSTEM: 00237, Centrifugation Unit
CONTACT:

	DESIGN	PERMIT
M3/YR	9611	9611

System Capacity

ADS NUMBER: 3941
STATUS: Planned Approved
PERMIT [Other UNIT of MEASURE]: 2,536,000 gal/year

KEY DECISION STATUS: KD-3 DATE STATUS ACHIEVED: 10/01/93 CONSTRUCTION COMPLETION DATE: 06/94

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	04/30/93	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

RCRA Part B permit application revision to be submitted to State by 12/15/93.

OTHER PERMIT LIMITATIONS & COMMENTS

Part B permit application prohibits acceptance of offsite wastes from other DOE facilities.

Note: Part B permit required. Part B permit application submitted 4/30/93. Revised Part B permit application to be submitted to State by 12/15/93; however, it will still prohibit acceptance of offsite wastes.

Other unit of measure for permitted capacity: 12,682 gallons/day.

TECHNOLOGY	MATRIX
Centrifugation	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

			DESIGN	PERMIT
SITE:	Lawrence Livermore National Laboratory			
FACILITY:	Area 514-1			
SYSTEM:	00226, Cold Vapor Evaporation Unit	M3/YR	3790	3790
CONTACT:				

System Capacity

ADS NUMBER: 3941

PERMIT [Other UNIT of MEASURE]: 1 million gal/year

STATUS: Planned Approved

KEY DECISION STATUS: KD-3 DATE STATUS ACHIEVED: 10/01/93 CONSTRUCTION COMPLETION DATE: 06/94

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	04/30/93	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

RCRA Part B permit application revision to be submitted to State by 12/15/93.

OTHER PERMIT LIMITATIONS & COMMENTS

Part B permit application prohibits acceptance of offsite wastes from other DOE facilities.

Note: Part B permit required. Part B permit application submitted 4/30/93. Revised Part B permit application to be submitted to State by 12/15/93; however, it will still prohibit acceptance of offsite wastes.

Other unit of measure for permitted capacity: 5,000 gallons/day.

TECHNOLOGY	MATRIX
Evaporation	Organic Liquids
	Aqueous Liquids

345

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Lawrence Livermore National Laboratory

FACILITY: Area 514-1

SYSTEM: 00235, Portable Blending Unit

CONTACT:

		DESIGN	PERMIT
		System Capacity	
M3/YR		147000	147000

ADS NUMBER: 3941

PERMIT [Other UNIT of MEASURE]: 38.8 million gal/

STATUS: Planned Approved

KEY DECISION STATUS: KD-3 DATE STATUS ACHIEVED: 10/01/93 CONSTRUCTION COMPLETION DATE: 06/94

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	04/30/93	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

RCRA Part B permit application revision to be submitted to State by 12/15/93.

OTHER PERMIT LIMITATIONS & COMMENTS

Part B permit application prohibits acceptance of offsite wastes from other DoE facilities.

Note: Part B permit required. Part B permit application submitted 4/30/93. Revised Part B permit application to be submitted to State by 12/15/93; however, it will still prohibit acceptance of offsite wastes.

Other unit of measure for permitted capacity: 194,000 gallons/day.

TECHNOLOGY	MATRIX
Neutralization	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Lawrence Livermore National Laboratory
FACILITY: Area 514-1
SYSTEM: 00234, Tank Blending Unit
CONTACT:

		DESIGN	PERMIT
M3/YR		15281	15281

System Capacity

ADS NUMBER: 3941
STATUS: Planned Approved
PERMIT [Other UNIT of MEASURE]: 4,032,000 gal/yr
KEY DECISION STATUS: KD-3 DATE STATUS ACHIEVED: 10/01/93 CONSTRUCTION COMPLETION DATE: 06/94

			-TRU-					RCRA CHARACTERISTICS		
HLW	LLW	TRU	ALPHA	HANDLING	METALS	MERCURY	ORGANICS	IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	04/30/93	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
RCRA Part B permit application revision to be submitted to State by 12/15/93.
OTHER PERMIT LIMITATIONS & COMMENTS
Part B permit application prohibits acceptance of offsite wastes from other DOE facilities.

Note: Part B permit required. Part B permit application submitted 4/30/93. Revised Part B permit application to be submitted to State by 12/15/93; however, it will still prohibit acceptance of offsite waste.

Other unit of measure for permitted capacity: 20,160 gallons/day.

TECHNOLOGY	MATRIX
Blending	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

			DESIGN	PERMIT
SITE:	Lawrence Livermore National Laboratory			
FACILITY:	Building 513			
SYSTEM:	00233, Shredding	M3/YR	633	633
CONTACT:				

System Capacity

ADS NUMBER: 3941

PERMIT [Other UNIT of MEASURE]: 27.55 tons/day

STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	N	N	N	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	01/15/93	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

No administrative limitations for Section 3.1 Treatment Units. Currently operating under interim status.

The systems have no technical design limitations with regard to existing regulatory criteria used for LDR standards, POTW requirements, and/or BAAQMD standards. The technical limitations of these systems are governed by the principles of chemical equilibrium (i.e. constituents that may leach into the environment will do so based on solubility products and adsorption forces).

There are administrative limitations on design. Design changes that cause administrative actions (such as supplying regulatory documents) do not preclude meeting LDR standards. They only preclude timely implementation of improvements to design.

OTHER PERMIT LIMITATIONS & COMMENTS

Part B permit application and Interim status document prohibit acceptance of offsite wastes from other DOE facilities.

Note: Revised Part B permit application to be submitted by 12/15/93. Revised Part A permit application (12/16/91 revision) approved 1/15/93.

TECHNOLOGY	MATRIX
Compaction	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
Shredding	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Unspecified

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Lawrence Livermore National Laboratory
FACILITY: Building 513
SYSTEM: 00228, Solidification Facility
CONTACT:

ADS NUMBER: 3941
STATUS: Planned Unapproved

	DESIGN	PERMIT
M3/YR	1332	1332

System Capacity
PERMIT [Other UNIT of MEASURE]: 1760 gal/day

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	04/30/93	/ /

OTHER INFORMATION

Metals <1%, Mercury <20 ppm, and Organics <1000 ppm.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

No administrative limitations for Section 3.1 Treatment Units. Currently operating under interim status.

The systems have no technical design limitations with regard to existing regulatory criteria used for LDR standards, POTW requirements, and/or BAAQMD standards. The technical limitations of these systems are governed by the principles of chemical equilibrium (i.e. constituents that may leach into the environment will do so based on solubility products and adsorption forces).

There are administrative limitations on design. Design changes that cause administrative actions (such as supplying regulatory documents) do not preclude meeting LDR standards. They only preclude timely implementation of improvements to design.

OTHER PERMIT LIMITATIONS & COMMENTS

Part B permit application and Interim status document prohibit acceptance of offsite wastes from other DOE facilities.

Note: Revised Part B permit application to be submitted by 12/15/93. Part A application (12/16/91 revision) approved 12/18/92.

This facility is not included in the April 30, 1993 amended Part A application and therefore does not have Interim Status authority to operate.

TECHNOLOGY	MATRIX
Solidification	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Soils

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

			DESIGN	PERMIT
SITE:	Lawrence Livermore National Laboratory			
FACILITY:	Building 612			
SYSTEM:	00229, Size Reduction Unit	M3/YR	115	115
CONTACT:				

System Capacity

ADS NUMBER: 3941

PERMIT [Other UNIT of MEASURE]: 5 tons/day

STATUS: Planned Approved

KEY DECISION STATUS: KD-0 DATE STATUS ACHIEVED: 02/01/92 CONSTRUCTION COMPLETION DATE: /

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	N	N	N	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	04/30/93	/ /

OTHER INFORMATION

Non-operational.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

No administrative limitations for Section 3.1 Treatment Units. Currently operating under interim status.

The systems have no technical design limitations with regard to existing regulatory criteria used for LDR standards, POTW requirements, and/or BAAQMD standards. The technical limitations of these systems are governed by the principles of chemical equilibrium (i.e. constituents that may leach into the environment will do so based on solubility products and adsorption forces).

There are administrative limitations on design. Design changes that cause administrative actions (such as supplying regulatory documents) do not preclude meeting LDR standards. They only preclude timely implementation of improvements to design.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

Part B permit application revision for new location to be submitted to State by 12/15/93.

No estimated construction completion date - system to be relocated.

OTHER PERMIT LIMITATIONS & COMMENTS

Part B permit application and Interim status document would prohibit acceptance of offsite wastes from other DOE facilities.

Note: Unit approved by State for construction; however, new location required. Part B permit application submitted 4/30/93. Revised Part B permit application will be submitted to State by 12/15/93.

This facility was included in the original Part A application but is not authorized under Interim Status for mixed waste.

TECHNOLOGY	MATRIX
Size Reduction	Unspecified

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Lawrence Livermore National Laboratory
FACILITY: Mixed Waste Management Facility
SYSTEM: 00360, Mixed Waste Management Facility
CONTACT:

System Capacity	DESIGN	PERMIT
M3/YR	0	0

ADS NUMBER: 3941
STATUS: Planned Approved
KEY DECISION STATUS: KD-3 DATE STATUS ACHIEVED: 10/01/93 CONSTRUCTION COMPLETION DATE: 06/94

		-TRU-						RCRA CHARACTERISTICS		
HLW	LLW	TRU	ALPHA	HANDLING	METALS	MERCURY	ORGANICS	IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
RCRA RD&D permit must be obtained from the State.
OTHER PERMIT LIMITATIONS & COMMENTS
RCRA RD&D permit must be obtained.

TECHNOLOGY	MATRIX
Unspecified	Unspecified

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Los Alamos National Laboratory
FACILITY: Controlled Air Incinerator
SYSTEM: 00312, Liquid Feed System
CONTACT: Steve Shafer 505-845-4862

	DESIGN	PERMIT
M3/YR	300	0

System Capacity
PERMIT [Other UNIT of MEASURE]: 200 pounds/hr

ADS NUMBER: 4170
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	Y	Y	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
TSCA	Final	NMED	01/01/86	/ /
RCRA	Final	NMED	01/01/89	/ /

OTHER INFORMATION

Non-operational. Permit pending.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Other matrices include gases and chemical products.

Final RCRA permit is for hazardous wastes only. Need to submit permit modification request to incinerate mixed waste.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

Facility upgrades, staffing/training, safety documentation, permit modification to incinerate mixed waste, trial burn.

OTHER PERMIT LIMITATIONS & COMMENTS

No: Freon-11, Freon-12, Tribromomethane, Soils or Vermiculite.
Limits on Carbon-14, Tritium, TRU.
Both TSCA and RCRA permit renewal are under modification.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

System is incorporated into the LANL Federal Facility Compliance Agreement with EPA that is currently in the execution process. Trial burn is targeted for 2-95.

TECHNOLOGY	MATRIX
Incineration	Organic Liquids
	Aqueous Liquids
	Lab Packs with Metals
	Lab Packs without Metals

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Los Alamos National Laboratory
FACILITY: Controlled Air Incinerator
SYSTEM: 00309, Solid Feed System
CONTACT: Steve Shafer 505-845-4862

	DESIGN	PERMIT
M3/YR	200	0

System Capacity

ADS NUMBER: 4170
STATUS: Existing Could be used for mixed waste

PERMIT [Other UNIT of MEASURE]: 100 pounds/hr

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	Y	Y	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
TSCA	Final	NMED	01/01/86	/ /
RCRA	Final	NMED	01/01/89	/ /

OTHER INFORMATION

Non-operational. Permit pending.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Other matrices include solid chemical products.

Final RCRA permit is for hazardous wastes only. Need to submit permit modification request to incinerate mixed waste.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

Facility upgrades, staffing/training, safety documentation, permit modification to incinerate mixed waste, trial burn.

OTHER PERMIT LIMITATIONS & COMMENTS

No: Freon-11, Freon-12, Tribromomethane, soils or vermiculite.
Limits on Carbon-14, Tritium, TRU.
Both TSCA and RCRA permits renewals are under modification.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

System is incorporated into the LANL Federal Facility Compliance Agreement with EPA that is currently in the execution process. Trial burn is targeted for 2-95.

TECHNOLOGY	MATRIX
Incineration	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Lab Packs with Metals
	Lab Packs without Metals

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Los Alamos National Laboratory
FACILITY: Hazardous Waste Treatment Facility (HWTF)
SYSTEM: 00208, Detox Skid
CONTACT: Stan Zygmunt 505-667-2245

ADS NUMBER: 4174
STATUS: Planned Approved

	DESIGN	PERMIT
M3/YR	0	0

System Capacity
PERMIT [Other UNIT of MEASURE]: 4 kg/hour

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	Y	Y	Y	Y	Y	Y

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Design capacity is 4 kg/hr.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

Technology is currently undergoing bench scale tests. Final design and construction of skid is targeted for FY 94. Estimated construction completion date - FY 95.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

The Detox Skid is part of the LANL Federal Facility Compliance Agreement with the EPA. The unit is intended to operate in the Hazardous Waste Treatment Facility.

TECHNOLOGY	MATRIX
Chemical Oxidation	Organic Liquids
	Aqueous Liquids
	Reactive Metals

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Los Alamos National Laboratory
FACILITY: Hazardous Waste Treatment Facility (HWTF)
SYSTEM: 00541, Future Skids
CONTACT: Stan Zygmunt 505-667-2245

ADS NUMBER:
STATUS: Planned Unapproved

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	Y	Y	Y	Y	Y	Y

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

Several skid mounted treatment units are being considered for development to operate in the Hazardous Waste Treatment Facility.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Part of the LANL Federal Facility Compliance Agreement. Will develop these skids as the need is identified.

TECHNOLOGY	MATRIX
Amalgamation	Organic Liquids
Leaching	Inorganic Sludges/Particulates
	Cemented Solids
	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Lab Packs with Metals
	Lab Packs without Metals
	Reactive Metals
	Compressed Gases
	Liquid Mercury
	Elemental Lead
	Beryllium Dust
	Batteries (Lead Acid, Cadmium)
	Calcine Solids
	Inorganic Solids
	Organic Solids
	Uranium Chips
Oxidation/Reduction	Aqueous Liquids
Stabilization	Organic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Los Alamos National Laboratory
FACILITY: Hazardous Waste Treatment Facility (HWTF)
SYSTEM: 00207, Plating Wastes Acids/Bases Skid
CONTACT: Stan Zygmunt 505-667-2245

ADS NUMBER: 4174
STATUS: Planned Approved

	DESIGN	PERMIT
M3/YR	0	0

System Capacity

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	Y	N	N	Y	Y	Y

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Design Capacity to be determined.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

Continuing bench scale tests. Final design and construction of skid targeted for FY 94. Estimated construction completion date - FY 95.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Part of the LANL Federal Facility Compliance Agreement with the EPA. The unit is intended to operate in the Hazardous Waste Treatment Facility.

TECHNOLOGY	MATRIX
Chemical Precipitation	Aqueous Liquids
Neutralization	Aqueous Liquids
Oxidation/Reduction	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Los Alamos National Laboratory
FACILITY: Hazardous Waste Treatment Facility (HWTF)
SYSTEM: 00206, Reactive Metals Skid
CONTACT: Stan Zygmunt 505-667-2245

ADS NUMBER: 4174
STATUS: Planned Approved

	DESIGN	PERMIT
M3/YR	0	0

System Capacity

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	Y	Y	Y	Y	Y	Y

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Treatment skid for uranium chips and barium sands.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
Bench scale tests are in progress. If successful, skid design will start in FY 94. Estimated construction completion date - FY 96.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Part of the LANL Federal Facility Compliance Agreement with the EPA. The unit is intended to operate in the Hazardous Waste Treatment Facility.

TECHNOLOGY	MATRIX
Water Reaction	Reactive Metals

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Los Alamos National Laboratory
FACILITY: Lead Decontamination Trailer
SYSTEM: 00203, Lead Decontamination Trailer
CONTACT: Stan Zygmunt 505-667-2245

ADS NUMBER: 3088
STATUS: Existing Operating

	DESIGN	PERMIT
M3/YR	25	0

System Capacity

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	RH	Y	N	N	N	N	N

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Part of LANL Federal Facility Compliance Agreement with EPA.

TECHNOLOGY	MATRIX
Decontamination	Elemental Lead
Recycling	Elemental Lead

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Los Alamos National Laboratory
FACILITY: Scintillation Vial Crusher - TA-84, Area L
SYSTEM: 00204, Scintillation Vial Crusher
CONTACT: Tim Sloan 505-665-8663

ADS NUMBER: 3088/4172
STATUS: Existing Operating

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	Y	Y	Y	Y	N	N

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Other matrices include scintillation vials and cocktail containers.

TECHNOLOGY	MATRIX
Crushing	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Los Alamos National Laboratory
FACILITY: Waste Immobilization Facility
SYSTEM: 00510, Waste Immobilization Facility
CONTACT: Ron Nakuoka 505-665-5971

ADS NUMBER: 4172
STATUS: Planned Unapproved

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	Y	Y	Y	Y	Y	Y

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Technology is vitrification after incineration. Other matrices are ash and sludge primarily used for immobilization of ash.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

System is currently in conceptual design phase.

TECHNOLOGY	MATRIX
Vitrification	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Soil with <50% Debris
	Soils
	Reactive Metals
	Elemental Lead
	Beryllium Dust
	Inorganic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Mound Facility
FACILITY: Mound Glass Melter
SYSTEM: 00261, Mound Glass Melter
CONTACT: Jim Orban 505-845-4421

	DESIGN	PERMIT
M3/YR	200	200

System Capacity

ADS NUMBER: 3100
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Trial Burn	Ohio EPA	01/01/90	/ /
NEPA	EA	DOE-HQ	07/01/93	/ /

OTHER INFORMATION

Part A permit waste feed rate = 0.025 short tons/hour.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Not permitted at this time, the glass melter is scheduled for a trial burn in 1995. EPA and the state of Ohio are to monitor the burns and analyze the results for compliance.

Other wastes can be treated by the glass melter with design changes to the feed mechanism and some tritium contaminated wastes with changes in the exhaust filtering system.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

Trial burn plan approved by Ohio EPA.
DOE-HQ approves EA.

OTHER PERMIT LIMITATIONS & COMMENTS

May change after trial burn plan results evaluated.

TECHNOLOGY	MATRIX
Vitrification	Organic Liquids
	Aqueous Liquids
	Organic Sludges/Particulates
	Inorganic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: NSSI/Recovery Services, Texas
FACILITY: NSSI/Recovery Services Inc.
SYSTEM: 00523, NSSI
CONTACT: Robert Galagher 713-641-0391

ADS NUMBER:
STATUS: Existing Operating Commercial

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
	Y									

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

TECHNOLOGY MATRIX

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Nevada Test Site
FACILITY: Liquid Waste Treatment Facility
SYSTEM: 00511, Liquid Waste Treatment System
CONTACT: Cathy Connoyer 702-295-7521

System Capacity	DESIGN	PERMIT
M3/YR	0	0

ADS NUMBER: 338
STATUS: Planned Approved
KEY DECISION STATUS: KD-0 DATE STATUS ACHIEVED: 01/01/92 CONSTRUCTION COMPLETION DATE: 08/95

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B App	NV DEP	/ /	/ /

OTHER INFORMATION
Design capacity = 4,000,000 gal/yr.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
The system will be RCRA-permitted, and therefore be subject to permit conditions. Waste material resulting from solar evaporation will be characterized and, if necessary, treated to meet Waste Acceptance Criteria based on NVO-325, Nevada Test Site Defense Waste Acceptance Criteria, Certification, and Transfer Requirements for disposal on site.. An Environmental Assessment is also underway and may identify additional administrative limits.

The Liquid Waste Treatment System will consist of facilities for treatment of waste generated primarily from groundwater characterization and decontamination operations. The primary treatment method will be solar evaporation from RCRA-permitted surface impoundments. Pretreatment of the liquids and solidification of the remaining sludge is also planned, but details of these treatment units are still under development.
STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
KD-1 to begin on 11-01-93.
Title I design will be initiated on 11-01-93, RCRA Part B application and EA currently being prepared.
OTHER PERMIT LIMITATIONS & COMMENTS
An application was submitted for RCRA Part B in July 1992. The LWTS would be an addition or modification to this permit. No renewal date applicable.
The permitted capacity of the facility is yet undetermined.

TECHNOLOGY
Evaporation

MATRIX
Aqueous Liquids
Inorganic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge K-25 Site
FACILITY: Central Neutralization Facility
SYSTEM: 00155, Central Neutralization Facility
CONTACT: T. Bowers 615-576-2629

ADS NUMBER:
STATUS: Existing Operating

	DESIGN	PERMIT
M3/YR	0	120000

System Capacity
PERMIT [Other UNIT of MEASURE]: 160000 gal/day

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	CH	Y	Y	N	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
ClnWtrAct	NPDES	TDEC	10/01/92	10/01/97
RCRA	Prm by Rul	TDEC	/ /	/ /

OTHER INFORMATION

Design capacity = 160,000 gallons/day.
Approximate annual throughput achievable = 36 to 40 million gallons/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Discharge of CNF effluent is regulated by NPDES permit No. TN0002950. Influents to CNF must meet the waste acceptance criteria for the unit. These criteria were established to ensure compliance with NPDES Permit and DOE Orders (i.e., 5400.5).

At present, the unit cannot accept aqueous liquids with organic constituents. Facility is capable of treating low concentrations of uranium and transuranic materials.

FY 96 line item project for upgrading CNF to provide enhanced rad removal capability, and the the ability to treat mixed waste separately from non-hazardous waste. The project is currently in the feasibility stage.

OTHER PERMIT LIMITATIONS & COMMENTS

Rad effluent regulated by DOE Order 5400.5.

TECHNOLOGY
Neutralization

MATRIX
Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge K-25 Site
FACILITY: K-25
SYSTEM: 00519, K-1232 Wastewater Treatment Facility
CONTACT: T. Bowers 615-576-2629

		DESIGN	PERMIT
	M3/YR	0	4000

System Capacity

ADS NUMBER:
PERMIT [Other UNIT of MEASURE]: 1 million gal/yr
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	Y	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Prm by Rul	TDEC	/ /	/ /

OTHER INFORMATION

Design capacity = 1,000,000 gallons/yr or 0.8 m3/hr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Facility is in shut-down mode and no administrative limits have been established.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

System has treated mixed waste in the past, but is currently in stand-by mode.

TECHNOLOGY	MATRIX
Chemical Precipitation	Aqueous Liquids
Evaporation	Aqueous Liquids
Neutralization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge K-25 Site

FACILITY: K-25

SYSTEM: 00521, Sludge Fixation Unit

CONTACT: J. L. Shoemaker 615-574-9937

ADS NUMBER:

STATUS: Existing Could be used for mixed waste

	DESIGN	PERMIT
M3/YR	0	5001

System Capacity

PERMIT [Other UNIT of MEASURE]: 5000 gallons/day

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	N	N	N

OTHER INFORMATION

Design capacity = 5,000 gal/day.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Facility operations have been discontinued and are scheduled to be closed under RCRA.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

Scheduled for RCRA closure. No plans to treat mixed waste. Option-stop RCRA closure & negotiate with State to bring system back on line.

TECHNOLOGY	MATRIX
Solidification	Inorganic Sludges/Particulates
	Soils
	Inorganic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge K-25 Site
FACILITY: K-25 Site TSCA Incinerator
SYSTEM: 00305, K-25 Site TSCA Incinerator
CONTACT: F. Perez 615-576-7734

ADS NUMBER:
STATUS: Existing Operating

System Capacity	DESIGN	PERMIT
M3/YR	0	15716

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	Y	Y	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Final	TDEC	09/28/87	09/28/87
RCRA	Final	TDEC	09/30/92	09/30/02
TSCA	Final	EPA	03/20/89	03/20/89
NPDES	Final	TDEC	09/30/92	/ /
CAA	Final	TDEC	10/02/91	10/02/93

OTHER INFORMATION

12,000 tons/year permitted capacity is based on waste characteristics and includes feeding of solid waste (e.g., sludges, soil, etc.) DOE has not provided approval at this time to incinerate solid wastes - only liquids, therefore operational capacity is much lower (2,000 tons/year).

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Design capacity = 12,000 tons/yr. U. S. EPA approval to dispose of PCBs: March 20, 1989. U. S. EPA approval for NESHAPS: February 25, 1993. Tennessee SCDES Permit No. TN002950. Tennessee Hazardous Waste Incineration Permit No. TN HW-16. Tennessee Hazardous Waste Treatment and Storage Permit No. TNHW 15A. Tennessee Air Pollution Permit No 032449I. Tennessee Aire Pollution Permit No. 024105P.

OTHER PERMIT LIMITATIONS & COMMENTS

Permits restrict offsite waste incineration at the facility to Portsmouth, Paducah, ORNL, Y-12, Fernald, and RMT. Volume restrictions also apply. Permit restricts RCRA waste from DOE-owned offsite facilities to 1,356 tons/year.

Other permits: CAA - Final - TDEC - 09/21/90 - 10/01/95
CAA - Final - TDEC - 11/17/86 - 10/01/93
CAA - Final - EPA - 10/26/87 -
RCRA - Prm by Rul - TDEC - 10/01/91

TECHNOLOGY	MATRIX
Incineration	Organic Liquids
	Aqueous Liquids
	Organic Sludges/Particulates
	Cemented Solids
	Organic Debris
	Inorganic Solids
	Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge K-25 Site
FACILITY: K-25 Uranium Decon Facility
SYSTEM: 00518, K-25 Uranium Decon Facility
CONTACT: B. E. Vaughn 615-574-9007

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	N	CH	Y	N	N	N	N	N

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Facility is presently in shut-down mode and is in the Decontamination and Decommissioning program.
REQUIREMENTS FOR USE OF EXISTING SYSTEMS
No plans to treat mixed waste.

TECHNOLOGY	MATRIX
Decontamination	Inorganic Debris
	Inorganic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge K-25 Site
FACILITY: K-25, K-1423
SYSTEM: 00522, Waste Staging & Processing Facility
CONTACT: M. E. Saunders 615-574-0341

ADS NUMBER:
STATUS: Planned Unapproved

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Final	TDEC	09/30/92	09/30/02

OTHER INFORMATION

Plan date operation - FY99.

Note: Neutralization - corrosive, reactive, ignitable; Bulking - corrosive, ignitable.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

This facility will be doing only treatments in tanks and containers. The treatments will be elementary neutralization, volume reduction (compaction) and bulking. This is intended to be primarily treatment in a 90 day area and not requiring a permit. If this is needed to be permitted treatment the conditions will be included in the permit.

This is expected to be small scale treatment not easily automated. Therefore only LLW and mixed waste will be treated. This treatment is not expected to be final treatment but rather a pretreatment to facilitate bulking or to meet a treatment facility waste acceptance criteria.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

A general plant project is to be initiated in Nov. 1993 to produce the preliminary proposal for submittal to DOE-ORO for funding approval. Three prioritization of GPP's is a necessary prerequisite.

OTHER PERMIT LIMITATIONS & COMMENTS

The RCRA Part B permit issued for the facility is for container storage (not treatment). Minor treatment, such as pH adjustment and repackaging or bulking processes, are allowed. Any other treatment is not allowed.

TECHNOLOGY	MATRIX
Bulking	Lab Packs with Metals
	Lab Packs without Metals
Compaction	Cemented Solids
	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Inorganic Solids
	Organic Solids
Neutralization	Organic Liquids
	Aqueous Liquids
	Organic Sludges/Particulates
	Inorganic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

			DESIGN	PERMIT
SITE:	Oak Ridge National Laboratory			
FACILITY:	Liquid Low Level Waste Evaporation Facility			
SYSTEM:	00105, Liquid Low Level Waste Evaporation Facility	M3/YR	0	39788
CONTACT:	Chris Scott 615-574-7057			

ADS NUMBER:

STATUS: Existing Operating

System Capacity
PERMIT [Other UNIT of MEASURE]: 1200 gallons/hour

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	RH	Y	N	N	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
NPDES	Final	State	02/27/86	03/31/91

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

OTHER PERMIT LIMITATIONS & COMMENTS

Operated under "permit-by-rule" RCRA exemption under ORNL NPDES no. TN.0002941. Permit renewal under negotiation with the State.

Solutions containing U-233, U-235, Pu-239, or Pu-241 must be mixed with either depleted uranium or natural thorium (according to chemical similarity) so that the resultant solution will contain at least 100 parts by weight of U-218 or Th-232 per part by weight of the fissile isotope(s).

Solutions containing TRU isotopes or U-233 which are added to the LLLW system must not have a total specific activity from those nuclides greater than 3.7 x 10E6 Bq/hg (100nCi/g).

TECHNOLOGY	MATRIX
Evaporation	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge National Laboratory
FACILITY: Melton Valley Low-Level Waste Immobilization Facility
SYSTEM: 00102, Melton Valley Low-Level Waste Immobilization Facility
CONTACT: Chris Scott 615-574-7057

ADS NUMBER:
STATUS: Existing Operating

System Capacity

	DESIGN	PERMIT
M3/YR	0	189

PERMIT [Other UNIT of MEASURE]: 50000 gal/campaign

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	B	Y	Y	N	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
NPDES	Final	State	02/27/86	03/31/91

OTHER INFORMATION

The treatment process is operated in campaigns (about 1 per year). The primary driving force is not RCRA treatment but rather a means to remove excess liquid to conserve storage capacity.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

"B" under Handling means both CH and RH. The stabilized cement matrix must meet the waste acceptance criteria of LLW disposal facility and must meet RCRA LDR treatment standards.

OTHER PERMIT LIMITATIONS & COMMENTS

Operates under "permit-by-rule" RCRA exemption under NPDES permit No. TN0002841. Permit renewal under negotiation with the State.

Solutions containing TRU isotopes or U-233 which are added to the LLLW system must not have a total specific activity from those nuclides greater than 3.7 x 10E6 Bq/kg (100nCi/g).

Solutions containing U-233, U-235, Pu-239 or Pu-241 must be mixed with either depleted uranium or natural thorium (according to chemical similarity) so that the resultant solution will contain at least 100 parts by weight of U-238 or Th-232 per part by weight of the fissile isotope(s).

TECHNOLOGY	MATRIX
Stabilization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Oak Ridge National Laboratory				
FACILITY:	Process Waste Treatment Plant				
SYSTEM:	00104, Process Waste Treatment Plant		M3/YR	0	397789
CONTACT:	Chris Scott	615-574-7057			

System Capacity

ADS NUMBER:

PERMIT [Other UNIT of MEASURE]: 200 gpm

STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	Y	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
NPDES	Final	State	02/27/86	03/31/91
CAA	Final	State	12/18/90	10/01/95

OTHER INFORMATION

Design capacity = 200 gal/minute.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

This facility is not designed for mixed waste treatment. The treatment of listed wastes may result in RCRA sludge generation. This would disrupt the management of that sludge.

This facility is not designed to handle high dose (high activity) liquid.

OTHER PERMIT LIMITATIONS & COMMENTS

Operated under "permit-by-rule" RCRA exemption under ORNL NPDES No. TN0002941. Permit under negotiation with the State.

TECHNOLOGY	MATRIX
Chemical Precipitation	Organic Liquids
	Aqueous Liquids
Filtration	Organic Liquids
	Aqueous Liquids
Ion Exchange	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge National Laboratory

FACILITY: X-10

SYSTEM: 00520, Non-Radiological Waste Treatment Plant

CONTACT: Chris Scott 615-574-7057

ADS NUMBER:

STATUS: Existing Operating

	M3/YR	DESIGN	PERMIT
		0	1511941

System Capacity

PERMIT [Other UNIT of MEASURE]: 760 gpm

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	N	N	N	CH	Y	N	Y	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
NPDES	Final	State	02/27/86	03/31/91

OTHER INFORMATION

Design capacity = 760 gpm.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Facility is subject to CWA NPDES limits.

OTHER PERMIT LIMITATIONS & COMMENTS

Facility is not designed for treatment of radioactive wastewater. Discharge limits for radionuclides are established in DOE Order 5400.5. Material with high levels of radioactivity are automatically diverted to the Process Waste Treatment Plant.

NPDES permit renewal is presently under negotiation with the State.

TECHNOLOGY	MATRIX
Chemical Precipitation	Organic Liquids
Filtration	Organic Liquids
Ion Exchange	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge Y-12 Plant
FACILITY: Biodenitrification Unit Building 9818
SYSTEM: 00215, Biodenitrification Unit
CONTACT: Chuck Fritts 615-574-3504

ADS NUMBER:
STATUS: Existing Operating

	DESIGN	PERMIT
M3/YR	0	448

System Capacity
PERMIT [Other UNIT of MEASURE]: 105000 gal/year

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Prm by Rul	TDEC	05/01/92	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Not a WM Facility/System.
REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Facility treats mixed waste.
OTHER PERMIT LIMITATIONS & COMMENTS
Capacity of unit not restricted by "permit-by-rule". Nitrate wastes reduced to less than 50 ppm nitrates.

TECHNOLOGY	MATRIX
Biodegradation	Organic Liquids
	Aqueous Liquids
	Organic Sludges/Particulates
Distillation	Organic Liquids
	Aqueous Liquids
Evaporation	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge Y-12 Plant
FACILITY: Central Pollution Control Facility (CPCF)
SYSTEM: 00530, Mercury Waste Water Treatment System
CONTACT: J. Prazniak 615-574-6873

System Capacity	DESIGN	PERMIT
M3/YR	0	8939

ADS NUMBER:
STATUS: Planned Unapproved

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA IGNITABLE	RCRA CORROSIVE	RCRA REACTIVE
N	N	N	N	CH	Y	Y	Y	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
CWA	NPDES	State	01/01/89	12/31/93

OTHER INFORMATION
Design capacity = 5,000,000 gpy.

Plan date operation - FY96.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
The HGTF is planned to remove metals from waste water generated by decontamination of equipment contaminated with mercury. The predominant metal contaminant will be mercury. Other metals, including uranium, are expected to be incidental. The HGTF will discharge through a dedicated, permitted outfall. Understandings with the State of Tennessee are likely to limit the types of waste waters that may be received. The regulatory character of sludge from the treatment of metals and carbon from the polishing step is uncertain at this time.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Engineering studies. Funded by Environmental Restoration Program. Design start scheduled for Dec. 16, 1993. Part of Y-12 Reduction of Mercury in Plant Effluents (RMPE-II) Project.

OTHER PERMIT LIMITATIONS & COMMENTS
The new NPDES permit for the Y-12 plant is anticipated in 1993.

Final permit not received yet. Permit is expected to require monitoring for mercury, but limits are not known. Understanding with the State is likely to limit types of waste waters to be treated to those generated from mercury contaminated/clean-up operations.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Operation of system will be part of the Compliance Schedule & Agreement that accompanies new NPDES permit.

TECHNOLOGY	MATRIX
Mercury Removal	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge Y-12 Plant
FACILITY: Central Pollution Control Facility (CPCF)
SYSTEM: 00216, Mopwater and Concentrated Waste System
CONTACT: J. Prazniak 615-574-6873

	DESIGN	PERMIT
M3/YR	0	10227

System Capacity

ADS NUMBER: 2201
STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	Y	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
CWA	NPDES	State	01/01/85	12/31/93
RCRA	Prm by Rul	State	01/01/85	/ /

OTHER INFORMATION

Design capacity = 2,700,000 gal/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

The CPCF/Mopwater Operation is designed to remove oil and grease, metals, and organics from aqueous waste generated by cleaning operations at the Y-12 plants. The system is not designed to treat nitrate-bearing wastes. Mixed waste may be received and treated. Effluent is discharged through an NPDES permitted outfall.

The system operates on a batch basis. Maximum batch size is 14,000 gallons. One batch may be treated every two days. Higher production rates, up to 4 batches per week, can be accommodated under problem-free conditions.

Sludge from treatment is typically F006 listed RCRA waste. Sludge is combined with sludge from other CPCF operations, and is stored at the Y-12 West End Treatment Facility sludge storage tanks.

OTHER PERMIT LIMITATIONS & COMMENTS

Facilities that discharge through an NPDES permit and treat waste water are now deemed to have "automatic" permit-by-rule in Tennessee. There is no permit renewal required.

THe new permit (CWA) is not expected to specify a capacity, though there will be mass limits on individual discharge parameters.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Operation of the CPCF/Mopwater system is necessary to the extent that mopwaters are generated and require treatment.

TECHNOLOGY	MATRIX
Carbon Adsorption	Aqueous Liquids
Neutralization	Aqueous Liquids
Oil/Water Separation	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge Y-12 Plant
FACILITY: Cyanide Treatment Facility, Building 9201-5N
SYSTEM: 00217, Cyanide Treatment Facility
CONTACT: Art Mitchell 615-574-9867

ADS NUMBER:
STATUS: Existing Operating

System Capacity	DESIGN	PERMIT
M3/YR	0	13

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	Y	N	N	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part A	TDEC	07/01/91	/ /
RCRA	Part B	TDEC	05/14/92	/ /

OTHER INFORMATION

Treats waste codes D002-D011.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Not a WM Facility/System.

OTHER PERMIT LIMITATIONS & COMMENTS

The Part A & B applications also allow treatment and storage of wastes within the following EPA waste codes: D002-D011, F007-F012, P029, P030, P033, P098, P104 & P106.

TECHNOLOGY	MATRIX
Chemical Oxidation	Organic Liquids
	Aqueous Liquids
	Reactive Metals

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Oak Ridge Y-12 Plant				
FACILITY:	Disp. Area Remedial Actions Liq. Storage Trtmnt.				
SYSTEM:	00330, Disp. Area Remedial Actions Liq. Storage Trtmnt.		M3/YR	3979	0
CONTACT:	K. R. Crow	615-574-6876			

System Capacity

ADS NUMBER:

STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	N	N	N	CH	Y	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Prm by Rul	TDEC	03/13/92	/ /
TSCA		EPA	/ /	/ /

OTHER INFORMATION

Normal operating capacity = 3,271 m3/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Design 1.05 million gallons/year, 2.5 million gallons/year excess. Permit by rule facility receiving leachate from the Bear Creek Burial Grounds, listed hazardous waste of F001, F002, F005, and F039. Leachate contains PCB contaminated oil.

TECHNOLOGY	MATRIX
Filtration	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Oak Ridge Y-12 Plant				
FACILITY:	Disp. Area Remedial Actions Liq. Storage Trtmnt.				
SYSTEM:	00330, Disp. Area Remedial Actions Liq. Storage Trtmnt		M3/YR	3979	0
CONTACT:	K. R. Crow	615-574-6876			

System Capacity

ADS NUMBER:

STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	N	N	N	CH	Y	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Prm by Rul	TDEC	03/13/92	/ /
TSCA		EPA	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Design 1.05 million gallons/year, 2.5 million gallons/year excess. Permit by rule facility receiving leachate from the Bear Creek Burial Grounds, listed hazardous waste of F001, F002, F005, and F039. Leachate contains PCB contaminated oil.

TECHNOLOGY	MATRIX
Oil/Water Separation	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Oak Ridge Y-12 Plant				
FACILITY:	Groundwater Treatment Facility				
SYSTEM:	00319, Groundwater Treatment Facility		M3/YR	17714	17714
CONTACT:	K. R. Crow	615-574-6876			
				System Capacity	

ADS NUMBER:

STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	N	N	N	CH	Y	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
NPDES	Final	TDEC	05/22/90	/ /
CAA	Final	TDEC	03/20/91	02/01/95

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Design capacity = 4.68 million gallons/year, 2.5 million gallons/year excess. Permit by rule facility discharging effluent through NPDES permit. Treat listed hazardous waters of F001, F002, F005 and F039.

OTHER PERMIT LIMITATIONS & COMMENTS

NPDES permit authorizes discharge of "treated contaminated groundwater." Air permit states that "the maximum process rate for this source (air stripper) shall not exceed 25 gallons of contaminated groundwater per minute. No uranium removal capability.

NPDES permit renewal is pending.

TECHNOLOGY	MATRIX
Air Stripping	Aqueous Liquids
Carbon Adsorption	Organic Liquids
Chemical Precipitation	Organic Liquids
Filtration	Organic Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge Y-12 Plant
FACILITY: Oak Ridge Res. Mixed Waste Treatment Facility
SYSTEM: 00525, MW Treatment Facility - Acid Dissolution - U Removal
CONTACT: R. R. Kimmitt 615-576-0077

ADS NUMBER: 8207/8205
STATUS: Planned Unapproved

	DESIGN	PERMIT
M3/YR	2206	2206
System Capacity		

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	N	Y	N

OTHER INFORMATION

Design capacity = 75,000 cf/yr. RCRA, TSCA.

Plan date operation - FY04.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Waste will be contact handled. Waste reading over a few mR/hr will be rejected.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

Work is focused on: (a) characterization of waste intended for this treatment, and (b) process development (bench scale testing). (b is contained in ADS 8205).

OTHER PERMIT LIMITATIONS & COMMENTS

Project is pre-conceptual state - no permitting activity at present.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Although there are no regulatory drivers for radioactivity removal from waste, such processing opens up the possibility of on-site disposal under DOE Order 5820.2A.

TECHNOLOGY	MATRIX
Acid Dissolution	Inorganic Sludges/Particulates
	Soils
	Inorganic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Oak Ridge Y-12 Plant				
FACILITY:	Oak Ridge Res. Mixed Waste Treatment Facility				
SYSTEM:	00219, MW Treatment Facility - Fixation/Stabilization		M3/YR	735	0
CONTACT:	R. R. Kimmitt	615-576-0077			
				System Capacity	

ADS NUMBER: 8207/8205

STATUS: Planned Unapproved

		-TRU-						RCRA CHARACTERISTICS		
HLW	LLW	TRU	ALPHA	HANDLING	METALS	MERCURY	ORGANICS	IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	N	N	N	N

OTHER INFORMATION

Design capacity = 25,000 cf/yr. RCRA, TSCA.

Plan date operation - FY04.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Waste will be contact handled. Waste reading over a few mR/hr will be rejected.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

Work is focused on: (a) characterization of waste intended for this treatment, and (b) process development (bench scale testing) (b is contained in ADS 8205).

OTHER PERMIT LIMITATIONS & COMMENTS

No permitting activity is on-going, since the project is in the pre-conceptual stage.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

This process will be necessary for selected wastes to meet the requirements of RCRA LDR (40 CFR 268). Wastes to be treated are also listed in the OR LDR FFC Agreement with EPA Region 4, signed 6-12-92.

TECHNOLOGY	MATRIX
Stabilization	Inorganic Sludges/Particulates
	Cemented Solids
	Inorganic Debris
	Heterogeneous Debris
	Soil with <50% Debris
	Soils
	Lab Packs with Metals
	Elemental Lead
	Beryllium Dust
	Batteries (Lead Acid, Cadmium)
	Inorganic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge Y-12 Plant
FACILITY: Oak Ridge Res. Mixed Waste Treatment Facility
SYSTEM: 00527, MW Treatment Facility - Incineration
CONTACT: R. R. Kimmitt 615-576-0077

ADS NUMBER: 8207
STATUS: Planned Unapproved

	DESIGN	PERMIT
M3/YR	882	0

System Capacity

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	Y	Y	N	N

OTHER INFORMATION
Design capacity = 30,000 cf/yr. NESHAPS, Air, RCRA, TSCA.

Plan date operation - FY04.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Waste will be contact handled. Waste reading over a few mR/hr will be rejected.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Engineering studies will be conducted in early FY 94 to evaluate the alternatives of building new solid mixed waste incineration capability in Oak Ridge or enhancing the capabilities of the existing TSCA incinerator.

OTHER PERMIT LIMITATIONS & COMMENTS
Since this activity is in the Engineering study stage, there is no on-going permitting activity.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Incineration is identified as BDAT for some mixed waste. This process is needed for compliance with RCRA LDR and for compliance with the OR LDR FFC Agreement with EPA Region 4, signed 6-12-92.

TECHNOLOGY	MATRIX
Incineration	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Cemented Solids
	Organic Debris
	Heterogeneous Debris
	Soil with <50% Debris
	Soils
	Lab Packs without Metals
	Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge Y-12 Plant
FACILITY: Oak Ridge Res. Mixed Waste Treatment Facility
SYSTEM: 00542, MW Treatment Facility - Sizing & Segregation
CONTACT: R. R. Kimmitt 615-576-0077

ADS NUMBER: 8207/8205
STATUS: Planned Unapproved

	DESIGN	PERMIT
M3/YR	2206	0

System Capacity

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	Y	N	Y	N

OTHER INFORMATION
Design capacity = 75,000 cf/yr. RCRA, TSCA.

Plan date operation - FY04.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Waste will be contact handled. Waste reading over a few mR/hr will be rejected.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Work in FY 94 will be included in the decontamination development effort of ADS 8205.
OTHER PERMIT LIMITATIONS & COMMENTS
There are no on-going permitting activities.
RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Size segregation and size reduction are pre-treatment steps supporting decontamination, stabilization, and thermal desorption. Therefore, they represent necessary parts of the systems to bring OR mixed wastes into compliance with RCRA LDR and implement the OR LDR FFC Agreement.

TECHNOLOGY	MATRIX
Sizing/Segregation	Inorganic Sludges/Particulates
	Cemented Solids
	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Soil with <50% Debris
	Soils
	Lab Packs with Metals
	Lab Packs without Metals
	Batteries (Lead Acid, Cadmium)
	Inorganic Solids
	Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge Y-12 Plant
FACILITY: Oak Ridge Res. Mixed Waste Treatment Facility
SYSTEM: 00529, MW Treatment Facility - Soil/Sludge Dewatering
CONTACT: R. R. Kimmitt 615-576-0077

ADS NUMBER: 8207/8205
STATUS: Planned Unapproved

System Capacity	DESIGN	PERMIT
M3/YR	2206	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	N	Y	N

OTHER INFORMATION

Design capacity = 75,000 cf/yr. RCRA, TSCA.

Plan date operation - FY04.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Waste will be contact handled. Waste reading over a few mR/hr will be rejected.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

Work on this process is included in the stabilization and thermal desorption development effort of ADS 8205.

OTHER PERMIT LIMITATIONS & COMMENTS

There is no on-going permitting activity.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Dewatering, as a pretreatment to stabilization or thermal desorption is part of the process to achieve compliance with RCRA LDR for mixed wastes (40 CFR 268).

TECHNOLOGY	MATRIX
Drying	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Soil with <50% Debris
	Soils
	Inorganic Solids
	Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Oak Ridge Y-12 Plant				
FACILITY:	Oak Ridge Res. Mixed Waste Treatment Facility				
SYSTEM:	00526, MW Treatment Facility - Surface Decontamination		M3/YR	500	0
CONTACT:	R. R. Kimmitt	615-576-0077			
				System Capacity	

ADS NUMBER: 8207/8205

STATUS: Planned Unapproved

HLW	LLW	TRU	-TRU- ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	N	N	N

OTHER INFORMATION

Design capacity = 17,000 cf/yr. RCRA, TSCA.

Plan date operation - FY04.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Waste will be contact handled. Waste reading over a few mR/hr will be rejected.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

Work is focused on: (a) identification and characterization of waste to be treated, and (b) process development (bench scale testing) (b is contained in ADS 8205).

OTHER PERMIT LIMITATIONS & COMMENTS

Since this project is in the pre-conceptual state, there is no on-going permitting activity.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Surface decontamination is appropriate technology for mixed waste that can be treated under the RCRA Debris Rule.

TECHNOLOGY	MATRIX
Decontamination	Heterogeneous Debris
	Elemental Lead
	Batteries (Lead Acid, Cadmium)

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge Y-12 Plant
FACILITY: Oak Ridge Res. Mixed Waste Treatment Facility
SYSTEM: 00528, MW Treatment Facility - Thermal Desorption
CONTACT: R. R. Kimmmitt 615-576-0077

		DESIGN	PERMIT
		System Capacity	
M3/YR		10	0

ADS NUMBER: 8207/8205
STATUS: Planned Unapproved

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	Y	Y	Y	N	N

OTHER INFORMATION
Waste will be contact handled. Waste reading over a few mR/hr will be rejected.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Design capacity = 330 cf/yr. NESHAPS, Air, RCRA, TSCA.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Work is focused on: (a) waste identification and characterization, and (b) process development (bench scale testing) (b is contained in ADS 8205).
OTHER PERMIT LIMITATIONS & COMMENTS
The project in in the pre-conceptual stage, so no permitting activities are on-going.
RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
This process is BDAT for mercury-contaminated wastes under RCRA LDR, and is an economical alternative to incineration for organically-contaminated mixed waste. The process will be a significant part of the treatment plan for implementing the OR FFC Agreement with EPA Region 4, signed 6-12-92.

TECHNOLOGY	MATRIX
Thermal Desorption	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Cemented Solids
	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Soil with <50% Debris
	Soil with <50% Debris
	Soils
	Inorganic Solids
	Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Oak Ridge Y-12 Plant				
FACILITY:	Plating Rinsewater Treatment Facility				
SYSTEM:	00221, Plating Rinsewater Treatment Facility		M3/YR	0	7575
CONTACT:	J. Prazniak	615-574-6873			
				System Capacity	

ADS NUMBER: 2201
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
CWA	NPDES	State	12/01/93	12/31/98

OTHER INFORMATION

Design capacity = 2,000,000 gal/yr. Excess capacity = 1,500,000 gal/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

No radionuclides. Plating Rinsewater System is designed to treat dilute plating rinsewater contaminated with heavy metals. Does not treat cyanide. Presently discharges through a dedicated outfall. But the new NPDES permit, expected this October will combine the PRTF and CPCF discharges under one set of limits. The sludge from the system will be combined with the sludge for the CPCF mopwater system.

Sludge from treatment is F006 listed RCRA waste. Sludge is combined with sludge from other CPCF operations, and is stored at the Y-12 West End Treatment Facility sludge storage tanks.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

A criticality safety analysis and controls to assure that conditions under which criticality could occur do not exist. Could handle depleted U easily.

OTHER PERMIT LIMITATIONS & COMMENTS

New CWA permit is expected in 12-93. No capacity is expected to be specified on new permit. However, there will be mass limits on individual discharge parameters.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Operation of the PRTF is necessary to the extent that plating rinsewaters requiring treatment are generated. A new planting shop at Y-12 is under construction. The PRTF will receive waste from the new shop.

TECHNOLOGY	MATRIX
Cyanide Destruction	Organic Liquids
	Aqueous Liquids
Filtration	Organic Liquids
	Aqueous Liquids
Neutralization	Organic Liquids
	Aqueous Liquids
Oxidation/Reduction	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge Y-12 Plant
FACILITY: Waste Coolant Processing Facility
SYSTEM: 00524, Waste Coolant Processing Facility
CONTACT: J. Prazniak 615-574-6873

	DESIGN	PERMIT
M3/YR	11363	0

System Capacity

ADS NUMBER: 2201
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	N	N

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

The WCPF is a small extended-aeration activited sludge treatment system that treats biodegradable machine cutting coolants to remove BOD. The effluent from the facility is shipped to the Central Pollution Control Facility or West End Treatment Facility for further treatment. Sludge from the treatment facility is considered to be LLW (not RCRA-hazardous).

Under present requirements, only depleted uranium may be processed; no solutions with enriched uranium allowed. WCPF was operated under criticality safety control in the past and could do so again.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

Criticality safety analysis and controls to insure that conditions conducive to criticality do not exist. Approximately $1M in physical upgrades to facility so hazardous waste could be received.

OTHER PERMIT LIMITATIONS & COMMENTS

No permits are being pursued.

Effluent from treatment system is further treated at Central Pollution Control Facility/Mopwater System or West End Treatment Facility.

TECHNOLOGY	MATRIX
Biodegradation	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Oak Ridge Y-12 Plant
FACILITY: West End Treatment Facility
SYSTEM: 00224, Wastewater Treatment
CONTACT: H. A. Valentine 615-576-1567

	DESIGN	PERMIT
M3/YR	0	9469

System Capacity
PERMIT [Other UNIT of MEASURE]: 2.5 million gal/yr

ADS NUMBER:
STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
CWA/NPDES	Final	TDEC	05/21/85	/ /
CAA	Final	TDEC	06/11/93	05/01/95

OTHER INFORMATION
Design capacity = 2.5 million gal/yr. Excess capacity = 4.0 million gal/yr.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Permit by rule facility discharging effluent through an NPDES permit. Treat listed hazardous wastewaters of F001, F002, F006, F007.

OTHER PERMIT LIMITATIONS & COMMENTS
Capacity of treatment system not limited by the permits.

CWA (NPDES) permit renewal pending.

TECHNOLOGY	MATRIX
Biodenitrification	Organic Liquids
	Aqueous Liquids
Chemical Precipitation	Organic Liquids
	Aqueous Liquids
Neutralization	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Paducah Gaseous Diffusion Plant
FACILITY: C-400-C Evaporator
SYSTEM: 00314, C-400-C Nickel Stripper Evaporation Unit
CONTACT:

		DESIGN	PERMIT
System Capacity	M3/YR	0	0

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

		-TRU-						RCRA CHARACTERISTICS		
HLW	LLW	TRU	ALPHA	HANDLING	METALS	MERCURY	ORGANICS	IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	N	N

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

This unit is undergoing RCRA closure and will be disassembled. This unit should be removed from the list.

TECHNOLOGY	MATRIX
Evaporation	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Paducah Gaseous Diffusion Plant
FACILITY: C-400-D Lime Precipitation Unit
SYSTEM: 00262, C-400-D Lime Precipitation Unit
CONTACT: R. G. Kuehn 502-441-6913

System Capacity	DESIGN	PERMIT
M3/YR	136	0

ADS NUMBER:
STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	N	Y	N

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Current plans are to RCRA close this unit.

The solids collected during precipitation area still considered to be MLLW and must be further treated.

TECHNOLOGY	MATRIX
Chemical Precipitation	Aqueous Liquids
Neutralization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Paducah Gaseous Diffusion Plant
FACILITY: Mixed Waste Treatment Facility
SYSTEM: 00553, Mixed Waste Treatment Facility
CONTACT:

ADS NUMBER:
STATUS: Planned Unapproved

		DESIGN	PERMIT
	M3/YR	0	0

System Capacity

-TRU-						RCRA CHARACTERISTICS		
HLW	LLW	TRU	ALPHA	HANDLING	METALS	MERCURY	ORGANICS	IGNITABLE	CORROSIVE	REACTIVE

OTHER INFORMATION
Design capacity to be determined.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Feasibility study in the planning stages. Funding for the study are included for 1994.
RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Could be used to enhance the requirements of the LDR FFCA and the FFC Act.

TECHNOLOGY MATRIX

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Paducah Gaseous Diffusion Plant
FACILITY: Wastewater Treatment System
SYSTEM: 00321, Wastewater Treatment System
CONTACT: H. A. Valentine 615-574-7083

ADS NUMBER:
STATUS: Planned Unapproved

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	N	N

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

All funding, design, and associated issues for this facility went away following the site operational transition. This unit should be removed from the list.

TECHNOLOGY	MATRIX
Chemical Precipitation	Aqueous Liquids
Filtration	Aqueous Liquids
Neutralization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Pantex Plant
FACILITY: Building 11-15A
SYSTEM: 00108, Building 11-15A
CONTACT: J. Evett 505-845-4445

	DESIGN	PERMIT
M3/YR	132	0

System Capacity

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	-TRU- ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	CH	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	TWC	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Encapsulation treatment is currently not permitted. A pilot study was completed by the Pantex Plant that showed that LDR treatment standards were achieved by epoxy-based encapsulation processes. It is currently unknown whether encapsulation will be pursued by the plant as a treatment option for debris or other MLLW.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

It has not been determined whether the plant will pursue this technology. Requires permit modifications, equipment procurement, staffing, NEPA, SAR.

OTHER PERMIT LIMITATIONS & COMMENTS

Dates if issuance/application submission for permits are not applicable at this time.

TECHNOLOGY	MATRIX
Immobilization	Aqueous Liquids
	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Cemented Solids
	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Inorganic Solids
	Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Pantex Plant				
FACILITY:	Building 11-9				
SYSTEM:	00107, Building 11-9		M3/YR	43	0
CONTACT:	J. Evett	505-845-4445			

System Capacity

ADS NUMBER:

STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	CH	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	TWC	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Encapsulation treatment is currently not permitted. A pilot study was completed by the Pantex Plant that showed that LDR treatment standards were achieved by epoxy-based encapsulation processes. It is currently unknown whether encapsulation will be pursued by the plant as a treatment option for debris or other MLLW.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

Permit modification, equipment procurement, staffing, training, NEPA, SAR. It is not determined that the plant will pursue this treatment.

OTHER PERMIT LIMITATIONS & COMMENTS

Date of issuance/application submission for permits not determined at this time.

TECHNOLOGY	MATRIX
Immobilization	Aqueous Liquids
	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Cemented Solids
	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Inorganic Solids
	Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Pantex Plant
FACILITY: Burning Ground
SYSTEM: 00354, One Cage, One Tray, and One Pan
CONTACT: J. Evett 505-845-4445

	DESIGN	PERMIT
M3/YR	4	4

System Capacity

ADS NUMBER: 3104
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	CH	N	N	N	Y	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part B App	TWC	09/30/93	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Under interim status, the Pantex Plant is authorized to burn HE-contaminated LLW. Currently, no mixed waste is treated at the burning grounds. At some time in the future, the plant may choose to treat MLLW at the burning grounds. Currently, the Texas Water Commission is reviewing a RCRA Permit modification, that if approved, will permit the plant to burn MLLW at the Burning Ground.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

Upgrading burning area/equipment is required. Texas Water Commission approval of RCRA permit. NEPA approval.

TECHNOLOGY	MATRIX
Thermal Destruction	Inorganic Sludges/Particulates
	Inorganic Debris
	Explosives

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Pantex Plant				
FACILITY:	Hazardous Waste Treatment & Processing Facility				
SYSTEM:	00109, Hazardous Waste Treatment & Processing Facility		M3/YR	500	500
CONTACT:	J. Evett	505-845-4445			

System Capacity

ADS NUMBER: 3103

STATUS: Planned Approved

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
31 TAC 335	State	Texas	10/31/94	/ /

OTHER INFORMATION

Plan date operation - FY98.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

Estimated construction completion is FY 95/96.

CDR completed 9-30-93.

NEPA submitted 9-30-93.

OTHER PERMIT LIMITATIONS & COMMENTS

Requires approval from Texas.

TECHNOLOGY

Immobilization

MATRIX

Aqueous Liquids

Inorganic Sludges/Particulates

Cemented Solids

Organic Debris

Inorganic Debris

Inorganic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Portsmouth Gaseous Diffusion Plant
FACILITY: Waste Treatment Facility
SYSTEM: 00331, Waste Treatment Facility
CONTACT: T. A. Cox 614-897-6415

ADS NUMBER: 6297
STATUS: Planned Unapproved

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Project not funded.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Funding is budgeted beginning in FY96. Project scope is undefined; feasibility study has not been funded.

OTHER PERMIT LIMITATIONS & COMMENTS
A RCRA permit application will be required and a RCRA permit issued prior to construction of the facility. There has been no funding to date to support this effort.

TECHNOLOGY	MATRIX
Unspecified	Unspecified

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Portsmouth Gaseous Diffusion Plant
FACILITY: X-616 Liquid Effluent Control Facility
SYSTEM: 00512, X-616 Liquid Effluent Control Facility
CONTACT: T. A. Acox 614-897-6415

		DESIGN	PERMIT
	M3/YR	0	7400000

System Capacity

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
NPDES	Final	State	09/23/91	07/29/94

OTHER INFORMATION
Design capacity = 28,000 m3/day.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
In June 1991, the recirculating cooling water was changed from a chromate-based system to a phosphate-based system. Subsequently, the NPDES permit was modified to require no treatment of the phosphated water. Currently, the X-616 facility is nonoperational. Any changes in the operational status would require the appropriate permitting authority.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Facility will need modifications and permit authority for operation.
OTHER PERMIT LIMITATIONS & COMMENTS
The operations at the X-616 facility have been discontinued upon agreement with Ohio EPA if the monitoring conditions of the permit are met.

Monitoring requirements for this facility include Cr, Cu, Fe, Ni, Zn, chloroform, trichloroethyene, oil and grease, total nonfilterable residue and total dissolved solids with specified limits on concentrations and mass loading. It is anticipated that more stringent limits will be imposed upon issuance of the new NPDES permit in 1994.

Additionally, monitoring requirements are imposed for mercury and acute toxicity to Ceriodaphnia and Pimephales promelas. While there are currently no specified limits for these parameters, it is anticipated that limits will be imposed upon issuance of the new NPDES permit in 1994.

TECHNOLOGY	MATRIX
Chemical Precipitation	Aqueous Liquids
Filtration	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Portsmouth Gaseous Diffusion Plant
FACILITY: X-622 Groundwater Treatment Facility
SYSTEM: 00310, X-622 Groundwater Treatment Facility
CONTACT: T. A. Acox 614-897-6415

	DESIGN	PERMIT
M3/YR	78576	78576

System Capacity

ADS NUMBER: 6801
STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
NPDES	Final	State	09/23/91	07/29/94

OTHER INFORMATION

Currently treating mixed waste from groundwater sampling and remediation from around X-749 landfill unit.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

NPDES Permit limits use of the facility to treatment to groundwater collected from around X-749 facility.

OTHER PERMIT LIMITATIONS & COMMENTS

Effluent concentrations limited to 10 ug/l for trichloroethene and an average of 25 ug/l for 1,2-dichloroethene. Other requirements will have to be negotiated with the State. In order to efficiently meet effluent criteria, waste acceptance criteria have been established.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Facility is operated to treat groundwater related to Interim Remedial Measures mandated by the Consent Order agreement with US EPA and the Consent Decree with the Ohio Attorney General.

TECHNOLOGY	MATRIX
Carbon Adsorption	Aqueous Liquids

401

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Portsmouth Gaseous Diffusion Plant				
FACILITY:	X-622T Groundwater Treatment Facility				
SYSTEM:	00315, X-622T Groundwater Treatment Facility		M3/YR	69628	69628
CONTACT:	T. A. Acox	614-897-6415			

System Capacity

ADS NUMBER: 6801

STATUS: Planned Approved

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
NPDES	Final	State	09/23/91	07/29/94

OTHER INFORMATION

Treatment limited to groundwater from X-705 basement french drain system.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Limited to groundwater from X-705 and X-700 facilities.

OTHER PERMIT LIMITATIONS & COMMENTS

Effluent concentrations limited to 10 ug/l (average and maximum) for trichloroethene. Other requirements will have to be negotiated with the State. In order to efficiently meet effluent criteria, waste acceptance criteria have been established.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Facility is operated to treat groundwater related to Interim Remedial Measures mandated by the Consent Decree with the Ohio Attorney General.

TECHNOLOGY	MATRIX
Carbon Adsorption	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Portsmouth Gaseous Diffusion Plant
FACILITY: X-623 Groundwater Treatment Facility
SYSTEM: 00316, X-623 Groundwater Treatment Facility
CONTACT: T. A. Acox 614-897-6415

System Capacity	DESIGN	PERMIT
M3/YR	99470	99470

ADS NUMBER:
STATUS: Planned Approved
KEY DECISION STATUS: KD-3 DATE STATUS ACHIEVED: / / CONSTRUCTION COMPLETION DATE: /

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
NPDES	Final	State	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

System currently under construction. Influent flow limited to groundwater from X-701B Holding Pond area, purge water from plantsite groundwater wells, and groundwater from other plantsite RFI/CMS activities.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Facility is operated to support the closure plan for the X-701B Holding Pond. Facility will also provide support to requirements under the US EPA Consent Order and Ohio Consent Decree.

TECHNOLOGY	MATRIX
Carbon Adsorption	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Portsmouth Gaseous Diffusion Plant
FACILITY: X-624 Groundwater Treatment Facility
SYSTEM: 00308, X-624 Groundwater Treatment Facility
CONTACT: T. A. Acox 614-897-6415

System Capacity	DESIGN	PERMIT
M3/YR	99470	99470

ADS NUMBER: 6801
STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
NPDES	Final	State	09/23/91	07/29/94

OTHER INFORMATION

Treating mixed waste from groundwater sampling and groundwater from remediation activities from X-701B Interim Measures Trench.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Limited to treatment of groundwater and related liquids. Five (5) mg solvent/liter maximum influent.

OTHER PERMIT LIMITATIONS & COMMENTS

Effluent concentrations limited to 26 ug/l (average) and 69 ug/l (maximum) for trichloroethene. Other requirements will have to be negotiated with the State. In order to efficiently meet effluent criteria, waste acceptance criteria have been established.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Facility is operated to treat groundwater related to Interim Remedial Measures mandated by the Consent Order agreement with US EPA and the Consent Decree with the Ohio Attorney General.

TECHNOLOGY	MATRIX
Air Stripping	Aqueous Liquids
Carbon Adsorption	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Portsmouth Gaseous Diffusion Plant
FACILITY: X-701E Groundwater Treatment Facility
SYSTEM: 00307, X-701E Groundwater Treatment Facility
CONTACT: T. A. Acox 614-897-6415

System Capacity	DESIGN	PERMIT
M3/YR	99470	120000

ADS NUMBER: 6801
STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
NPDES	Final	State	09/23/91	07/29/94

OTHER INFORMATION

Treating mixed waste from groundwater sampling, groundwater from remediation activities, and accumulated rainfall in X-701B Holding Pond area.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Limited to treatment of groundwater and related waters. Facility operations will cease when X-623 Groundwater Treatment Facility (now under construction) becomes operational.

OTHER PERMIT LIMITATIONS & COMMENTS

Influent flow is limited to groundwater and rainfall collected in X-701B Holding Pond.

Effluent concentrations limited to 10 ug/l for trichloroethene and an average of 25 ug/l for 1,2-dichloroethene. Other requirements will have to be negotiated with the State. In order to efficiently meet effluent criteria, waste acceptance criteria have been established.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Facility is operated to support the closure plan for the X-701B Holding Pond.

TECHNOLOGY	MATRIX
Carbon Adsorption	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Portsmouth Gaseous Diffusion Plant
FACILITY: X-705 Decontamination Facility
SYSTEM: 00313, Microfiltration
CONTACT: T. A. Acox 614-897-6415

ADS NUMBER:
STATUS: Existing Operating

System Capacity	DESIGN	PERMIT
M3/YR	3000	3000

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
NPDES	Final	State	09/23/91	07/29/94

OTHER INFORMATION

Treating mixed waste from cleaning and decontamination operations from all facilities on site.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Limited to site decontamination and cleaning solutions by NPDES permits.

Operations are limited by nuclear criticality. Operational agreements limits concentration in storgage to 500 mg U/liter and to 150 mg U/liter in the first stage pH adjustment. Additional agreement limits total U238 in sludge containers to 200 grams/55-gal drum.

OTHER PERMIT LIMITATIONS & COMMENTS

Monitoring requirements for the facility include Cr, Fe, Ni, Zn, N (as NH4, NO3, NO2 and total), oil and grease, and trichloroethene; however, there are no specified limits. It is anticipated that limits will be imposed upon issuance of the new NPDES permit in 1994.

Influent flows are limited to liquids from plantsite cleaning and decontamination operations.

TECHNOLOGY	MATRIX
Filtration	Aqueous Liquids
Neutralization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Portsmouth Gaseous Diffusion Plant
FACILITY: X-705 Decontamination Facility
SYSTEM: 00311, Uranium Recovery and Raffinate Treatment System
CONTACT: T. A. Acox 614-897-6415

System Capacity	DESIGN	PERMIT
M3/YR	150	150

ADS NUMBER:
STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	N	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
NPDES	Final	State	09/23/91	07/29/94

OTHER INFORMATION
Influent stream limited to uranium bearing solutions from specific operations.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
NPDES permit limits treatment and decontaminated cleaning solutions. Administrative controls require economic analysis for solutions.

Nuclear criticality agreements limit U238 to 200 grams per container (1 cubic yd). Also limited to uranium concentration of 5 mg effluent from ion exchange unit.

OTHER PERMIT LIMITATIONS & COMMENTS
Monitoring requirements for this facility include Cr, Fe, Ni, Zn, N (as NH4, NO3) with specified limits on concentrations and mass loading. It is anticipated that more stringent limits will be imposed upon issuance of the new NPDES permit in 1994.

TECHNOLOGY	MATRIX
Biodenitrification	Aqueous Liquids
Filtration	Aqueous Liquids
Ion Exchange	Aqueous Liquids
Liquid Extraction	Aqueous Liquids
Neutralization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Quadrex Environmental, Gainesville, FL
FACILITY: Quadrex Environmental
SYSTEM: 00545, Incineration of Scintillation Liquids
CONTACT: Kathy Garener 904-373-6066

	DESIGN	PERMIT
M3/YR	0	0

— System Capacity —

ADS NUMBER:
STATUS: Existing Operating Commercial

HLW	LLW	TRU	-TRU- ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	Y	Y	Y	N

— PERMIT STATUS INFORMATION —

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part A	State	09/28/90	09/27/95
RML	Final	State	06/04/93	10/30/95

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

OTHER PERMIT LIMITATIONS & COMMENTS

RCRA ID # FLD 980 711 071. Permit/Certification No. HO 01-169480 permit to operate a tank and a container storage area.

RML - Radioactive Materials License No. 1354-1.

TECHNOLOGY	MATRIX
Incineration	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Ramp Industries, Denver, CO
FACILITY: Ramp Industries
SYSTEM: 00514, Ramp Industries
CONTACT: John Lucas 303-480-1509

ADS NUMBER:
STATUS: Existing Operating Commercial

	DESIGN	PERMIT
M3/YR	0	0

System Capacity

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	Y	Y	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCA	Final	CDH	06/21/93	10/30/92
RCRA	Part A App	State	01/26/88	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

OTHER PERMIT LIMITATIONS & COMMENTS

RCA - Radiation Control Act Title 25, Article 11, CRS 1989.
Radioactive Materials License No. Colorado 523-01.
Renewal application submitted prior to 10/30/92.

EPA ID No. COD 980 718 985. Part A application includes container storage and treatment in tanks.

TECHNOLOGY	MATRIX
Compaction	Organic Debris Inorganic Debris Lab Packs with Metals Inorganic Solids Organic Solids
Decontamination	Organic Debris Inorganic Debris Inorganic Solids Organic Solids
Macroencapsulation	Inorganic Debris Calcine Solids Inorganic Solids
Shredding	Organic Debris Inorganic Solids Organic Solids
Solidification	Organic Liquids Aqueous Liquids Organic Sludges/Particulates

8884

4886

	Inorganic Sludges/Particulates
	Soil with <50% Debris
	Soils
	Beryllium Dust
Stabilization	Organic Liquids
	Aqueous Liquids
	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Soil with <50% Debris
	Soils

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant
FACILITY: Advanced Size Reduction Facility: Building 776
SYSTEM: 00014, Unit 62, Advanced Size Reduction Facility
CONTACT: Bob Griffis 303-966-4934

ADS NUMBER: 3821
STATUS: Existing Could be used for mixed waste

	DESIGN	PERMIT
M3/YR	1819	0

System Capacity

PERMIT [Other UNIT of MEASURE]: Solids:1.3 tons/h

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	11/02/89	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Design capacity = 2,080 tons/yr. System exists and is planned for future use, year to be determined. No Rocky Flats Plant mixed waste streams have yet been identified for processing in this system.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

System is non-operational due to major upgrades - repairs.

OTHER PERMIT LIMITATIONS & COMMENTS

Permit strictly prohibits receipt of offsite waste.

TECHNOLOGY	MATRIX
Size Reduction	Organic Debris
	Inorganic Debris

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant

FACILITY: Aqueous Process Waste Treatment: Building 774

SYSTEM: 00001, Wastewater

CONTACT: Bob Griffis 303-966-4934

		DESIGN	PERMIT
M3/YR		1819	0

System Capacity

PERMIT [Other UNIT of MEASURE]: 130,060 gal/hour

ADS NUMBER: 3821

STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	Y	Y	Y	Y	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	07/01/88	/ /

OTHER INFORMATION

RCRA codes MW stream RFP 1070 D002A, D002B, F001, F002, F003, F005A. RCRA codes MW stream RFP 2050 D0018, D002A, D011.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Has the capability to process non-radioactive photographic solutions for silver recovery. The recovered silver is formed into ingots.

OTHER PERMIT LIMITATIONS & COMMENTS

RFP has indicated its intentions to the State to close the photochemical treatment unit. Also, the treatment system contains multiple-technology units, not all of which can treat organics.

TECHNOLOGY	MATRIX
Chemical Precipitation	Organic Liquids Aqueous Liquids Inorganic Sludges/Particulates
Deactivation	Organic Liquids Aqueous Liquids Inorganic Sludges/Particulates
Filtration	Organic Liquids Aqueous Liquids Inorganic Sludges/Particulates
Neutralization	Organic Liquids Aqueous Liquids Inorganic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant
FACILITY: Building 374
SYSTEM: 00007, Process Waste Treatment Facility: Building 374
CONTACT: Bob Griffis 303-966-4934

		DESIGN	PERMIT
M3/YR		149000	0

System Capacity

ADS NUMBER: 3821
STATUS: Existing Operating

PERMIT [Other UNIT of MEASURE]: 4835 gal/hour

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	N	N	N	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	06/08/90	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Upgrades to system are in design phase with plan date of operation - FY98. System will treat MTRU/MLLW. Future capacity to treat liquid wastes is to be determined.

OTHER PERMIT LIMITATIONS & COMMENTS

Can only accept waste generated onsite at RFP. Liquid waste fed to the evaporator must contain less than 13,500 picocuries/liter.

TECHNOLOGY	MATRIX
Deactivation	Aqueous Liquids Inorganic Sludges/Particulates
Decontamination	Aqueous Liquids Inorganic Sludges/Particulates
Evaporation	Aqueous Liquids Inorganic Sludges/Particulates
Immobilization	Aqueous Liquids Inorganic Sludges/Particulates
Neutralization	Aqueous Liquids Inorganic Sludges/Particulates
Solidification	Aqueous Liquids Inorganic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant
FACILITY: Building 374/774 Salt And Sludge Treatment
SYSTEM: 00343, Building 374/774 Salt And Sludge Treatment
CONTACT: Scott Miya 303-273-6027

System Capacity	DESIGN	PERMIT
M3/YR	0	0

ADS NUMBER: 3830/3822
STATUS: Planned Approved
KEY DECISION STATUS: KD-0 DATE STATUS ACHIEVED: 08/01/93 CONSTRUCTION COMPLETION DATE: 09/99

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	/ /	/ /
NPDES	App	EPA	/ /	/ /

OTHER INFORMATION

Design capacity to be determined. System 4A - Salt Treatment - Planned Unapproved. System 4B - Sludge Treatment - Planned Approved.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Salt and Sludge Treatment Building 374 and 774 is Treatment System 4A and 4B in the Implementation Model. Line Item Year - 4A is FY97. Line Item Year - 4B is FY96. The Building 374/774 Salt and Sludge Treatment System (CTMP Systems 4A and 4B) immobilization technologies are yet to be determined. Immobilization in System 4B will be achieved vis microwave solidification or polymer solidification or cementation.

Waste Codes: D006, D008, F001, F002, F003, F005A, F006, F007, and F009.
System 4A will treat ignitable wastes and waste code D001. Nitrate salts may be oxidizer.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

System 4B conceptual design 60% completed. Immobilization technologies are yet to be determined. Microwave melting, polymer, and cement solidification are candidates. Hot bench scale testing of each technology scheduled for FY94.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

The Immobilization technology which will be used has not yet been determined, but will be either cementation or polymer solidification. Bench scale testing of actual waste began in FY93 with polymer and cement.

OTHER PERMIT LIMITATIONS & COMMENTS

Part B to be applied for (System 4A submittal date - 1/97. System 4B submittal date - 1/96).

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Proposed facility is under the CTMP. CTMP is an enforceable plan per compliance agreement between EPA & DOE, the LDR FFCA II.

TECHNOLOGY	MATRIX
Immobilization	Inorganic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant
FACILITY: Building 776 Low-Level Mixed Waste Baler
SYSTEM: 00013, Building 776 Low-Level Mixed Waste Baler
CONTACT: Bob Griffis 303-966-4934

System Capacity	DESIGN	PERMIT
M3/YR	0	0

ADS NUMBER: 3821
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA			/ /	/ /

OTHER INFORMATION
Design capacity = 1,056 tons/yr.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
System exists and is planned for future use, year to be determined. No Rocky Flats Plant mixed waste streams have been identified for processing in this system.

Waste Codes: F001, F002, and F005A.
REQUIREMENTS FOR USE OF EXISTING SYSTEMS
The inherent contamination control problem in room 144 of Bldg 776 has to be remedied. The need for this baler, above and beyond the capabilities of the Supercompactor, must be established.
OTHER PERMIT LIMITATIONS & COMMENTS
This unit has been removed from the RCRA Part A permit. Change to Interim Status submitted to State, but not approved. Would require permitting. No plans to do so at present.

TECHNOLOGY	MATRIX
Compaction	Organic Debris
	Inorganic Debris

415

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant
FACILITY: Chip Cementation: Building 447
SYSTEM: 00020, Chip Cementation: Building 447
CONTACT: Bob Griffis 303-966-4934

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

	DESIGN	PERMIT
M3/YR	5	0

System Capacity
PERMIT [Other UNIT of MEASURE]: 1100 gal/day

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	06/08/90	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
System exists and is planned for future use, year to be determined.

Waste Codes: D008C, F001, and F002
REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Non-operational. Pending closure.
OTHER PERMIT LIMITATIONS & COMMENTS
Part A has specific waste and quantities identified.
No offsite waste accepted.

TECHNOLOGY	MATRIX
Solidification	Inorganic Debris
Stabilization	Inorganic Debris

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant
FACILITY: Evaporator Upgrade and Waste System Evaporator
SYSTEM: 00544, Evaporator Upgrade and Waste System Evaporator
CONTACT: Tom Johnson 303-966-6404

ADS NUMBER:
STATUS: Planned Unapproved

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA			/ /	/ /

OTHER INFORMATION
The Evaporator Upgrade project will be completed in FY94.

The Waste System Evaporator project will be completed in two phases.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Upgrade project would replace worn and obsolete components of the multiple-effect evaporator.
OTHER PERMIT LIMITATIONS & COMMENTS
Permit would need to be modified.

TECHNOLOGY	MATRIX
Evaporation	Aqueous Liquids

417

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant
FACILITY: Fabric Filtration: Buildings 444,447, and 460
SYSTEM: 00006, Fabric Filtration: Buildings 444,447, and 460
CONTACT: Bob Griffis 303-966-4934

ADS NUMBER:
STATUS: Existing Operating

		DESIGN	PERMIT
M3/YR		12128	0

System Capacity
PERMIT [Other UNIT of MEASURE]: 2000 gal/hour

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	11/26/86	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Permitted capacity = 12,128 m3/year, Normal operating capacity = 3,411 m3/year, and Available capacity = 8,717 m3/year. This is a currently operating system.

Filter system utilizes filter paper resulting in waste paper that is collected in 55-gallon drums.

OTHER PERMIT LIMITATIONS & COMMENTS

460 permitted for hazardous only.
No offsite waste allowed.
Part A has specific wastes and quantities identified.

TECHNOLOGY	MATRIX
Filtration	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant
FACILITY: Low-Level Mixed Waste Baler: Building 889
SYSTEM: 00339, Low-Level Mixed Waste Baler: Building 889
CONTACT: Bob Griffis 303-966-4934

System Capacity	DESIGN	PERMIT
M3/YR	0	0

ADS NUMBER: 3821
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	/ /	/ /

OTHER INFORMATION
Design capacity = 1,056 tons/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
System exists and is planned for future use, year to be determined. No Rocky Flats Plant mixed waste streams have yet been identified for processing in this system.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS
The Bldg 889 facility upgrades must be completed. In addition, all required safety documentation must be completed and approved.

OTHER PERMIT LIMITATIONS & COMMENTS
This unit has been removed from the Part A permit. Change to Interim Status submitted to State but not approved. Would require permitting. No plans to do so at present.

TECHNOLOGY	MATRIX
Compaction	Organic Debris
	Inorganic Debris

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant
FACILITY: Misc. Waste Handling & Immob.: Bldg 774
SYSTEM: 00338, Misc. Waste Handling & Immob.: Bldg 774
CONTACT: Bob Griffis 303-966-4934

ADS NUMBER: 3821
STATUS: Existing Operating

		DESIGN	PERMIT
M3/YR		42	0

System Capacity
PERMIT [Other UNIT of MEASURE]: 55 gal/day

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	N	N	N	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	11/02/89	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

This is a currently operating system.

RCRA codes MW Stream RFP 1066 D002A, D002B, and D007.

OTHER PERMIT LIMITATIONS & COMMENTS

Permit strictly limits receipt of offsite waste.

TECHNOLOGY	MATRIX
Solidification	Aqueous Liquids
Stabilization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant
FACILITY: Miscellaneous Waste Form Treatment
SYSTEM: 00341, Miscellaneous Waste Form Treatment
CONTACT: Lee Lucero 303-966-5667

System Capacity	DESIGN	PERMIT
M3/YR	250	0

ADS NUMBER: 3822
STATUS: Planned Approved
KEY DECISION STATUS: KD-0 DATE STATUS ACHIEVED: 08/01/93 CONSTRUCTION COMPLETION DATE: 12/01

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	CH	Y	Y	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	/ /	/ /

OTHER INFORMATION
TDD Number 3822.F11.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Is System 3 in the CTMP Implementation model. LI Year - FY96. Waste codes: D001B, D002A, D002B, D003D, D003E, D004, D005, D006B, D007, D008B, D009, D009C, D010, D011, F001, F002, F003, F005A, and P015.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
Conceptual design - 60% completed.

OTHER PERMIT LIMITATIONS & COMMENTS
Part B applied for.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Proposed facility is under the CTMP. CTMP is an enforceable plan per compliance agreement between EPA & DOE, the LDR FFCA II.

TECHNOLOGY
Immobilization

MATRIX
Aqueous Liquids
Inorganic Sludges/Particulates
Inorganic Debris
Heterogeneous Debris
Beryllium Dust
Inorganic Solids
Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant
FACILITY: Mixed Residue Treatment
SYSTEM: 00345, Mixed Residue Treatment
CONTACT: Don Dustin 303-966-3809

ADS NUMBER:
STATUS: Planned Unapproved

	DESIGN	PERMIT
M3/YR	0	0

System Capacity

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	B	Y	Y	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Further waste characterization and examination of technology alternatives is required to correctly identify treatment pathways for all the mixed residue waste forms.

Waste codes: D001, D002, D003, D006, D007, D008, F001, F002, F003, F005

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

Current efforts consist of developing a program and schedule for the removal of all mixed residues covered by the June 1993 Settlement Agreement and Compliance Order on Consent.

OTHER PERMIT LIMITATIONS & COMMENTS

All required permit applications still need to be submitted. Schedule not determined.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Facility is covered under the June 1993 Settlement Agreement and Compliance Order on Consent which orders implementation of the "Mixed Residue Reduction Program."

TECHNOLOGY	MATRIX
Actinide Separation	Aqueous Liquids Inorganic Sludges/Particulates Inorganic Debris
Oxidation Process	Aqueous Liquids Inorganic Sludges/Particulates Inorganic Debris
Surface Decontamination	Aqueous Liquids Inorganic Sludges/Particulates Inorganic Debris Unspecified
Volume Reduction	Aqueous Liquids Inorganic Sludges/Particulates Inorganic Debris

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

4886

				DESIGN	PERMIT
SITE:	Rocky Flats Plant				
FACILITY:	Modular Storage Tanks and Building 910 Evaporator				
SYSTEM:	00543, Evaporation/Immobilization		M3/YR	0	0
CONTACT:	Bob Griffis	303-966-4934			

System Capacity

ADS NUMBER: 3821

PERMIT [Other UNIT of MEASURE]: 54,000 gal/day

STATUS: Existing Operating

		-TRU-						RCRA CHARACTERISTICS		
HLW	LLW	TRU	ALPHA	HANDLING	METALS	MERCURY	ORGANICS	IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State/EPA	/ /	/ /

OTHER INFORMATION

Design capacity = 50,000 gal/day.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Waste codes: F001, F002, F003, F005A, F006, F007, and F009.

OTHER PERMIT LIMITATIONS & COMMENTS

Air permit limits NOx production from evaporator's natural gas fired engines. State has allowed use as part of interim measure - treating groundwater only. Other uses not permitted.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Part of OU4-IM/IRA.

TECHNOLOGY	MATRIX
Evaporation	Aqueous Liquids
Immobilization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Rocky Flats Plant				
FACILITY:	Organic and Sludge Immob. System: Building 774				
SYSTEM:	00005, Organic & Sludge Immobilization Sys.: Bldg 774		M3/YR	270	0
CONTACT:	Bob Griffis	303-966-4934			

System Capacity

ADS NUMBER: 3821

STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	N	N	Y	Y	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	07/01/88	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

This is a currently operating treatment system, employing concentration to solidify oils contaminated with organics.

TECHNOLOGY	MATRIX
Immobilization	Organic Liquids
	Organic Sludges/Particulates
Solidification	Organic Liquids
	Organic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant

FACILITY: Pondcrete Solidification Process: Building 788

SYSTEM: 00018, Pondcrete Solidification Process: Building 788

CONTACT: Bob Griffis 303-966-4934

		DESIGN	PERMIT
	M3/YR	0	0

System Capacity

ADS NUMBER:

PERMIT [Other UNIT of MEASURE]: 20,800 tons/yr

STATUS: Existing Could be used for mixed waste

		-TRU-						RCRA CHARACTERISTICS		
HLW	LLW	TRU	ALPHA	HANDLING	METALS	MERCURY	ORGANICS	IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	06/08/90	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Design capacity = 20,800 tons/yr. This system exists and is planned for future use, year to be determined. Final waste form does not meet LDR requirements. The Halliburton NUS B&C Process Trains are planned to replace this facility.

Mixed waste stream to be treated is solar pond waste with a matrix of aqueous liquid contaminated with toxic organics and metals without mercury. Waste codes: D006B, F001, F002, F003, F005A, F006, F007, and F009.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

This system to be replaced by another planned/approved system. Non-operational due to pending closure.

OTHER PERMIT LIMITATIONS & COMMENTS

Permit strictly prohibits receipt of offsite waste.

TECHNOLOGY	MATRIX
Solidification	Aqueous Liquids
	Inorganic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant

FACILITY: Pondcrete/Saltcrete Reprocessing Facility: 750PAD

SYSTEM: 00016, Pondcrete/Saltcrete Reprocessing Fac.: 750PAD

CONTACT: Bob Griffis 303-966-4934

System Capacity	DESIGN	PERMIT
M3/YR	0	0

ADS NUMBER:

STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	/ /	/ /

OTHER INFORMATION

Design capacity = 6,608 tons/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Facility exists and is planned for future use, year to be determined. System also reprocesses previously solidified pondcrete and saltcrete.

Designed to meet LDR requirements but testing of final waste form indicates does not meet LDR requirements.

Waste codes: D006B, F001, F002, F003, F005A, F006, F007, and F009.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

Permit modification. Some system refurbishment and upgrades.

OTHER PERMIT LIMITATIONS & COMMENTS

No current schedule to submit permit modification.

TECHNOLOGY	MATRIX
Solidification	Inorganic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Rocky Flats Plant				
FACILITY:	Pondcrete/Saltcrete Reprocessing Facility: 904PAD				
SYSTEM:	00017, Pondcrete/Saltcrete Reprocessing Fac.: 904PAD		M3/YR	0	0
CONTACT:	Bob Griffis	303-966-4934			
				System Capacity	

ADS NUMBER:

STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	/ /	/ /

OTHER INFORMATION

Design capacity = 3,312 tons/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Facility exists and is planned for future use, year to be determined. System also reprocesses previously solidified pondcrete and saltcrete.

Designed to meet LDR requirements but testing of final waste form indicates does not meet LDR requirements.

Waste codes: D006B, F001, F002, F003, F005A, F006, F007, and F009.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

Permit modification. Some system refurbishment and upgrades.

OTHER PERMIT LIMITATIONS & COMMENTS

No current schedule to submit permit modification.

TECHNOLOGY	MATRIX
Solidification	Inorganic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant
FACILITY: Size Reduction Vault: Building 776
SYSTEM: 00012, Size Reduction Vault: Building 776
CONTACT: Bob Griffis 303-966-4934

	DESIGN	PERMIT
M3/YR	0	0

System Capacity

ADS NUMBER: 3821
STATUS: Existing Operating

PERMIT [Other UNIT of MEASURE]: .44 tons/hr

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	11/02/89	/ /

OTHER INFORMATION

Design capacity = 704 tons/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

This is a currently operating treatment system. Waste streams listed include Inorganic Debris with toxic organics and metals without mercury contamination; Inorganic Debris with toxic organic contaminants; and Elemental Lead with toxic metals without mercury contaminants.

Waste codes: D001F, D002C, D003A, D003E, D005, D006B, D007, D008B, D008C, F001, F002, and F005A.

OTHER PERMIT LIMITATIONS & COMMENTS

Permit prohibits receipt of offsite waste without CDH Permission (Class 1 modification). Permit may need to be modified for all waste codes listed above.

TECHNOLOGY	MATRIX
Size Reduction	Organic Debris
	Inorganic Debris
	Elemental Lead

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant
FACILITY: Solidified Bypass Sludge Treatment
SYSTEM: 00342, Solidified Bypass Sludge Treatment
CONTACT: Scott Miya 303-273-6027

ADS NUMBER: 3822
STATUS: Planned Unapproved

	DESIGN	PERMIT
M3/YR	0	0

System Capacity

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	Y	Y	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	/ /	/ /

OTHER INFORMATION

Design capacity to be determined.
Plan date operation - FY06.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Solidied Bypass Sludge Treatment is System #2 in the CTMP Implementation Model. Line Item Year FY97. The Solidified Bypass Sludge Treatment System (CTMP System 2) technologies for immobilization are not yet determined. Immobilization will be completed via microwave solidification or polymer solidification or cementation.

Waste codes: D006B, D008B, F001, F002, and F005A.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

Specific technology for immobilization has not yet been determined. Candidate technologies for immobilization are microwave solidification, polymer solidification, and cementation.

OTHER PERMIT LIMITATIONS & COMMENTS

Part B to be applied for upon completion of Title I engineering (scheduled 8/97).

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

LLM Solidified Bypass Sludge Treatment System is a proposed treatment facility under the CTMP. CTMP is an enforceable plan per compliance agreement between EPA and DOE, the LDR FFCA II.

TECHNOLOGY	MATRIX
Immobilization	Inorganic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant
FACILITY: Solvent Contaminated Waste System
SYSTEM: 00340, Solvent Contaminated Waste System
CONTACT: Frank Humbert 303-273-6160

ADS NUMBER: 3822
STATUS: Planned Unapproved

	DESIGN	PERMIT
M3/YR	0	0

System Capacity

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	State	/ /	/ /
CAA	None	EPA	/ /	/ /

OTHER INFORMATION

System 1A - Thermal (TDD 3822.F17). System 1B - Non-Thermal.

Design capacity is to be determined.

For both systems, excess chemicals, PCB solids, and cutoff sludge fall under the "multiple" matrix.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Solvent Contaminated Waste System - Thermal is Treatment System 1A in the CTMP Implementation Model. Line Item Year is FY97. The Solvent Contaminated Waste Treatment System (CTMP System 1A) technologies for thermal destruction and immobilization are yet to be determined. Destruction will be completed via a fluidized bed unit or controlled air incinerator or plasma arc furnace, and immobilization will be completed via microwave solidification or polymer solidification of cementation.

Waste codes: D001A, D001B, D001E, D001F, D002A, D002B, D002C, D003A, D003B, D003D, D003E, D004, D005, D006B, D007, D008, D008B, D009A, D009B, D009C, D009D, D010, D011, D038, D040, F001, F002, F003, F005A, F006, F009, P015, P029, P074, P087, P098, P104, P106, P112, and U123.

Solvent Contaminated Waste System - Non-Thermal is Treatment System 1B in the CTMP Implementation Model. Line Item Year is FY99. The Solvent Contaminated Waste Treatment System (CTMP System 1B) technologies for non-thermal destruction and immobilization are yet to be determined. Destruction will be completed via UV oxidation or mediated electrochemical oxidation or biodegradation or catalytic oxidation or supercritical water oxidation or chemical oxidation (alkaline chlorination) or surface organics removal, and immobilization will be completed via microwave solidification or polymer solidification or cementation.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM

System 1A - Fluidized bed incineration technology undergoing cold surrogate testing at a full scale test incinerator in FY94.

System 1B - Alternatives to incineration technologies undergoing cold surrogate testing in FY94: Mediated Electrochemical Oxidation; Supercritical Water Oxidation; Catalytic Wet Chemical Oxidation; and Packed Bed Reactor/Silent Discharge Plasma.

OTHER PERMIT LIMITATIONS & COMMENTS

Permit still to be submitted. (System 1A - Scheduled 1/97). (System 1B - Part B permit modification submittal scheduled 2/2003).

System 1B would be constructed if System 1A is not selected.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Proposed facility is under the CTMP. The CTMP is an enforceable plan per compliance agreement between EPA and DOE, the LDR FFCA II.

TECHNOLOGY	MATRIX
Non-Thermal	Organic Liquids
	Aqueous Liquids
	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Cemented Solids
	Inorganic Debris
	Heterogeneous Debris
	Other - Multiple
Thermal Destruction	Organic Liquids
	Aqueous Liquids
	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Cemented Solids
	Inorganic Debris
	Heterogeneous Debris
	Other - Multiple

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Rocky Flats Plant				
FACILITY:	Supercompaction & Repackaging Fac.: Bldg 776				
SYSTEM:	00019, Supercompaction & Repackaging Fac.: Bldg 776		M3/YR	949	0
CONTACT:	Bob Griffis	303-966-4934			

System Capacity

ADS NUMBER: 3821

PERMIT [Other UNIT of MEASURE]: .45 tons/hour

STATUS: Existing Operating

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	N	N	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	State	/ /	/ /

OTHER INFORMATION

Waste streams are from the inorganic debris matrix contaminated with toxic organics.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Waste codes: F001, F002, and F005A.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

Hot test complete. MTRU - okay to start. MLLW - waiting to receive interim status.

TECHNOLOGY	MATRIX
Compaction	Organic Debris
	Inorganic Debris

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Rocky Flats Plant
FACILITY: Surface Organic Removal
SYSTEM: 00344, Leaded Gloves, and Bulk Lead Treatment
CONTACT: Lee Lucero 303-966-5667

System Capacity	DESIGN	PERMIT
M3/YR	100	0

ADS NUMBER: 3822
STATUS: Planned Unapproved

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	Y	Y	Y	Y

OTHER INFORMATION
System 5 of the CTMP.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Line Item Year is FY97. The Surface Organics Removal Treatment System (CTMP System 5) technologies for separation and immobilization are yet to be determined. Separation will be achieved via hot nitrogen stripping or volatilization/steam cleaning, supercritical CO2 extraction, or low temperature thermal stripping. Immobilization will be achieved via polymer solidification and/or cementation.

The multiple matrix includes PCB solids, cut off sludge. EPA codes: D001A, D001F, D002, D003A, F001, F002, F003, F005A, D004, D005, D006B, D007, D008B, D008C, D009, D010, and D011.

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Separation and immobilization technologies to be determined. Cold surrogate testing of all technologies proceeding in FY94, with hot bench scale testing and/or TSE in FY95.

OTHER PERMIT LIMITATIONS & COMMENTS
Permit application to be submitted 7/98.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Proposed facility is under the CTMP. CTMP is an enforceable plan per compliance agreement between EPA and DOE, the LDR FFCA II.

TECHNOLOGY	MATRIX
Immobilization	Inorganic Sludges/Particulates
	Cemented Solids
	Inorganic Debris
	Heterogeneous Debris
	Elemental Lead
	Other - Multiple
Separation	Inorganic Sludges/Particulates
	Cemented Solids
	Inorganic Debris
	Heterogeneous Debris
	Elemental Lead
	Other - Multiple

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Sandia National Lab - New Mexico
FACILITY: Radioactive & Mixed Waste Management Facility
SYSTEM: 00213, Radioactive & Mixed Waste Management Facility
CONTACT: Mona Williams 505-845-5405

System Capacity	DESIGN	PERMIT
M3/YR	1	0

ADS NUMBER: 1133
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	CH	Y	N	Y	Y	Y	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	NMED	09/07/90	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

FONSI was just received. Building is complete. Some upgrades and modifications are being made. FY95 start date is possible depending on start-up requirements. The equipment for the intended treatment has not been purchased yet.

This is primarily a repackaging, characterizing, type facility. Very little treatment is going to occur. The treatments listed in their "Draft" Part B application are: Compaction, Shredding & Bailing, Solidification and Stabilization of liquid waste (Bench Scale), Decontamination and waste segregation, pH neutralization (Bench Scale) and Packaging.

REQUIREMENTS FOR USE OF EXISTING SYSTEMS

Facility upgrades, staffing/training, safety documentation, permit modification, equipment procurement.

OTHER PERMIT LIMITATIONS & COMMENTS

Will not treat: HLW, Compressed Gases, RH Waste, Explosives/Pyrotechnics.
RCRA permit renewal is under modification.

TECHNOLOGY	MATRIX
Compaction	Aqueous Liquids
Decontamination	Batteries (Lead Acid, Cadmium)
Neutralization	Cemented Solids
Solidification	Elemental Lead
Stabilization	Inorganic Sludges/Particulates
	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Inorganic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site
FACILITY: Consolidated Incineration Facility
SYSTEM: 00143, CIF Ashcrete
CONTACT: D. Salem 803-557-7222

	DESIGN	PERMIT
M3/YR	0	0

System Capacity

ADS NUMBER:
STATUS: Planned Approved
KEY DECISION STATUS: KD-3 DATE STATUS ACHIEVED: 12/01/92 CONSTRUCTION COMPLETION DATE: 03/95

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	RH	Y	Y	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Final	SCDHEC/EPA	09/30/92	/ /

OTHER INFORMATION
Design capacity = 1,000 drums/year.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
Construction is 22 percent complete.
OTHER PERMIT LIMITATIONS & COMMENTS
Permit restricts capacity to onsite needs only.
The CIF Ashcrete system is under a RCRA permit as part of the incineration system. The permit allows the CIF Ashcrete system to receive only ash from the incinerator and ash quench liquid for treatment. Therefore, many of the matrices listed below are not appropriate for the CIF Ashcrete system.
RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Included in LDR FFCA between DOE and EPA. CIF milestones are: (1) submit quarterly construction reports to EPA; (2) notify EPA 90 days prior to a trial burn & processing of waste; (3) submit semi-annual operational status reports to EPA; (4) begin production runs of LDR waste within 39 months of the effective date of the CIF RCRA permit; and (5) within 90 days of start of production runs, propose to EPA annual waste processing rate milestones & completion date for processing of LDR waste.
Per agreement between EPA, DOE, & SCDHEC, the LDR FFCA will be amended by Nov. 30, 1993 to allow for development of a strategic solid waste plan to support the FFCAct process. At this time, CIF schedule will not be modified. However, any changes in funding or strategy may impact CIF schedule contained in LDR FFCA.

TECHNOLOGY	MATRIX
Stabilization	Aqueous Liquids
	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Cemented Solids
	Inorganic Debris
	Heterogeneous Debris
	Soil with <50% Debris
	Soils
	Beryllium Dust
	Inorganic Solids
	Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site
FACILITY: Consolidated Incineration Facility (CIF)
SYSTEM: 00531, CIF Blowdown Treatment System
CONTACT: D. Salem 803-557-7222

ADS NUMBER:
STATUS: Planned Unapproved

	DESIGN	PERMIT
M3/YR	0	0

System Capacity

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	SCDHEC/EPA	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, UNAPPROVED SYSTEM
Vendor contracts for blowdown treatment were awarded on April 5, 1993.

OTHER PERMIT LIMITATIONS & COMMENTS
Contract activity - terms of contract limit capacity to SRS waste.

TECHNOLOGY	MATRIX
Stabilization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site
FACILITY: Consolidated Incineration Facility
SYSTEM: 00361, CIF Incinerator - Liquid Feed System
CONTACT: D. Salem 803-557-7222

	DESIGN	PERMIT
M3/YR	8000000	6500

System Capacity

ADS NUMBER:
STATUS: Planned Approved
KEY DECISION STATUS: KD-3 DATE STATUS ACHIEVED: 12/01/92 CONSTRUCTION COMPLETION DATE: 03/95

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	Y	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Final	SCDHEC/EPA	09/30/92	/ /

OTHER INFORMATION
Design capacity (liquid) = 4.5 million kg/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Facility operates under a RCRA Part B permit. Waste generation and treatment covered under the Land Disposal Restriction Federal Facility Complaince Agreement. New wastes must be listed with the EPA.

Permit has BTU limits and flow rate limits. BTU limits for high heat value liquids waste = 7,500 to 20,000 BTU/lb. Flow rate limit = 687 lbs/hr. BTU limits for low heat value liquid waste = 0 - 7,000 btu/lbs. Flow rate limit = 950 lbs/hr. There are restrictions on receipt of heavy metals. Permit prohibits acceptance of off-site waste.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
Construction is 22 percent complete.

OTHER PERMIT LIMITATIONS & COMMENTS
Permit restricts capacity to onsite needs only.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Included in LDR FFCA between DOE and EPA. CIF milestones are: (1) submit quarterly construction reports to EPA; (2) notify EPA 90 days prior to a trial burn & processing of waste; (3) submit semi-annual operational status reports to EPA; (4) begin production runs of LDR waste within 39 months of the effective date of the CIF RCRA permit; and (5) within 90 days of start of production runs, propose to EPA annual waste processing rate milestones & completion date for processing of LDR waste.

Per agreement between EPA, DOE & SCDHEC, the LDR FFCA will be amended by Nov. 30, 1993 to allow for development of a strategic solid waste plan to support the FFCAct process. At this time, CIF schedule will not be modified. However, any changes in funding or strategy may impact CIF schedule contained in LDR FFCA.

TECHNOLOGY	MATRIX
Incineration	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site

FACILITY: Consolidated Incineration Facility

SYSTEM: 00142, CIF Incinerator - Solid Feed System

CONTACT: D. Salem 803-557-7222

		DESIGN	PERMIT
	M3/YR	0	100424

System Capacity

PERMIT [Other UNIT of MEASURE]: 2025 pounds/hour

ADS NUMBER:

STATUS: Planned Approved

KEY DECISION STATUS: KD-3 DATE STATUS ACHIEVED: 12/01/92 CONSTRUCTION COMPLETION DATE: 03/95

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	Y	N	Y

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Final	SCDHEC/EPA	09/30/92	/ /

OTHER INFORMATION

Design capacity (solid) = 4 million kg/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Facility operates under RCRA Part B permit. Waste generation and treatment covered under the Land Disposal Restriction Federal Facility Compliance Agreement. New wastes must be listed with the EPA.

Permit has BTU limits and flow rate limits. Permit limits for solid waste feed system - flow rate = 687 lbs/hr. There are restrictions on receipt of heavy metals. Container requirements limit containers to cardboard boxes 21 inches square and between 25 and 75 lbs. Permit prohibits acceptance of off-site waste.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

Construction is 22 percent complete.

OTHER PERMIT LIMITATIONS & COMMENTS

Permit restricts capacity to onsite needs only.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Included in LDR FFCA between DOE and EPA. CIF milestones are: (1) submit quarterly construction reports to EPA; (2) notify EPA 90 days prior to a trial burn & processing of waste; (3) submit semi-annual operational status reports to EPA; (4) begin production runs of LDR waste within 39 months of the effective date of the CIF RCRA permit; and (5) within 90 days of start of production runs, propose to EPA annual waste processing rate milestones & completion date for processing of LDR waste.

Per agreement between EPA, DOE & SCDHEC, the LDR FFCA will be amended by Nov. 30, 1993 to allow for development of a strategic solid waste plan to support the FFCAct process. At this time, CIF schedule will not be modified. However, any changes in funding or strategy may impact CIF schedule contained in LDR FFCA.

TECHNOLOGY	MATRIX
Incineration	Organic Sludges/Particulates
	Inorganic Sludges/Particulates
	Organic Debris
	Reactive Metals

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site
FACILITY: DWPF Vitrification Plant
SYSTEM: 00141, DWPF Vitrification Plant
CONTACT: K. Z. Wolf 803-557-1082

ADS NUMBER:
STATUS: Planned Approved

	DESIGN	PERMIT
M3/YR	18570	4542

System Capacity

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
Y	N	N	N	RH	Y	Y	Y	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
CWA-SCPCA	Final	State	08/17/92	/ /

OTHER INFORMATION
DWPF testing will be conducted through 1995.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Facility will treat waste under a state industrial wastewater permit. Waste generation and treatment covered under the Land Disposal Restriction Federal Facility Compliance Agreement. New waste must be listed with the EPA.

No organics can be received into the melter.
REQUIREMENTS FOR USE OF EXISTING SYSTEMS
DWPF is undergoing chemical runs testing. Need completion of startup testing, completion of planned modifications, and completion of ORR (operational readiness review) prior to treating MW.
OTHER PERMIT LIMITATIONS & COMMENTS
Permit to operate was issued 08-17-92. Operating Permit No. 16783.
RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
FFCA Startup Date.
FFA Waste Removal Schedule.
Per agreement between EPA, DOE, and SCDHEC, the LDR FFCA will be amended by November 30, 1993 to allow for development of a strategic solid waste plan to support the FFCAct processes. At this time, DWPF schedule will be modified to support a revised startup date.

TECHNOLOGY	MATRIX
Vitrification	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site
FACILITY: F/H Area Effluent Treatment Facility
SYSTEM: 00300, F/H Area Effluent Treatment Facility
CONTACT: T. Syfert 803-557-0320

ADS NUMBER:
STATUS: Existing Operating

System Capacity	DESIGN	PERMIT
M3/YR	600000	400000

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	RH	Y	Y	Y	Y	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
CWA	Final	State	09/30/88	/ /
SCPCA	Final	State	09/30/88	/ /
NPDES	Final	State	09/30/88	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Permit number 12870. Facility operates under NPDES permit. Permit limits discharge to 400,000 m3/yr. Present discharge 16,000 m3/yr.

Facility cannot accept PCBs or fissile material under permit conditions. Metals treated include Cr, Hg, Pb, Zn & Cu plus radionuclides H3, Cr51, Co58, Co60, Zn65, Sr89, Sr90, Y90, Ru106, Sb124, Sb125, I131, Cs134, Cs137, Ce141, Y91, Nb95, Zr95, Ru103, Ce144, Pr144, Pm147, Pu239. Facility is capable of accepting influent wastewaters via tankers or drums. New influents require special permits and approvals from the state.

TECHNOLOGY	MATRIX
Carbon Adsorption	Aqueous Liquids
Chemical Precipitation	Aqueous Liquids
Evaporation	Aqueous Liquids
Filtration	Aqueous Liquids
Ion Exchange	Aqueous Liquids
Mercury Absorption	Aqueous Liquids
Neutralization	Aqueous Liquids
Reverse Osmosis	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site
FACILITY: Hazardous Waste/Mixed Waste Disposal Facility
SYSTEM: 00147, Acid Leaching and Chemical Precipitation Unit
CONTACT: J. Damelio 803-725-6479

System Capacity	DESIGN	PERMIT
M3/YR	1432	1432

ADS NUMBER:
STATUS: Planned Approved

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	SCDHEC/EPA	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Proposed facility. RCRA permit application not yet submitted. Project rescoping has required DOE-HQ review and approval. NEPA-EA in draft. However, EIS requirement is under review. If it is determined that an EIS is needed, a significant delay will occur.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

Due to project rescoping (necessary to align HW/MW TB processes with LDR "third third" rule promulgation), a baseline change proposal has been submitted to DOE-HQ to change cost, schedule & scope. Until finalized, the project schedule cannot be determined. At such time, when a defined path forward is available, KD status will be determined.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Included as part of the LDR FFCA between DOE & EPA. Current milestone requires project schedule submittal for the HW/MW TB to the EPA by 11/30/93. As agreed upon in a Sept. 13, 1993 meeting with the EPA, DOE and the State, the LDR FFCA will be amended before 11/30/93. The HW/MW TB milestone will be replaced with milestones directed at the development of a strategic plan which will support the FFCAct process.

TECHNOLOGY	MATRIX
Acid Leaching	Inorganic Debris
Chemical Precipitation	Inorganic Debris

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site
FACILITY: Hazardous Waste/Mixed Waste Disposal Facility
SYSTEM: 00144, Macroencapsulation Unit - SRS
CONTACT: J. Damelio 803-725-6479

ADS NUMBER:
STATUS: Planned Approved

System Capacity	DESIGN	PERMIT
M3/YR	73	73

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	SCDHEC/EPA	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Proposed facility. RCRA permit application not yet submitted. Project rescoping has required DOE-HQ review and approval. NEPA-EA in draft. However, EIS requirement is under review. If it is determined that an EIS is needed, a significant delay will occur.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

Due to project rescoping (necessary to align HW/MW TB processes with LDR "third third" rule promulgation), a baseline change proposal has been submitted to DOE-HQ to change cost, schedule & scope. Until finalized, the project schedule cannot be determined. At such time, when a defined path forward is available, KD status will be determined.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Included as part of the LDR FFCA between DOE & EPA. Current milestone requires project schedule submittal for the HW/MW TB to the EPA by 11/30/93. As agreed upon in a Sept. 13, 1993 meeting with the EPA, DOE and the State, the LDR FFCA will be amended before 11/30/93. The HW/MW TB milestone will be replaced with milestones directed at the development of a strategic plan which will support the FFCAct process.

TECHNOLOGY	MATRIX
Macroencapsulation	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Elemental Lead
	Inorganic Solids
	Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site
FACILITY: Hazardous Waste/Mixed Waste Disposal Facility
SYSTEM: 00146, Mercury Amalgamation Unit
CONTACT: J. Damelio 803-725-6479

ADS NUMBER:
STATUS: Planned Approved

System Capacity	DESIGN	PERMIT
M3/YR	1	1

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	SCDHEC/EPA	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Proposed facility. RCRA permit application not yet submitted. Project rescoping has required DOE-HQ review and approval.

NEPA-EA in draft. However, EIS requirement is under review. If it is determined that an EIS is needed, a significant delay will occur.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

Due to project rescoping (necessary to align HW/MW TB processes with LDR "third third" rule promulgation), a baseline change proposal has been submitted to DOE-HQ to change cost, schedule & scope. Until finalized, the project schedule cannot be determined. At such time, when a defined path forward is available, KD status will be determined.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Included as part of the LDR FFCA between DOE & EPA. Current milestone requires project schedule submittal for the HW/MW TB to the EPA by 11/30/93. As agreed upon in a Sept. 13, 1993 meeting with the EPA, DOE and the State, the LDR FFCA will be amended before 11/30/93. THe HW/MW TB milestone will be replaced with milestones directed at the development of a strategic plan which will support the FFCAct process.

TECHNOLOGY
Amalgamation

MATRIX
Inorganic Debris
Liquid Mercury

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Savannah River Site				
FACILITY:	Hazardous Waste/Mixed Waste Disposal Facility				
SYSTEM:	00145, Mercury Roasting/Retorting And Recovery Unit		M3/YR	17	17
CONTACT:	J. Damelio	803-725-6479			
			System Capacity		

ADS NUMBER:

STATUS: Planned Approved

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	SCDHEC/EPA	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Proposed facility. RCRA permit application not yet submitted. Project rescoping has required DOE-HQ review and approval.

NEPA-EA in draft. However, EIS requirement is under review. If it is determined that an EIS is needed, a significant delay will occur.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

Due to project rescoping (necessary to align HW/MW TB processes with LDR "third third" rule promulgation), a baseline change proposal has been submitted to DOE-HQ to change cost, schedule & scope. Until finalized, the project schedule cannot be determined. At such time, when a defined path forward is available, KD status will be determined.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Included as part of the LDR FFCA between DOE & EPA. Current milestone requires project schedule submittal for the HW/MW TB to the EPA by 11/30/93. As agreed upon in a Sept. 13, 1993 meeting with the EPA, DOE and the State, the LDR FFCA will be amended before 11/30/93. The HW/MW TB milestone will be replaced with milestones directed at the development of a strategic plan which will support the FFCAct process.

TECHNOLOGY	MATRIX
Hg Roasting/Retorting	Inorganic Sludges/Particulates
	Inorganic Debris
	Soils

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site
FACILITY: Hazardous Waste/Mixed Waste Disposal Facility
SYSTEM: 00151, Size Reduction
CONTACT: J. Damelio 803-725-6479

ADS NUMBER:
STATUS: Planned Approved

	DESIGN	PERMIT
M3/YR	2398	2398

System Capacity

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	SCDHEC/EPA	/ /	/ /

OTHER INFORMATION

Normal and operating capacity is 500 m3/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Proposed facility. RCRA permit application not yet submitted. Project rescoping has required DOE-HQ review and approval.

NEPA-EA in draft. However, EIS requirement is under review. If it is determined that an EIS is needed,a significant delay will occur.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

Due to project rescoping (necessary to align HW/MW TB processes with LDR "third third" rule promulgation), a baseline change proposal has been submitted to DOE-HQ to change cost, schedule & scope. Until finalized, the project schedule cannot be determined. At such time, when a defined path forward is available, KD status will be determined.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Included as part of the LDR FFCA between DOE & EPA. Current milestone requires project schedule submittal for the HW/MW TB to the EPA by 11/30/93. As agreed upon in a Sept. 13, 1993 meeting with the EPA, DOE & the State, the LDR FFCA will be amended before 11/30/93. The HW/MW TB milestone will be replaced with milestones directed at the development of a strategic plan which will support the FFCAct process.

TECHNOLOGY	MATRIX
Compaction	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
Shredding	Inorganic Debris
	Heterogeneous Debris
Size Reduction	Cemented Solids
	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
Sorting	Organic Debris
	Inorganic Debris
	Heterogeneous Debris

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site
FACILITY: Hazardous Waste/Mixed Waste Disposal Facility
SYSTEM: 00149, Soil Washing
CONTACT: J. Damelio 803-725-6479

ADS NUMBER:
STATUS: Planned Approved

System Capacity		DESIGN	PERMIT
	M3/YR	340	340

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	None	SCDHEC/EPA	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Proposed facility. RCRA permit application not yet submitted. Project rescoping has required DOE-HQ review and approval.

NEPA-EA in draft. However, EIS requirement is under review. If it is determined that an EIS is needed, a significant delay will occur.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

Due to project rescoping (necessary to align HW/MW TB processes with LDR "third third" rule promulgation), a baseline change proposal has been submitted to DOE-HQ to change cost, schedule & scope. Until finalized, the project schedule cannot be determined. At such time, when a defined path forward is available, KD status will be determined.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Included as part of the LDR FFCA between DOE & EPA. Current milestone requires project schedule submittal for the HW/MW TB to the EPA by 11/30/93. As agreed upon in a Sept. 13, 1993 meeting with the EPA, DOE & the State, the LDR FFCA will be amended before 11/30/93. The HW/MW TB milestone will be replaced with milestones directed at the development of a strategic plan which will support the FFCAct process.

TECHNOLOGY	MATRIX
Soil Washing	Soil with <50% Debris
	Soils

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site
FACILITY: Hazardous Waste/Mixed Waste Disposal Facility
SYSTEM: 00148, Stabilization/Solidification Unit
CONTACT: J. Damelio 803-725-6479

ADS NUMBER:
STATUS: Planned Approved

System Capacity

	DESIGN	PERMIT
M3/YR	484	484

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	SCDHED/EPA	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Proposed facility. RCRA permit application not yet submitted. Project rescoping has required DOE-HQ review and approval.

NEPA-EA in draft. However, EIS requirement is under review. If it is determined that an EIS is needed, a significant delay will occur.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

Due to project rescoping (necessary to align HW/MW TB processes with LDR "third third" rule promulgation), a baseline change proposal has been submitted to DOE-HQ to change cost, schedule & scope. Until finalized, the project schedule cannot be determined. At such time, when a defined path forward is available, KD status will be determined.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Included as part of the LDR FFCA between DOE & EPA. Current milestone requires project schedule submittal for the HW/MW TB to the EPA by 11-30-93. As agreed upon in a Sept. 13, 1993 meeting with the EPA, DOE & the State, the LDR FFCA will be amended before 11-30-93. The HW/MW TB milestone will be replaced with milestones directed at the development of a strategic plan which will support the FFCAct process.

TECHNOLOGY	MATRIX
Stabilization	Aqueous Liquids
	Inorganic Sludges/Particulates
	Inorganic Debris

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site

FACILITY: M-Area Liquid Effluent Treatment Facility

SYSTEM: 00027, M-Area Liquid Effluent Treatment Facility

CONTACT: J. B. Pickett 803-725-3838

ADS NUMBER:

STATUS: Existing Operating

	DESIGN	PERMIT
M3/YR	480	0

System Capacity

PERMIT [Other UNIT of MEASURE]: .038 million gal/d

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	Y	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Part A App	SCDHEC	01/01/86	/ /
RCRA	Part B App	SCDHEC	07/26/88	09/01/92
NPDES	Final	SCDHEC	07/03/85	/ /

OTHER INFORMATION

An end-of-pipe industrial wastewater treatment facility. The facility is a close-coupled system which can accept direct transfers of wastewater from piped laboratories or permitted transfer containers. No radioactive materials other than uranium are included in the permit.

The LETF wastewater permit limits the chemical constituents to those used in the M-Area aluminum forming and metal plating operations. The primary constituents are Ni, Al, and depleted U.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Facility operates under a state industrial wastewater permit. A portion of the facility, the M-Area Process Waste Interim Treatment/Storage Facility, operates under RCRA Interim Status. It is a part of the Land Disposal Restriction Federal Facility Compliance Agreement. Any new waste must be listed with the SCDHEC (NPDES permit modification) & EPA (LDR FFCA modification).

OTHER PERMIT LIMITATIONS & COMMENTS

The wastewater treatment system is permitted for 0.038 million gallons/day (about 26 gallons/minute). The waste storage tanks (RCRA) have a total capacity of about 8330 m3 (2.2 million gallons).

The wastewater permit specifies that only those effluents generated in M-Area, from facilities that are close-coupled to the LETF may be treated. Any other materials would require a modification to the wastewater permit, the interim status RCRA Part A, and the RCRA Part B (submitted).

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

The RCRA storage tanks are included in the LDR FFCA with EPA Region IV. The effective date was 3-13-91. It was modified 4-24-92. It is between DOE-SR & EPA. The key milestones are: (1) submit all permits needed to treat the stored wastes by 6/30/94; (2) start treatment of the LDR wastes within 180 days of permit approval.

TECHNOLOGY	MATRIX
Chemical Precipitation	Aqueous Liquids
Filtration	Aqueous Liquids
Flocculation	Aqueous Liquids
Neutralization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site
FACILITY: M-Area Vendor Treatment
SYSTEM: 00150, M-Area Vendor Treatment
CONTACT: J. B. Pickett 803-725-3838

	DESIGN	PERMIT
M3/YR	2765	0

System Capacity

ADS NUMBER:
STATUS: Planned Approved
KEY DECISION STATUS: KD-0 DATE STATUS ACHIEVED: / / CONSTRUCTION COMPLETION DATE: 06/95

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	N	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
NPDES	Mod App	SCDHEC	06/30/94	/ /
RCRA	None	SCDHEC	06/30/94	/ /

OTHER INFORMATION
The design capacity will be 730,000 gallons treated in one year. The treatment schedule will provide for a two year period, to allow for contingencies.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Proposed facility to operate under NPDES permit. Contract for vendor to be awarded in calendar year 1993. Initial contract and permits will be limited to M-Area waste only.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
Only the funds for "Title II equivalent" design have been approved.
KD-0 completed - final specifications transmitted 6-7-93. Final design (Title II equivalent) scheduled to start when contract awarded. Now goaled for 12/93. FY 94 funding approved.
Permit applications to be submitted by 6-30-94.
Actual operation contingent on FY 95, 96, & 97 funding approval.

OTHER PERMIT LIMITATIONS & COMMENTS
The vendor treatment system will be permitted for 730,000 gallons/yr. The modification to the wastewater permit will specify only those wastes stored in the M-Area, from electroplating/aluminum forming operations. No other wastes will be accepted. The storage pad for the final stabilized waste will accept only the M-Area stabilized wastes.

A RCRA permit may be necessary for this process. An industrial wastewater permit will be applied for in parallel with NPDES permit. Untreated and stabilized sludges will be stored in RCRA units.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
LDR FFCA between DOE-SR & EPA, Region IV modified 4-24-92. Key commitments: (1) submit treatment schedule within 90 days of contract award; (2) submit all permits by 6-30-94; and (3) start treatment within 180 days of permit(s) approvals.

TECHNOLOGY	MATRIX
Stabilization	Aqueous Liquids
Vitrification	Inorganic Sludges/Particulates

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site

FACILITY: SRL Ion Exchange Treatment Probe

SYSTEM: 00116, High Activity

CONTACT: M. Spearman 803-725-8802

ADS NUMBER:

STATUS: Existing Operating

	DESIGN	PERMIT
M3/YR	210	210

System Capacity

PERMIT [Other UNIT of MEASURE]: 55,482 gal/yr

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	RH	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	SCDHEC	/ /	/ /

OTHER INFORMATION

The SRL (SRTC) Ion Exchange Probes for the High-activity tanks were installed in 1991. The waste that leaves the SRTC MWST is not usually hazardous, and therefore, treatment is generally not necessary. The RCRA Part A permit limits the throughput of the MWST treatment processes (High-activity and Low-activity combined) to 14,400 gallons/day (5,256,000 gallons/yr). The RCRA Part A permit also limits the total annual quantity of waste that is permitted to pass through the SRTC MWST to 457,299 gallons/yr (1,714 m3/yr). Because this number is lower, it limits the amount of waste that the Ion Exchange Probes can treat annually. From this total annual quantity, the treatment and design capacity of the SRL (SRTC) Ion Exchange Treatment Probes is 55,482 gallons/yr (210 m3/yr) for the high-activity waste.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

High and low activity ion exchange probes operate under interim status. Waste treatment is covered by the Land Disposal Restriction Federal Facility Compliance Agreement. Any new waste stream must be listed with the EPA.

Facility is a closed system operating under a waste acceptance criteria which is tied into operating practices at Savannah River Technology Center (Savannah River Laboratory) where the waste is generated.

OTHER PERMIT LIMITATIONS & COMMENTS

Permit of facility that receives the discharge from the SRL tanks prohibits receipt of listed waste.

TECHNOLOGY	MATRIX
Ion Exchange	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site
FACILITY: SRL Ion Exchange Treatment Probe
SYSTEM: 00301, Low Activity
CONTACT: M. Spearman 803-725-8802

ADS NUMBER:
STATUS: Existing Operating

	DESIGN	PERMIT
M3/YR	1500	1500

System Capacity
PERMIT [Other UNIT of MEASURE]: 396,300 gal/yr

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	SCDHEC	/ /	/ /

OTHER INFORMATION

The SRL (SRTC) Ion Exchange Probes for the Low-activity tanks were installed in 1992. The waste that leaves the SRTC MWST is not usually hazardous, and therefore, treatment is generally not necessary. The RCRA Part A permit limits the throughput of the MWST treatment processes (High-activity and Low-activity combined) to 14,400 gallons/day (5,256,000 gallons/yr). The RCRA Part A permit also limits the total annual quanitity of waste that is permitted to pass through the SRTC MWST to 457,229 gallons/yr (1,714 m3/yr). Because this number is lower, it limits the amount of waste that the Ion Exchange Probes can treat annually. From this total annual quantity, the treatment and design capacity of the SRL (SRTC) Ion Exchange Treatment Probes is 396,300 gallons/yr (1,500 m3/yr) for the low-activity waste.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

High and low activity ion exchange probes operate under Interim Status. Waste treatment is covered by the Land Disposal Restriction Federal Facility Compliance Agreement. Any new waste stream must be listed with the EPA.

Facility is a closed system operating under a waste acceptance criteria which is tied into operating practices at Savannah River Technology Center (Savannah River Laboratory) where the waste is generated.

OTHER PERMIT LIMITATIONS & COMMENTS

Permit prohibits receipt of listed waste of the facility that receives the discharge from the SRL tanks.

TECHNOLOGY	MATRIX
Ion Exchange	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site
FACILITY: Transuranic Waste Facility
SYSTEM: 00152, Transuranic Waste Facility
CONTACT: B. A. Daugherty 803-725-6414

System Capacity	DESIGN	PERMIT
M3/YR	722	722

ADS NUMBER:
STATUS: Planned Approved

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	N	Y	Y	CH	Y	Y	Y	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Pending	EPA/SCDHEC	/ /	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Facility is in the planning stages. A RCRA permit application has not yet been submitted. NEPA-EA complete. However, evaluation is ongoing in regard to requirements for an EIS. A significant delay will be created if an EIS must be done.

Facility is designed to sort waste and repackage so that TRU waste destined for WIPP will meet the waste acceptance criteria. No actual treatment is performed.

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM

Pre-transition project - did not require KD approval.

Due to project cost escalation resulting from additional functional requirements, the DOE position not to perform treatment, and uncertainties associated with WIPP, the TWF has been split into 2 phases: Low Activity Tru Facility (LATF) and High Activity TRU Facility (HATF). Phase I is retrieval of TRU waste drums & LATF. Phase II is the HATF and is a separate line item. Retrieval is presently funded and will start Title I design in FY 94.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Included in the LDR FFCA between DOE and EPA. Current milestones are: (1) DOE-SR will retrieve & process TRU wastes (including LDR TRU wastes) and prepare that waste for certification & disposal at the WIPP; (2) DOE will submit a complete RCRA permit to SCDHEC by Nov. 30, 1993; (3) DOE-SR will begin construction of TWF within 90 days of the effective date of the permit; (4) DOE-SR will submit quarterly construction progress reports to EPA; (5) DOE-SR will notify EPA & SCDHEC 90 days prior to mixed waste processing; and (6) DOE-SR will begin preparing waste for shipment to WIPP within 60 months after the effective date of the RCRA permit.

As agreed upon in the Sept. 13, 1993 meeting with the EPA, DOE & the State, the LDR FFCA will be amended before 11/30/93. The TWF milestones will be replaced with milestones directed at the development of a strategic plan which will support the FFCAct process.

TECHNOLOGY	MATRIX
Repackaging	Organic Liquids
	Inorganic Sludges/Particulates
	Organic Debris
Sorting	Organic Liquids
	Inorganic Sludges/Particulates
	Organic Debris

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Savannah River Site
FACILITY: Z-Area Saltstone Facility
SYSTEM: 00120, Z-Area Saltstone Facility
CONTACT: K. Z. Wolf 803-557-1082

ADS NUMBER:
STATUS: Existing Operating

System Capacity	DESIGN	PERMIT
M3/YR	41000	41000

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	RH	Y	Y	N	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
CWA/SCPCA	Final	State	07/18/88	/ /

OTHER INFORMATION

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

Facility operates under a state industrial wastewater permit for the treatment process and an industrial solid waste permit for the disposal vaults. Facility and waste stream are included under the Land Disposal Restriction Federal Facility Compliance Agreement. New waste streams must be identified to EPA.

Facility is excluded from RCRA under the totally enclosed treatment facility exclusion. The exclusion was granted contingent to the facility accepting only waste from the H-Area tank farm via a pipeline.

OTHER PERMIT LIMITATIONS & COMMENTS

Permit Number 12683.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

FFCA waste removal schedule.
FFCA.

TECHNOLOGY	MATRIX
Stabilization	Aqueous Liquids
	Inorganic Debris

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Scientific Ecology Group - Oak Ridge, TN
FACILITY: Scientific Ecology Group - Oak Ridge, TN
SYSTEM: 00517, SEG Incinerator - Commercial
CONTACT: John Hess 615-220-1236

ADS NUMBER:
STATUS: Planned Approved

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	Y	Y	N	N

OTHER INFORMATION

Depending on dose rates/concentrations, waste streams containing transuranic alpha emitters could potentially be treated in this system. Some waste streams requiring Remote Handling also could potentially be treated in this system.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

To be determined during permitting process (1994/1995).

Radionuclides limitations are specified in our Tennessee Radioactive Materials Licenses. Limited isotopes: H-3 (limit in curies - 300.0); C-14 (limit in curies - 100.0); PO-210 (limit in curies - 10.0); RA-226 (limit in curies - 5.0); TH-232 (limit in curies 10.0); U-235 (limit of grams - 350.0); U-238 (limit in curies - 100.0); U-233 (limit of grams - 200.0); U-Other (limit in curies - 1.0); PU-238 (limit of grams - 200.0 < total Pu limit - 3.63 PU grams); PU-239; PU-240; PU-241; PU-242; AM-241 (limit in curies - 225.0); AT.NO. 3-83 (limit in curies - 360.0); AT.NO. 84-91 (limit in curies - 1.1); and AT.WT. >238 (limit in curies - 1.1). Additional limits may apply based on NESHAPS permit.

OTHER PERMIT LIMITATIONS & COMMENTS

This unit is not currently RCRA permitted. Part B application to be submitted First Quarter 1994.

TECHNOLOGY

Incineration

MATRIX

Organic Liquids
Aqueous Liquids
Organic Sludges/Particulates
Inorganic Sludges/Particulates
Organic Debris
Inorganic Debris
Heterogeneous Debris
Soil with <50% Debris
Soils
Lab Packs with Metals
Lab Packs without Metals
Inorganic Solids
Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: Scientific Ecology Group - Oak Ridge, TN
FACILITY: Scientific Ecology Group - Oak Ridge, TN
SYSTEM: 00515, SEG Stabilization - Commercial
CONTACT: John Hess 615-220-1236

ADS NUMBER:
STATUS: Existing Operating Commercial

System Capacity	DESIGN	PERMIT
M3/YR	0	0

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	N	CH	Y	N	N	N	N	N

OTHER INFORMATION

Depending on dose rates/concentrations, waste streams containing Transuranic alpha emitters could potentially be treated in this system. Some waste streams requiring Remote Handling could potentially be treated in this system.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

To be determined during process (in progress). Same as SEG Incinerator limits, except for NESHAPS limits which do not apply to this unit.

OTHER PERMIT LIMITATIONS & COMMENTS

Part B permit application currently under review.

TECHNOLOGY

Stabilization

MATRIX

Aqueous Liquids
Inorganic Sludges/Particulates
Inorganic Debris
Heterogeneous Debris
Soil with <50% Debris
Soils
Elemental Lead
Calcine Solids
Inorganic Solids

455

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

				DESIGN	PERMIT
SITE:	Scientific Ecology Group - Oak Ridge, TN				
FACILITY:	Scientific Ecology Group - Oak Ridge, TN				
SYSTEM:	00540, SEG Ultracompactor/TRUPress - Commercial		M3/YR	0	0
CONTACT:	John Hess	615-220-1236			

System Capacity

ADS NUMBER:

STATUS: Planned Approved

		-TRU-						RCRA CHARACTERISTICS		
HLW	LLW	TRU	ALPHA	HANDLING	METALS	MERCURY	ORGANICS	IGNITABLE	CORROSIVE	REACTIVE
N	Y	Y	Y	CH	Y	N	Y	N	N	N

OTHER INFORMATION

These units would be used primarily to reduce volumes awaiting available treatment capacity to meet LDR requirements.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

To be determined during permitting process (in progress).

Same as SEG Incinerator limits, except that NESHAPS limits do not apply to this unit.

These units would be used primarily to reduce volume awaiting available treatment capacity to meet LDR requirements.

TECHNOLOGY	MATRIX
Compaction	Organic Debris
	Inorganic Debris
	Heterogeneous Debris
	Soil with <50% Debris
	Soils
	Calcine Solids
	Inorganic Solids
	Organic Solids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: West Valley Demonstration Project
FACILITY: Integrated Radwaste Treatment System
SYSTEM: 00346, Integrated Radwaste Treatment System
CONTACT: Elizabeth Matthews 716-942-4930

ADS NUMBER:
STATUS: Existing Operating

		DESIGN	PERMIT
M3/YR		2305	2305

System Capacity
PERMIT [Other UNIT of MEASURE]: 2700 metric tons/y

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
Y	N	Y	Y	RH	Y	Y	N	N	N	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	NYSDEC	06/01/90	/ /
St. Water	SPDES	NYSDEC	/ /	09/01/90

OTHER INFORMATION

Chemical Precipitation Step Design Capacity = 2305 m3/yr.
Salts Dissolution Step Design Capacity = 2305 m3/yr.
Ion Exchange Step Design Capacity = 2123 m3/yr.
Evaporation Step Design Capacity = 8502 m3/yr.
Stabilization Step Design Capacity = 1842 m3/yr.

SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

System is operating under interim status.
The IRTS consists of four major treatment steps - (1) Sludge Mobilization and Wash; (2) Ion Exchange; (3) Evaporation; and (4) Cement Stabilization.
The waste stream is LLW when it reaches the Evaporation and Stabilization steps. These last two steps cannot accept HLW.
The final waste form must be < 100 nCi/gr alpha emitters (Stabilization).

OTHER PERMIT LIMITATIONS & COMMENTS

System throughput is limited to 2700 metric tons/yr in the Part A permit.
The system is operated by the DOE, but title to the system is held by NY State.

Other Permits:
NESHAP:(LWTS): approval to construct (modification) was issued 5-25-89: EPA; no renewal required.
NESHAP:(PVS): approval to construct was issued 10-05-87: EPA; no renewal required.
NESHAP:(01-14): approval to construct was issued 5-25-89: EPA; no renewal required.
State Air:(Cement Silo): certificate to operate issued 3-85; NYSDEC renewal 6-94.

RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER

Operation is subject to the conditions of the "WVDP Act" and "Cooperative Agreement" between the US DOE and NYS Energy Research and Development Authority.
The IRTS has been identified as a SWMU and a Hazardous Waste Treatment Facility in a RCRA 3008(h) consent order issued to the facility. It is part of an ongoing RCRA facility investigation.

TECHNOLOGY	MATRIX
Chemical Precipitation	Aqueous Liquids
Evaporation	Aqueous Liquids
Ion Exchange	Aqueous Liquids

Salts Dissolution	Aqueous Liquids
Stabilization	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: West Valley Demonstration Project
FACILITY: Liquid Pretreatment System
SYSTEM: 00555, Liquid Pretreatment System - 82
CONTACT: Elizabeth Matthews 716-942-4313

System Capacity	DESIGN	PERMIT
M3/YR	4731	4731

ADS NUMBER:
STATUS: Existing Could be used for mixed waste

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
N	Y	N	Y	CH	Y	N	Y	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
St. Water	SPDES	NYSDEC	01/01/81	09/30/90

OTHER INFORMATION
Construction complete, system in stand-by mode.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION
Not permitted to treat mixed wastes.
The facility can only accept trace organics and trace metals.
REQUIREMENTS FOR USE OF EXISTING SYSTEMS
Current waste stream treatment is permitted under the SPDES program and meet necessary RCRA requirements.
New waste streams would require SPDES permit modification, at a minimum.
OTHER PERMIT LIMITATIONS & COMMENTS
State Water permit was transferred in 1981 from previous owner. Renewal application is pending.

System designed to treat radiologically contaminated groundwater, which (to date) has not contained hazardous constituents. In order to treat additional waste streams, a SPDES modification would be necessary (at a minimum).
RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Operation is subject to the conditions of the "WVDP Act" and the "Cooperative Agreement" between the DOE and NYS Energy Research and Development Authority.

The LPS has been identified as a solid waste management unit in a RCRA 3008 (h) Consent Order issued to the facility and is part of an ongoing RCRA facility investigation.

TECHNOLOGY	MATRIX
Carbon Adsorption	Organic Liquids
	Aqueous Liquids
Filtration	Organic Liquids
	Aqueous Liquids
Separation	Organic Liquids
	Aqueous Liquids

INFORMATION SHEET FOR CANDIDATE TREATMENT SYSTEMS

SITE: West Valley Demonstration Project
FACILITY: Vitrification Facility
SYSTEM: 00212, Vitrification Facility
CONTACT: Elizabeth Matthews 716-942-4313

	DESIGN	PERMIT
M3/YR	83	83

System Capacity
PERMIT [Other UNIT of MEASURE]: 11 metric tons/yr

ADS NUMBER:
STATUS: Planned Approved
KEY DECISION STATUS: KD-4 DATE STATUS ACHIEVED: 10/01/82 CONSTRUCTION COMPLETION DATE: 10/95

HLW	LLW	TRU	TRU ALPHA	HANDLING	METALS	MERCURY	ORGANICS	RCRA CHARACTERISTICS IGNITABLE	CORROSIVE	REACTIVE
Y	N	Y	Y	RH	Y	Y	N	N	Y	N

PERMIT STATUS INFORMATION

REGULATION	PERMIT TYPE	REG AGENCY	DATE PERMIT ISSUED OR APPLICATION SUBMITTED	RENEWAL DATE
RCRA	Interim	NYSDEC	06/01/90	/ /
St. Water	SPDES	NYSDEC	01/01/81	09/01/90

OTHER INFORMATION
Facility is currently under construction.
Plan date operation - FY96.
SYSTEM ADMINISTRATIVE LIMITATIONS AND OTHER RELEVANT INFORMATION

STATUS / ACTIVITIES OF PLANNED, APPROVED SYSTEM
Construction and regulatory approvals are proceeding on schedule to be completed prior to initiating operations in FY 96.
OTHER PERMIT LIMITATIONS & COMMENTS
The State Water SPDES permit was transferred from the previous owner in 1981, and the 9-90 renewal application is pending.
System throughput is limited to 11 metric tons/yr as specified in Part A permit.
System is operated by DOE, but title to the system is held by NY state.
NESHAP:(SFCM): application for approval to construct (modification) was submitted 9-93: EPA; renewal TBD.
NESHAP:(In-Cell HVAC): application for approval to construct was submitted 9-93: EPA; renewal TBD.
State Air:(In-Cell HVAC): application for approval to construct was submitted 10-93; NYSDEC; renewal TBD.
RELATIONSHIP OF SYSTEM TO ENFORCEABLE AGREEMENT OR ORDER
Operation is subject to the conditions of the "WVDP Act" and the "Cooperative Agreement" between the US DOE and NYS Energy Research and Development Authority.
The VF has been identified as a solid waste management unit in a RCRA 3008(h) consent order issued to the facility and is part of an ongoing RCRA facility investigation.

TECHNOLOGY	MATRIX
Vitrification	Aqueous Liquids
	Inorganic Sludges/Particulates

4 of 5

Definition of Terms Contained in Treatment System Information Sheets

Table Element	Definition
Site	Department of Energy site where treatment system is/will be located.
Facility	Name of facility in which treatment system is/will be located.
System	Name of treatment system. A treatment system is generally defined to include one waste entry point and one waste exit point, and, could be operated independently of other systems to treat mixed waste streams.
Contact	Primary technical point of contact and telephone number.
ADS Number	Department of Energy Activity Data Sheet number for the treatment system (or facility).
Status	The current status of the treatment system, as defined by the Department of Energy. The terms/phrases used are: - Existing Operating. System is currently operating and treating mixed wastes. - Existing Could be Used for Mixed Waste. Existing system not currently treating mixed wastes. System may be treating other waste (low-level, hazardous, sanitary, etc.) or may not be operating at this time (but has at least reached KD-4). - Planned Approved. System that has reached, at the minimum, the KD-0 approval stage (approval of mission need), or equivalent. Typically, the funds for the system's conceptual design have been authorized or the system is under construction. - Planned Unapproved. System that has not reached the KD-0 approval stage or no funds for the system's conceptual design have been authorized. - Commercial. This modifier is added to the system status terms/phrases listed above for commercial, non-DOE treatment systems. This field does not reflect the permitted status of the treatment system. See "Permit Status Information" for the permitted status of each system.

Definition of Terms Contained in Treatment System Information Sheets

Table Element	Definition
Key Decision Status	Key Decision (KD) is Department of Energy nomenclature denoting the status of major system acquisitions or major projects. The KD status indicates the Headquarters approval level achieved and the associated stage(s) of engineering design/construction activities. Key Decision status is given for "Planned Approved" systems only. For "Planned Approved" projects not funded or approved through the KD process, the status given in this field is the KD status which most closely reflects the current phase of the project. The Key Decision status (and design/construction stage) are: - KD-0 (approval to begin Conceptual Design) - KD-1 (approval to begin Title I Design) - KD-2 (approval to begin Title II Design) - KD-3 (approval to begin Construction)
Date Status Achieved	The date the KD status/approval was achieved.
Construction Completion Date	For "Planned Approved" systems, the estimated date construction will be completed. Construction completion date format is "MM/YY".
System Capacity - Design	Design, or technically achievable, capacity (or throughput) in cubic meters per year (m^3/yr). If design capacity is reported in other units of measure, the design capacity is indicated as 0 m^3/yr in this field. The design capacity (in the alternate units of measure) is presented in the "Other Information" field.
System Capacity - Permit	Capacity of the system, as specified in the final permit, draft permit, or interim status Part B permit application, in cubic meters per year (m^3/yr). If permitted capacity is specified in other units of measure, the permitted capacity is indicated as 0 m^3/yr, and the capacity (in the other unit of measure) is provided directly under this field.

4886

462

463

4886

Definition of Terms Contained in Treatment System Information Sheets

Table Element	Definition
Radioactivity Groups	Mixed waste radioactivity categories as defined in the Interim Mixed Waste Inventory Report (IMWIR). HLW - High Level Waste LLW - Low Level Waste TRU - Transuranic Waste TRU Alpha - Transuranic Alpha emitters A "Y" indicates the treatment system can manage the radioactivity group. A "N" indicates the treatment system cannot manage the radioactivity group. A "Y" in the HLW category and a "N" in the TRU and/or LLW category indicates that the system might be able to manage the TRU or LLW mixed waste, but in order to avoid generation of treatment residuals that are HLW, good operating practices would exclude those waste forms from the treatment system.
Handling	Type of handling associated with the treatment system, or the waste handling category(ies) that can be managed in the system. CH - Contact-handled wastes only RH - Remote-handled wastes only B - Both contact-handled and remote-handled wastes can be manag
Applicable Contaminants	Mixed waste contaminant categories as defined in the IMWIR. Metals - RCRA metals (except for mercury) Mercury - Mercury Organics - RCRA organic compounds A "Y" indicates the treatment system can (potentially, technically) treat the contaminant category to LDR standards. A "N" indicates the treatment system cannot (potentially, technically) treat the contaminant category to LDR standards.

Definition of Terms Contained in Treatment System Information Sheets

Table Element	Definition
RCRA Characteristics	RCRA characteristic for ignitability, corrosivity, and reactivity. A "Y" indicates the treatment system can (potentially, technically) treat to remove the hazardous characteristic(s) and/or treat to LDR standards. A "N" indicates the treatment system cannot (potentially, technically) treat to remove the hazardous characteristic(s) and/or treat to LDR standards.
Permit Status Information	Status of the facility/system in the permitting process. Regulation - Regulations applicable to treatment system. Permit Type - Status of each permit associated with treatment system. Reg Agency - Regulatory Agency issuing each permit. Date Permit Issued or Application Submitted - Self-explanatory Renewal Date - Permit renewal date for facility/systems with a final permit.
Other Information	Information concerning the design (or proposed design) capacity of the treatment system. The design capacity of the treatment system is provided in this field if the capacity is specified in units of measure other than cubic meters per year. This field also contains other information about planned dates of operation and EPA RCRA waste codes acceptable in the system.
System Administrative Limitations	Current non-technical limitations on treatment system operation.
Other Relevant Information	This field provides current (quantitative) technical limitations and/or restrictions concerning waste forms to be treated in the system. This field is intended to present major waste acceptance criteria for the system.
Requirements for Use of Existing Systems	Activities required to start treating mixed wastes in "Existing Could be Used for Mixed Waste" systems.

464

4886

Definition of Terms Contained in Treatment System Information Sheets

Table Element	Definition
Status / Activities of "Planned, Approved" or "Planned, Unapproved" System	Additional information concerning the current status of KD or pre-KD activities of "Planned Approved" or "Planned Unapproved" systems. Examples of the status of pre-KD activities include "conducting feasibility studies" or "funding for FY 1994 is budgeted". Examples of the status of KD activities include: "Conceptual Design is 50% complete" or "Approval to begin Title I Design received in July 1993. Title I Design will start in January 1994".
Other Permit Limitations/Comments	Additional information relevant to the permit status, if any. Field contains information that could affect the receipt of off-site waste, including restrictions in a final permit, a draft permit, or in the permit application submitted by DOE. This section is intended to provide additional information concerning the permit limitations of off-site treatment options identified in CSTPs.
Relationship of System to Enforceable Agreement or Order	If the treatment facility/system is part of an agreement or order with EPA and/or the state, this field identifies the title of the agreement/order, the parties, and the effective date. The agreement/order's milestones pertaining to the facility/system are summarized.
Technology	Treatment technology(ies) that are/can be performed within the treatment system.
Matrix	Physical/chemical matrices that can (potentially, technically) be treated by the corresponding technologies in the system. The matrix categories include those defined in the IMWIR. Other matrices (matrices not adequately characterized in the IMWIR list) that (potentially, technically) can be treated in the system are specified.

APPENDIX C

Definitions

DEFINITIONS

The terms defined below have been collected or derived from documentation for regulatory agencies, and DOE sites, as well as, from environmental and other sources of regulations and documents, and some have been written by 180 day report team members. The words and phrases are listed alphabetically. Common abbreviations, if any, follow the term.

Air Stripping - A treatment system that removes, or "strips" volatile organic compounds from contaminated groundwater or surface water by forcing an airstream through the water and causing the compounds to evaporate.

Amalgamation (AMLGM) - A process applicable to radioactive wastes containing mercury and particularly to wastes containing radioactive mercury isotopes. Mercury compounds are converted into a solid mercury-zinc alloy, which is more easily managed and less mobile than solutions containing radioactive mercury. Amalgamation provides a significant reduction in air emissions of mercury and provides a change in mobility from liquid mercury to a paste-like solid, potentially reducing leachability. Amalgamation may be performed using any of the following elements: zinc, copper, nickel, gold, and sulfur.

Aqueous Liquids (as a waste matrix) - Liquids/slurries with a total organic carbon (TOC) content less than 1 percent. Slurries must be pumpable (e.g. suspended/settled solids can be up to approximately 35-40 percent). Only liquids/slurries packaged/stored in bulk form (i.e., tank stored, drummed bulk free liquids) are included in this category. Liquids packaged in lab pack-type configuration are categorized as lab packs.

Batteries (as a waste matrix) - This category includes lead acid, cadmium, and miscellaneous batteries.

Best Available Technology (BAT) or Best Demonstrated Available Technology (BDAT) - (1) The preferred technology for treating a particular process liquid waste, selected from among others after taking into account factors related to technology, economics, public policy, and other parameters. As used in DOE Order 5400.5, BAT is not a specific level of treatment, but the conclusion of a selection process that includes several treatment alternatives. (2) Treatment technologies that have been shown through actual use to yield the greatest environmental benefit among competing technologies that are practically available.

Biodegradation (BIODG) - The degradation of organics or non-metallic inorganics (i.e. inorganics that contain the elements of phosphorous, nitrogen, and sulfur) in units operated under either aerobic or anaerobic conditions such that a surrogate compound or

indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the biodegradation of many organic constituents than cannot be directly analyzed in wastewater residues).

Borosilicate Glass - A type of heat-resistant glass containing at least 5 percent boric oxide (by weight); used in glassware that resists heat and is a leading candidate for use in high-level waste immobilization and disposal.

Calcining - The process of decomposing HLW by thermal evaporation; the resultant waste form is unconsolidated powder or granules. (Calcining is used as an interim measure for HLW storage at INEL).

Capacity (of a facility) - The annual process throughput, in m^3/yr under normal operating conditions. "Normal operating conditions" are defined as the shift schedule under which the facility normally operates; i.e., one 8-hour shift/day, 5 days a week; two shifts/day, 5 day a week; 24 hours a day, 7 days a week.

Carbon Adsorption (CARBN) - A treatment technology used to treat wastewaters containing dissolved organics at concentrations less than about 5 percent and, to a lesser extent, dissolved metal and other inorganic contaminants. The most effective metals removal is achieved with metal complexes. The two most common carbon adsorption processes are the granular activated carbon (GAC), which is used in packed beds, and the powdered activated carbon (PAC), which is added loosely to wastewater.

Cemented Solids (as a waste matrix) - Sludges or solids (e.g. particulates, etc.) that have been solidified/stabilized with cement or other solidifying agents but do not meet LDR treatment standards. These wastes may require pretreatment (e.g. crushing/grinding) prior to subsequent LDR treatment.

Characterization - The determination of waste contents and properties, whether by review of process knowledge, NDE/NDA, or sampling and analysis.

Chemical Fixations - Any waste treatment process that involves reactions between the waste and certain chemicals, and results in solids that encapsulate, immobilize, or otherwise tie up hazardous components in the waste to minimize the leaching of such components and to render the waste nonhazardous and more suitable for disposal.

Chemical Oxidation (CHOXD) - Chemical or electrolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combinations of reagents: (1) hypochlorite (e.g. bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permanganates; and/or (9) other oxidizing reagents of equivalent

efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g. Total Organic Carbon can often be used as an indicator parameter for the adsorption of many organic constituents that cannot be directly analyzed in wastewater residues). Chemical oxidation specifically includes what is commonly referred to as alkaline chlorination.

Chemical Reduction (CHRED) - Chemical reduction utilizing the following reducing reagents (or waste reagents) or combination of reagents: (1) sulfur dioxide; (2) sodium, potassium, or alkali salts of sulfites, bisulfites, metabisulfates, and polyethylene glycols (e.g. Total Organic Halogens can often be used as an indicator parameter for the reduction of many halogenated organic constituents that cannot be directly analyzed in wastewater residues). Chemical reduction is commonly used for the reduction of hexavalent chromium to the trivalent state.

Cleanup - (1) Actions undertaken during a removal or remedial response to physically remove or treat a hazardous substance that poses a threat or potential threat to human health and welfare, the environment, and/or real and personal property. Sites are considered cleaned up when removal or remedial programs have no further expectation or intention of returning to the site and threats have been mitigated or do not require further action. (2) Actions taken to deal with a release or threat of release of a hazardous substance that could affect humans and/or the environment. The term "cleanup" is sometimes used interchangeably with either remedial action, removal action, response action, or corrective action.

Closure - Operational Closure: Those actions that are taken upon completion of operations to prepare the disposal site or disposal unit for custodial care (e.g., addition of cover, grading, drainage, erosion control). **Final Site Closure:** Those actions that are taken as part of a formal decommissioning or remedial action plan, the purpose of which is to achieve long-term stability of the disposal site and to eliminate to the extent practical the need for active maintenance so that only surveillance, monitoring, and minor custodial care are required.

Compliance Agreements - Legally binding agreements between regulators and regulated entities that set standards and schedules for compliance with environmental statutes. Include Consent Order and Compliance Agreements, Federal Facilities Agreements, and Federal Facility Compliance Agreements.

Compressed Gases (as a waste matrix) - Pressurized aerosol cans and gas cylinders of any gas composition. Non-pressurized aerosol cans and gas cylinders would be classified as debris.

Concentration Based Standard - A restricted waste for which a concentration based standard has been developed for an extract of the waste or treatment residue, or the constituent concentration in the waste or treatment residue. These standards were based on best demonstrated available technology (BDAT) and the waste or waste extract or treatment residue must not exceed these concentrations if the waste is to be land disposed.

Contact-Handled Waste (CH Waste) - Waste or waste containers whose external surface dose rate does not exceed 200 mrem per hour at surface of container.

Corrosive/Corrosivity - (1) A solid waste exhibits corrosivity if (a) a sample of the waste is either aqueous and has a Ph less than or equal to 2 or greater than or equal to 12.5, or it is a liquid and corrodes steel at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55° (130°F). (2) A chemical agent that reacts with the surface of a material causing it to deteriorate or wear away. (3) Identifies waste that must be segregated because of its ability to extract and solubilize toxic contaminants (especially heavy metals) from other waste; identifies waste that requires the use of corrosion-resistant containers for disposal.

Deactivation (DEACT) - The removal of the hazardous characteristics of a waste due to its ignitability, corrosivity, and/or reactivity.

Debris - Materials that are primarily nongeologic in origin such as grass, trees, stumps, and man-made materials such as concrete, clothing, partially buried whole or empty drums, capacitors, and other synthetic manufacturing items, such as liners. (It does not include synthetic organic chemicals, but may include materials contaminated with these chemicals.)

Decommissioning - (1) Actions taken to reduce the potential health and safety impacts of DOE contaminated facilities, including activities to stabilize, reduce, or remove radioactive materials or to demolish the facilities. (2) Preparations taken for retirement of a nuclear facility from active service, accompanied by the execution of a program to reduce or stabilize radioactive contamination. (3) The process of removing a facility or area from operation and decontaminating and/or disposing of it or placing it in a condition of standby with appropriate controls and safeguards.

Decontamination - The removal of unwanted material (typically radioactive material) from facilities, soils, or equipment by washing, chemical action, mechanical cleaning, or other techniques.

Delist - Use of the petition process to have a waste stream's toxic designation rescinded.

Delisting - According to 40 CFR 260.20 and .22, in order to be

exempted from the RCRA hazardous waste "system," a listed hazardous waste, a mixture of a listed and solid waste, or a derived-from waste must be delisted. Characteristic hazardous wastes never need to be delisted, but can be treated to no longer exhibit the characteristic. A contained-in waste also does not have to be delisted; it only has to "no longer contain" the hazardous waste.

Department of Energy Waste - Radioactive waste generated by activities of the DOE (or its predecessors), waste for which DOE is responsible under law or contract, or other waste for which the DOE is responsible.

Derived-From Rule - This rule states that any solid waste derived from the treatment, storage, or disposal of a listed RCRA hazardous waste is itself a listed hazardous waste (regardless of the concentration of hazardous constituents). For example, ash and scrubber water from the incineration of a listed waste are hazardous wastes on the basis of the derived-from rule. Solid wastes derived from a characteristic hazardous waste are hazardous wastes only if they exhibit a characteristic.

Designated Facility - A hazardous or mixed waste treatment, storage, or disposal facility that has received an EPA permit (or facility with interim status) in accordance with the requirements of Parts 270 and 124 of 40 CFR, a permit from a state authorized in accordance with Part 271 of 40 CFR, or that is regulated under §261-6(c)(2) or Subpart F of Part 266 of 40 CFR, and that has been designated on the manifest by the generator pursuant to §262.20.

Disposal - The permanent isolation of waste with no intent of recovery.

Disposal Facility - (1) The land, structures, and equipment used for the disposal of waste. (2) A facility or part of a facility at which waste is intentionally placed into or on the land or water, and at which waste will remain after closure.

Effluent - (1) Airborne and liquid wastes discharged from a DOE site or facility following such engineering waste treatment and all effluent controls, including onsite retention and decay, as may be provided. This term does not include solid wastes, wastes for shipment offsite, wastes that are contained (e.g., underground nuclear test debris) or stored (e.g., in tanks) or wastes that are to remain onsite through treatment or disposal. (2) Wastewater (treated or untreated) that flows out of a treatment plant, sewer, or industrial outfall. May refer to wastes discharged into surface waters.

Elemental Lead (Activated and Non-Activated) (as a waste matrix) - Both surface contaminated and activated elemental lead. Activated lead includes lead from accelerators or other neutron sources that may result in irradiation. Surface contaminated lead materials

include bricks, counterweights, shipping casks, and other shielding materials.

Environmental Impact Statement (EIS) - (1) A document prepared in accordance with the requirements of §102(2)(C) of NEPA. (2) A tool for decision making; it describes the positive and negative effects of the undertaking and lists alternative actions. The draft document (DEIS) is prepared by the EPA, or under EPA guidance, and attempts to identify and analyze the environmental impacts of a proposed action and feasible alternatives, and is circulated for public comment prior to preparation of the final environmental impact statement.

Environmental Restoration (ER) - Measures taken to clean up and stabilize or restore a site to pre-violation conditions that has been contaminated with hazardous substances during past production or disposal activities.

Environmental Restoration Waste - Waste generated by environmental restoration program activities.

Existing Facility - (1) Any equipment, structure, system, process or activity that fulfills a specific purpose. Examples include accelerators, storage areas, fusion research devices, nuclear reactors, production or processing plants, coal conversion plants, magnetohydrodynamics experiments, windmills, radioactive waste disposal systems and burial grounds, testing laboratories, research laboratories, transportation activities, and accommodations for analytical examinations of irradiated and unirradiated components. (2) Buildings and other structures; their functional systems and equipment, including site development features such as landscaping, roads, walks and parking areas; outside lighting and communications systems; central utility plants; utilities supply and distribution systems; and other physical plant features. (3)(a) Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (b) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.

Facilities - Buildings and other structures; their functional systems and equipment, including site development features such as landscaping, roads, walks and parking areas; outside lighting and communications systems; central utility plants; utilities supply and distribution systems; and other physical plant features.

Federal Facility Compliance Agreement (FFCA) - An agreement between the DOE and a host state with respect to how and/or when some waste-related activity will be conducted to achieve compliance with

applicable regulations in a timely manner. A major driver or constraint on activities that a particular site must undertake for waste operations.

Filtration - Removal/separation of particles from a mixture of fluid and particles by a medium that permits the flow of the fluid but retains the particles. Usually, the larger the particles, the easier they are to remove from the fluid.

Free Liquid - Liquid that is not absorbed into host material such that it could readily separate from the solid portion of a waste under ambient temperature and pressure, and spill or drain from its container.

Generation - Includes the wastes resulting from new production, rework operations, wastes generated from D&D operations, and wastes resulting from environmental restoration operations, including the recovery of pre-1970 wastes, should their recovery be determined to be necessary.

Generator - Refers to current or previously operated facilities of the DOE that have produced or are producing waste.

Groundwater - Liquid water occurring beneath the earth's surface in the interstices between soil grains, in fractures, or in porous formations.

Groundwater Contamination - The pollution of the underground sources of springs and wells. Contamination can result from indiscriminate land disposal of potentially hazardous waste materials that are then dissolved or suspended in free liquids, usually water, and leach downward through the unsaturated profile to the zone of saturation or from improperly constructed or operated wells. Movement of the toxic materials in the saturated zone is horizontal, and the rate of flow is determined by the gradient of the aquifer and its permeability. Correction of the problem is seldom limited to one site.

Groundwater Remediation - Treatment of groundwater to remove pollutants.

Hazardous Substance - (1)(a) Any substance designated pursuant to §311(b)(2)(A) of the FWPCA; (b) any element, compound, mixture, solution, or substance designed pursuant to §102 of CERCLA; (c) any hazardous waste having the characteristics identified under or listed pursuant to §3002 of the SWDA; (d) any toxic pollutant listed under §307(a) of the FWPCA; (e) any hazardous air pollutant listed under §112 of the CAA; and (f) any imminently hazardous chemical substance or mixture with respect to which the Administrator of EPA has taken action pursuant to §7 of TSCA. (2) Any material that poses a threat to human health and/or the environment. Typical hazardous

substances are toxic, corrosive, ignitable, explosive, or chemically reactive. Any substance designated by EPA to be reported if a designated quantity of the substance is spilled in the waters of the United States or if otherwise emitted into the environment. (3) §101(14) of CERCLA, as amended, defines "hazardous substance" chiefly by reference to other environmental statutes, such as the SWDA, FWPCA, CAA, and TSCA. The term excludes petroleum, crude oil or any fraction thereof, natural gas, natural gas liquids, or synthetic gas usable for fuel. Under the Act, OERR also may include other substances that it specifically designates as "hazardous".

Hazardous Waste (HW) - (1) Those wastes that are designated hazardous by EPA [or state] Regulations. (2) Byproducts of production or operation that can pose a potential hazard to human health or the environment when improperly managed and that possess at least one of four characteristics (ignitability, corrosivity, reactivity, toxicity), or that appear on special EPA lists. (3) A solid waste or combination of solid waste, that, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may (a) cause, or significantly contribute to, an increase in mortality or an increase in serious, irreversible, or incapacitating reversible illness; or (b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. (4) Those wastes listed by EPA or meeting characteristics specified by EPA in their criteria pursuant to the RCRA. Disposal treatment or storage of hazardous wastes can only take place in a site or facility issued a permit by EPA or a state. Note: Source, special nuclear material, and byproduct material, as defined by the AEA of 1954 as amended, are specifically excluded from the term hazardous waste.

Heterogeneous Debris (as a waste matrix) - Wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194, 8/18/92). This category includes debris that do not meet the criteria for categorization as either Organic Debris or Inorganic Debris. This category also includes mixtures of debris and solid progress residues or soil, provided debris comprises no more than 50 percent of the waste.

High-Level Radioactive Waste (HLW) - (1) The highly radioactive waste material that results from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid waste derived from the liquid, that contains a combination of TRU waste and fission products in concentrations requiring permanent isolation. (2)(a) Irradiated reactor fuel, (b) liquid wastes resulting from the operation of the first cycle solvent extraction system, or equivalent, and the concentrated wastes from subsequent extraction cycles, or equivalent, in a facility for reprocessing irradiated reactor fuel, and (c) solids into which such liquid wastes have been converted. (3) As defined by the NWPA, high-level waste is (a) the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including the liquid

waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and (b) other highly radioactive material that the NRC, consistent with existing law, determines by rule to require permanent isolation. (4) Waste generated in the fuel of a nuclear reactor, or waste found at nuclear reactors or nuclear fuel reprocessing plants. These wastes are a serious threat to anyone who comes near them without shielding.

Ignitability - A waste property describing waste with a flash point lower than 140°F.

Immobilization - Treatment of waste through macroencapsulation, microencapsulation, or sealing to reduce surface exposure to potential leaching media or to reduce the leachability of the hazardous constituents.

Immobilized Materials - Materials that are fixed in a matrix.

Incineration - (1) The controlled process by which combustible solid, liquid, or gaseous wastes are burned and changed into noncombustible gases and solid ash. (2) A treatment technology using combustion to destroy organic constituents and reduce the volume of wastes.

Inorganic Debris (as a waste matrix) - Wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194, 8/18/92). More specifically this category is defined for wastes that contain >90 percent inorganic debris. Example inorganic debris materials are: metal shapes (e.g. equipment, scrap), metal turnings, glass (e.g. light tubes, leaded glass, etc.), ceramic materials, concrete, rocks.

Inorganic Sludges/Particulates (as a waste matrix) - Solid process residues with a predominately inorganic matrix. Solid process residues are solids that do not fit the definition of debris. Typically, these solids are sludge or particulate materials. Waste in this category may also contain some debris materials provided the amount of debris is less than 50 percent (based on LDR debris rule). The solids in this category may be contaminated with, or contain organics, such that thermal treatment is required. However, the matrices are predominantly inorganic such that thermal treatment would result in a high residue. Example waste materials in this category are: sludges, ashes, sand blasting media, absorbed aqueous or organic liquids (or inorganic particulate absorbents), ion exchange resins, and paint chips/residues.

Ion Exchange - A process used to separate a mixed waste into its radioactive and hazardous constituents if the radioactive components are ionic. It will also concentrate the radioactive ionic species into a small volume, leaving a nonradioactive aqueous phase. The principal mixed waste application of this process is to recover

metallic radionuclides from wastewaters or acid leach liquors.

Lab Packs with Metals and Lab Packs without Metals (as waste matrices) - Wastes with one or more small containers of free liquids or solids surrounded by solid materials (virgin or waste materials) within a larger container. These categories include scintillation fluids that are packaged with vials. The difference between wastes within these categories is contaminants. Lab packed wastes contaminated with TC metals are categorized as "Lab packs with Metals". Lab packed wastes that are not contaminated with TC metals are categorized as "Lab packs without Metals".

Land Disposal Restrictions (LDRs) - (1) Provisions of the HSWA requiring phased-in treatment of hazardous wastes before disposal. (2) A RCRA program that restricts land disposal of RCRA hazardous wastes and requires treatment to promulgated treatment standards. (See Thirds Rule)

Leachate - (1) Any liquid, including any suspended components in the liquid, that has percolated through or drained from hazardous waste. (2) A contaminated liquid resulting when water percolates, or trickles, through waste materials and collects components of those wastes. Leaching may occur at landfills and may result in hazardous substances entering soil, surface water, or groundwater.

Listed Waste - Wastes listed as hazardous under RCRA that have not been subjected to the Toxic Characteristics Listing Process because the dangers they present are considered self-evident.

Liquid-Liquid Extraction (LLEXT) - Extraction (often referred to as solvent extraction) of organics from liquid wastes into an immiscible solvent for which the hazardous constituents have a greater solvent affinity, resulting in an extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and a raffinate (extracted liquid waste) proportionately low in organics that must undergo further treatment as specified in the standard.

Low-Level Radioactive Waste (LLW) - (1) Waste that contains radioactivity and is not classified as high-level waste, TRU waste, or spent nuclear fuel, or the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content. Test specimens of fissionable material irradiated for research and development only, and not for the production of power or plutonium, may be classified as low-level waste, provided the concentration of TRU is less than 100 Nci/g. (2) Radioactive waste not classified as high-level waste, TRU waste, spent nuclear fuel, or byproduct material.

Macroencapsulation (MACRO) - Application of surface coating materials such as polymeric organics (e.g., resins and plastics) or a jacket of inert inorganic materials to substantially reduce

surface exposure to potential leaching media. Macroencapsulation specifically does not include any material that would be classified as a tank or container according to 40 CFR 260.10.

Metals Recovery (RMETL) - Recovery of metals or inorganics utilizes one or more of the following direct physical/removal technologies: (1) ion exchange; (2) resin or solid (i.e., zeolites) adsorption; (3) reverse osmosis; (4) chelation/solvent extraction; (5) freeze crystallization; (6) ultrafiltration and/or (7) simple precipitation (i.e. crystallization). Note: This does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration, (including ultrafiltration) and centrifugation, when use in conjunction with the above listed recovery technologies.

Microencapsulation - Stabilization of the debris with the following reagents (or waste reagents) such that the leachability of the hazardous contaminants is reduced: (1) Portland cement; or (2) Lime/pozzolans (e.g. fly ash and cement kiln dust). Reagents (e.g. iron salts, silicates, and clay) may be added to enhance the set/cure time and/or compressive strength, or to reduce the leachability of the hazardous constituents.

Mixed Low Level Waste (MLLW) - Low level waste that also includes hazardous materials as identified in 40 CFR 261, Subparts C and D.

Mixed TRU (MTRU) Waste - TRU waste that also includes hazardous materials as identified in 40 CFR 261, Subparts C and D.

Mixed Waste - (1) Radioactive waste (as defined by the Atomic Energy Act) that contains material listed as hazardous waste in Subpart D of 40 CFR 261 or that exhibits any of the hazardous waste characteristics identified in Subpart C of 40 CFR 261. (2) Waste that contains both radioactive and hazardous components, as defined by the AEA and the RCRA. The term "radioactive component" refers only to the actual radionuclides dispersed or suspended in the waste substance.

Mixture Rule - Under the mixture rule, when any solid waste and a listed hazardous waste are mixed, the entire mixture is a listed hazardous waste. Mixtures of solid wastes and characteristic hazardous wastes are hazardous only if the mixture exhibits a characteristic. (40 CFR 261.3(a)(2))

Neutralization (NEUTR) - use of the following reagents (or waste reagents) or combinations of reagents: (1) Acids; (2) bases; or (3) water (including wastewaters) resulting in a Ph greater than 2 but less than 12.5 as measured in the aqueous residuals.

Onsite - (1) Within a single research or production site of the DOE weapons complex; e.g., LANL is a site, as is INEL, SNL, etc. (2) The contaminated area and all potential areas in very close proximity to

the contamination that must be taken into account for effective implementation of the response action.

Onsite Facility - A hazardous waste treatment, storage, or disposal area that is located on the generating site.

Operable Unit (OU) - (1) A discrete action that comprises an incremental step toward comprehensively addressing site problems. This discrete portion of a remedial response manages migration, or eliminates or mitigates a release, threat of release, or pathway of exposure. The cleanup of a site can be divided into a number of operable units, depending on the complexity of the problems associated with the site. Operable units may address geographical portions of a site, specific site problems, or initial phases of an action, or may consist of any set of actions performed over time or any actions that are concurrent but located in different parts of a site; (2) A discrete portion of a site consisting of one to many release sites considered together for assessment and cleanup activities. The primary criteria for placement of release sites into an operable unit include geographic proximity, similarity of waste characteristics and site type, and the possibilities for economy of scale. (3) An overall response action that by itself eliminates or mitigates a release, a threat of a release, or an exposure pathway.

Organic Debris (as a waste matrix) - Wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194, 8/18/92). More specifically this category is defined for wastes that contain >90 percent organic debris. Example organic debris materials are: rags (including "solvent rags") plastic/rubber, paper, wood, and glovebox gloves (including lead-lined), animal carcasses.

Organic Liquids (as a waste matrix) - Liquids/slurries with a total organic carbon (TOC) content greater than or equal to 1 percent. Slurries must be pumpable (e.g. suspended/settled solids can be up to approximately 35-40 percent). Only liquids/slurries packaged/stored in bulk form (i.e., tank stored, drummed bulk free liquids) are included in this category. Liquids packaged in lab pack-type configuration are categorized as lab packs.

Organic Sludges/Particulates (as a waste matrix) - Solid process residues with an organic matrix. Solid process residues are solids that do not fit the definition of debris. Typically, these solids are sludge or particulate materials. Waste in this category may also contain some debris materials provided the amount of debris is less than 50 percent (based on LDR debris rule). As opposed to Inorganic Sludges/Particulates, wastes in this category would not leave a large residue when thermally treated. Example waste materials in this category are: organic sludges, (e.g. sewage sludges) activated carbon, organic resins, and absorbed liquids (organic particulate absorbents).

Package - A barrel, box, or other container into which waste is initially placed. A package is placed in packaging prior to transportation.

Ph - (1) Used to describe the hydrogen-ion activity of a system. The logarithm (the exponent indicating the power to which a given number must be raised to produce a given number) of the reciprocal of hydrogen ion concentration ($-\log_{10}[H^+]$, where $[H^+]$ is hydrogen-ion concentration in moles per liter). (2) A symbol for the degree of acidity or alkalinity.

Pollutant or Contaminant - Includes, but is not limited to, any element, substance, compound, or mixture, including disease-causing agents, that after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring; except that the term "pollutant or contaminant" shall not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of paragraph (14) and shall not include natural gas, liquefied natural gas, or synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas).

Precipitation (PRECP) - Treatment of metals and other inorganics to form insoluble precipitates of oxides, hydrides, carbonates, sulfides, sulfates, chlorides, fluorides, or phosphates. The following reagents (or waste reagents) are typically used alone or in combination: (1) Lime (i.e., containing oxides and/or hydroxides of calcium and/or magnesium; (2) caustic (i.e., sodium and/or potassium hydroxides; (3) soda ash (i.e. sodium carbonate); (4) sodium sulfide; (5) ferric sulfate or ferric chloride; (6) alum; or (7) sodium sulfate. Additional flocculating, coagulating or similar reagents/processes that enhance sludge dewatering characteristics are not precluded form use.

Pretreatment Processes - Processes (e.g., shredding, grinding, physical separation, etc.) that make the waste amenable to the treatment process that ultimately destroys, removes, or immobilizes the hazardous contaminants or characteristics.

Radiation - (1) Ionizing radiation that includes any or all of the following: gamma rays and x-rays, alpha and beta particles, high-speed electrons, neutrons, high-speed protons, and other atomic particles. This definition does not include nonionizing radiations, such as sound, microwave, radiowave or visible, infrared, or ultraviolet light. (2) Refers to the process of emitting energy in the form of rays or

particles that are thrown off by disintegrating atoms. The rays or particles emitted may consist of alpha, beta, or gamma radiation.

Radioactive Mixed Waste - (See Mixed Waste)

Radioactive Waste - (1) Solid, liquid, or gaseous material that contains radionuclides regulated under the AEA of 1954, as amended, and of negligible economic value considering costs of recovery. (2) A solid, liquid, or gaseous material of negligible economic value that contains radionuclides in excess of threshold quantities. Does not include material contaminated by radionuclides from nuclear weapons testing.

Radioactivity - (1) The spontaneous nuclear decay of a material with a corresponding release of energy in the form of particles and/or electromagnetic radiation. (2) The property or characteristic of radioactive material to spontaneously "disintegrate" with the emission of energy in the form of radiation. The unit of radioactivity is the curie (or becquerel).

Radionuclide - (1) A species of atom having an unstable nucleus, that is subject to spontaneous decay. (2) Any nuclide that emits radiation. A nuclide is a species of atom characterized by the constitution of its nucleus and hence by the number of protons, the number of neutrons, and the energy content.

Reactive Metals (as a waste matrix) - Bulk reactive metals and equipment contaminated with reactive metals. Bulk reactive metals include sodium, alkali metal alloys, aluminum fines, uranium fines, zirconium fines, and other pyrophoric materials. Contaminated equipment includes piping, pumps, and other materials with a residue or reactive metals that cannot be separated from the equipment medium.

Reactivity - (1) A characteristic of a waste that is explosive, reacts violently with water, or generates toxic gases when exposed to water or liquids that are moderately acidic or alkaline. (2) An EPA characterization of hazardous waste that identifies waste that under routine management, presents a hazard because of instability or extreme reactivity.

Remedial Action (RA) - (1) Activities conducted at DOE facilities to reduce potential risks to people and/or harm to the environment from radioactive and/or hazardous substance contamination. (2) Those actions consistent with permanent remedy taken instead of, or in addition to, removal action in the event of a release or threatened release of a hazardous substance into the environment to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment. (3) The term includes, but is not limited to, such actions at the location of the release as storage, confinement, perimeter protection, clay cover, neutralization, cleanup of released hazardous substances or contaminated materials, recycling

or reuse, diversion, destruction, segregation of reactive wastes, dredging or excavations, repair or replacement of leaking containers, collection of leachate and runoff, onsite treatment or incineration, provision of alternative water supplies, and any monitoring reasonably required to ensure that such actions protect the public health and welfare and the environment. The term includes the costs of permanent relocation of residents and businesses and community facilities where the President determines that, alone or in combination with other measures, such relocation is more cost-effective than, and environmentally preferable to, the transportation, storage, treatment, destruction, or secured disposition offsite of such hazardous substances, or may otherwise be necessary to protect the public health or welfare. The term does not include offsite transport of hazardous substances or contaminated materials unless the President determines that such actions: are more cost-effective than other remedial actions; will create new capacity to manage in compliance with Subtitle C of the SWDA, hazardous substances in addition to those located at the affected facility; or are necessary to protect public health or welfare or the environment from a present or potential risk that may be created by further exposure to the continued presence of such substances or materials [as defined by §101(24) of CERCLA].

Remote-Handled Waste (RH Waste) - (1) Packaged waste with an external surface dose rate that exceeds 200 mrem per hour.

Remote Handling - The handling of wastes from a distance so as to protect human operators from unnecessary exposure.

Resource Conservation and Recovery Act (RCRA) Part A Permit - The first part of a Resource Conservation and Recovery Act permit application that identifies treatment, storage, and disposal units within a to-be-permitted facility.

Resource Conservation and Recovery Act (RCRA) Permit, Part B - The detailed second part of a RCRA permit application that describes waste to be managed, and waste quantities, and facilities.

Segregation - The separation of waste materials to facilitate handling, storage, treatment, transportation, and/or disposal.

Site - (1) A geographic entity comprising land, buildings, and other facilities required to perform program objectives. Generally a site has, organizationally, all of the required facilities for management functions. That is, it is not a satellite of some other site. (2) For the purposes of the ERWM Five-Year Plan, sites are lands, installations, and/or facilities for which DOE has or shares responsibility for ERWM activities. (3) An area or a location at which hazardous substances have been stored, treated, disposed of, placed, or otherwise come to be located. This includes all contiguous land, structures, other appurtenances, and improvements on the land used for treatment, storage, or disposal of hazardous substances. A

site may consist of several treatment, storage, or disposal facilities (e.g., impoundments, containers, buildings, or equipment).

Site Characterization - The program of exploration and research, both in the laboratory and in the field, undertaken to establish the geologic conditions and the ranges of those parameters of a particular site relevant to the procedures under this part. Site characterization includes borings, surface excavations, excavation of exploratory shafts, limited subsurface lateral excavations and borings and geophysical testing.

Site Closure and Stabilization - Those actions that are taken upon completion of operations that prepare the disposal site for custodial care and that ensure that the disposal site will remain stable and will not need ongoing active maintenance.

Soil (as a waste matrix) - Soils contaminated with hazardous constituents and radioactivity that are stored in waste containers. Includes soils contaminated with organics, inorganics, or both.

Soil With <50 Percent Debris (as a waste matrix) - Soils contaminated with hazardous constituents and radioactivity that are stored in waste containers. Includes soils contaminated with organics, inorganics, or both. Wastes in this category may include debris, provided it is less than 50 percent of the waste.

Stabilization (STABL) - A broad class of treatment processes that immobilize hazardous constituents in a waste. For treatment of metals in low-level mixed wastes and for TRU wastes containing low-level radioactive components, stabilization technologies will reduce the leachability of the hazardous metal constituents (regardless of whether the metals are radioactive) in nonwastewater matrices.

Steam Stripping - A continuous process conducted in a unit that consists of a boiler, a stripping column, a condenser, and a collection tank. Steam stripping of organics from liquid wastes utilizes direct application of steam to the wastes operated such that liquid and vapor flow rates, as well as, temperature and pressure ranges have been optimized, monitored and maintained. These operating parameters are dependent upon the design parameters of the unit such as, the number of separation stages and the internal column design. Thus, resulting in a condensed extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and an extracted wastewater that must undergo further treatment as specified in the standard.

Storage - (1) Temporary holding of waste pending treatment or disposal. Storage methods include containers, tanks, waste piles, and surface impoundments. (2) The containment of hazardous waste, either on a temporary basis or for a period of years, in such a manner as not to constitute disposal of such hazardous waste. (3) Retrievable retention of waste pending disposal.

Storage Facility - Land area, structures, and equipment used for the storage of waste.

Storage Unit - A discrete part of the storage facility in which waste is stored.

Supercompaction - A volume-reduction method relying on mechanical compaction.

Technology Based Standard - A restricted waste for which a technology based standard is specified may be land disposed after it is treated using that specified technology or an equivalent treatment method approved by the Administrator of EPA.

Thermal Treatment - The treatment of hazardous waste in a device that uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. Examples of thermal treatment processes are incineration, pyrolysis, calcination, wet air oxidation, and microwave discharge.

Transuranic Waste (TRU) - This core definition appears in modified form in various relevant documents: Waste containing alpha-emitting radionuclides with an atomic number greater than 92 and half-lives greater than 20 years, at concentrations greater than 100 Nci/g of waste. Modifications include the following: (1) For purposes of management, DOE Order 5820.2A (a) considers TRU waste, as defined above, "without regard to source or form" [The proposed revision to the Order ("DOE Order 5820.2A Major Issues for Revision," May 6, 1992) contemplates removing this clause.]; (b) allows heads of field elements to determine that wastes containing other alpha-emitting radionuclides must be managed as TRU waste; and (c) adds "at time of assay", implying both that the classification of a waste as TRU is to be made based on an assay and that such classification can be superseded only by another assay. (2) For purposes of setting standards for management and disposal, 40 CFR 191.02(i) adds "except for: (a) high-level radioactive wastes; (b) wastes that the DOE has determined, with the concurrence of the Administrator [of EPA] do not need the degree of isolation required by this part; or (c) wastes that the Commission [NRC] has approved for disposal on a case-by-case basis in accordance with 10 CFR 61 [Licensing Requirements for Land Disposal of Radioactive Wastes]".

Treatability Group - Based on the radioactive characteristics, hazardous components, and physical/chemical matrices as discussed above, DOE has grouped its wastes to reflect salient treatment considerations for each waste stream. These "treatability groups" are used to relate waste streams and waste quantities to treatment facilities and technology development needs.

Treatment - (1) Any method, technique, or process designed to change the physical or chemical character of waste to render it less hazardous, safer to transport, store or dispose of, or reduced in

volume. (2) Any activity that alters the chemical or physical nature of a hazardous waste to reduce its toxicity, volume, mobility, or render it amenable for transport, storage, or disposal.

Treatment Facility - The specific area of land, structures, and equipment dedicated to waste treatment and related activities.

Treatment, Storage, and Disposal (TSD) Facility - Any building, structure, or installation where a radioactive or hazardous substance has been treated, stored, or disposed.

Treatment System - The equipment and processes used for similar waste types at treatment facilities. A treatment system is the unit treatment operation or sequence of unit treatment operations carried out on all wastes that enter the system (e.g., a treatment system may consist of chemical reduction followed by precipitation, or an incinerator and a vitrification unit for the ash).

Vitrification - (1) A waste treatment process in which calcined or another decomposed form of waste is mixed with glass and fused into a solid mass. The resultant mass is expected to remain a stable and insoluble form for long time periods, and thus will be a leading candidate for the most benign wasteform for disposal. (Vitrification with borosilicate glass is the BDAT for HLW and certain mixed waste streams.) (2) The conversion of high-level waste materials into a glassy or noncrystalline solid for subsequent disposal. (3) The process of immobilizing waste that produces a glass-like solid that permanently captures the radioactive materials.

Volatile Organic Compound (VOC) - (1) Any reactive organic compound as defined in 40 CFR 60.2 definitions. (2) An organic (carbon-containing) compound that evaporates (volatilizes) readily at room temperature.

Waste Acceptance Criteria (WAC) - The criteria used to determine if waste and waste packages are acceptable for treatment, storage, transportation and disposal purposes.

Waste Characterization - Activities to determine the extent and nature of the waste. Note: Waste characterization may be based on process knowledge, nonintrusive (NDE/NDA) examination, or intrusive examination such as sampling and analysis.

Waste Form - The physical form of the waste such as sludges, combustibles, metals, etc.

Waste Isolation Pilot Plant (WIPP) - (1) The project authorized under §213 of the DOE National Security and Military Applications of Nuclear Energy Authorization Act of 1980 (Public Law 96-164; 93 Stat. 1259, 1265) to demonstrate the safe disposal of radioactive waste materials generated by atomic energy defense activities. (2) A research and development facility, located near Carlsbad, New Mexico, to be used for demonstrating the safe disposal of TRU wastes from DOE activities.

Waste Management - The planning, coordination, and direction of those functions related to generation, handling, treatment, storage, transportation, and disposal of waste, as well as associated surveillance and maintenance activities.

Waste Minimization - (1) An action that effectively avoids or reduces the generation of waste by source reduction, improving energy usage, or by recycling. This action is consistent with the general goal of minimizing present and future threats to human health, safety, and the environment. (2) The reduction, to the extent feasible, of hazardous waste that is generated prior to treatment, storage, or disposal of the waste. Waste minimization includes any source reduction or recycling activity that results in either (a) reduction of total volume of hazardous waste, (b) reduction of toxicity of hazardous waste or (c) both.

Waste Segregation - The separation of waste materials before the package (or repackage process to facilitate handling, storage, treatment, transportation, and/or disposal.

Waste Stream - A flow of waste materials with specific definable characteristics that remain the same throughout the life of the process generating the waste stream. A waste stream is produced by a single process or sub-process; however, that process or sub-process may be one that combines two or more input waste streams together to produce a single output waste stream.

Wastewaters - Wastes that contain less than 1 percent by weight total organic carbon (TOC) and less than 1 percent by weight total suspended solids (TSS) with the following exception: F001, F002, F003, F004, F005, wastewaters are solvent-water mixtures that contain less than 1 percent by weight TOC or less than 1 percent by weight total F001, F002, F003, F004, F005 solvent constituents listed in §286.41, Table CCWE (Constituent Concentrations in Waste Extract).

Wet Air Oxidation (WETOX) - A treatment technology applicable to wastewaters containing organics and oxidizable inorganics such as cyanide. The basic principle of operation for wet air oxidation is that the enhanced solubility of oxygen in water at high temperatures and pressures aid in the oxidation of organics.

APPENDIX D

Key for Wastesream Matrix

APPENDIX D

Appendix D presents supplemental information on FEMP mixed wastestreams with their associated treatability group definitions. Appendix D.1 presents information on quantities, characteristics and Best Demonstrated Available Technologies (BDAT) for each FEMP mixed wastestream with available treatment capacity as identified in Section 3.1 of the CSTP. Appendix D.2 presents similar information for mixed wastestreams identified in Section 3.3 for which treatment technologies need adaptation or for which no technology exists. The key to these appendices is presented below.

KEY FOR WASTESTREAM MATRIX

COLUMN #1: ID#: Identification number assigned to wastestream in FFCA 180 Day Mixed Work Inventory Report.

COLUMN #8: RADIOLOGICAL CHARACTERISTICS:

CH: Contact-handled mixed low-level waste with an exposure rate of 500 mR/hr or less at three feet.

COLUMN #9: BASIS OF CHARACTERIZATION:

PK: Process Knowledge

SA: Sampling and Analysis

COLUMN #11: TREATMENT TECHNOLOGIES

ADGAS: Venting of compressed gases into an absorbing or reacting media (i.e., solid or liquid) - venting can be accomplished through physical release utilizing valves/piping; physical penetration of the container, and/or penetration through detonation.

AMLGM: Amalgamation of liquid, elemental mercury contaminated with radioactive materials utilizing inorganic reagents such as copper, zinc, nickel, gold, and sulfur that result in a nonliquid, semi-solid amalgam and thereby reducing potential emissions of elemental mercury vapors to the air.

BIOLO: Biological treatment

CHRED: Chemical reduction utilizing the following reducing reagents (or waste reagents) or combinations of reagents: (1) Sulfur dioxide; (2) sodium, potassium, or alkali salts or sulfites, bisulfites, metabisulfites, and polyethylene glycols (e.g., NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; and/or (5) other reducing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been

KEY FOR WASTESTREAM MATRIX

(continued)

substantially reduced in concentration in the residuals (e.g., Total Organic Halogens can often be used as an

indicator parameter for the reduction of many halogenated organic constituents that cannot be directly analyzed in wastewater residues). Chemical reduction is commonly used for the reduction of hexavalent chromium to the trivalent state.

DEACT: Deactivation to remove the hazardous characteristics of a waste due to its ignitability, corrosivity, and/or reactivity.

FSUBS: Fuel substitution in units operated in accordance with applicable technical operating requirements.

INCIN: Incineration in units operated in accordance with the technical operating requirements of 40 CFR part 264 subpart O and part 265 subpart O.

MACRO: Macroencapsulation with surface coating materials such as polymeric organics (e.g. resins and plastics) or with a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media. Macroencapsulation does not specifically include any material that would be classified as a tank or container according to 40 CFR 260.10.

NEUTR: Neutralization with the following reagents (or waste reagents) or combinations of reagents: (1) Acids; (2) bases; or (3) water (including wastewaters) resulting in a Ph greater than 2 but less than 12.5 as measured in the aqueous residuals.

PRECP: Chemical precipitation of metals and other inorganics as insoluble precipitates of oxides, hydroxides, carbonates, sulfides, sulfates, chlorides, fluorides, or phosphates. The following reagents (or waste reagents) are typically used alone or in combination: (1) Lime (i.e., containing oxides and/or hydroxides of calcium and/or magnesium); (2) caustic (i.e., sodium and/or potassium hydroxides); (3) soda ash (i.e., sodium carbonate); (4) sodium sulfide; (5) ferric sulfate or ferric chloride; (6) alum; or (7) sodium sulfate. Additional floculating, coagulation or similar reagents/processes that enhance sludge dewatering

KEY FOR WASTESTREAM MATRIX

(continued)

characteristics are not precluded from use.

RMERC: Retorting or roasting in a thermal processing unit capable of volatizing mercury and subsequently condensing the volatilized mercury for recovery. The retorting or roasting unit (or facility) must be subject to one or more of the following: (a) a National Emissions Standard for Hazardous Air Pollutants (NESHAP) for mercury; (b) a Best

Available Control Technology (BACT) or a Lowest Achievable Emission Rate (LAER) standard for mercury imposed pursuant to a Prevention of Significant Deterioration (PSD) permit; or (c) a state permit that establishes emission limitations (within meaning of section 302 of the Clean Air Act) for mercury. All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (e.g.,High or Low Mercury Subcategories).

RMETL: Recovery of metals or inorganics utilizing one or more of the following direct physical/removal technologies: (1) ion exchange; (2) resin or solid (i.e., zeolites) adsorption; (3) reverse osmosis; (4) chelation/solvent extraction; (5) freeze crystallization; (6) ultrafiltration and/or (7) simple precipitation (i.e., crystallization) - NOTE: This does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.

RORGS: Recovery of organics utilizing one or more of the following technologies: (1) Distillation; (2) thin film evaporation; (3) steam stripping; (4) carbon adsorption; (5) critical fluid extraction; (6) liquid-liquid extraction; (7) precipitation/crystallization (including freeze crystallization); or (8) chemical phase separation techniques (i.e., addition of acids, bases, demulsifiers, or similar chemicals); - Note: this does not preclude the use of other physical phase separation techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.

KEY FOR WASTESTREAM MATRIX

(continued)

RTHRM: Thermal recovery of metals or inorganics from nonwastewaters in units identified as industrial furnaces according to 40 CFR 260.10 (1), (6), (7), (11), and (12) under the definition of "industrial furnaces".

STABL: Stabilization with the following reagents (or waste reagents) or combinations of reagents: (1) Portland cement; or (2) lime/pozzolans (e.g., fly ash and cement kiln dust) - this does not preclude the addition of reagents (e.g., iron salts, silicates, and clays) designed to enhance the set/cure time and/or compressive strength, or to overall reduce the leachability of the metal or inorganic.

STRIP: Steam stripping of organics from liquid wastes utilizing direct application of steam to the wastes operated such that liquid and vapor flow rates, as well as, temperature and pressure ranges have been optimized, monitored, and maintained. These operating parameters are dependent upon the design parameters of the unit such as, the number of separation stages and the internal column design. Thus, resulting in a condensed extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and an extracted wastewater that must undergo further treatment as specified in the standard.

VITR: Vitrification

COLUMN #12: BASIS

C = Concentration based treatment standard

T = Technology based treatment standard

APPENDIX D.1

Wastestreams with Existing Treatment Capacity

APPENDIX D.1

WASTESTREAMS WITH EXISTING TREATMENT CAPACITY

TREATABILITY GROUP: ORGANIC LIQUIDS, TOXIC METALS W/O MERCURY

Definition: This category includes liquids/slurries with total organic carbon (TOC) greater than or equal to, 1%. Slurries must be pumpable (e.g., suspended/settled solids can be up to approximately 35-40%). Toxic Characteristic Leaching Procedure (TCLP) metals are the primary contaminants present although ignitable (D001) wastes with toxic metals are also included in this grouping. These wastestreams do not contain mercury. All liquids/slurries are packaged/stored in bulk form (i.e., tank stored, drummed bulk free liquids). Liquids packed in lab pack-type configuration arfe categorized as lab packs.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
1952	TBP, KEROSENE, DAAP SOLUTION	PLANTS 2 & 3	51467	38.1	0.000	0.000	CH	SA	D001 D008	INCIN STABL	C C

452

4888

APPENDIX D.1

WASTESTREAMS WITH EXISTING TREATMENT CAPACITY

TREATABILITY GROUP: AQUEOUS LIQUIDS, TOXIC METALS W/O MERCURY

Definition: This category includes liquids/slurries with total organic carbon (TOC) less than 1%. Slurries must be pumpable (e.g., suspended/settled solids can be up to approximately 35-40%). Toxic Characteristic Leaching Procedure (TCLP) metals are the primary contaminants present although corrosive (D002) aqueous liquids with metals are also included in this grouping. These wastestreams do not contain mercury. All liquids/slurries are packaged/stored in bulk form (i.e., tank stored, drummed bulk free liquids). Liquids packed in lab pack-type configureation are categorized as lab packs.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
844	URANYL NITRATE SOLUTION IN TANKS	PLANTS 2 & 3, GENERAL	928335	688.0	0.000	0.000	CH	PK	D002 D005 D007	DEACT PRECP STABL CHRED- STABL PRECP	T C C

4886

453

APPENDIX D.2

Wastestreams for which Technology Needs Adaptation or for which No Technology Exists

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: AQUEOUS LIQUID, TOXIC ORGANICS

Definition: This category includes liquids/slurries with total organic carbon (TOC) less than 1%. Slurries must be pumpable (e.g., suspended/settled solids can be up to approximately 35-40%). Toxic Characteristics Leaching Procedure (TCLP) organics and F-listed solvents are the primary contaminants present although corrosive (D002) wastes with toxic organics are also included in this grouping. All liquids/slurries are packaged/stored in bulk form (i.e. tank stored, drummed bulk free liquids). Liquids packed in lab pack-type configuration are categorized as lab packs.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
358*	CAUSTIC SOLUTION (NaOH) FROM PLANT 8 RAFFINATE PROCESSING	100 PLANT 1, GENERAL	292	0.416	0.000	0.000	CH	SA	D002 D019	DEACT	T
1180	GROUNDWATER FROM WELL #1031	RGW	229	0.800	0.000	0.000	CH	PK	F002	STRIP	C
1536	RAINWATER FROM WASTE PIT AREA	721 WASTE MANAGEMENT. CHEMICAL PITS	30474	31.800	0.000	0.000	CH	PK	F001 F002	STRIP BIOLO	C C
10014	U-CONTAMINATED WATER	200 PLANTS 2&3, GENERAL	2641	2.800	0.000	0.000	CH	SA	D039		
	TOTALS		33,636	35.816	0.000	0.000					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: AQUEOUS LIQUID, TOXIC METALS W/O MERCURY

Definition: This category includes liquids/slurries with total organic carbon (TOC) less than 1%. Slurries must be pumpable (e.g., suspended /settled solids can be up to approximately 35-40%). TCLP metals are the primary contaminants present although corrosive (D002) wastes with toxic metals are also included in this grouping. These wastestreams do not contain mercury. All liquids/slurries are packaged/stored in bulk form (i.e. tank stored, drummed bulk free liquids). Liquids packed in lab pack-type configuration are categorized as lab packs.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
383	X-RAY FIXER & DEVELOPER, CLEAR LIQUID	783 SERVICE BLDG, ADMIN BLDG, GARAGE	123	0.200	0.000	0.000	CH	PK	D011	STABL PRECP	C
594	SODIUM HYPOSULFIDE - DEVELOPING SOLUTION	743 PROCUREMENT / STORES-RECEIVING	239	0.600	0.000	0.000	CH	PK	D011	STABL PRECP	C
873	SPENT FIXER	730 LABORATORY	612	1.200	2,273.0	4.6	CH	PK	D011	STABL PRECP	C
1185	TYPE 028 FIX; CD-5 DEVELOPER	735 SERVICE BLDG AND ADMIN BLDG	229	0.200	1,136.0	1.1	CH	PK	D011	STABL PRECP	C
1297	PC 49896 ITEK UNIVERSAL DEVELOPER		509	5.7	0.000	0.000	CH	PK	D011	STABL PRECP	C
1751	SPENT FIXER		57	0.600	0.000	0.000	CH	PK	D011	PRECP STABL	C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
20046	NON-METALLIC MISCELLANEOUS SAMPLES	LABORATORY	35	0.400	0	0	CH	SA	D007	CHRED-STABL	C
30080	CONTAMINATED SOIL, ROCKS, DEBRIS (LIQUIDS ONLY)	PLANTS 2 & 3	228	0.200	0	0	CH	SA	D002 D004 D007 D008 D011	DEACT VITR CHRED-STABL STABL STABL	T C C C C
40181	THORIUM NITRATE SOLUTION	FAK	2280	0.600	0.000	0.000	CH	PK	D002 D007 D008	DEACT CHRED-STABL PRECP STABL PRECP	T C C
	TOTALS		4,312	9.7	3,409	5.7					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

147

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: AQUEOUS LIQUID, TOXIC ORGANICS, TOXIC METALS W/O MERCURY

Definition: This category includes liquids/slurries with total organic carbon (TOC) less than 1%. Slurries must be pumpable (e.g., suspended /settled solids can be up to approximately 35-40%). TCLP metals and organics and F-listed solvents are the primary contaminants present although ignitable (D001) and corrosive (D002) wastes with toxic organics and metals are also included in this grouping. These wastestreams do not contain mercury. All liquids/slurries are packaged/stored in bulk form (i.e. tank stored, drummed bulk free liquids). Liquids packed in lab pack-type configuration are categorized as lab packs.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
1178	GROUNDWATER FROM WELL #2649	RGW	752	1.200	0.000	0.000	CH	SA	D007 F002	CHRED-STABL PRECP STRIP	C C
1229	CONTAMINATED SUMP WATER	300 PLANTS 2&3, PILOT PLANT	6019	6.600	15,909	18.1	CH	SA	D001 D008 D018 D019 D039 D040 F002 F003	DEACT STABL INCIN INCIN	T C C C

4886

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4728

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
1707	LAB GENERATED WASTE, ACID DIGESTATES	CNL	1307	1.400	0.000	0.000	CH	SA	D002 D007 D008 D019 D028 D039 F001 F002	DEACT CHRED-STABL PRECP STABL STRIP BIOLO	T C C C C
1938*	NON-CHLORIDE, CONTAMINATED WATER OR SUMP LIQUOR	135, PLANT 1, DRUM RECONDITIONING DRUM PAINTING BOOTH	170	0.208	0.000	0.000	CH	SA	D007 D008 D010 F005	CHRED- STABL INCIN STABL STABL INCIN	C C C C
	TOTALS		8,248	9.4	15,909	18.1					

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: AQUEOUS LIQUID, IGNITABLE, REACTIVE, OR CORROSIVE ONLY

Definition: This category includes liquids/slurries with total organic carbon (TOC) less than 1%. Slurries must be pumpable (e.g., suspended /settled solids can be up to approximately 35-40%). Only wastes that are corrosive (D001), reactive (D003) or ignitable (D001) (as defined in 40 CFR Part 261) and do not contain toxic metals or organics are included in this grouping. All liquids/slurries are packaged/stored in bulk form (i.e. tank stored, drummed bulk free liquids). Liquids packed in lab pack-type configuration are categorized as lab packs.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
1691	HYDROFLUORIC ACID		16678	.200	0.000	0.000	CH	PK	D002	DEACT	T
1692	NITRIC ACID		145	0.200	0.000	0.000	CH	PK	D002	DEACT	T
2257*	TCLP EXTRACTS LAB GENERATED WASTE	ITA ITAS	155	0.208	0.000	0.000	CH	SA	D002	DEACT	T
	TOTALS		16,978	0.6	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

560

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: ORGANIC LIQUID, TOXIC ORGANICS

Definition: This category includes liquids/slurries with total organic carbon (TOC) greater than, or equal to 1%. Slurries must be pumpable (e.g. suspended/settled solids can be up to approximately 35-40%). TCLP organics and F-listed solvents are the primary contaminants present although ignitable (D001) and corrosive (D002) wastes with toxic organics are also included in this grouping. All liquids/slurries are packaged/stored in bulk form (i.e. tank stored, drummed bulk free liquids). Liquids packed in lab pack-type configuration are categorized as lab packs.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
385	SPENT SOLVENTS	738 SERVICE BLDG., GARAGE	108	0.200	0.000	0.000	CH	PK	D018 F001 F002	 INCIN INCIN	 C C
386*	FLOOR SUMP CLEANOUT SLUDGE	738 SERVICE BLDG., ADMIN. BLDG., GARAGE RCRA	633	0.416	2,727	1.792	CH	SA	D019 D039 F001 F002	 INCIN INCIN	 C C
397	1,1,1-TRICHLOROETHANE (CLEANING SOLUTION)	768 BLDG. 45., BOILER PLANT	103	0.200	455.0	1.000	CH	PK	D018 F001 F002	 INCIN INCIN	 C C
418	SPENT ACETONE	733 ANALYTICAL LABORATORY HAZARDOUS WASTE	758	9.800	1,023.0	1.2	CH	PK	D001 F003	FUBS RORGS INCIN INCIN	T C
419	XYLENE	733 ANALYTICAL HAZARDOUS WASTE	299	2.400	455.0	1.000	CH	PK	D001 F003	FSUBS RORGS INCIN INCIN	T C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

101

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
421	METHANOL	733 ANALYTICAL LABORATORY HAZARDOUS WASTE	140	2.000	0.000	0.000	CH	PK	D001 F003	FSUBS RORGS INCIN INCIN	T C
422	SPENT METHYLENE CHLORIDE	733 ANALYTICAL LABORATORY HAZARDOUS WASTE	15	0.200	0.000	0.000	CH	PK	F002	INCIN	C
426	METHANOL AND CYCLOHEXANE MIXTURE	733 ANALYTICAL LABORATORY HAZARDOUS WASTE	2457	36.400	4,091.0	5.6	CH	SA	D001 F003	FUSBS RORGS INCIN INCIN	T C
438	HYDRAULIC OIL FROM BALER IN DRUM RECONDITIONING	137 PLANT 1. DRUM RECONDITIONINGDRUM BALER	177	0.200	0.000	0.000	CH	SA	D018		
447	HYDRAULIC FLUID FROM FREIGHT ELEV. AT LAB BASEMENT	730 LABORATORY	207	0.400	0.000	0.000	CH	SA	D018		
455*	UNLABELED DRUM CONTAINING 1,1,1 TRICHLOROETHANE	100 PLANT 1, GENERAL	111	0.208	0.000	0.000	CH	SA	D001 F001	FSUBS RORGS INCIN INCIN	T C
457	OIL	100 PLANT 1	224	0.200	0.000	0.000	CH	PK	D018		
459	PAINT	135 PLANT 1. DRUM RECONDITIONINGDRUM PAINTING BOOTH	204	0.200	0.000	0.000	CH	PK	D001 F001 F002 F003 F005	FSUBS RORGS INCIN INCIN INCIN INCIN INCIN	T C C C C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

202

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
478	CONTAMINATED OIL, SOLUBLE, FROM LATHE ON PLANT 64 PAD	742 PROCUREMENT. DECONTA-MINATION	143	0.200	0.000	0.000	CH	SA	D018		
485	KEROSENE	200 PLANTS 2 & 3	92	0.200	0.000	0.000	CH	PK	D018		
493	STENCILED GASOLINE	100 PLANT 1	57	0.200	0.000	0.000	CH	PK	D001 D018	FSUBS RORGS INCIN	T
507	GASOLINE	300 PLANTS 2 & 3. PILOT PLANT	112	0.200	0.000	0.000	CH	SA	D001 D018	FSUBS RORGS INCIN	T
632	HYDRAULIC FLUID FROM BAILER	137 PLANT 1. DRUM RECONDITIONINGDRUM BALER	318	0.600	0.000	0.000	CH	PK	D018		
633	OIL - UNKNOWN GENERATION	100 PLANT 1	1290	2.400	0.000	0.000	CH	PK	D018		
638	USED OIL	400 PLANT 4	142	0.200	0.000	0.000	CH	PK	D018		
658	CODED AS OIL - STRONG SOLVENT ODOR	YAQ	40	0.200	0.000	0.000	CH	PK	D018		
1706	LAB WASTE, TCLP EXTRACT	CNL	2035	2.200	0.000	0.000	CH	SA	F002 F005	INCIN INCIN	C C
1708	LAB GENERATED WASTE, METHYLENE CHLORIDE EXTRACTS	CNL	246	0.400	0.000	0.000	CH	PK	F002	INCIN	C

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

503

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
1709	LAB GENERATED WASTE, FLAMMABLE ORGANIC EXTRACTS	CNL	1603	0.200	455.0	1.000	CH	SA	D001 D002 F003 F005	FSUBS RORGS INCIN DEACT INCIN INCIN	T T C C
1725	LUBRICATING OILS	739 SERVICE BLDG. AND ADMIN BLDG., GARAGE OIL	1437	1.800	0.000	0.000	CH	PK	D018		
1998	METHANOL AND CYCLOHEXANE	732 LABORATORY GENERAL. ANALYTICAL	104	1.200	227.0	0.285	CH	PK	D001 F003	FSUBS RORGS INCIN INCIN	T C
10027	CONTAMINATED OIL, INSOLUBLE	600 PLANT 6. GENERAL	2502	2.800	0.000	0.000	CH	SA	D039 D040 F001	INCIN	C
10030	CONTAMINATED SOLVENTS (METHANOL)	732 LABORATORY GENERAL. ANALYTICAL	82	0.600	0.000	0.000	CH	PK	D001 F003	FSUBS RORGS INCIN INCIN	T C
10032	CONTAMINATED OIL, INSOLUBLE	901 PLANT 9. GENERAL. PLANT 9 MAINTENANCE	277	0.400	0.000	0.000	CH	SA	F001	INCIN	C

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

564

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
20003	DEGREASING SOLVENT	YAQ	56832	56.000	0.000	0.000	CH	SA	D001	FSUBS	T
										RORGS	
										INCIN	
									D019		
									D022		
									D028		
									D029		
									D035		
									D039		
									D040		
									F001	INCIN	C
									F003	INCIN	C
20021	CONTAMINATED INSOLUBLE OIL	137 PLANT 1. DRUM RECONDITIONING DRUM BALER	2637	3.000	0.000	0.000	CH	SA	D019		
									D029		
									D039		
									D040		
									F001	INCIN	C
20028	CONTAMINATED OIL - INSOLUBLE	351 PILOT PLANT, HEAT TREATING	1245	2.000	0.000	0.000	CH	SA	D039		
									D040		
									F001	INCIN	C
20054	CONTAMINATED SOLVENT - TRICHLOR, PERCHLOR	530 PLANT 5, CASTING AREA	171	0.200	0.000	0.000	CH	SA	D019		
									D022		
									D028		
									D029		
									D039		
									F001	INCIN	C
									F005	INCIN	C
20055	CONTAMINATED OIL - INSOLUBLE	300 PLANTS 2 & 3, PILOT PLANT GENERAL	3	0.200	0.000	0.000	CH	SA	D029		
									D039		
									F002	INCIN	C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
20142	CONTAMINATED TBP-KEROSENE	732 LABORATORY GENERAL. ANALYTICAL	15	0.400	0.000	0.000	CH	SA	D001 D019 D022 D039 F002 F003	FSUBS RORGS INCIN INCIN INCIN	T C C
30033	CONTAMINATED SOLVENT - TRICHLOR, PERCHLOR	745 MAINTENANCE SECTION	2544	3.400	0.000	0.000	CH	SA	D001 D039 F003 F005	FSUBS RORGS INCIN INCIN INCIN	T C C
30034	OIL CONTAMINATED WITH SOLVENTS (TANK 5)	741 PROCUREMENT, GARAGE	12466	17.000	0.000	0.000	CH	SA	D018 F001	INCIN	C
50022	CONTAMINATED WATER	140 PLANT 1. SAMPLING	11	0.200	0.000	0.000	CH	SA	D001 F003	FSUBS RORGS INCIN INCIN	T C
60331	WATER/GAS MIXTURE TANK #9	741 PROCUREMENT, GARAGE	3941	4.200	0.000	0.000	CH	PK	D001 D018	FSUBS RORGS INCIN	T
	TOTALS		95,781	153.2	9,433	11.9					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

506

4886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: ORGANIC LIQUID, TOXIC METALS W/O MERCURY

Definition: This category includes liquids/slurries with total organic carbon (TOC) greater than, or equal to 1%. Slurries must be pumpable (e.g. suspended/settled solids can be up to approximately 35-40%). TCLP metals are the primary contaminants present although ignitable (D001) and corrosive (D002) wastes with toxic metals are also included in this grouping. These wastestreams do not contain mercury. All liquids/slurries are packaged/stored in bulk form (i.e. tank stored, drummed bulk free liquids). Liquids packed in lab pack-type configuration are categorized as lab packs.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
393	LUBRICATING OIL FROM REDUCTION REMELT	PLANT 5, GENERAL. OIL STORAGE AREA	316	0.400	1.591.0	2.1	CH	PK	D008	INCIN-STABL	C
50095	CONTAMINATED INSOLUBLE OIL	900 PLANT 9. GENERAL	168	0.200	0.000	0.000	CH	SA	D007	CHRED-STABL	C
	TOTALS		484	0.6	1,591	2.1					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

48886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: ORGANIC LIQUID, TOXIC ORGANICS, TOXIC METALS W/O MERCURY

Definition: This category includes liquids/slurries with total organic carbon (TOC) greater than, or equal to 1%. Slurries must be pumpable (e.g. suspended/settled solids can be up to approximately 35-40%). TCLP metals and organics and F-listed solvents are the primary contaminants present although ignitable (D001) and corrosive (D002) wastes with toxic organics and metals are also included in this grouping. These wastestreams do not contain mercury. All liquids/slurries are packaged/stored in bulk form (i.e. tank stored, drummed bulk free liquids). Liquids packed in lab pack-type configuration are categorized as lab packs.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
379	SPENT 1,1,1-TRICHLOROETHANE	502 PLANT 5. GENERAL. MAINTENANCE SHOP	77	0.200	0.000	0.000	CH	PK	D008 D018 F001 F002	STABL INCIN INCIN	C C C
388	USED OIL	739 SERVICE BLDG. AND ADMIN BLDG., GARAGE OIL	5313	6.400	18,182.0	22.8	CH	PK	D010 D018 F002	STABL INCIN	C C
400	USED OIL FROM MAINTENANCE	769 BLDG. 45., BOILER PLANT OIL STORAGE	105	0.200	568.0	1.1	CH	PK	D001 D008 F001	FSUBS RORGS INCIN STABL INCIN	T C C
402	USED OIL	203 PLANTS 2 & 3. GENERAL. OIL STORAGE AREA	404	0.800	682.0	6.7	CH	PK	D008 D018 F001 F002	STABL INCIN INCIN	C C C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

508

4886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
408	USED OIL	747 MAINTENANCE SECTION, MACHINE SHOP STORAGE	146	0.200	682.0	1.000	CH	PK	D005	PRECP	C
										STABL	
									D006	STABL	C
									D008	STABL	C
									F001	INCIN	C
412	1,1,1-TRICHLOROETHANE	755 BLDG. 45., LAB MAINTENANCE SHOP	10	0.200	0.000	0.000	CH	SA	D001	FSUBS	T
										RORGS	
										INCIN	
									D006	STABL	C
									F001	INCIN	C
									F002	INCIN	C
514	BAD PAINT FROM PAINT BOOTH	135 PLANT 1. DRUM RECONDITIONINGDRUM PAINTING BOOTH	572	1.200	0.000	0.000	CH	PK	D001	FSUBS	T
										RORGS	
										INCIN	
									D007	CHRED-	C
										STABL	
									D008	STABL	C
									F001	INCIN	C
									F002	INCIN	C
									F003	INCIN	C
									F005	INCIN	C
716	WASTE OILS	769 BLDG. 45., BOILER PLANT OIL STORAGE	267	0.400	1,136.0	1.6	CH	SA	D008	STABL	C
									D018		
777	AGITENE	768 BLDG. 45., BOILER PLANT	268	0.400	682.0	5.1	CH	PK	D001	FSUBS	T
										RORGS	
										INCIN	
									D008	STABL	C
									F001	INCIN	C
									F002	INCIN	C.

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
1412	CONTAMINATED ORGANIC CHEMICAL OR SOLVENT	768 BLDG. 45., BOILER PLANT	188	0.200	0.000	0.000	CH	SA	D001	FSUBS	T
										RORGS	
										INCIN	
									D006	STABL	C
									D008	STABL	C
									F001	INCIN	C
									F002	INCIN	C
1447*	NON-CHLORIDE CONTAMINATED WATER OR SUMP LIQUOR	135 PLANT 1, DRUM RECONDITIONINGDRUM PAINTING BOOTH	56	0.208	0.000	0.000	CH	SA	D001	FSUBS	T
										RORGS	
										INCIN	
									D008	INCIN	C
										STABL	
									F003	INCIN	C
									F005	INCIN	C
2235*	LAB GENERATED WASTE ORGANIC LIQUID WASTE	TCT	1,749	2.080	0.000	0.000	CH	SA	D010	STABL	C
									F002	INCIN	C
10004	CONTAMINATED SOLVENT	735 SERVICE BLDG. AND ADMIN BLDG.	3479	4.400	0.000	0.000	CH	SA	D007	CHRED-STABL	C
									D018		
									D019		
									D021		
									D029		
									D039		
									D040		
									F001	INCIN	C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

5/0

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
10029	CONTAMINATED INSOLUBLE OIL	921 PLANT 9. CASTING. N-R FURNACE	1387	1.600	0.000	0.000	CH	SA	D006	STABL	C
										CHRED-STABL	
									D007	STABL	C
									D008		C
									D019		
									D029		
									D040	INCIN	
									F001		C
20031	CONTAMINATED OIL, INSOLUBLE GEAR OIL	100 PLANT 1. GENERAL	1263	1.800	0.000	0.000	CH	SA	D008	STABL	C
									D018		
									D019		
									D028		
									D029		
									D039		
									D040		
									F002	INCIN	C
20038	CONTAMINATED OIL - INSOLUBLE	301 PLANTS 2 & 3, PILOT PLANT GENERAL, PILOT PLANT MAINTENANCE	288	0.400	0.000	0.000	CH	SA	D006	STABL	C
									D008	STABL	C
									D018		
									D019		
									D028		
									D029		
									D039		
									D040		
									F002	INCIN	C
									F005	INCIN	C

4886

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

5

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
50072	CONTAMINATED SUMP WATER	137 PLANT 1, DRUM RECONDITIONINGDRUM BALER	671	0.600	0.000	0.000	CH	SA	D001 D008 D019 D039 D040 F002 F003 F005	FSUBS RORGS INCIN STABL INCIN INCIN INCIN	T C
50096	NON-RECOVERABLE TRASH	765 BLDG.45., WATER TREATMENT	153	0.200	0.000	0.000	CH	SA	D001 D007 F003	FSUBS RORGS INCIN CHRED- STABL INCIN	T C C
60068	CONTAMINATED INSOLUBLE OIL	503 PLANT 5, GENERAL. OIL STORAGE AREA	510	0.800	0.000	0.000	CH	SA	D008 F001	STABL INCIN	C C
60069	CONTAMINATED INSOLUBLE OIL	510 PLANT 5, METAL REDUCTION AREA	1883	2.600	0.000	0.000	CH	SA	D008 F001	STABL INCIN	C C
	TOTALS		18,789	24.9	21,878	38.3					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

512

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: ORGANIC LIQUID, TOXIC ORGANICS, TOXIC METALS W/ MERCURY

Definition: This category includes liquids/slurries with total organic carbon (TOC) greater than, or equal to 1%. Slurries must be pumpable (e.g. suspended/settled solids can be up to approximately 35-40%). TCLP metals and organics and F-listed solvents are the primary contaminants present although ignitable (D001) and corrosive (D002) wastes with toxic organics and metals are also included in this grouping. These wastestreams contain mercury. All liquids/slurries are packaged/stored in bulk form (i.e. tank stored, drummed bulk free liquids). Liquids packed in lab pack-type configuration are categorized as lab packs.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
414	USED OIL	776 BLDG.45., LAB OIL STORAGE AREA	198	0.400	0.000	0.000	CH	PK	D001	FSUBS	T
										RORGS	
										INCIN	
									D006	STABL	C
									D008	STABL	C
									D009	RTHRM	C
										Acid Leach	
										STABL	
										INCIN	
									D039		
									F001	INCIN	C
									F002	INCIN	C

4886

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

513

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
479	USED PAINT THINNER	705 CONSTRUCTION	436	0.400	1.136.0	1.1	CH	PK	D001	FSUBS	T
										RORGS	
										INCIN	
									D006	STABL	C
									D007	CHRED-	C
										STABL	
									D008	STABL	C
									D009	RTHRM	C
										Acid Leach	
										STABL	
										INCIN	
									D011	STABL	C
									D035		
									F003	INCIN	C
									F005	INCIN	C
2259*	TCLP LEACHATE	ITA ITAS	191	0.208	0.000	0.000	CH	PK	D009	RTHRM	C
										ACID LEACH	
										STABL	
										INCIN	
									F001	INCIN	C
									F002	INCIN	C
10006	CONTAMINATED OIL - INSOLUBLE	730 LABORATORY GENERAL	122	0.200	0.000	0.000	CH	SA	D008	STABL	C
									D009	RTHRM	C
										ACID LEACH	
										STABL	
										INCIN	
									D039		
									F001	INCIN	C
	TOTALS		947	1.2	1,139	1.1					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

514

4886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: ORGANIC LIQUID, IGNITABLE, REACTIVE OR CORROSIVE ONLY

Definition: This category includes liquids/slurries with total organic carbon (TOC) greater than, or equal to 1%. Slurries must be pumpable (e.g. suspended/settled solids can be up to approximately 35-40%). Only wastes that are corrosive (D002), reactive (D003) or ignitable (D001) (as defined in 40 CFR Part 261) and do not contain toxic metals or organics are included in this grouping. All liquids/slurries are packaged/stored in bulk form (i.e. tank stored, drummed bulk free liquids). Liquids packed in lab pack-type configuration are categorized as lab packs.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
425	LABORATORY ACIDS (NITRIC AND CYCLOHEXANE)	733 ANALYTICAL LABORATORY HAZARDOUS WASTE	448	7.000	68.0	0.098	CH	SA	D001 D002	FSUBS RORGS INCIN DEACT	T T
428	ACETONITRILE IN WATER	733 ANALYTICAL LABORATORY HAZARDOUS WASTE	0.454	0.200	0.000	0.000	CH	PK	D001	FSUBS RORGS INCIN	T
508	PAINT THINNER	300 PLANTS 2 & 3. PILOT PLANT GENERAL	220	0.200	0.000	0.000	CH	PK	D001	FSUBS RORGS INCIN	T
533	PAINT (POSSIBLY GREY EPOXY PAINT)	742 PROCUREMENT. DECONTAMIN-ATION	130	0.200	0.000	0.000	CH	SA	D001	FSUBS RORGS INCIN	T
587	GREASE AND WATER	100 PLANT 1	113	0.200	0.000	0.000	CH	SA	D001	FSUBS RORGS INCIN	T

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
768	DAAP/SOLVENT MIXTURE		6538	0.400	0.000	0.000	CH	PK	D001	FSUBS RORGS INCIN	T
870	VARNISH - UNUSED	135 PLANT 1. DRUM RECONDITIONINGDRUM PAINTING BOOTH	89	0.200	455.0	5.1	CH	PK	D001	FSUBS RORGS INCIN	T
1182	CLEAR DISPERSANT, TYPE (H)	735 SERVICE BLDG. AND ADMIN BLDG.	35	0.200	455.0	5.2	CH	SA	D001	FSUBS RORGS INCIN	T
1337	CONTAMINATED WATER NON-CHLORIDE	765 BLDG. 45., WATER TREATMENT	169	0.200	0.000	0.000	CH	SA	D001	FSUBS RORGS INCIN	T
1432	NON-CHLORIDE CONTAMINATED WATER OR SUMP LIQUOR	100 PLANT 1	869	1.200	3,409.0	5.3	CH	SA	D001	FSUBS RORGS INCIN	T
2224*	FLOOR COATING BASE	100 PLANT 1, GENERAL	356	0.832	0.000	0.000	CH	PK	D001	FSUBS RORGS INCIN	T
	TOTALS		8,967.5	10.8	4,387	15.7					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

516

4888

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: ORGANIC SLUDGES/PARTICULATES, TOXIC ORGANICS

Definition: This category includes solid process residues with an organic matrix. Solid process residues are solids that do not fit the definition of debris. Typically, these solids are sludge or particulate materials. Waste in this category may also contain some debris material provided the amount of debris is less than 50% (Note: based on LDR debris rule). As opposed to Inorganic Sludges/Particulates, wastes in this category would not leave a large residue when thermally treated. TCLP organics and F-listed solvents are the primary contaminants present although ignitable (D001) and corrosive (D002) wastes with toxic organics are also included in this category.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
194	SLUDGES, SOLVENT - TRICHLOR, PERCHLOR	BLDG 45, WATER TREATMENT	194	0.200	0.000	0.000	CH	PK	D037		
390	OILY SEMI-SOLID	655 PLANT 6 WATER TREATMENT AREA	469	0.800	795.0	1.4	CH	PK	D018 F002	 INCIN	 C
448	SLUDGE, HYDRAULIC OIL FROM FREIGHT ELEVATOR	730 LABORATORY	260	0.200	0.000	0.000	CH	PK	D018		
456	SLUDGE-LIKE, VERY STRONG SOLVENT ODOR	100 PLANT 1	508	0.400	0.000	0.000	CH	pk	D018		
517	OIL DRY CONTAMINATED WITH OIL FROM BALER	PLANT 1	426	0.400	0.000	0.000	CH	PK	D018		
584	KEROSENE (DIESEL FUEL)/SLUDGE/WATER FROM PUMP TEST	741 PROCUREMENT , GARAGE	1115	1.600	0.000	0.000	CH	PK	D018		
1532	BIODENITRIFICATION SURGE LAGOON SLUDGE	721 WASTE MGMT. CHEMICAL PITS	387117	408.0	0.000	0.000	CH	SA	D018 D039 F001 F002	 INCIN INCIN	 C C

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

488

517

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
10003	OILY OXIDATION SLUDGES	800 PLANT 8. GENERAL	2590	2.800	0.000	0.000	CH	SA	D001 D039 F001	FSUBS RORGS INCIN INCIN	T C
10010	SLUDGES, OILY	655 PLANT 6. WATER TREATMENT AREA	77667	105.8	0.000	0.000	CH	SA	D029 D039 D040 F001	INCIN	C
10026	1,1,1-TRICHLOROETHANE	YAQ	7782	9.200	0.000	0.000	CH	SA	D001 F001	FSUBS RORGS INCIN INCIN	T C
10031	FLOOR SUMP CLEANOUT SLUDGE	738 SERVICE BLDG & ADMIN BLDG., GARAGE RCRA	594	0.600	0.000	0.000	CH	SA	D029 D039 F001	INCIN	C
20006	OIL CONTAMINATED WET SUMP OR FILTER CAKE	VXB	16397	25.40	0.000	0.000	CH	SA	F002	INCIN	C
20037	PROCESS RESIDUES, TRAILER CAKES	900 PLANT 9. GENERAL	362	0.600	0.000	0.000	CH	SA	D029		
20045	CONTAMINATED TBP AND/OR KEROSENE	732 LABORATORY GENERAL ANALYTICAL	50	0.200	0.000	0.000	CH	SA	D019 D022 D039 F002	INCIN	C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
20048	PROCESS RESIDUES, TRAILER CAKES	731 LABORATORY GENERAL, OPERATIONS & ENGINEERING SERVICES	9	0.200	0.000	0.000	CH	SA	F005	INCIN	
30005	OILY SLUDGES	853 PLANT 8, OXIDATION SYSTEM, OIL DECANTATION	15541	15.80	0.000	0.000	CH	SA	D001 D019 F001 F003 F005	FSUBS RORGS INCIN INCIN INCIN INCIN	T C C C
30010	WET SUMP OR FILTER CAKE - OIL	735 SERVICE BLDG AND ADMIN BLDG	10611	10.60	0.000	0.000	CH	SA	D039 D040 F002	INCIN	C
30018	WET SUMP OR FILTER CAKE - NON-OILY	381 PLANTS 2 & 3, PILOT PLANT SUMP, SUMP CATCH BASIN	3231	4.200	0.000	0.000	CH	SA	D039 F002	INCIN	C
30026	NON-OILY CLEANOUT SLUDGES FOR ROASTING	200 PLANTS 2 & 3. GENERAL	3968	5.400	0.000	0.000	CH	PK	D039 F002	INCIN	C
30037	PROCESS RESIDUES, TRAILER CAKES	381 PLANTS 2 & 3, PILOT PLANT SUMP, SUMP CATCH BASIN	454	0.800	0.000	0.000	CH	SA	D039 F002	INCIN	C
30042	WET SUMP OR FILTER CAKE - NON-OILY	380 PLANTS 2 & 3. PILOT PLANT SUMP	592	0.800	0.000	0.000	CH	PK	D039 F002	INCIN	C
30046	NON-OILY CLEANOUT SLUDGES FOR ROASTING	741 PROCUREMENT. GARAGE	1864	2.000	0.000	0.000	CH	SA	D019 F001	INCIN	C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
50085	WET CAKE, NON-OILY/HALIDE	100 PLANT 1. GENERAL	56	0.200	0.000	0.000	CH	SA	D001 F002 F003 F005	FSUBS RORGS INCIN INCIN INCIN INCIN	T C C C
50200	OILY SLUDGE FOR OXIDATION	610 PLANT 6, ROLLING	90	0.200	0.000	0.000	CH	SA	D001 F001	FSUBS RORGS INCIN INCIN	T C
50339	SLUDGES, OILY, FOR OXIDATION, HIGH METAL	620 PLANT 6, MACHINING	1601	2.200	0.000	0.000	CH	SA	F002	INCIN	C
60119	SLUDGES, OILY, FOR OXIDATION, HIGH FREE METALS	741 PROCUREMENT. GARAGE	2968	3.200	0.000	0.000	CH	SA	D001 F001 F002	FSUBS RORGS INCIN INCIN INCIN	T C C
60123	SOLVENT SEMISOLID	736 SERVICE BLDG. AND ADMIN BLDG., LAUNDRY	40	0.200	0.000	0.000	CH	SA	D039 F002	INCIN	C
	TOTALS		536,556	602.0	795	1.4					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: ORGANIC SLUDGES/PARTICULATES, TOXIC METALS W/O MERCURY

Definition: This category includes solid process residues with an organic matrix. Solid process residues are solids that do not fit the definition of debris. Typically, these solids are sludge or particulate materials. Waste in this category may also contain some debris material provided the amount of debris is less than 50% (Note: based on LDR debris rule). As opposed to Inorganic Sludges/Particulates, wastes in this category would not leave a large residue when thermally treated. TCLP metals are the primary contaminants present although ignitable (D001) and corrosive (D002) wastes with toxic metals are also included in this category. These wastestreams do not contain mercury.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
20007	OIL CONTAMINATED WET SUMP OR FILTER CAKE	HXA UNITED NUCLEAR CORP., HANFORD, WA	31716	62.20	0.000	0.000	CH	SA	D011	STABL	C
20145	WET SUMP OR FILTERCAKE, OIL	HXA UNITED NUCLEAR CORP., HANFORD, WA	271	0.400	0.000	0.000	CH	SA	D002 D007	DEACT CHRED-STABL	T C
30047	SOLVENT SLUDGE, TRICHLOR, PERCHLOR, ETC.	LABORATORY GENERAL	36	0.200	0.000	0.000	CH	SA	D007 D011	CHRED-STABL STABL	C C
50177	FURNACE SALT, NON-CHLORIDE	914 PLANT 9 REDUCTION	834	0.800	0.000	0.000	CH	SA	D001 D004 D008	FSUBS RORGS INCIN VITR STABL	T C C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4889

521

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
50202	OILY SLUDGE FOR OXIDATION	920 PLANT 9, CASTING	88	0.200	0.000	0.000	CH	SA	D001 D010	FSUBS RORGS INCIN STABL	T C
50204	OILY SLUDGE FOR OXIDATION	951 PLANT 9, MACHINING, LE BLOND RAPID BORER	153	0.200	0.000	0.000	CH	SA	D001 D010	FSUBS RORGS INCIN STABL	T C
	TOTALS		33,098	64.0	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

522

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: ORGANIC SLUDGES/PARTICULATES, TOXIC ORGANICS, TOXIC METALS W/O MERCURY

Definition: This category includes solid process residues with an organic matrix. Solid process residues are solids that do not fit the definition of debris. Typically, these solids are sludge or particulate materials. Waste in this category may also contain some debris material provided the amount of debris is less than 50% (Note: based on LDR debris rule). As opposed to Inorganic Sludges/Particulates, wastes in this category would not leave a large residue when thermally treated. TCLP metals and organics and F-listed solvents are the primary contaminants present although ignitable (D001) and corrosive (D002) wastes with toxic organics and metals are also included in this category. These wastestreams do not contain mercury.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
10007	OILY SLUDGES	PLANT 9, SUMP LIQUOR PROCESSING	430	0.600	0.000	0.000	CH	SA	D007 F001	CHRED-STABL INCIN	C C
10009	SLUDGES - SOLVENT (TRICHLOR, PERCHLOR)	135 PLANT 1. DRUM RECONDITIONINGDRUM PAINTING BOOTH	133	0.400	0.000	0.000	CH	SA	D001 D008 D035 F005	FSUBS RORGS INCIN STABL INCIN	T C C
10016	OILY SLUDGE	351 PILOT PLANT HEAT TREATING	1352	1.200	0.000	0.000	CH	SA	D010 D035 F001	STABL INCIN	C C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

523

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
10021	SLUDGES, OILY	200 PLANTS 2 & 3. GENERAL	311	0.400	0.000	0.000	CH	SA	D008 D039 D040 F001	STABL INCIN	C C
10028	SLUDGES, OILY	800 PLANT 8. GENERAL	1476	2.000	0.000	0.000	CH	SA	D008 F001	STABL INCIN	C C
50070	NON-OILY SLUDGE FOR ROASTING	824 PLANT 8. OXIDATION SYSTEM. BOX FURNACE	332	0.400	0.000	0.000	CH	SA	D008 F001 F002	STABL INCIN INCIN	C C C
	TOTALS		4,034	5.0	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

524

1488

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: ORGANIC SLUDGES/PARTICULATES, IGNITABLE, REACTIVE OR CORROSIVE ONLY

Definition: This category includes solid process residues with an organic matrix. Solid process residues are solids that do not fit the definition of debris. Typically, these solids are sludge or particulate materials. Waste in this category may also contain some debris material provided the amount of debris is less than 50% (Note: based on LDR debris rule). As opposed to Inorganic Sludges/Particulates, wastes in this category would not leave a large residue when thermally treated. Only wastes that are corrosive (D002), reactive (D003) or ignitable (D001) (as defined in 40 CFR Part 261) and do not contain toxic metals or organics are included in this category.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
30045	OILY SLUDGES, HIGH FREE METAL	655 PLANT 6. WATER TREATMENT AREA	423	0.600	0.000	0.000	CH	SA	D001	FSUBS RORGS INCIN	T
30081	DISCARD PROCESS RESIDUES, TRAILER CAKES	235 PLANTS 2 & 3. HOT RAFFINATE BLDG	387	0.200	0.000	0.000	CH	SA	D002	DEACT	T
50008	SUMP CAKE - COPPER CONTAMINATED	761 BLDG. 45., GENERAL SUMP	36832	31.00	0.000	0.000	CH	SA	D001	FSUBS RORGS INCIN	T
50068	NON-OILY SLUDGE FOR ROASTING	761 BLDG 45., GENERAL SUMP	13990	13.40	0.000	0.000	CH	SA	D001	FSUBS RORGS INCIN	T
50346	OILY SLUDGE FOR OXIDATION	940 PLANT 9, MACHINING	292	0.400	0.000	0.000	CH	SA	D001	FSUBS RORGS INCIN	T

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

525

4886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
50347	DISCARD PROCESS RESIDUE	767 BLDG. 45., BOILER PLANT	179	0.200	0.000	0.000	CH	SA	D001	FSUBS RORGS INCIN	T
50355	DISCARD PROCESS RESIDUE	761 BLDG. 45., GENERAL SUMP	3675	3.200	0.000	0.000	CH	SA	D001	FSUBS RORGS INCIN	T
	TOTALS		55,778	49.0	0.0	0.0					

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: INORGANIC SLUDGES/PARTICULATES, TOXIC ORGANICS

Description: This category includes solid process residues with an inorganic matrix. Solid process residues are solids that do not fit the definition of debris. Typically, these solids are sludge or particulate materials. Waste in this category may also contain some debris material provided the amount of debris is less than 50% (Note: based on LDR debris rule). The solids in this category may be contaminated with, or contain organics, such that thermal treatment is required. However, the matrices are predominantly inorganic such that thermal treatment would result in a high residue. Example waste materials in this category are: sludges, absorbed aqueous or organic liquids (on inorganic particulate absorbents), ion exchange resins, and paint chips/residues. TCLP organics and F-listed solvents are the primary contaminants present although ignitable (D001) and corrosive (D002) wastes with toxic organics are also included in this category.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH BASIS
588	MERCO AND OILY MERCO DRY	137 PLANT 1, DRUM RECONDITIONING	1557	1.600	0.000	0.000	CH	PK	F002	INCIN	C
30004	INCINERATOR CINDERS	PLANTS 2 & 3	66,340	108.0	0.000	0.000	CH	SA	F001	INCIN	C
50079	INCINERATOR CINDERS	762	2768	4.200	0.000	0.000	CH	SA	F002	INCIN	C
50100	COPPER CONTAMINATED SUMP CAKE LOW U	PLANT 8	524	0.800	0.000	0.000	CH	PK	F001	INCIN	C
50113	ROASTED CALCIUM-PRECIPITATED	PLANT 8	1487	3.800	0.000	0.000	CH	SA	F001	INCIN	C
50129	SCRAP U3O8 - LOW F	PLANT 8	6151	7.600	0.0000	0.000	CH	SA	F001	INCIN	C
50131	SCRAP U3O8 - LOW F	LABORATORY	56	1.000	0.000	0.000	CH	PK	F002	INCIN	C
50152	SCRAP U3O8 OR THO2, HIGH FLUORIDE	PLANT 8	13,646	8.400	0.000	0.000	CH	PK	F002	INCIN	C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4889

537

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH BASIS
50154	ROASTED CALCIUM-PRECIPITATED SUMP OR FILTER CAKES	PLANT 8	21,067	32.60	0.000	0.000	CH	PK	F001	INCIN	C
50175	SALT SLUDGE, CHLORIDE	PLANT 9	500	1.000	0.000	0.000	CH	SA	F002	INCIN	C
50183*	SCRAP SALTS, LOW F	PLANT 6, DEGREASING AND PICKLING, DERBY PICKLING	216.1	0.400	0.000	0.000	CH	SA	F001	INCIN	C
60149	U308 FROM BOX FURNACE	PLANT 8	40,712	50.20	0.000	0.000	CH	SA	F001 F002	INCIN INCIN	C C
60152	U308 ROTEXED PLANT 8 FURNACE PRODUCT	PLANT 8	75,533	69.20	0.000	0.000	CH	SA	F001	INCIN	C
	TOTALS		230,557	288.8	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

F-48 86

527

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: INORGANIC SLUDGES/PARTICULATES, TOXIC METALS W/O MERCURY

Description: This category includes solid process residues with an inorganic matrix. Solid process residues are solids that do not fit the definition of debris. Typically, these solids are sludge or particulate materials. Waste in this category may also contain some debris material provided the amount of debris is less than 50% (Note: based on LDR debris rule). The solids in this category may be contaminated with, or contain organics, such that thermal treatment is required. However, the matrices are predominantly inorganic such that thermal treatment would result in a high residue. Example waste materials in this category are: sludges, absorbed aqueous or organic liquids (on inorganic particulate absorbents), ion exchange resins, and paint chips/residues. TCLP metals are the primary contaminants present although ignitable (D001) wastes with toxic metals are also included in this category. These wastestreams do not contain mercury.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH BASIS
817	PAINT CHIPS FROM SAND FILTERS AT WATER PLANT	BUILDING 45	268	0.400	0.000	0.000	CH	SA	D008	STABL	C
10002	SCRAP SALTS	FTA RMI COMPANY, INC.	7488	6.000	0.000	0.000	CH	SA	D005 D008	PRCPT STABL STABL	C C
10013	SUMP CAKE	362	6548	4.800	0.000	0.000	CH	PK	D005 D007	PRCPT STABL CHRED-STABL	C C
10022	GRIT BLAST	WASTE MANAGEMENT	284609	172.8	0.000	0.000	CH	PK	D008	STABL	C
20015	SCRAP SALTS AND FLOOR SWEEPINGS - LOW	PLANT 6	2862	4.800	0.000	0.000	CH	SA	D007	CHRED-STABL	C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH BASIS
20024	SCRAP SALTS AND FLOOR SWEEPINGS	FYC MARTIN MARRIETTA, PADUCAH, KY	1014	1.800	0.000	0.000	CH	SA	D007 D008	CHRED-STABL STABL	C C
20027	DUST COLLECTOR RESIDUES - HIGH FLUORIDE	LABORATORY GENERAL	245	0.600	0.000	0.000	CH	SA	D004 D011	VITR STABL	C C
20033	PROCESS RESIDUES, TRAILER CAKES	PLANT 6	384	1.000	0.000	0.000	CH	SA	D008	STABL	C
20035	DUST COLLECTOR RESIDUES - HIGH FLUORIDE	PLANTS 2 & 3	559	0.800			CH		D007	CHRED-STABL	C
20047	SCRAP SALTS AND FLOOR SWEEPINGS - LOW	PLANT 6	230	0.400	0.000	0.000	CH	SA	D004 D008	VITR STABL	C C
20058	DUST COLLECTOR RESIDUES - HIGH FLUORIDE	PLANT 1	3	0.200	0.000	0.000	CH	SA	D006 D008	STABL STABL	C C
20139	SAMPLES NON-METALLIC	FTA RMI COMPANY, INC.	84	0.200	0.000	0.000	CH	SA	D005	PRECP STABL	C
30036	DUST COLLECTOR RESIDUES - HIGH FLUORIDE	PLANT 6	551	1.000	0.000	0.000	CH	SA	D006 D008	STABL STABL	C C
30047	SOLVENT SLUDGE, TRICHLOR, PERCHLOR, ETC.	LABORATORY GENERAL	36	.2000	0.000	0.000	CH	SA	D007 D011	CHRED-STABL STABL	C C
30060	WET SUMP OR FILTER CAKE - NON-OILY	362	246	0.400	0.000	0.000	CH	PK	D005	PRCPT STABL	C C
40185	IMPURE THORIUM NITRATE (SOLID)	CBH	838	0.200	0.000	0.000	CH	PK	D001 D007 D008	DEACT CHRED- STABL STABL	T C C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH BASIS
40186	IMPURE THORIUM NITRATE (SOLID)	FZC	2000	0.600	0.000	0.000	CH	PK	D001 D007 D008	DEACT CHRED-STABL STABL	T C C
50091	DUST COLLECTOR RESIDUES - PYROPHORIC	PLANT 9	63	0.200	0.000	0.000	CH	SA	D004 D008	VITR STABL	C C
50102	PROCESS RESIDUES, TRAILER CAKES, SLURRIES, RAFFINATES	PLANT 6	54	0.400	0.000	0.000	CH	SA	D006 D008	STABL STABL	C C
50148	SCRAP U3O8 HIGH F	PLANT 5	110080	109.4	5,000.0	0.000	CH	SA	D004	VITR	C
50165	ROASTED OFF-SITE SUMP CAKE	PLANT 8	14944	11.40	0.000	0.000	CH	SA	D007	CHRED-STABL	C
50169	NON-OILY SLUDGE FOR ROASTING	PLANT 9	202	0.200	1,136	1.000	CH	SA	D007	CHRED-STABL	C
50173	SALT SLUDGE, CHLORIDE	PLANT 9	4799	3.200	0.000	0.000	CH	SA	D007	CHRED-STABL	C
50174	SALT SLUDGE, CHLORIDE	PLANT 6	9099	10.20	0.000	0.000	CH	PK	D007	CHRED-STABL	C
50180	FURNACE SALT, NON-CHLORIDE	PLANT 6	10,942	7.600	0.000	0.000	CH	SA	D007 D008 D010	CHRED-STABL STABL STABL	C C C
50188	SCRAP SALTS, HIGH F	PLANT 4	1885	2.400	0.000	0.000	CH	SA	D004 D007 D008 D010	VITR CHRED-STABL STABL STABL	C C C C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4889

531

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	(m³)	5-YEAR RATE (kg)	(m³)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH BASIS
50293	U308 FOR REOXIDATION	HXA UNITED NUCLEAR CORP., HANFORD, WA	3560	4.800	0.000	0.000	CH	SA	D004	VITR	C
50314	SCRAP SALTS AND FLOOR SWEEPINGS	PLANTS 2 & 3	114	0.200	0.000	0.000	CH	SA	D010	STABL	C
50323	SOLIDIFIED FURNACE SALTS NON-CHLORIDE	PLANT 9	111846	137.2	0.000	0.000	CH	SA	D004	VITR	C
50349	DUST COLLECTOR RESIDUES - HIGH FLUORIDE	PLANT 8	87	0.200	0.000	0.000	CH	SA	D008	STABL	C
50351	DUST COLLECTOR RESIDUES - HIGH FLUORIDE	PLANTS 2 & 3	267	0.200	0.000	0.000	CH	SA	D004 D008	VITR STABL	C C
50387	SALT SLUDGE, CHLORIDE	LABORATORY GENERAL	324	0.400	0.000	0.000	CH	SA	D005	PRCPT STABL	C
50405	NON-RECOVERABLE TRASH	PLANT 6	298	0.800	0.000	0.000	CH	SA	D006 D007	STABL CHRED-STABL	C C
50406	FURNACE SALT, CHLORIDE	PLANT 6	2945	5.400	0.000	0.000	CH	SA	D004 D011	VITR STABL	C C
	TOTALS		579,390	490.2	6,136	6.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

532

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: INORGANIC SLUDGES/PARTICULATES, TOXIC METALS W/ MERCURY

Description: This category includes solid process residues with an inorganic matrix. Solid process residues are solids that do not fit the definition of debris. Typically, these solids are sludge or particulate materials. Waste in this category may also contain some debris material provided the amount of debris is less than 50% (Note: based on LDR debris rule). The solids in this category may be contaminated with, or contain organics, such that thermal treatment is required. However, the matrices are predominantly inorganic such that thermal treatment would result in a high residue. Example waste materials in this category are: sludges, absorbed aqueous or organic liquids (on inorganic particulate absorbents), ion exchange resins, and paint chips/residues. TCLP metals are the primary contaminants present although corrosive (D002) wastes with toxic metals are included in this category. These wastestreams also contain mercury.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH BASIS
40122	THORIUM TRAILER CAKES, WASTE SLURRIES	LABORATORY GENERAL ANALYTICAL	183	0.200	0.000	0.000	CH	SA	D002 D005 D009	DEACT PRCPT STABL RTHRM Acid Leach STABL INCIN	T C C
50185	SCRAP SALT, HIGH F	FXA PIKETON PLANT	5	0.200	0.000	0.000	CH	SA	D009	RTHRM Acid Leach STABL INCIN	C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

533

48886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH BASIS
	TOTALS		188	0.4	0.0	0.0					

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: INORGANIC SLUDGES/PARTICULATES, TOXIC ORGANICS, TOXIC METALS W/O MERCURY

Description: This category includes solid process residues with an inorganic matrix. Solid process residues are solids that do not fit the definition of debris. Typically, these solids are sludge or particulate materials. Waste in this category may also contain some debris material provided the amount of debris is less than 50% (Note: based on LDR debris rule). The solids in this category may be contaminated with, or contain organics, such that thermal treatment is required. However, the matrices are predominantly inorganic such that thermal treatment would result in a high residue. Example waste materials in this category are: sludges, absorbed aqueous or organic liquids (on inorganic particulate absorbents), ion exchange resins, and paint chips/residues. TCLP metals and organics and F-listed solvents are the primary contaminants present. These wastestreams do not contain mercury.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH BASIS
50170	SALT SLUDGE FOR PLANT 8	PLANT 4	602	0.800	0.000	0.000	CH	SA	D004 D019 D039 F002	VITR INCIN	C C
	TOTALS		602	0.8	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

535

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: ORGANIC DEBRIS, TOXIC ORGANICS

Definition: This category includes wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194, 8/18/92). More specifically, this category is defined for wastes that contain >90% organic debris. TCLP organics and F-listed solvents are the primary contaminants present although ignitable (D001) wastes with toxic organics are also included in this category.

Treatment: 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. Additional Land Disposal Restriction (LDR) treatment technologies specific to the hazardous constituents in each wastestream are described below.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
180	RAGS SOLVENT	MAINTENANCE SECTION	25	0.200	0.000	0.000	CH	PK	F002	INCIN	C
396	PAINT THINNER RAGS	MAINTENANCE SECTION	74	0.400	227.00	1,300	CH	PK	F002 F003 F005	INCIN INCIN INCIN	C C C
398	SOLVENT RAGS	BUILDING 45	19	0.200	114.00	1,200P	CH	PK	D018 F001 F002	 INCIN INCIN	 C C
743	CONTAINER OF PUMP OIL AND RAGS	PLANT 1	18	0.200	0.000	0.000	CH	PK	F001	INCIN	C
1501	SPILL CLEANUPS OF OIL AND GAS	WASTE MANAGEMENT	230	1.000	0.000	0.000	CH	SA	D018		

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
10012	CONTAMINATED BURNABLES	PLANTS 2 & 3	2645	5.800	0.000	0.000	CH	PK	D029 D039 D040 F001	 INCIN	 C
10024	TRASH CONT. TO SOLVENT	PROCUREMENT	99	0.400	0.000	0.000	CH	SA	D018 F001	 INCIN	 C
30075	CONTAMINATED NON-BURNABLES	PLANTS 2 & 3	14	0.200	0.000	0.000	CH	SA	F002	INCIN	C
50002	NON-RECOVERABLE TRASH	LABORATORY GENERAL	60	0.600	0.000	0.000	CH	SA	D001 F003 F005	FSUBS RORGS INCIN INCIN INCIN	T C C
50010	NON-RECOVERABLE TRASH	PLANT 1	204	0.200	0.000	0.000	CH	SA	F002 F005	INCIN INCIN	C C
50025	CONTAMINATED METALLIC FILTER ELEMENTS	PLANT 8	413	0.400	0.000	0.000	CH	PK	F001 F002	INCIN INCIN	C C
50359	NON-RECOVERABLE TRASH	PLANT 6, GENERAL	225	0.800			CH		F002	INCIN	C
	TOTALS		4,026	10.4	341.0	2,500					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4888

53

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: ORGANIC DEBRIS, TOXIC METALS W/O MERCURY

Definition: This category includes wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194, 8/18/92). More specifically, this category is defined for wastes that contain >90% organic debris. TCLP metals are the primary contaminants present. These wastestreams do not contain mercury.

Treatment: 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. Additional treatment technologies specific to the hazardous constituents in each wastestream are described below.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
10017	LINERS/GLOVES CONTAM. WITH ROOFING CPD AND DIESEL FUEL	MAINTENANCE SECTION	77	0.600	0.000	0.000	CH	PK	D007 D010	CHRED-STABL STABL	C C
20120	DUST COLLECTOR BAGS	PLANT 9	190	0.400	0.000	0.000	CH	SA	D007	CHRED-STABL	C
50058	DUST COLLECTOR BAGS	LABORATORY GENERAL	12	0.200	0.000	0.000	CH	SA	D007	CHRED-STABL	C
50061	DUST COLLECTOR BAGS	PLANT 9	50	0.200	0.000	0.000	CH	SA	D008	STABL	C
	TOTALS		329	1.4	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

538

4886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: ORGANIC DEBRIS, TOXIC METALS W/ MERCURY

Definition: This category includes wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194, 8/18/92). More specifically, this category is defined for wastes that contain >90% organic debris. TCLP metals are the primary contaminants present. These wastestreams contain mercury.

Treatment: 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. Additional LDR treatment technologies specific to the hazardous constituents in each wastestream are described below.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
389	OILY RAGS FROM WATER TREATMENT AREA	PLANT 6, WATER TREATMENT AREA	25	0.200	273.0	2,300	CH	PK	D008 D009 D010	STABL RTHRM ACID LEACH STABL INCIN STABL	T C C
	TOTALS		25	0.2	273.0	2,300					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

535

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: ORGANIC DEBRIS, TOXIC ORGANICS, TOXIC METALS W/O MERCURY

Definition: This category includes wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194, 8/18/92). More specifically, this category is defined for wastes that contain >90% organic debris. TCLP metals and organics and F-listed solvents are the primary contaminants present. These wastestreams do not contain mercury.

Treatment: 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. Additional LDR treatment technologies specific to the hazardous constituents in each wastestream are described below.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
376	OILY RAGS	PLANT 5	43	0.200	0.000	0.000	CH	PK	D008 D018 F002	STABL INCIN	C C
380	RAGS WITH 1,1,1-TRICHLOROETHANE	PLANT 5	6	0.200	0.000	0.000	CH	PK	D008 D018 F001 F002	STABL INCIN INCIN	C C C
387	OIL SOAKED RAGS	SERVICE BLDG. AND ADMIN. BLDG.	268	1.200	1,818	8.400	CH	PK	D010 D018 F002	STABL INCIN	C C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4888

540

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
404	OILY RAGS	PLANTS 2 & 3	59	0.400	227.0	1.600	CH	PK	D008 D018 F002	STABL INCIN	C C
410	OILY RAGS	MAINTENANCE SECTION	129	0.400	682.0	10.50	CH	PK	D008 D018 F002	STABL INCIN	C C
413	1,1,1-TRICHLOROETHANE RAGS	BUILDING 45	5	0.200	0.000	0.000	CH	SA	D008 D039 F002	STABL INCIN	C C
	TOTALS		510	2.6	2,727	20.5					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: INORGANIC DEBRIS, TOXIC ORGANICS

Definition: This category includes wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194, 8/18/92). More specifically, this category is defined for wastes that contain >90% inorganic debris. TCLP organics and F-listed solvents are the primary contaminants present.

Treatment: 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. Additional LDR treatment technologies specific to the hazardous constituents in each wastestream are described below.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
1537	FILTER MATERIAL - SAND, GRAVEL, FLY ASH	WASTE MANAGEMENT	186313	23.00	0.000	0.000	CH	PK	F001 F002	INCIN INCIN	C C
	TOTALS		186,313	23.0	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

542

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: INORGANIC DEBRIS, TOXIC METALS W/O MERCURY

Definition: This category includes wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194, 8/18/92). More specifically, this category is defined for wastes that contain >90% inorganic debris. TCLP metals are the primary contaminants present. These wastestreams do not contain mercury.

Treatment: 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. Additional LDR treatment technologies specific to the hazardous constituents in each wastestream are described below.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
1080	CADMIUM SPRINGS	927	26	0.200	0.000	0.000	CH	PK	D006	STABL	C
1271	LEAD SOLDER JOINTS	LABORATORY	6771	7.600	0.000	0.000	CH	PK	D008	STABL	C
10005	CONTAMINATED SOIL, ROCKS, BRICKS, AND CERAMICS	WASTE MANAGEMENT	2390	1.600	0.000	0.000	CH	SA	D008	STABL	C
10025	CONTAMINATED SOIL AND ROCKS	FTA RMI COMPANY, INC.	34680	29.60	0.000	0.000	CH	PK	D005	PRECP STABL	C
20151	CONTAMINATED BRICKS, ROCKS, SOIL, SAND	PLANT 5	466	0.600	0.000	0.000	CH	SA	D004 D008 D011	VITR STABL STABL	C
30039	CONTAMINATED ROCKS, SOIL, ETC., WITH NO FREE LIQUIDS	PLANTS 2 & 3	449	0.600	0.000	0.000	CH	SA	D011	STABL	C
30065	CONTAMINATED NON-BURNABLES	PLANTS 2 & 3	6847	6.200	0.000	0.000	CH	SA	F002	INCIN	C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

543

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
40152	SCRAP THO2 HIGH IN FLUORIDE	362	58	0.400	0.000	0.000	CH	PK	D005	PRECP STABL	C
50031	CONTAMINATED METALLIC FILTER ELEMENTS	PLANT 9	1293	3.200	0.000	0.000	CH	SA	D008 D010	STABL STABL	C C
50063	ROASTED MGF2/OTHER MATERIAL	PLANT 8	2349	1.400	0.000	0.000	CH	SA	D004 D008	VITR STABL	C C
50367	NON-RECOVERABLE TRASH	PLANTS 2 & 3	194	0.200	0.000	0.000	CH	SA	D008	STABL	C
60140*	STEEL SHOT	132 PLANT 1, DRUM RECONDITIONINGWHEEL ABRATOR SHOT BLAST UNIT	965	0.416	0.000	0.000	CH	SA	D010	STABL	C
	TOTALS		56,488	52.0	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

544

4888

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: INORGANIC DEBRIS, TOXIC METALS W/ MERCURY

Definition: This category includes wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194, 8/18/92). More specifically, this category is defined for wastes that contain >90% inorganic debris. TCLP metals are the primary contaminants present. These wastestreams also contain mercury.

Treatment: 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. Additional LDR treatment technologies specific to the hazardous constituents in each wastestream are described below.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH BASIS
91	MERCURY SPILL CLEANUP RESIDUE	MAINTENANCE SECTION	173	1.000	0.000	0.000	CH	PK	U151	RMERC STABL	C
432	ELEMENTAL MERCURY (SPILL CLEAN-UP)	ANALYTICAL LAB. HAZARDOUS WASTE	255	1.200	1,136	3.600	CH	PK	U151	RMERC	T
1199	MERCURY CONTAMINATED FLOOR TILE & PIPE INSULATION	LABORATORY	1110	3.400	1,136	3.600	CH	PK	D009	RTHRM Acid Leach STABL INCIN	C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

545

48 06

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH BASIS
10018	CONTAMINATED SOIL AND ROCKS	500	842	0.600	0.000	0.000	CH	SA	D005	PRECP	C
										STABL	
									D006	STABL	C
										CHRED-STABL	
									D007	STABL	C
									D008	RTHRM	
									D009	ACID LEACH	C
										STABL	C
										INCIN	
	TOTALS		2,380	6.2	2,272	7.2					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

546

4886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: INORGANIC DEBRIS, TOXIC ORGANICS, TOXIC METALS W/O MERCURY

Definition: This category includes wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194, 8/18/92). More specifically, this category is defined for wastes that contain >90% inorganic debris. TCLP metals and organics and F-listed solvents are the primary contaminants present. These wastestreams do not contain mercury.

Treatment: 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. Additional LDR treatment technologies specific to the hazardous constituents in each wastestream are described below.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
50036	CONTAMINATED BURNABLE	PLANT 8	531	1.800	0.000	0.000	CH	SA	D007 F002	CHRED-STABL INCIN	C C
	TOTALS		531	1.8	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

547

4886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: INORGANIC DEBRIS, IGNITABLE, REACTIVE, OR CORROSIVE ONLY

Definition: This category includes wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194, 8/18/92). More specifically, this category is defined for wastes that contain >90% inorganic debris. Only wastes that are corrosive (D002), reactive (D003) or ignitable (D001) (as defined in 40 CFR Part 261) and do not contain toxic metals or organics are included in this category.

Treatment: 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. Additional LDR treatment technologies specific to the hazardous constituents in each wastestream are described below.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
40137	UNFIRED REDUCTION CHARGES PLUS CAF2	BUILDING 320	1.000	0.200	0.000	0.000	CH	PK	D001	DEACT	T
	TOTALS		1.0	0.2	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

548

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: HETEROGENOUS DEBRIS, TOXIC ORGANICS

Definition: This category includes wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194 8/18/92). This category includes debris that do not meet the criteria for categorization as either Organic Debris or Inorganic Debris. This category also includes mixtures of debris and solid process residues or soil, provided debris comprises more than 50% of the waste. TCLP organics and F-listed solvents are the primary contaminants present.

Treatment: 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. Additional LDR treatment technologies specific to the hazardous constituents in each wastestream are described below.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
527	OILY RAGS, CLEAN UP MATERIAL - GLASS JAR	PROCUREMENT	38	0.200	0.000	0.000	CH	PK	D018 F002	INCIN	C
627	5-GAL CAN W/ SPILL CLEANOUT MATERIAL	PLANTS 2 & 3	6	0.200	0.000	0.000	CH	PK	F001	INCIN	C
628	SPILL CLEANUP MATERIAL	PLANT 2 & 3	65	0.200	0.000	0.000	CH	PK	F001	INCIN	C
644	NON-RECOVERABLE TRASH, PADS, RAGS, WATER	PLANT 1	242	0.600	0.000	0.000	CH	PK	D018		
1427	NON RECOVERABLE TRASH	PLANT 6	41	0.200	0.000	0.000	CH	SA	F002	INCIN	C
1428*	SPILL CLEAN-UP MATERIAL FROM BUILDING 79 RCRA STORAGE PAD	700 WASTE MANAGEMENT	86	0.208	0.000	0.000	CH	PK	F001 F002	INCIN INCIN	C C
1716	LAB GENERATED WASTE, CONTACT WASTE SOLID	CNL	394	2.600	0.000	0.000	CH	PK	F001 F002 F005	INCIN INCIN INCIN	C C C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

545

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
20036	SCRAP SALTS AND FLOOR SWEEPING	PLANT 6	387	0.800	0.000	0.000	CH	SA	F001	INCIN	C
20114	CONTAMINATED BURNABLES	PLANT 6	184	0.400	0.000	0.000	CH	SA	F001	INCIN	C
30074	CONTAMINATED NON-BURNABLES	PLANT 1	1139	1.000	0.000	0.000	CH	SA	F002	INCIN	C
50014	NON-RECOVERABLE TRASH	PLANT 5	455	1.000	0.000	0.000	CH	SA	D019 F002	INCIN	C
	TOTALS		3,037	7.4	0.0	0.0					

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: HETEROGENOUS DEBRIS, TOXIC METALS W/O MERCURY

Definition: This category includes wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194 8/18/92). This category includes debris that do not meet the criteria for categorization as either Organic Debris or Inorganic Debris. This category also includes mixtures of debris and solid process residues or soil, provided debris comprises more than 50% of the waste. TCLP metals are the primary contaminants present. These wastestreams do not contain mercury. category.

Treatment: 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. Additional LDR treatment technologies specific to the hazardous constituents in each wastestream are described below.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
659	LEAD AND WOOD SHAVINGS - UNKNOWN ORIGIN	PLANT 1	9	0.200	0.000	0.000	CH	PK	D008	STABL	C
1421*	NON-RECOVERABLE TRASH	503 PLANT 5, GENERAL, OIL STORAGE AREA (RCRA & TSCA)	64	0.208	0.000	0.000	CH	SA	D008	STABL	C
10011	CONTAMINATED BURNABLES	362	51	0.200	0.000	0.000	CH	SA	D005	PRCPT STABL	C
20107	CONTAMINATED NON-BURNABLES	PLANT 6	273	0.200	0.000	0.000	CH	SA	D008	STABL	C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

55

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
30009	SCRAP SALTS AND FLOOR SWEEPINGS	PLANT 1	7523	10.00	0.000	0.000	CH	PK	D008	STABL	C
60011	NON-RECOVERABLE TRASH	WASTE MANAGEMENT	8389	11.00	0.000	0.000	CH	PK	D007	CHRED-STABL	C
	TOTALS		16,309	21.8	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

552

4886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: HETEROGENOUS DEBRIS, TOXIC METALS W/ MERCURY

Definition: This category includes wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194 8/18/92). This category includes debris that do not meet the criteria for categorization as either Organic Debris or Inorganic Debris. This category also includes mixtures of debris and solid process residues or soil, provided debris comprises more than 50% of the waste. TCLP metals are the primary contaminants present. These wastestreams also contain mercury.

Treatment: 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. Additional LDR treatment technologies specific to the hazardous constituents in each wastestream are described below.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
50361	NON-RECOVERABLE TRASH	PLANT 6	275	0.800	0.000	0.000	CH	SA	D009	RTHRM ACID LEACH STABL INCIN	C
	TOTALS		275	0.8	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: HETEROGENOUS DEBRIS, TOXIC ORGANICS, TOXIC METALS W/O MERCURY

Definition: This category includes wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194 8/18/92). This category includes debris that do not meet the criteria for categorization as either Organic Debris or Inorganic Debris. This category also includes mixtures of debris and solid process residues or soil, provided debris comprises more than 50% of the waste. TCLP metals and organics and F-listed solvents are the primary contaminants present. These wastestreams do not contain mercury.

Treatment: 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. Additional LDR treatment technologies specific to the hazardous constituents in each wastestream are described below.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
399*	OILY RAGS, PADS AND TRASH FROM BOILER PLANT MACHINERY	769 BUILDING 45, BOILER PLANT OIL STORAGE	49	0.208	227	0.963	CH	SA	D008 D039 F001	STABL INCIN	C C
415*	OILY RAGS AND ABSORBENTS WD-40 AND VARIOUS OILS	776 BUILDING 45, LAB OIL STORAGE AREA	35.86	0.200	227.0	6.3	CH	SA	D008 D018 F002	STABL INCIN	C C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

54

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
417*	WIPES, RESINS, SOLIDS	733 ANALYTICAL LABORATORY HAZARDOUS WASTE	88.0	0.200	0.000	0.000	CH	PK	D004	VITR	C
									D005	PRECP STABL	C
									D008	STABL	C
									D022		C
									F002	INCIN	C
									F003	INCIN	C
434*	SOLIDS CONTAMINATED BY LAB SAMPLES AND MATERIALS	733 ANALYTICAL LABORATORY HAZARDOUS WASTE	395.4	1.400	682.0	2.400	CH	PK	D004	VITR	C
									D005	PRECP STABL	C
									D006	STABL	C
									D007	CHRED-STABL	C
									D008	STABL	C
									D022		C
									F002	INCIN	C
									F003	INCIN	C
460*	LIQUID AND SOLID WASTE SAMPLES	700 WASTE MANAGEMENT	11.0	0.200	0.000	0.000	CH	SA	D004	VITR	C
									D005	PRECP STABL	C
									D006	STABL	C
									D007	CHRED-STABL	C
									D008	STABL	C
									D010	STABL	C
									D018		C
									F002	INCIN	C
1425*	CONTAMINATED RAGS PAPER POLYETHYLENE FROM RMI	FTA RMI COMPANY, INC.	134	0.624	0.000	0.000	CH	SA	D005	PRECP STABL	C
									F001	INCIN	C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
10023*	NON-RECOVERABLE TRASH	200 PLANTS 2 & 3, GENERAL	3043.16	3.8	0.000	0.000	CH	SA	D008 F001	STABL INCIN	C C
20094*	CONTAMINATED BURNABLES, RAGS, FILTER CLOTH	310 PLANTS 2 & 3, GREEN SALT PRODUCTION	395.0	1.700	0.000	0.000	CH	SA	D008 D011 F001	STABL STABL INCIN	C C C
20095	CONTAMINATED BURNABLES, RAGS, PAPER		287	1.200	455	2.000	CH	SA	D011 F001 F005	STABL INCIN INCIN	C C C
30053	PROCESS RESIDUES, TRAILER CAKES	PLANT 6	78	0.200	0.000	0.000	CH	PK	D006 D007 D008 D018 D040 F002 F005	STABL CHRED-STABL STABL INCIN INCIN	C C C C C
	TOTALS		4,516.4	9.7	1,591	11.7					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

556

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: HETEROGENOUS DEBRIS, IGNITABLE, REACTIVE, OR CORROSIVE ONLY

Definition: This category includes wastes with matrices meeting the definition of debris per the 8/18/92 LDR debris rulemaking (57 FR 37194 8/18/92). This category includes debris that do not meet the criteria for categorization as either Organic Debris or Inorganic Debris. This category also includes mixtures of debris and solid process residues or soil, provided debris comprises more than 50% of the waste. Only wastes that are corrosive (D002), reactive (D003) or ignitable (D001) (as defined in 40 CFR Part 261) and do not contain toxic metals or organics are included in this category.

Treatment: 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. Additional LDR treatment technologies specific to the hazardous constituents in each wastestream are described below.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH BASIS
0358	CONTAMINATED NON-BURNABLE	PROCUREMENT	1,447	0.800	0.000	0.000	CH	SA	D001	FSUBS RORGS INCIN	T
50407	NON-RECOVERABLE TRASH	003	480	0.200	0.000	0.000	CH	SA	D001	FSUBS RORGS INCIN	T
	TOTALS		1,927	1.0	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

557

F-4886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: SOILS, TOXIC ORGANICS

Description: Soils contaminated with hazardous constituents that are stored in waste containers. Wastes in this category may include debris, provided it is less than 50% of the waste. TCLP organics and F-listed solvents are the primary contaminants present.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
580	SOIL CONTAMINATED WITH OIL AND WATER	PROCUREMENT	382	0.400	0.000	0.000	CH	PK	D018		
661	BORING #1594 FROM NORTHWEST CORNER OF BLDG 12	ASI	216	0.200	0.000	0.000	CH	SA	F001	INCIN	C
720	BORING #1261	ASI	250	0.200	0.000	0.000	CH	SA	F001	INCIN	C
776	BORING #1674, LOCATED INSIDE PILOT PLT	ASI	154	0.200	0.000	0.000	CH	PK	F001	INCIN	C
819	BORING #1251	ASI	414	0.400	0.000	0.000	CH	SA	F001	INCIN	C
1841	SOIL		1512	1.200	0.000	0.000	CH	PK	F001 F002	INCIN INCIN	C C
1842	GRASS ON THE SOIL		19	0.200	0.000	0.000	CH	PK	F001 F002	INCIN INCIN	C C
	TOTALS		2,928	2.6	0.0	0.0					

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: SOILS, TOXIC METALS W/O MERCURY

Description: Soils contaminated with hazardous constituents that are stored in waste containers. Wastes in this category may include debris, provided it is less than 50% of the waste. TCLP metals are the primary contaminants present. These wastestreams do not contain mercury.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
538	BORING #1508	ASI	296	0.200	0.000	0.000	CH	SA	D006 D007 D008	STABL CHRED-STABL STABL	C C C
539	BORING #1509	ASI	691	0.400	0.000	0.000	CH	SA	D004 D006 D007 D008	VITR STABL CHRED-STABL STABL	C C C C
540	BORING #1512	ASI	331	0.200	0.000	0.000	CH	SA	D004 D005 D006 D007 D008 D011	VITR PRCPT STABL STABL CHRED-STABL STABL STABL	C C C C C C
541	BORING #1513	ASI	569	0.400	0.000	0.000	CH	SA	D005 D006 D007 D008	PRCPT STABL STABL CHRED-STABL STABL	C C C C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

355

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
542	BORING #1514	ASI	304	0.200	0.000	0.000	CH	SA	D004	VITR	C
									D005	PRCPT	C
										STABL	
									D006	STABL	C
									D007	CHRED-STABL	C
										STABL	
									D008		C
543	BORING #1515 FROM THE FIRE TRAINING COURSE GROUNDS	ASI	259	0.200	0.000	0.000	CH	SA	D004	VITR	C
									D005	PRCPT	C
										STABL	
									D006	STABL	C
									D007	CHRED-STABL	C
										STABL	
									D008		C
545	BORING #1511	ASI	304	0.200	0.000	0.000	CH	SA	D004	VITR	C
									D005	PRCPT	C
										STABL	
									D006	STABL	C
										CHRED-STABL	
									D007		C
30027	CONTAMINATED SOIL, ROCKS, BRICKS	PLANTS 2 & 3	2867	1.800	0.000	0.000	CH	PK	D004	VITR	C
									D005	PRCPT STABL	C
										CHRED-STABL	
									D007	STABL	C
										STABL	
									D008	STABL	C
									D010		C
									D011		C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

560

4288

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
50098	CONTAMINATED SOIL, ROCKS, BRICKS	PLANT 1	35677	25.60	0.000	0.000	CH	SA	D008	STABL	C
	TOTALS		41,298	29.2	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: BATTERIES (LEAD ACID, CADMIUM), TOXIC METALS W/ MERCURY

Description: This category includes lead acid, cadmium, and miscellaneous batteries. These wastestreams also contain mercury.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
382	DRY CELL BATTERIES	500	220	0.200	0.000	0.000	CH	PK	D002 D009	DEACT RTHRM Acid Leach STABL INCIN	T C
405	DRY CELL BATTERIES	241	134	0.200	682.0	1.100	CH	PK	D002 D009	DEACT RTHRM Acid Leach STABL INCIN	T C
423	ELEMENTAL MERCURY BATTERIES	ANALYTICAL LAB. HAZARDOUS WASTE	20	0.200	91.00	0.084	CH	PK	D009	RMERC	T
676	DRY CELL BATTERIES, BUILDING 12	MAINTENANCE SECTION	174	0.200	909.0	1.100	CH	PK	D002 D006 D009	DEACT RTHRM RTHRM Acid Leach STABL INCIN	T T C

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

562

4886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
2211*	USED MERCURY FROM MISC. EQUIPMENT	NON-SPECIFIED SOURCE	165	0.416	0.000	0.000	CH	PK	D009	RMERC	T
	TOTALS		713	1.2	1,682	2.3					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: REACTIVE METALS

Description: This category includes bulk reactive metals and equipment contaminated with reactive metals. Bulk reactive metals include sodium, alkali metal alloys, aluminum fines, zirconium fines, or pyrophoric metals. Contaminated equipment includes piping, pumps, and other materials with a residue of reactive metals that cannot be separated from the equipment medium.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
700	MAGNESIUM FLAKE AND OILY RAGS	PLANT 5	75	0.200	0.000	0.000	CH	PK	D003	DEACT	T
30051	NON-METALLIC MISCELLANEOUS SAMPLES	PLANT 1	7	0.200	0.000	0.000	CH	PK	D001 D003	DEACT DEACT	T T
50089	CONTAMINATED MAGNESIUM	PLANT 5	13348	34.00	0.000	0.000	CH	PK	D001 D003	DEACT DEACT	T T
50090	CONTAMINATED MAGNESIUM	500	965	2.200	0.000	0.000	CH	SA	D001 D003	DEACT DEACT	T T
	TOTALS		14,395	36.6	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

564

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: ELEMENTAL LEAD (ACTIVATED AND NON-ACTIVATED)

Description: This category includes both surface contaminated and activated elemental lead. Surface contaminated lead material include bricks, counterweights, shipping casks, and other shielding materials. Remotely possible for activated lead which includes lead from accelerators or other neutron sources that may result in irradiation.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
1987	LEAD/LEAD SEALS	WASTE MANAGEMENT	276	0.400	0.000	0.000	CH	PK	D008	MACRO	T
	TOTALS		276	0.4	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

4886

565

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: LAB PACKS WITHOUT METALS

Description: This category includes wastes with one or more small containers of free liquids or solids surrounded by solid materials (virgin or waste materials) within a larger container. This category contains lab-packed wastes that are not contaminated with TCLP metals.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
10034	BENZENE (LABPACKED)	LABORATORY GENERAL	3	0.200	0.000	0.000	CH	PK	D001 D018 U019	FSUBS RORGS INCIN INCIN	T C
10035	CARBON TETRACHLORIDE (LABPACKED)	LABORATORY GENERAL	20	0.200	0.000	0.000	CH	PK	D019 U211	INCIN	C
	TOTALS		23	0.4	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

566

4886

APPENDIX D.2

WASTREAMS FOR WHICH TECHNOLOGY NEEDS ADAPTATION OR FOR WHICH NO TECHNOLOGY EXISTS

TREATABILITY GROUP: COMPRESSED GAS

Description: This category includes pressurized aerosol cans and gas cylinders of any gas composition.

ID #	WASTE DESCRIPTION	WASTE SOURCE	CURRENT QTY. (kg)	CURRENT QTY. (m^3)	5-YEAR RATE (kg)	5-YEAR RATE (m^3)	RAD. CHAR	BASIS OF CHAR.	EPA CODE	LDR TREATMENT TECHNOLOGY	TECH. BASIS
433	AEROSOL SPRAY CANS PROPELLANT	ANALYTICAL LABORATORY	13.60	0.200	0.000	0.000	CH	PK	D001	DEACT	T
	TOTALS		13.6	0.2	0.0	0.0					

C:\WP51\CSTP\FFCATBL CLM
October 25, 1993

* = Wastestreams added since submittal of Interim Mixed Waste Inventory Report

567

1-4886

APPENDIX E

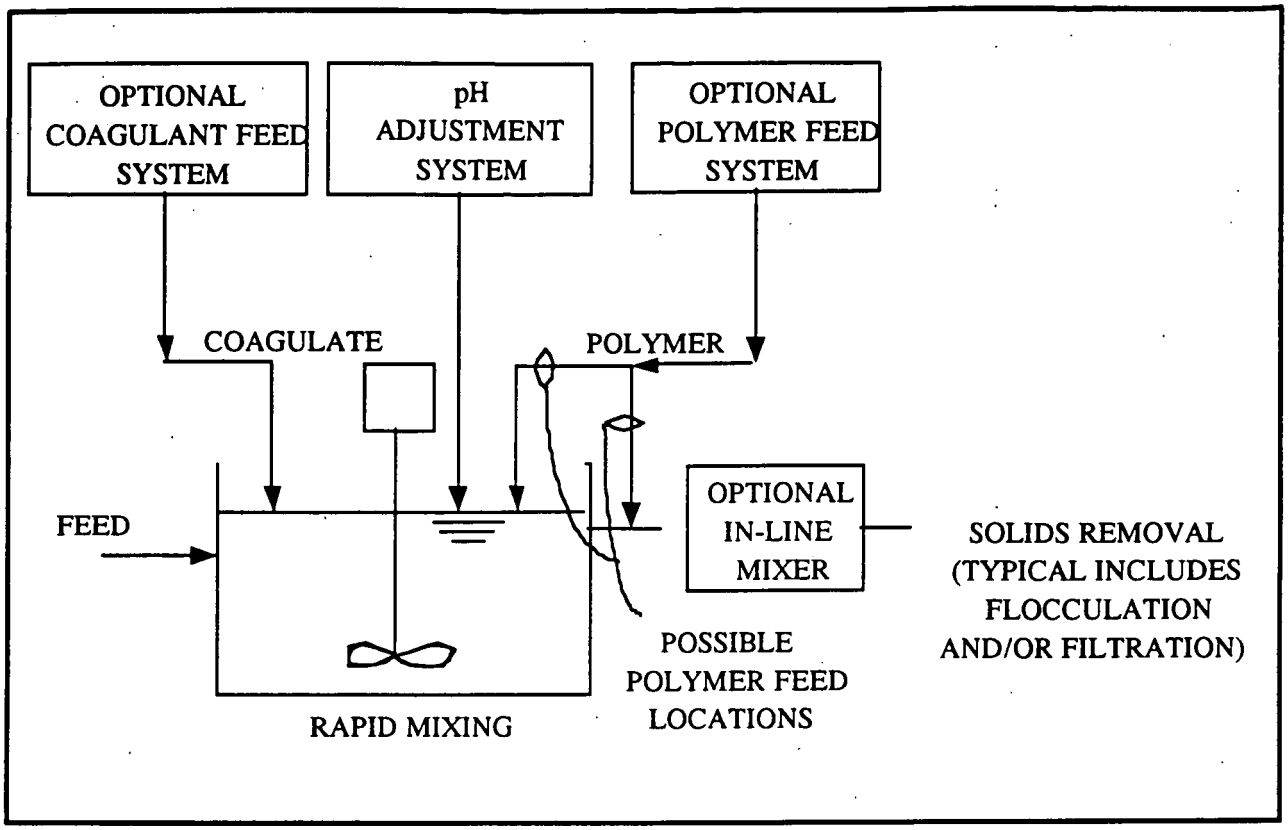
Example of ReOpt Information

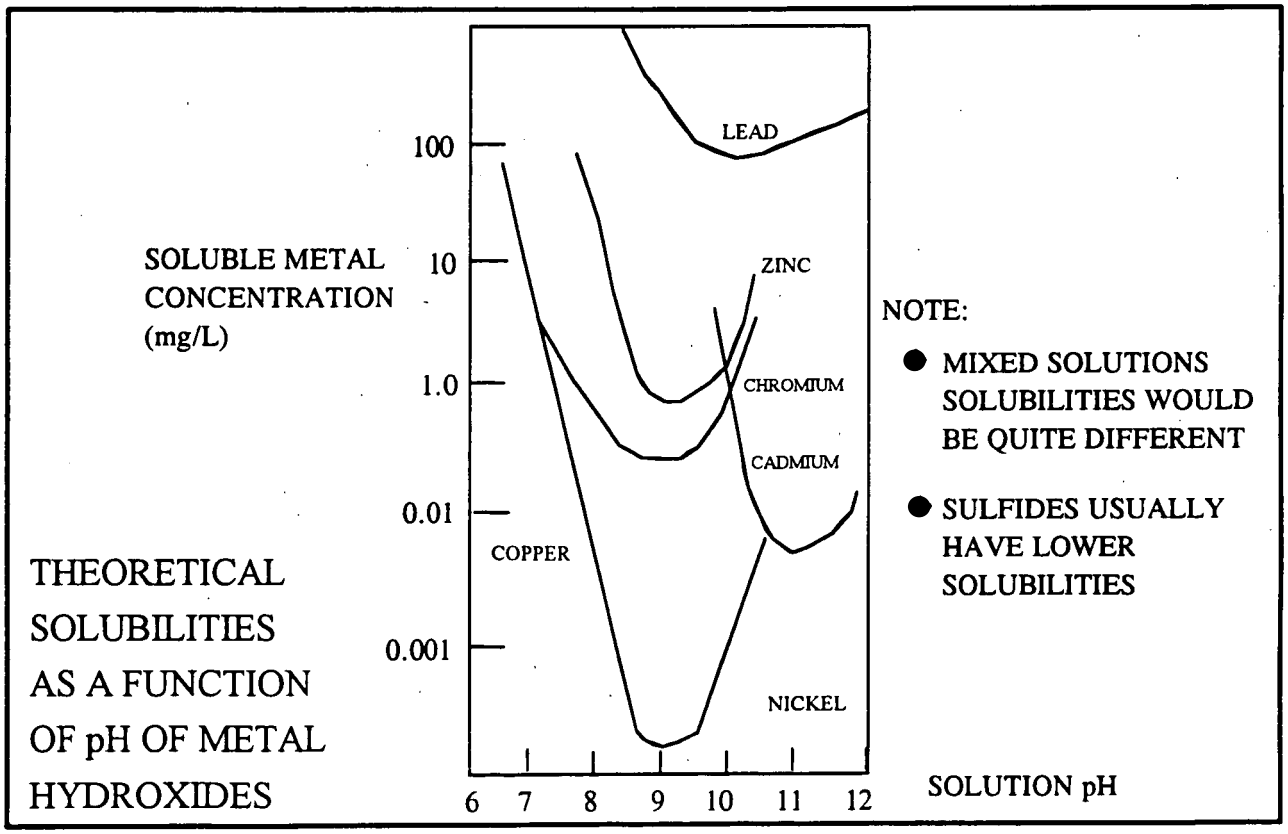
APPENDIX E

Example printout from DOE's ReOpt technology database. This database was used to identify potential on-site treatment technologies which could be used to treat the FEMP's mixed wastes.

Flow Diagram for Precipitation

Date: OCT 25 1993



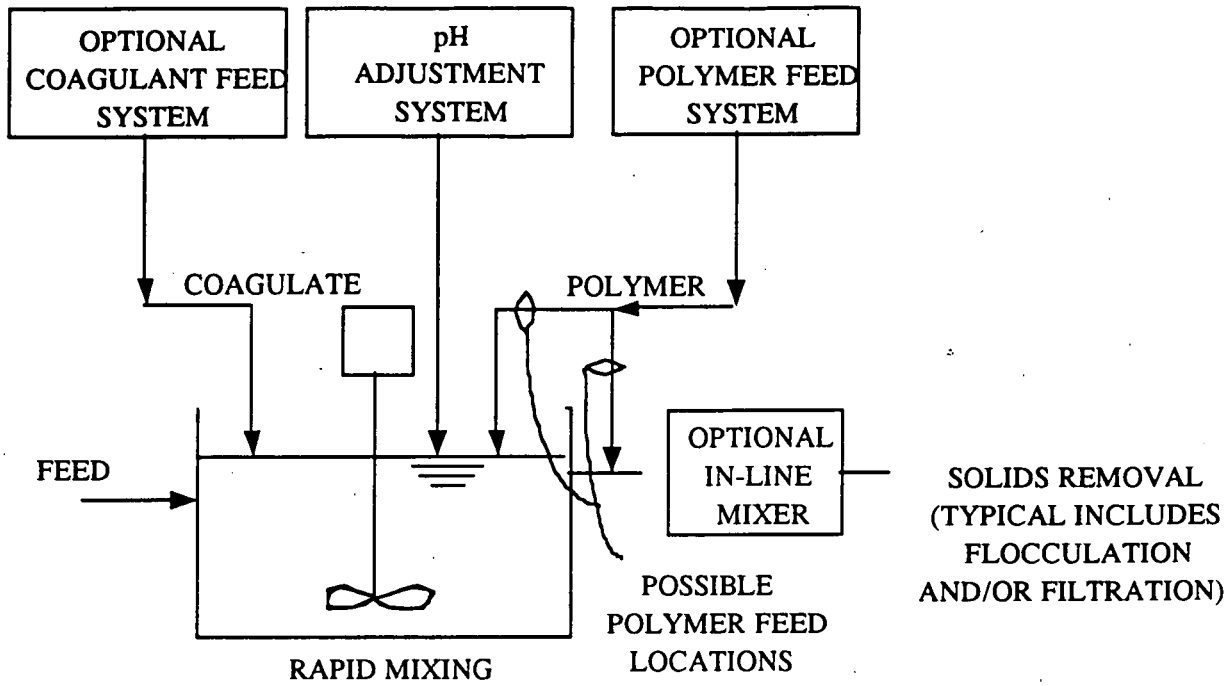


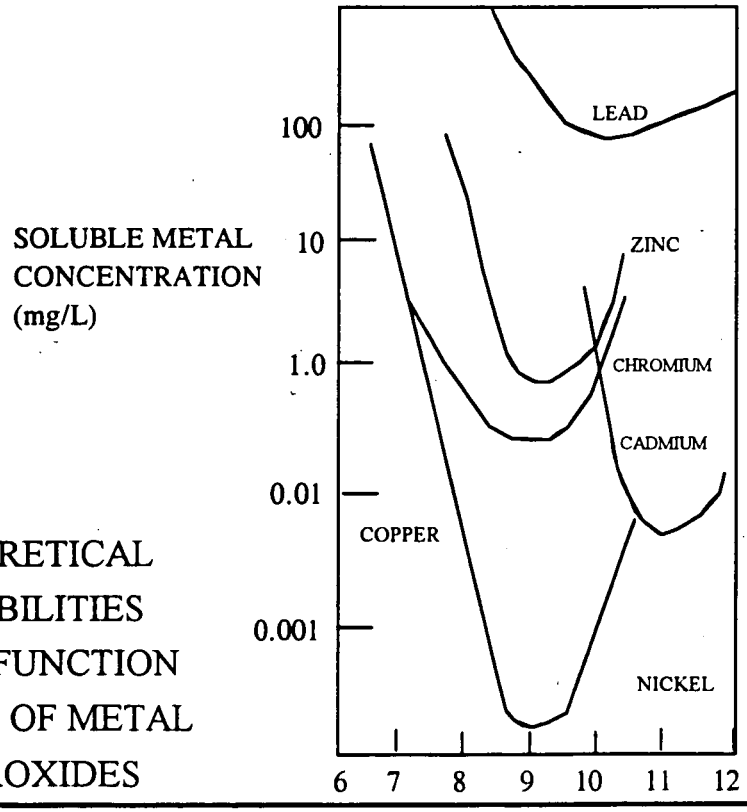
570

Flow Diagram for Precipitation

Date: OCT 25 1993

4886





THEORETICAL SOLUBILITIES AS A FUNCTION OF pH OF METAL HYDROXIDES

NOTE:

- ● MIXED SOLUTIONS SOLUBILITIES WOULD BE QUITE DIFFERENT
- ◆ SULFIDES USUALLY HAVE LOWER SOLUBILITIES

Engineering and Design Parameters for Precipitation

Date: OCT 25 1993

4886

Parameter	Value
Flow rate.	Precipitation flow rates can range from 20 gpm to tens of millions of gallons per day.
Rapid mix sizing	Rapid mix retention times of from 1 to 15 minutes. (Rule of thumb:5 minutes.).
Reaction pH	Between 8 and 12 for metal hydroxide precipitation. Above 11 for lime-soda softening. 5 to 8 for precipitation using aluminum salts. 4 to 12 for precipitation using iron salts. Actual optimum reaction pH should be determined through treatability testing.

Technology Description for Precipitation

Date: OCT 25 1993

Precipitation is a chemical treatment process by which soluble contaminants are removed from water by converting them to insoluble compounds. Soluble contaminants may include metals, hardness (alkaline earth ions), or other inorganic anions (such as sulfate, carbonate, bicarbonate, phosphate, fluoride, silica, or complexed cyanide). An example of chemical precipitation is metals precipitation using hydroxide, sulfide, phosphate, or carbonate ion as the precipitating agent; another example is lime-soda softening.

Precipitation reactions for waste treatment purposes are usually induced by one or more of the following steps:

Adding a substance that will react directly with a compound in solution to form a less soluble compound.

Adding a substance that will shift the solubility equilibrium to a point that no longer favors the continued solubility of the compound.

Changing the temperature of a saturated or nearly saturated solution in the direction of decreased solubility.

Solids separation is effected by coagulation, flocculation, sedimentation, and filtration. The resulting residuals are a waste sludge and a treated liquid supernatant stream.

The more common precipitation methods are as follows:

Metal hydroxide precipitation is a pH adjustment process used to treat aqueous wastes containing metals. To remove metals, base (usually lime or caustic) is added to adjust the pH to the point where the constituents to be removed have the lowest solubility (usually pH 8 to 12). This treatment results in a metal sludge and a treated effluent that has an elevated pH.

Lime-soda softening is used to remove hardness from water. This process is sometimes required as a pretreatment to prevent scaling of other treatment processes. Lime and soda ash are the reaction chemicals. The optimum pH for this process is above 11. The process removes calcium and magnesium down to 20 mg/l as hardness. Fluoride and silica are also removed by co-precipitation.

Metal sulfide precipitation is sometimes used to remove metals to lower effluent concentrations than can be achieved using hydroxide precipitation. Sodium or ferric sulfide is added as a precipitating agent. After precipitation, excess sulfide ions must be removed by oxidation.

Aluminum or iron salts are often used as the precipitating agent to remove other anionic inorganic compounds (such as sulfate, carbonate, bicarbonate, phosphate, fluoride, and silica).

Phosphate or carbonate ions are among the other precipitating agents that can be used to achieve metals precipitation.

Effluent metal concentrations of less than 1.0 mg/l (and sometimes lower) are achievable. Chromium can be precipitated to less than 0.1 mg/l if reduction is used as a pretreatment to convert hexavalent chromium to the trivalent form. Phosphate and arsenic can also be removed to less than 0.5 mg/l through precipitation.

Metal hydroxide and metal sulfide precipitation can be used as primary treatment for metals removal, or as a pretreatment for other treatment processes.

Contaminated wastewater is fed continuously or batchwise into the rapid mix tank. Treatment chemicals may include acids or bases for pH adjustment, and other coagulants such as alum or ferric chloride, and polymers. As an option, polymers can be fed in-line downstream of the rapid mix tank. Polymers may be organic polymers, which promote flocculation through hydrogen bonding and electrostatic forces, or synthetic polyelectrolytes with anionic or cationic functional groups, which promote agglomeration.

After precipitation, wastewater typically undergoes flocculation and solids removal using sedimentation and/or filtration. To achieve precipitation via temperature reduction, cooling coils are typically provided in the rapid mix reactor.

Associated technologies include pH adjustment, oxidation, and reduction as potential pretreatment technologies; pH adjustment, coagulation, flocculation, filtration, ion exchange, and membrane processes as potential polishing treatment for aqueous residuals; and sedimentation, solids dewatering, and solidification/ stabilization for solid residuals.

Contaminant Applicability for Precipitation

Date: OCT 25 1993

4886

Halogenated Non-Polar Aromatics
Generally not applicable. Some removal of organics may occur through adsorption or co-precipitation.

PCB's, Halogenated Dioxins, Furans
Generally not applicable. Some removal of organics may occur through adsorption or co-precipitation.

Other Halogenated Polar Aromatics
Generally not applicable. Some removal of organics may occur through adsorption or co-precipitation.

Halogenated Aliphatics
Generally not applicable. Some removal of organics may occur through adsorption or co-precipitation.

Other Halogenated Compounds
Generally not applicable. Some removal of organics may occur through adsorption or co-precipitation.

Nitrated Aromatics and Aliphatics
Generally not applicable. Some removal of organics may occur through adsorption or co-precipitation.

Heterocyclics, Non-Halogenated Aromatics
Generally not applicable. Some removal of organics may occur through adsorption or co-precipitation.

Polynuclear Aromatics and Heterocyclics
Generally not applicable. Some removal of organics may occur through adsorption or co-precipitation.

Other Polar Non-Halogenated Compounds
Generally not applicable. Some removal of organics may occur through adsorption or co-precipitation.

Other Non-Polar Organics
Generally not applicable. Some removal of organics may occur through adsorption or co-precipitation.

Non-Volatile Metals
Applicable to metals that react to form metal hydroxides or metal sulfides with solubility less than 1 ppm. Constraints-Some metal chelates or complexes are not removable by precipitation alone. For these metals, pre-treatment or alternate treatment technologies are required.

aluminum	antimony
barium	beryllium
cerium	chromium
cobalt	copper
iron	lithium
manganese	molybdenum
nickel	niobium
silver	strontium
technetium	tin
vanadium	yttrium
zirconium	

Volatile Metals

Contaminant Applicability for Precipitation

Date: OCT 25 1993

4886

Applicable to metals that react to form metal hydroxides or metal sulfides with solubility less than 1 ppm. Constraints-Some metal chelates or complexes are not removable by precipitation alone. For these metals, pre-treatment or alternate treatment technologies are required.

cadmium
lead
magnesium
polonium
thallium
cesium
lithium hydroxide
mercury
selenium
zinc

Other Inorganics

Applicable to inorganic compounds that react to form insoluble compounds. Constraints-Solubility of precipitated inorganic compound must be less than appropriate discharge limit or additional treatment will be required.

chromic acid
palladium
ruthenium
sulfur
europium
phosphorus
samarium

Radionuclides

Applicable to radionuclides that react to form insoluble compounds. Constraints- Solubility of precipitated compound must be less than appropriate discharge limit or additional treatment will be required. Some radionuclide complexes are not removable by precipitation alone. For these compounds, pretreatment or alternate treatment is required.

actinium
actinium-225
actinium-227
americium
americium-238
americium-240
americium-242
americium-243
antimony-120
antimony-124
beryllium-10
cerium-134
cerium-137
cerium-139
cesium-132
cesium-135
cesium-137
cobalt-55
cobalt-57
cobalt-58m
curium
curium-240
curium-242
curium-244
europium-146
europium-148
europium-150
europium-154
iodine-129
iodine-135
lead-209
lead-211
manganese-51
manganese-52m
nickel-56
nickel-63
niobium-89
niobium-93m
niobium-95
palladium-101
palladium-107
phosphorus-32
actinium-224
actinium-226
actinium-228
americium-237
americium-239
americium-241
americium-242m
antimony-119
antimony-122
antimony-125
beryllium-7
cerium-135
cerium-137m
cesium-130
cesium-134
cesium-136
cesium-138
cobalt-56
cobalt-58
cobalt-60
curium-238
curium-241
curium-243
europium-145
europium-147
europium-149
europium-152
europium-155
iodine-131
lead-203
lead-210
lead-212
manganese-52
manganese-56
nickel-57
niobium-88
niobium-90
niobium-94
palladium-100
palladium-103
palladium-109
phosphorus-33

575

Contaminant Applicability for Precipitation

Date: OCT 25 1993

4886

plutonium
plutonium-235
plutonium-237
plutonium-239
plutonium-241
polonium-203
polonium-207
protactinium
protactinium-231
radium
radium-225
ruthenium-103
ruthenium-106
samarium-151
samarium-155
selenium-73
selenium-75
selenium-81
strontium-89
strontium-91
technetium-101
technetium-98
thallium-200
thallium-202
thorium
thorium-230
thorium-232
tin-123
tin-126
uranium-232
uranium-234
uranium-236
yttrium-87
yttrium-90
zinc-65
zirconium-89
plutonium-234
plutonium-236
plutonium-238
plutonium-240
plutonium-242
polonium-205
polonium-210
protactinium-230
protactinium-232
radium-224
radium-226
ruthenium-105
samarium-147
samarium-153
selenium-70
selenium-73m
selenium-79
strontium-85
strontium-90
sulfur-35
technetium-97
technetium-99
thallium-201
thallium-204
thorium-229
thorium-231
tin-121
tin-125
uranium
uranium-233
uranium-235
uranium-238
yttrium-88
zinc-63
zinc-69
zirconium-93

Data Requirements for Precipitation

Date: OCT 25 1993

Data Requirement	Purpose
Flow rate	Required to properly size unit processes.
Waste stream characterization	Required to select precipitation technology and predict treatment effectiveness. Parameters required include metals, other cations (calcium, magnesium), anions (sulfate, carbonate, phosphate), and complexing and chelating agents.
Total suspended solids	Required to predict solids generation rates and properly size sedimentation process.
Total dissolved solids	Required to predict solids generation rates.
Alkalinity and acidity	Required to predict chemical requirements for pH adjustment.
Effluent discharge requirements	Required to select precipitation technology and predict technology effectiveness.

Associated Technologies for Precipitation

Date: OCT 25 1993

4886

Medium:
Groundwater
Contaminants:
Any Contaminant

Recovery or Removal APPLICABLE TECHNOLOGY LIST:
Bulk Material Storage
Extraction Wells
Pipelines
Transportation

Disposal APPLICABLE TECHNOLOGY LIST:
Discharge to POTW
Discharge to Surface Water
Injection Wells
Land Application

Ex-Situ Treatment APPLICABLE TECHNOLOGY LIST:
Aerobic Biological Treatment
Calcining
Dehalogenation
Dewatering
Electro-Kinetic Separation
Encapsulation
Hydrolysis
Incineration
Molten Solids Processing
Neutralization
Pyrolysis
Roasting
Solidification and Stabilization
Solids Classification
Solvent Extraction
Thermal Desorption

References for Precipitation

Date: OCT 25 1993

4886

Chung
Chung, N. K. Chemical Precipitation. Section 7.2 in "Standard Handbook of Hazardous Waste Treatment and Disposal." Harry Freeman, editor. pp. 721-731.
Technical Information Available? Y
Application Information Available? N

EPA
Environmental Protection Agency. 1988. "Cost of Remedial Action Model Users Manual." Version 2.1. Office of Solid Waste and Emergency Response, Washington, D.C.
Technical Information Available? N
Application Information Available? Y

Lowry and Lowry
Lowry, J. D. and S. B. Lowry. Radionuclides in Drinking Water. "American Water Works Association." 80(7) p. 50. July 1988.
Technical Information Available? Y
Application Information Available? N

Patterson
Patterson, J. W. "Industrial Wastewater Treatment Technology". 2nd edition. Butterworth Publishers.
Technical Information Available? Y
Application Information Available? N

579

Previous Applications for Precipitation

Date: OCT 25 1993

4886

Cleanup Location:	Lipari Landfill, Glassboro, NJ
Contaminated Medium:	Groundwater
Major Contaminant Type:	Heavy metals, ethers, benzene, phenols, and cyanides
Cleanup Performer:	Radian Corp.
Status of Cleanup:	Remedial action completed

Cleanup Location:	Stringfellow Acid Pits, CA
Contaminated Medium:	Groundwater
Major Contaminant Type:	Heavy metals, volatile organic compounds
Cleanup Performer:	Not available
Status of Cleanup:	Remedial action completed

Site Technical Constraints for Precipitation

Date: OCT 25 1993

4886

Constraint	Effect
Land area	Precipitation requires that sufficient land area be available for coagulation, flocculation, and settling processes, and for chemical feed systems. Land area requirements depend on actual application and are design specific. In most cases, land area is not a selection criteria.
Equipment housing	In most climates, equipment should be housed in a building.

Medium Technical Constraints for Precipitation

Date: OCT 25 1993

4886

Constraint	Effect
Precipitate formation	Addition of coagulants (such as aluminum or iron salts) and polymers sometimes required to help form precipitates in wastewater stream.
Chelated or complexed metals	Metals precipitation generally not effective for removing chelated or complexed metals. Common chelating or complexing agents include cyanide, ammonia, and EDTA. Waste streams containing chelating or complexing agents are usually segregated and treated separately to break the complex before metals can be precipitated. Complexed metals can be treated by ion exchange or by membrane processes. Cyanide compounds are usually treated by oxidation.
Co-precipitation	Precipitation of mixed metal waste streams can result in lower effluent concentrations than theoretically predicted because of co-precipitation. Iron salts are frequently added to enhance co-precipitation effects. Extent of improvement must be predicted case by case.
Sludge/treated effluent	Sludge recovered from precipitation processes requires dewatering and disposal. Treated effluent from metal hydroxide precipitation may require pH adjustment prior to discharge. Treated effluent from metal sulfide precipitation may require sulfide removal prior to discharge.
Flow equalization	Flow equalization (using a storage tank to dampen variations in wastewater flow and composition) can reduce process upsets and improve removal efficiencies.

582

Contaminant Technical Constraints for Precipitation

Date: OCT 25 1993

4886

Constraint	Effect
Anionic heavy metals	Some anionic heavy metals (such as hexavalent chromium, arsenic, and selenium) do not precipitate as hydroxides. Chromium must be treated by reduction to form trivalent chromium prior to hydroxide precipitation. Arsenic and selenium may be removed by co-precipitation with other metal salts.
Heavy metal concentrations	Reduction of heavy metal concentrations to below drinking water standards is difficult using hydroxide precipitation. Subsequent treatment by ion exchange or membrane processes is usually required. In some cases, iron co-precipitation can achieve drinking water standards. Hydroxide precipitation can typically reduce effluent concentration to meet RCRA characteristic waste regulations (40 CFR 261).
Nickel and lead	Nickel and lead are particularly difficult to precipitate as hydroxides to low effluent concentrations. Sulfide precipitation, ion exchange, or treatment by membrane processes is typically required.
Organics	Precipitation will generally not remove organic contaminants, with the exception of limited removal through adsorptive carryover.
Waste with several metals	For a waste containing several metals, more than one precipitation stage, with different pH control points, may be required to remove metals to desired levels. (Typical solubility limits shown on the "Theoretical Solubilities" diagram.) This is most common for chromium, which redissolves at the pH required for zinc and cadmium removal.
Metal complexes	Pretreatment may be required to break metal complexes prior to precipitation. Pretreatment generally not required for noncomplexed metals.

Site Regulatory Constraints for Precipitation

Date: OCT 25 1993

Constraint	Effect
Minimum or zero disturbance regulations	Applicable if within wilderness area (50 CFR Part 35.1), 100-year flood plain (40 CFR Part 264.18(b)), or sites of archaeological interest (36 CFR Part 65).
Flood plain regulations	If the site is within a flood plain, the treatment facility must be designed to withstand flooding (note technical limitations on water table level); must minimize disturbance to wetlands; must minimize potential impact on human health, safety, and welfare (40 CFR 6, Appendix A).
Noise regulations	If the site is near to or within a populated area (e.g., portable air compressors, 40 CFR 204.5).
Fugitive dust regulations	If site is near to or within a populated area (40 CFR 50.6).

Action Regulatory Constraints for Precipitation

4886

Date: OCT 25 1993

Constraint	Effect
National Pollutant Discharge Elimination System (NPDES) limits	Offsite discharges subject to NPDES permit limitations (40 CFR 125).
Treatment standards	Treatment standards for offsite discharges (40 CFR 122, 40 CFR 124, and 40 CFR 136) and discharges to publicly owned treatment works (40 CFR 403 and 40 CFR 270) must be met. pH adjustment prior to disposal may be required to meet RCRA characteristic waste regulations (40 CFR 261).

Contaminant Regulatory Constraints for Precipitation

Date: OCT 25 1993

Constraint	Effect
Sludge characteristics	Sludge resulting from metals precipitation will have a high metals content and may be a RCRA characteristic hazardous waste because of sludge leachability (40 CFR 261). Sludge would then have to meet RCRA guidelines (including land disposal bans) or be delisted by petition.