DOE/LLW-201
Revision 2

FFCAct Clearinghouse

Directory of Abstracts

Radioactive Waste Technical Support Program

October 1994

RB

Introduction

Purpose

The Federal Facility Compliance Act (FFCAct) Clearinghouse is a card catalog of information about the FFCAct and its requirements for developing Site Treatment Plans (STP). The information available in the clearinghouse includes abstracts describing computer applications, technical reports, and a list of technical experts. Information can be accessed for use in responding to FFCAct requirements, and the clearinghouse provides search capabilities on particular topics and issues related to STP development. Appendix A includes: the FFCAct Clearinghouse Fact Sheet and; additional hard copy forms to be used to populate the database.

How It Works

The FFCAct Clearinghouse database is a PC/LAN based system and is maintained in the computer application Lotus Notes. Lotus Notes is an information management tool that provides full text search capabilities.

There are two forms for data entry in the FFCAct Clearinghouse. The **FFCAct** form is used to enter information about the abstracts. The **Response** form is used to add comments or post questions about one of the abstracts.

Three views are currently available in the FFCAct Clearinghouse database. The clearinghouse contains full text search capabilities.

Access

A hard copy directory of abstracts is prepared and distributed. Distribution includes FFCAct Task Force, the Policy Coordination Group (PCG), the Site Treatment Plan Work Group members and EM-33 Program Managers. It is assumed that directories will be forwarded to the respective contractor level representatives at each site. Additional copies or information about the clearinghouse are available by contacting Twain Harwood, the FFCAct Clearinghouse System Administrator, at (208)526-1446. Steve Domotor, EM-332, Applied Technologies Program Manager is the DOE-HQ sponsor and primary point of contact.

Key Benefits

Collaboration: Workgroup members and site personnel can assist each other and share information.

Retrieval: Full text search capabilities allow for easy retrieval of resources.

Forms

The **FFCAct** form is used to enter information about a contributor's data. The **Response** form is used to enter additional information, comments, or questions about an individual FFCAct entry.

Views

Currently, there are three views in the FFCAct Clearinghouse database. You may look at the data by title, primary subject, or format.

System Administration

If you have any questions or comments, contact:

Twain Harwood
EG&G Idaho, Inc.
RWTSP
P.O. Box 1625, MS-2420
Idaho Falls, ID 83415-2420
Phone: (208) 526-1446
FAX: (208) 526-8878

DISCLAIMER

Help Document

Composing Abstracts

To compose a document, select **Compose** from the menu bar and the document you would like to create. The current options in the FFCAct database are **FFCAct** and **Response**.

When composing documents, to move between fields use the arrow keys or the mouse. The ENTER and TAB keys will work, but the results will differ depending on the type of field you are in.

When you have composed a document, use the **Check Spelling** in **Edit** on the menu bar.

To edit a document you have previously entered, position cursor on the proper entry in the **View** and double click (or press CNTL/E). Once you have opened the document by double clicking, choose **View** from the menu bar and then select **Edit Mode**. The fields open and allow you to enter data.

To save document, point the arrow at the lefthand button below the menu bar and double click. You will be asked to save your document.

When composing a Response document position the arrow on the FFCAct or Response document that you are responding to.

To print a document, the following options are:

1. From within the document, select **File/Print** from the menu bar.

2. From View, highlight the document you want to print and select **File/Print** from the menu bar.

3. To print multiple documents from View, move the arrow to the lefthand column on **View** and click the mouse button once; a checkmark appears. Check all of the documents you want to print. When you have checked all of the documents, select **File/Print** from the menu bar.

Using Forms

Procedures

To enter data into the FFCAct Clearinghouse, use the following guidelines:

1. Create an FFCAct form by choosing form from Compose menu.

2. To enter a Response form highlight the abstract you are responding to.
Select **Response** from the Compose menu.

FFCAct

Compose FFCAct when you want to enter information for the abstract. The following information will be included in the FFCAct document:

Field	Description
Format	Format of the information - computer application, technical document, or technical expert.
Author(s)/Expert(s)	Indicate the author and/or the technical expert.
Point of Contact	Enter the point of contact if additional information is desired.
Subject Area: Primary Secondary Tertiary	These three fields are keyword selects used to categorize the information. Scroll through the keywords by pressing the spacebar or press ENTER to see the entire list. To enter a keyword not on the list, press ENTER and type in the value at the bottom of the screen.
Abstract	Enter the information for abstract.

Views

The FFCAct Clearinghouse database contains three Views. To change Views, select **View** from the menu bar. The available Views will be listed on the bottom of the menu; select the View you would like to see. Views available are described below.

Format

This View lists the FFCAct abstract organized by the format of information (i.e., computer application, technical document, or technical expert). To view additional information in the abstract or response document, position the arrow on the document and double click the mouse.

Primary Subject

This View lists the FFCAct abstract organized by the primary subject. To view additional information in the abstract or response document, position the arrow on the document and double click the mouse.

Title

This View lists the FFCAct abstract organized by the title. To view additional information in the abstract or response document, position the arrow on the document and double click the mouse.

Response

Response is used to add comments or questions about to the FFCAct abstracts entered in the database. The following fields are available:

Field	Description
Author	Automatically entered from your userid.
Date	Automatically entered.
Key Thought	Enter a short description of the subject of the response document.
[ ]	Area to enter your comments or questions.

Full Text Search

The FFCAct Clearinghouse database contains full text search capabilities. Full text search allows you to identify documents that contain keyword(s) that you have selected. If the search bar is not displayed at the top of your screen, select **View** and **Show Search Bar**. To search, position the cursor in the search bar and enter the keyword(s) you have selected. A comma (,) between words searches for any of the words in the list. The word **AND** finds documents containing all of the keywords in your search list. You may also use an * for a wildcard search. Once you have entered the search criteria and have selected **Search**, View will display only those documents that contain keyword(s) you selected. When you open one of the documents, notice that the word(s) you have searched for are outlined with a red box. To return to a View with all of the documents, select clear. For more information on full text search, see the on-line **Help** on the menu bar or Lotus Notes documentation.

Format Index of Abstracts

Format Index of Abstracts

Format	Title	Primary
	- Mixed Waste Inventory Report, Phase I and II Data Release; STP37	STP Guidance
	- National Summary Report of Conceptual Site Treatment Plans; Volume I; March 1994; STP36	STP Guidance
	- ER Proposed Strategy for Complying with Site Treatment Plan; August 9, 1994	STP Guidance
	- Overview of the Draft Site Treatment Plans; August 26, 1994	STP Guidance
	- Nuclear Waste - Much Effort Needed to Meet Federal Facility Compliance Act's Requirements; May 1994	GAO Report
	- Draft Presentation to States on DSTP Options	STP Guidance
	- National Summary Report of Draft Site Treatment Plans (DRAFT); September 12,1994	Treatment Options
	- Mixed Waste Technology Development for FY-93 within the Office of Technology Development (EM-50); DRAFT; Jan. 28,	Technology
	- DOE Mixed Waste Treatment Capacity Analysis; June 1994	Waste Type
	- MWTP Functional and Operational Requirements for an Integrated Facility; August 30, 1992	Waste Type
	- DSTP Development Framework Implementation Guidance; May 11, 1994; Revision 1	STP Guidance
	- National Institutes of Health: Mixed Waste Stream Analysis; August 1994; DOE/LLW-208	Waste Type
Technical Expert		
	- Paul Krumrine - Senior Scientist	Technology
	- Susan D. Carson, Ph. D.	Facility, Technolog
	- Christine A. Langton	Technology, Waste
	- Gary S. Robinson	Regulatory
	- Michael B. Heiser	Technology
	- Skid Mounted/ Mobile Treatment Units	Facility, Technolog
	- Ian Pegg - Adj. Assoc. Prof. of Physics	Technology
	- Pedro Macedo - Professor of Physics/Co-Director of VSL	Technology
	- Nicholas Beskid - Assistant Program Manager OWMP	Technology
	- James Mazer - Assistant Chemist	Technology
	- Xiangdong Feng - Principal Investigator	Technology
	- Andrea Wollerman - Chemical Engineer	Regulations, Tech
	- Richard K. Blauvelt	Regulatory
	- Technology Support Teams (Fact Sheet)	Technology, Regul

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Title/Name: Interim Mixed Waste Inventory Database/Report; DOE/NBM-1100-V1-6

Format	Computer Application
Author(s)/Expert(s)	Rob Black; EG&G Idaho, Inc., P.O. Box 1625, Idaho Falls, ID 83415-2420; (208)526-2163; FAX (208)526-8878
Point of Contact	Rob Black; EG&G Idaho, Inc., P.O. Box 1625, Idaho Falls, ID 83415-2420; (208)526-2163; FAX (208)526-8878

Subject Area:

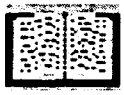
Primary	Waste Type
Secondary	MLLW
Tertiary	Wastestream, Technology, Facility

Abstract:
DOE prepared the report to provide an inventory of its mixed wastes, treatment capacities, and technologies. The report currently covers 50 sites within 22 states with over 1478 mixed waste streams identified by DOE as currently in storage or expected to be generated within the next five years. The electronic version includes the report's technical sections using three different databases; waste streams, treatment facilities, technology development.

NOTE: Presently available via electronic access through the INEL Technical Library.

Prepared By: Twain E. Harwood **Date Completed:** 01/27/94 03:41:21 PM

FFCAct Clearinghouse



Title/Name: Waste Stream and Technology Data (WSTD) System

Format	Computer Application
Author(s)/Expert(s)	Bob Devries
Point of Contact	Bob Devries, EG&G Idaho, Inc., RWTSP, P.O. Box 1625, Idaho Falls, ID 83415-2420; (208)526-2746; Fax: (208)526-8878

Subject Area:

Primary	TSD Facilities, Waste Profiles
Secondary	DOE
Tertiary	TRU, MTRU, LLW, MLLW

Abstract:
The Waste Stream and Technology Data (WSTD) system was developed to assist DOE with performing their waste management responsibilities. Although, the system is still in a production mode it does include the following information for LLNL, Sandia-AL, NTS, Hanford, Rocky Flats, LANL, and INEL: existing volumes of waste; characteristics of that waste; treatment, storage, and disposal capabilities that exist; and TSD capabilities that are planned. With this information, decisions can be made on utilization of existing and planned capability. If TSD is not available or planned for a waste, decisions can be made about developing the necessary capability.

Purpose of the System

The WSTD system is a tool used as a repository of data and is structured for relative ease of data retrieval and data comparison (i.e., data analysis).

Prepared By: Twain E. Harwood Date Completed: 02/10/94 09:31:08 AM

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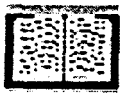

Title/Name: Waste Management Automated Technology Catalog; STP35

Format	Computer Application
Author(s)/Expert(s)	William McCulla, Program Development Mgr., Chemical Science and Technology Division, LANL, Phone: (505)667-2148, Byron Palmer, Technical Staff Member, Chemical Science and Technology Division, Phone: (505)667-3528
Point of Contact	Steve Domotor, US DOE, EM-351, Trevion II, Washington D.C. 20585-0002, Phone: (301)903-5053, Fax: (301)903-7451; Peter Caslte, WINCO/EM-351, Phone: (301)601-1408, FAX: (301)601-1452

Subject Area:

Primary	STP Guidance
Secondary	Technology Process
Tertiary	Treatment

Abstract:
There are several versions of the catalog. The WMATC is in a portable electronic format supported on a Macintosh PC and operates under the 4D Runtime software. DOS based versions are available either through Internet access to the LANL server using the MOSAIC utility or a local version that uses the MOSAIC utility on a DOS based PC.

The WMATC's utility is based on its ability to carry out searches for technologies that match specific waste management functions such as front-end handling, pretreatment, treatment, etc. A unique feature of the WMATC is that the technologies in the database have been tied to specific unit operations in top-level flowsheets. These flowsheets are suggestive of the flowsheets developed by the Mixed Waste Treatment Project (EM-35) during the analysis of the complex-wide mixed low-level waste treatment system requirements. The graphically oriented search strategy (available in Macintosh version) directs the development of flow sheets by providing technology choices from the catalog for five waste matrices; organic liquids, aqueous liquids, process solids, soils, and debris - and the required unit operations.

Prepared By: Twain E. Harwood **Date Completed:** 05/02/94 09:01:15 AM

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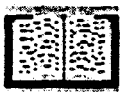

Title/Name: Waste Management Facilities Cost Information Report; EGG-WTD-10443; October 1992

Format	Hard Document
Author(s)/Expert(s)	David Shropshire; EG&G Idaho, Inc., P.O. Box 1625, ID 83415-2420; (208)526-6800; FAX (208)526-8878
Point of Contact	David Shropshire; EG&G Idaho, Inc., P.O. Box 1625, ID 83415-2420; (208)526-6800; FAX (208)526-8878

Subject Area:

Primary	Facility
Secondary	Cost
Tertiary	Planned

Abstract:
The Waste Management Facilities Cost Information (WMFCI) Report develops planning life-cycle cost (PLCC) estimates for treatment, storage, and disposal (TSD) facilities. This report contains PLCC estimates versus capacity for 26 different facility cost modules. A procedure to guide DOE and its contractor personnel in the use of estimating data is also provided. Estimates in the report apply to five distinctive waste streams: low-level waste (LLW), low-level mixed waste (LLMW), alpha contaminated LLW, alpha contaminated LLMW, and transuranic waste (TRU). The report addresses five different treatment types: incineration, metal/melting and recovery, shredder/compaction, solidification, and vitrification. Data in this report allow the user to develop PLCC estimates for various waste management options.

Prepared By: Twain E. Harwood **Date Completed:** 03/24/94 10:38:53 AM

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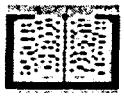

Title/Name: Federal Facility Compliance Act Guidance Notebook (CSTP only - received 9/22/93)

Format	Hard Document
Author(s)/Expert(s)	Marilyn Stone; DOE-HQ, EM-35; (301)903-7921; FAX (301)903-7166 NOTE: The guidance is prepared by multiple authors and is compiled and maintained by M. Stone or designee, Richard Kelley; SAIC (???).
Point of Contact	Twain Harwood; FFCAct Clearinghouse; EG&G Idaho, Inc., P.O. Box 1625; Idaho Falls, ID 83415-2420; (208)526-1446; FAX (208)526-8878

Subject Area:

Primary	STP Guidance
Secondary	Conceptual
Tertiary	FFCAct Task Force

Abstract:
Marilyn Stone is overseeing and tracking the development of guidance to support the preparation of site treatment plans (STP). There are and will continue to be a variety of technical, procedural and policy guidance documents developed over the next few years, ranging from relatively lengthy reference documents to very brief issue resolution statements. To keep track of the guidance during preparation and after completion a simple tracking system has been instituted with a format describing the status of the document, a contact person, and other relevant information. An index of material available and in progress is updated and distributed periodically enabling potential users to identify and obtain what's out there that is relevant to their activities.

Marilyn is also maintaining a file of the latest version of each of the products. Distribution will remain the responsibility of the originator. Also, it is the responsibility of the originator to ensure that Marilyn receives a copy of the latest version and the information needed to update the index.

Prepared By: Twain E. Harwood **Date Completed:** 03/24/94 10:37:32 AM

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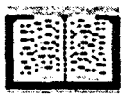

Title/Name: Waste Acceptance Plan and Analytical Protocol for the Toxic Substances Control Act Incinerator; July 1993; K/TSCA-030

Format	Hard Document
Author(s)/Expert(s)	B.S. Snyder and Fidel Perez; Martin Marietta Energy Systems, Inc., Oak Ridge K-25 Site, Oak Ridge, Tenn. 37831
Point of Contact	B.S. Snyder and Fidel Perez; Martin Marietta Energy Systems, Inc., Oak Ridge K-25 Site, Oak Ridge, Tenn. 37831

Subject Area:

Primary	Facility
Secondary	Waste Acceptance Criteria
Tertiary	Treatment

Abstract:
The Toxic Substance Control Act (TSCA) Incinerator is a custom rotary kiln incinerator designed to destroy liquid, sludge, and solid polychlorinated byphenyl (PCB) and hazardous, as defined by the Resource Conservation and Recovery Act of 1976 (RCRA), wastes. These wastes are generated by operations at the Oak Ridge K-25 site and several other DOE off-site facilities. The Primary off-site generators include the Oak Ridge Y-12 Plant, and Oak Ridge National Laboratory (ORNL), Oak Ridge, Tenn.; Paducah Gaseous Diffusion Plant, Paducah, Kentucky; Portsmouth Gaseous Diffusion Plant, Portsmouth, Ohio; Fernald Environmental Management Project, Fernald, Ohio; and RMI Titanium Company Extrusion Plant, Ashtabulah, Ohio.

Prepared By: Twain E. Harwood **Date Completed:** 01/27/94 03:25:06 PM

FFCAct Clearinghouse

Title/Name: DOE Waste Treatability Groups Guidance; September 1993; STP05

Format	Hard Document
Author(s)/Expert(s)	Tim Kirkpatrick and Rob Black, EG&G Idaho, Inc. and; Wayne Ross, PNL, Batelle Blvd., Richland, WA 999352; Phone: (509)372-4684
Point of Contact	Lydia Chang, DOE-HQ, EM-331, (301)903-7136; Tim Kirkpatrick or Rob Black; EG&G Idaho, Inc.; P.O. Box 1625, Idaho Falls, Idaho 83415-2420; Tim Kirkpatrick @ (301)601-1441 and Rob Black (208)526-2163; FAX (208)526-8878

Subject Area:

Primary	STP Guidance
Secondary	Treatablility Group
Tertiary	All

Abstract:
This guidance document provides a standard methodology for categorizing waste information that should be implemented at DOE sites. This methodology will assist in the development of the final mixed waste inventory report, the Site Treatment Plans, preparation of the national Site Treatment Plan summary, and analyzing different national treatment options.

In order to properly integrate the site treatment plans into a cohesive national summary, to be able to use the national summary to help identify and evaluate DOE-wide treatment needs against treatment capacity and capabilities, and to develop treatment options, each Site Treatment Plan must be developed using the same technically-based approach for categorizing waste streams and identifying appropriate treatment. By using the same methodology, DOE sites will be able to share information across the complex on potential treatment technologies/treatment capacities for any specific category of waste. Therefore, this should assist the sites in the development of various options for the site treatment plan.

Prepared By: Twain E. Harwood **Date Completed:** 05/02/94 09:33:00 AM

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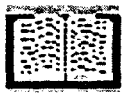


Title/Name: Supercritical Water Oxidation (SCWO) Program Plan; August 1993

Format	Hard Document
Author(s)/Expert(s)	John Beller; SCWO Program Manager; EG&G Idaho, Inc.; P.O. Box 1625, Idaho Falls, Idaho 83415-3710; (208)526-1205; FAX (208)526-5142
Point of Contact	John Beller; SCWO Program Manager; EG&G Idaho, Inc.; P.O. Box 1625, Idaho Falls, Idaho 83415-3710; (208)526-1205; FAX (208)526-5142

Subject Area:

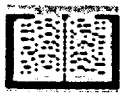
Primary	Technology
Secondary	Treatment System
Tertiary	Full Containment

Abstract:
Supercritical water oxidation technology has the potential of meeting the U.S. Department of Energy's treatment requirements for mixed radioactive waste. This program plan covers the overall approach for the development and demonstration of this technology on a pilot-scale for treating mixed waste. The program plan details the policy basis, program objectives and requirements, processing options, technology acquisition strategy, organization and implementation plans, and preliminary schedules.

SCWO is an emerging technology with the potential for meeting DOE treatment requirements (DOE Order 5400.3, "Hazardous and Radioactive Mixed Waste Program") for mixed wastes. These requirements are a result of on-going changes in environmental regulations.

Prepared By: Twain E. Harwood **Date Completed:** 12/29/93 10:27:33 AM

FFCAct Clearinghouse



Title/Name: Minimum Additive Waste Stabilization (MAWS) Abstract

Format	Hard Document
Author(s)/Expert(s)	Ms. Grace Ordaz; Program Manager; EM Office of Technology Development; U.S. Department of Energy; Phone:(301) 903-7440; FAX (301) 903-7457
Point of Contact	Ms. Grace Ordaz; Program Manager; EM Office of Technology Development; U.S. Department of Energy; Phone:(301) 903-7440; FAX (301) 903-7457

Subject Area:

Primary	Technology
Secondary	Innovative Technology
Tertiary	Thermal

Abstract:
The Minimum Additive Waste Stabilization Program involves the development and on-site demonstration of an integrated, multiple-technology system for treatment of blends of several waste streams with an objective of achieving significant reductions in overall treatment and disposal costs. The MAWS system integrates three primary technologies - vitrification, soil washing, and water treatment - in order to address a variety of waste streams. The MAWS concept is innovative in that the available waste streams are viewed as resources for the process. They are to be fully exploited in order to minimize the need for purchased additives. A portfolio approach is adopted to maximize the economic benefits of blending optimum proportions of multiple waste streams and using alternative technologies.

Prepared By: Twain E. Harwood **Date Completed:** 01/27/94 03:28:32 PM

FFCAct Clearinghouse

Title/Name: MAWS: A program for the Development and Demonstration of an integrated, multiple-technology, multiple-waste stream treatment system for the Fernald Site (revision #0).

Format	Hard Document
Author(s)/Expert(s)	Dr. Ian L. Pegg; Vitreous State Laboratory, Catholic University of America, Washington, D.C. 20064; Phone (202) 319-6700; FAX (202) 319-4469
Point of Contact	Dr. Ian L. Pegg; Vitreous State Laboratory, Catholic University of America, Washington, D.C. 20064; Phone (202) 319-6700; FAX (202) 319-4469

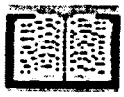
Subject Area:

Primary	Technology
Secondary	Technology Process
Tertiary	Planned

Abstract:
The paper discusses the major concepts underlying the MAWS approach, the main objectives of the program, and the progress that has been made to date. A soil washing progress has been developed that achieves substantial volume reduction while producing a contaminant enriched fraction suitable for blending with other waste streams to produce a vitrifiable feed. Glass-based waste forms have been developed for Fernald Mixed Waste Blends that show excellent leach resistance, are processable using improved Joule-Heated Vitrification Technology, and achieve very high waste loadings. The large volume reductions obtained with this approach translate into substantial reductions in Life-Cycle remediation costs. These benefits should be widely applicable to other sites.

Prepared By: Twain E. Harwood **Date Completed:** 12/29/93 12:48:21 PM

FFCAct Clearinghouse



Title/Name: Compositional Optimization of Mixed Waste Glasses: A Microstructural Approach

Format	Hard Document
Author(s)/Expert(s)	E. Wang - Waste Form A. C. Buechele - Waste Form S. S. Fu - Waste Form P. B. Macedo - Technology
Point of Contact	Dr. P. B. Macedo; Vitreous State Laboratory, Catholic University of America, Washington, D.C. 20064; Phone:(202) 319-5329; Fax: (202) 319-4469

Subject Area:

Primary	Technology
Secondary	Waste Form
Tertiary	Chemical Treatment

Abstract:
In this paper is reported the results of research to optimize compositions for vitrification of low level nuclear wastes from Fernald, Ohio using the MAWS approach. About 50 glasses of different compositions were melted using different percentages of wastes and additives. These glasses were then heat treated at various temperatures. Heat treated and as-melted glass samples were examined using scanning electron microscope and energy dispersive spectroscopy. Various crystalline phases were found, among them flourophlogopite, forsterite, diopsidicaugite, and spinels. The compositional dependence of crystallization has been studied, and near optimal compositions have been found for Fernald wastes. The principles of solution chemistry have been applied to predict the crystallization behavior as a function of compositional variation, and have shown the usefulness of this procedure in facilitating the determination of optimal composition.

Prepared By: Twain E. Harwood **Date Completed:** 01/28/94 08:42:23 AM

FFCAct Clearinghouse

Title/Name: Operable Unit 1 MAWS Remedial Design Bench-Scale Treatability Study Work Plan; Volumes I & II (Rev. 1)

Format	Hard Document
Author(s)/Expert(s)	Parsons - Technology, Fairchild, Ohio
Point of Contact	Mr. Rod Gimpel; FERMCO; P. O. Box 39804, MS 82, Cincinnati, Ohio 45239-8704; Phone: (513) 648-6113; FAX: (513) 648-6921

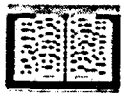
Subject Area:

Primary	Facility
Secondary	Treatment System
Tertiary	Planned

Abstract:
The Fernald work plan describes the background and activities for demonstration of one variation of the MAWS Technology system at Fernald. Activities will include vitrification, Soil Washing, Off-Gas Treatment, and Ion exchange water treatment in one integrated system. Data will be obtained on all technologies to validate the process and provide information for scale up to commercialization. Included are detailed plans for sampling, analytical, data management, health and safety, and residuals management. Issues on community relations, staffing, and schedule are also addressed.

Prepared By: Twain E. Harwood **Date Completed:** 10/04/94 09:16:42 AM

FFCAct Clearinghouse



Title/Name: Test Plan for PACT/PCF - 1.5, Testing Under the MAWS Project

Format	Hard Document
Author(s)/Expert(s)	Mr. Krag Filius - Technology
Point of Contact	Mr. Dan Battleson; MSE, Inc., P. O. Box 3767, Butte, Montana 59702; Phone: (406) 484-7287; Fax: (406) 484-7230

Subject Area:

Primary	Facility
Secondary	Innovative Technology
Tertiary	Treatment

Abstract:
The Minimum Additive Waste Stabilization (MAWS) project was established by the DOE to develop and demonstrate waste treatment processes in which wastestreams are treated to maximize the quality of the final disposable wasteform while minimizing the amount of materials added to achieve the final stabilized form. DOE, MSE, and Argonne National Laboratory (ANL) are investigating the applicability of the Plasma Centrifugal Furnace (PCF) to the MAWS concept as part of the DOE MAWS Program. This test plan is applicable to testing performed at the Retech, Inc., Plasma Arc Centrifugal Treatment (PACT) facility in Ukiah, CA., using a 1.5 foot scale PCF. The tests are designed to verify modeling and bench scale testing performed at ANL.

Prepared By: Twain E. Harwood **Date Completed:** 01/27/94 03:30:31 PM

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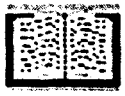

Title/Name: MAWS Program - Soil Washing Report

Format	Hard Document
Author(s)/Expert(s)	Mr. Carlos Tellez - Technology; Lockheed Environmental Systems & Technologies Company; 900 Grier Drive, Suite B, Las Vegas, Nevada 89119; Phone: (702) 361-0740; Fax: (702) 361-8034
Point of Contact	Mr. Carlos Tellez - Technology; Lockheed Environmental Systems & Technologies Company; 900 Grier Drive, Suite B, Las Vegas, Nevada 89119; Phone: (702) 361-0740; Fax: (702) 361-8034

Subject Area:

Primary	Technology
Secondary	Baseline Technology
Tertiary	Soils

Abstract:
The soil washing activities described in this report are in support of the MAWS technology demonstration program. Contaminated soil residues from the soil washing process are used as silica feed for the sludge vitrification process. The demonstration will identify what, if any, limits must be established for the soil feed. The MAWS program includes laboratory testing and demonstration of pilot-scale vitrification and soil washing systems at the FEMP site. The purpose of laboratory testing is to provide the data needed to design the on-site demonstration system. For soil washing, this phase of the MAWS project is limited to non-RCRA, uranium contaminated soils. The goal of the soil washing system is to reduce uranium activity levels in the cleaned soil to less than 35 $_{p}$Ci/g.

Prepared By: Twain E. Harwood **Date Completed:** 01/27/94 03:32:42 PM

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Title/Name: MAWS (Annual Activity Report); Rev. 0

Format	Hard Document
Author(s)/Expert(s)	Mr. Paul Krumrine - Technology
Point of Contact	Ms. Grace Ordaz; Program Manager, EM Office of Technology Development, U.S. DOE; Phone: (301) 903-7440; FAX: (301) 903-7457

Subject Area:

Primary	Technology
Secondary	DOE Innov. Tech.
Tertiary	Tech. Process

Abstract:
The annual activity report for the Minimum Additive Waste Minimization (MAWS) program provides a full, comprehensive description of the MAWS concept and important developments through FY 93. *Specifically*, technical areas of materials science, equipment development, waste form characterization, and life cycle cost benefits are described, and the development process for the Fernald process is described in detail. Extension of the MAWS concept to other DOE facilities and continued development of integrated systems is addressed.

Prepared By: Twain E. Harwood **Date Completed:** 10/04/94 09:04:44 AM

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Title/Name: MAWS (Fact Sheet).

Format	Hard Document
Author(s)/Expert(s)	Ms. Grace Ordaz - Program Manager Ms. Denise Freeman - Program Manager Ms. Andrea Wollerman
Point of Contact	Ms. Grace Ordaz, Program Manager; EM Office of Technology Development; U.S. DOE; Phone: (301) 903-7440; FAX: (301) 903-7457

Subject Area:

Primary	Technology
Secondary	Technology Process
Tertiary	Thermal

Abstract:
The fact sheet describes the Minimum Additive Waste Stabilization (MAWS) program and the first primary demonstration of the technology in vitrifying the Fernald Operable Unit 1 pit sludges and soils. MAWS utilizes multiple waste streams as substitutes for additives otherwise necessary for vitrification to produce a stable, high quality waste form. MAWS results in the minimum waste volume for disposal. Described are laboratory studies to characterize the wastes and glasses produced, as well as the three major technologies that have been integrated in this demonstration - vitrification, soil washing, and ion exchange water treatment. Also, some indication is provided of the cost benefit of this system over competing cementation processes.

Prepared By: Twain E. Harwood **Date Completed:** 01/27/94 01:39:24 PM

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Title/Name: Choosing Solidification or Vitrification for Low-Level Radioactive Mixed Waste Treatment.

Format	Hard Document
Author(s)/Expert(s)	Rod F. Gimpel - Technology
Point of Contact	Mr. Rod Gimpel - Technology; WEMCO; P. O. Box 39804, MS 82, Cincinnati, Ohio 45239-8704; Phone: (513) 648-6113; Fax: (513) 648-6921

Subject Area:

Primary	Technology
Secondary	Technology Process
Tertiary	Thermal

Abstract:

Ex-Situ solidification and vitrification are the competing methods for treating in excess of 450,000 M^3 of low-level radioactive and mixed waste at the Fernald Environmental Management Project (FEMP) located near Cincinnati, Ohio. Solidification is generally perceived as the most economical treatment method. Whereas, vitrification is considered as the most effective of all treatments. Unfortunately, vitrification has acquired the stigma that it is too expensive to receive further consideration as an alternative in high volume treatment applications. Ironically, economic studies, as presented here show that vitrification may be more competitive in some volume applications. This paper summarizes how Fernald is choosing between solidification and vitrification as the primary waste treatment method.

Prepared By: Twain E. Harwood **Date Completed:** 01/27/94 01:42:47 PM

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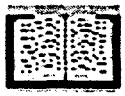

Title/Name: NTS Defense Waste Acceptance Criteria, Certification, and Transfer Requirements; Rev. 1, June 1992; NVO-325

Format	Hard Document
Author(s)/Expert(s)	Wendy Griffin
Point of Contact	Wendy Griffin (co-author); Waste Management Division, U.S. Department of Energy, Nevada Operations Office, P.O. Box 98518, Las Vegas, NV 89193-8518; (702) 295-5951; Fax (702)295-1153

Subject Area:

Primary	Facility
Secondary	Waste Acceptance Criteria
Tertiary	Disposal

Abstract:

Prepared By: Twain E. Harwood Date Completed: 10/04/94 09:42:07 AM

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Title/Name: Nevada Test Site Conceptual Site Treatment Plan

Format	Hard Document
Author(s)/Expert(s)	Jim Henderson
Point of Contact	Jim Henderson (co-author), Raytheon Services Nevada, 1551 Hillshire Drive, Las Vegas, NV 89134; (702)794-1417; Fax (702) 794-5559

Subject Area:

Primary	STP
Secondary	Conceptual
Tertiary	

Abstract:

Prepared By: Twain E. Harwood **Date Completed:** 01/26/94 04:03:09 PM

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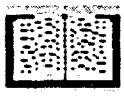

Title/Name: Soil Treatment

Format	Hard Document
Author(s)/Expert(s)	Grady Maraman, Preston McDaniel
Point of Contact	U.S. Department of Energy, Oak Ridge Operations Office, Attn. Grady Maraman, Former Sites Restoration Division, P.O. Box 2001, Oak Ridge, TN 37831-8723; (615) 576-3948; Fax (615)576-0956

Subject Area:

Primary	Technology
Secondary	Waste Acceptance Criteria
Tertiary	Chemical

Abstract:
Development of a soil treatment process based on conventional mining technology for removal of contaminants by particle size separation (e.g., soil washing). The premise is that the radiological contamination is primarily associated with the "fines" and by use of screens , cyclones, classifiers, or other similar equipment the remediation criteria can be met for the bulk of the soil. The process is under development. First steps are to characterize the soil for particle size distributions, location and type of contaminants, and amenability of soil to various separation processes. Next based on the soil characterization results, a treatment process will be designed with expected performance and cost estimates.

Prepared By: Twain E. Harwood **Date Completed:** 01/27/94 10:15:38 AM

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Title/Name: Chlorinated Waste Oils Treatment

Format	Hard Document
Author(s)/Expert(s)	Ron Kirk, Mark Kaye
Point of Contact	U.S. Department of Energy, Oak Ridge Operations Office, Attn. Ron Kirk, Former Sites Restoration Division, P.O. Box 2001, Oak Ridge, TN 37831-8723; (615) 576-7477; Fax (615)576-0956

Subject Area:

Primary	Technology
Secondary	Waste Acceptance Criteria
Tertiary	Treatment

Abstract:
The waste oils at the Colonie Interim Storage Site are contaminated with chlorinated organics and uranium that require treatment to allow ultimate disposal. A process to dechlorinate this waste has been developed which involves a three phased approach. The first phase uses air-stripping of the volatile organics followed by thermal destruction of the organics in the off-gas. The second phase uses chemical dechlorination to reduce the TOX concentration below 1000 mg/liter. Third phase uses air-stripping for final removal of volatiles followed by thermal destruction of the organics in the off-gas. Finally, the treated dechlorinated oils are solidified.

Prepared By: Twain E. Harwood **Date Completed:** 01/27/94 10:28:46 AM

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Title/Name: Metal Shredder

Format	Hard Document
Author(s)/Expert(s)	Ron Kirk, Jack Mattson
Point of Contact	U.S. Department of Energy, Oak Ridge Operations Office, Attn. Ron Kirk, Former Sites Restoration Division, P.O. Box 2001, Oak Ridge, TN 37831-8723; (615) 576-7477; Fax (615)576-0956

Subject Area:

Primary	Volume Reduction
Secondary	Shredder
Tertiary	Metals

Abstract:
A metal shredder is in use at the Colonie Interim Storage Site. It is used for volume reduction of contaminated office furniture (desks, chairs, file cabinets, etc.) where decontamination and verification are not cost effective. The shredder can handle metal items up to 18 in. x 30 in. and 1/8 in. thick. It is also useful in preparing metal for both smelting and land disposal.

Prepared By: Twain E. Harwood **Date Completed:** 01/27/94 10:40:11 AM

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Title/Name: FY-93 Program Summary, Office of Research and Development, Office of Demonstration, Testing and Evaluation; DOE/EM-0109P, October 1993

Format	Hard Document
Author(s)/Expert(s)	U.S. Department of Energy Office of Environmental Restoration and Waste Management, Office of Technology Development, EM 50
Point of Contact	Available to DOE and DOE contractors from the Office of Scientific and Technical Information, P.O. Box 62, Oak Ridge, TN 37831; (615)576-8401

Subject Area:

Primary	Technology
Secondary	DOE
Tertiary	

Abstract:

Executive Summary

This report summarizes significant FY-93 programmatic information and accomplishments relevant to the individual activities within the Office of Technology Development Program for RDDT&E.

Introduction

A brief discussion of the mission of the Office of Environmental Restoration and Waste Management (EM) and the Office of Technology Development (EM 50) is presented.

The Problems

This section provides an overview of the major problem areas confronting DOE. These problem areas include: groundwater and soils cleanup, waste retrieval and processing, and pollution prevention.

EM Program Overview

This section highlights the organizational elements within EM and in particular EM 50. Also provided is an EM 50 Funding Summary for FY 92 and FY 93.

RDDT&E

This section discusses the RDDT&E programs and summarizes their key problem areas, then explains three salient program formulating concepts: Integrated Demonstrations (ID), Integrated Programs (IP), and the "technology window of opportunity".

Program Summary

Detailed information for each of the programs within RDDT&E is presented and includes a Fact Sheet, a list of Technical Task Plans (TTP) and an Accomplishments and Objectives section.

Prepared By: Twain E. Harwood **Date Completed:** 02/03/94 09:33:15 AM

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Title/Name: (DRAFT) Mixed Waste Programs Directory, Fiscal years 1992 -1995, compiled June 1993

Format	Hard Document
Author(s)/Expert(s)	U.S. Department of Energy, Office of Environmental Restoration and Waste Management (EM), Office of Technology Development (EM 50)
Point of Contact	Stanley Wolf, FFCA EM-50; Phone: (301)903-7962

Subject Area:

Primary	Technology
Secondary	DOE
Tertiary	Mixed Waste

Abstract:

Purpose - To provide an overview of EM-50 activities and plans for MLLW, and points of contact for further information.

Introduction (section A)
- General descriptions of Integrated Demonstrations (IDs) and Integrated Programs (IPs)
- List of IDs and IPs, HQ Program Managers and Field Coordinators, and programs supporting RDDT&E on mixed waste
- List of technologies supported by EM 50 by major technology areas in the treatment of mixed waste
- Crosswalking EM 50 technologies with waste matrix categories from the DOE Interim Mixed Waste Inventory Report (IMWIR) and with the EM 30 generic waste treatment categories

Sections B - K
- Names and phone numbers of HQ program managers and field coordinators
- List of accomplishments, objectives, and plans for specific technologies in development and demonstration
- Linkage of specific EM 50 TD with specific IMWIR waste stream categories and EM 30 waste treatment categories

Prepared By: Twain E. Harwood **Date Completed:** 02/03/94 10:26:39 AM

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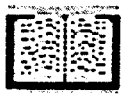

Title/Name: WMFCI Report for GTCC LLW and DOE Equivalent Special Caste Waste; EGG-WM-10701, July 1993

Format	Hard Document
Author(s)/Expert(s)	David Shropshire and Fred Feizollahi
Point of Contact	David Shropshire, EG&G Idaho, Inc., P.O. Box 1625, Idaho Falls, ID 83415-2420; (208)526-6800; FAX (208)526-8878

Subject Area:

Primary	Facility
Secondary	Cost
Tertiary	GTCC

Abstract:
This report contains preconceptual designs and planning life-cycle cost (PLCC) estimates for treatment, storage, and disposal facilities needed for management of GTCC LLW and DOE equivalent waste. The report contains information on 16 facilities (referred to as cost modules). These facilities are treatment facility front-end and back-end support functions (administration support, and receiving, preparation, and shipping cost modules); seven treatment concepts (incineration, metal melting, shredding/compaction, solidification, vitrification, metal sizing and decontamination, and wet/air oxidation cost modules); two storage concepts (enclosed vault and silo); disposal facility front-end functions (disposal receiving and inspection cost module); and four disposal concepts (shallow-land, engineered shallow-land, intermediate depth, and deep geological cost modules). Data in this report allow the user to develop PLCC estimates for various waste management options. A procedure to guide the DOE and its contractor personnel in the use of estimating data is also included in this report.

Prepared By: Twain E. Harwood **Date Completed:** 03/24/94 10:40:35 AM

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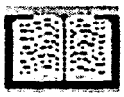

Title/Name: MLLW Systems Analysis Methodology and Applications Report (Draft), Volume 1 and 2; DOE/LLW-194; Oct. 1993

Format	Hard Document
Author(s)/Expert(s)	Mark Abashian, IT Corporation, 5301 Central Avenue, NE, Suite 700 Albuquerque, NM 87108; Phone: (505) 262-8736
Point of Contact	Steve Domotor, US DOE, EM-351, Trevion II, Washington D.C. 20585-0002; Phone: (301)903-5053; Fax: (301)903-7451

Subject Area:

Primary	Systems Analysis
Secondary	MLLW Management
Tertiary	Facilities and Technologies

Abstract:
This report summarizes the Systems Analysis Methodology for MLLW management that was developed to support the MWTP and the STP development. This methodology is an analytical tool that will aid the decision -makers in evaluating the feasibility and effectiveness of various MLLW management options (combination of facilities and technologies), with the goal of choosing the optimum or best option for implementation. A reference case and 11 options are evaluated in this study in terms of four performance measures: (1) the performance of waste forms and disposal facility technologies using a pathways analysis model to simulate radionuclide migration and exposure pathways, (2) life-cycle costs and implementation schedules for the options, (3) regulatory impacts on the options based on permitting costs and schedules, and (4) health and safety risks associated with the implementation of the options. The results of evaluating these performance measures for each option are integrated into a common index to facilitate comparison between the alternatives.

Prepared By: Twain E. Harwood **Date Completed:** 05/06/94 09:01:42 AM

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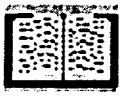

Title/Name: INEL Low-Level Radioactive Waste Acceptance Criteria; DOE/ID-10112 (Rev. 5); August 1993

Format	Hard Document
Author(s)/Expert(s)	R. M. Brown and J. D. Wells
Point of Contact	J. Dale Wells, EG&G Idaho, Inc., Radioactive Waste Management Complex; (208)526-7711

Subject Area:

Primary	Facility
Secondary	Waste Acceptance Criteria
Tertiary	Treatment and Storage

Abstract:
The LLW WAC in this document promulgate the requirements that waste generators must satisfy to certify LLW for processing at the Waste Experimental Reduction Facility (WERF) and to dispose or to store LLW at the Radioactive Waste Management Complex RWMC. WERF and the RWMC are located at the Idaho National Engineering Laboratory (INEL). These criteria implement the requirements set forth in DOE Order 5820.2A[1], Chapter III Management of LLW; these criteria are also consistent with applicable U.S. Environmental Protection Agency (EPA), and Nuclear Regulatory Commision (NRC) requirements.

Prepared By: Twain E. Harwood **Date Completed:** 02/04/94 09:46:41 AM

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Title/Name: Waste Management Facilities Cost Information for Transportation of Radioactive Materials; EGG-WM-10877; Jan. 1994

Format	Hard Document
Author(s)/Expert(s)	Fred Feizollahi, David Shropshire, and David Burton
Point of Contact	David Shropshire, EG&G Idaho, Inc., P.O. Box 1625, Idaho Falls, Idaho 83415-2420; Phone: (208)526-6800; Fax: (208)526-8878.

Subject Area:

Primary	Facility
Secondary	Cost
Tertiary	Transportation

Abstract:
This report contains cost information on the DOE Complex waste streams that will be addressed by DOE in the Programmatic Environmental Impact Statement (PEIS) project. It describes the results of the task commissioned be DOE to develop cost information for transportation of radioactive waste. It contains transportation costs for most types of DOE waste streams: low-level waste (LLW), mixed low-level waste (MLLW), alpha-LLW, and alpha-MLLW, greater-than-Class C (GTCC) LLW and DOE equivalent waste, transuranic waste (TRU), and spent nuclear fuel (SNF). Unit rates for transportation of contact-handled (<200 mrem/hr contact dose) and remote-handled (>200 mrem/hr contact dose) radioactive waste are estimated.

Land transportation of radioactive waste is subject to regulations promulgated by DOE, the U. S. Department of Transportation (DOT), the U. S. Nuclear Regulatory Commission (NRC), and state and local agencies. The cost estimates in this report assume compliance with applicable regulations.

Prepared By: Twain E. Harwood **Date Completed:** 10/04/94 09:06:18 AM

FFCAct Clearinghouse

Title/Name: Waste Management Facilities Cost Information for Mixed Low-Level Waste: Interim Report; EGG-WM-10962; March 1994

Format	Hard Document
Author(s)/Expert(s)	David Shropshire and Fred Feizollahi
Point of Contact	David Shropshire; EG&G Idaho, Inc., P.O. Box 1625, Idaho Falls, ID 83415-2420; (208)526-6800; FAX: (208)526-8878

Subject Area:

Primary	Facility (TSD) - MLLW
Secondary	Cost
Tertiary	Preconceptual

Abstract:
This report contains preconceptual designs and planning level life-cycle cost estimates for treating alpha and nonalpha mixed low-level radioactive waste (MLLW). This report contains information on twenty-seven treatment, storage, and disposal (TSD) modules that can be integrated to develop total life cycle costs for various waste management options. A procedure to guide the U. S. Department of Energy and its contractor personnel in the use of estimating data is also summarized in this report. The assumptions and bases used in this report are essentially the same as those stated in *Waste Management Facilities Cost Information*, EGG-WM-10443.

The method presented in this report is for planning level life cycle cost estimates (accuracy of plus or minus 30%). Estimates based on this report are good for comparative alternative evaluations. The cost information is non-site specific, and any alternative selection based on the estimates derived from this method would warrant further study. These estimates should not be used to determine funding.

Prepared By: Twain E. Harwood **Date Completed:** 03/24/94 10:32:45 AM

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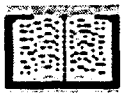

Title/Name: DOE Site Specific Waste Distribution Report; STP40

Format	Hard Document
Author(s)/Expert(s)	Byron Palmer, LANL, (505)667-3150 Leon Borduin, LANL, (505)667-3528 Pete Castle, WINCO, (301)601-1408
Point of Contact	Pete Castle, WINCO/EM-351, (301)601-1408, Fax: (301)601-1452 or Steve Domotor, Applied Technology Program Mgr., EM-351, (301)903-5053, Fax: (301)903-7451

Subject Area:

Primary	Technology Analysis
Secondary	Treatability Group
Tertiary	Options Analysis Tool

Abstract:
The DOE Site Specific Waste Distribution report presents data contained in the Interim Mixed Waste Inventory Report in a Matrix-Contaminant Grid (MCG) format that is specific to individual sites. The number and volume of waste streams falling into each cell of the MCG is indicated. The MCG helps to define the treatment technology requirements of a waste stream based on effects of the waste matrix and contaminant type.

Prepared By: Twain E. Harwood **Date Completed:** 04/11/94 12:12:51 PM

FFCAct Clearinghouse

Title/Name: Survey of Mixed Waste Technologies for Mobile Treatment; May 1994; STP32

Format	Hard Document
Author(s)/Expert(s)	Ken Kuzio, Sandia National Laboratory, 20201 Century Blvd., Germantown MD 20874, Phone: (301)601-1504
Point of Contact	Steve Domotor, US DOE, EM-351, Trevion II, Washington D.C. 20585-0002, Phone: (301)903-5053, Fax: (301)903-7451; Ken Kuzio, Sandia National Laboratory, 20201 Century Blvd., Germantown MD 20874, Phone: (301)601-1504

Subject Area:

Primary	Technology
Secondary	Mobile
Tertiary	Treatment

Abstract:
Many sites are storing small volumes of mixed waste which require treatment, yet, from an economic perspective, do not mandate the construction and operation of a fixed, dedicated treatment facility. These sites are evaluating the feasibility of using mobile treatment units (MTUs) to meet waste treatment requirements in a cost-effective manner. Information on existing commercially available MTUs is provided for the sites to make a technically defensible decision involving the deployment of these types of treatment systems. This document provides information on: (1) the characteristics of commercially available MTUs; (2) the regulatory environment governing the deployment of these types of treatment facilities; (3) a generic project management approach for developing customized MTUs for a given site's mixed waste streams.

Prepared By: Twain E. Harwood **Date Completed:** 10/03/94 03:39:18 PM

FFCAct Clearinghouse

Title/Name: Draft Site Treatment Plan Cost Information Guidance; STP27

Format	Hard Document
Author(s)/Expert(s)	Matt Zenkowich, FFCA Task Force and Cost Guidance Working Group
Point of Contact	Mathew Zenkowich, DOE-HQ, EM-323, Trevion II, Germantown, MD, Phone: (301)903-7126, Fax:(301) 903-7160

Subject Area:

Primary	STP Guidance
Secondary	Cost
Tertiary	Facility

Abstract:
The DSTPs, currently under development, will describe DOE's preferred options for treatment of its mixed waste. As described in the Treatment Selection Guides and DSTP Implementation Guidance, cost will be considered in the evaluation and selection of preferred options. In order to ensure a level of commonality and consistency in the DSTP options evaluation and selection process this guidance provides the following:

- o A general approach and framework for developing cost information,
- o Common assumptions to be used in developing DSTP cost information,
- o A common format for reporting DSTP cost information, and
- o Cost estimating tools and resources that can be used by the Operations Offices to develop the required cost information in cases where more specific information is lacking.

This guidance is not meant to be a comprehensive cost estimation or project management document. Nor does the guidance proscribe the use of any particular cost estimating methodology or technique. The approach taken in the guidance is to provide a common framework, assumptions, work breakdown structure, and reporting format so that cost estimates for various options can be compared on a consistent basis and an approximate total cost for implementation of the STPs can be estimated.

Prepared By: Twain E. Harwood **Date Completed:** 05/12/94 01:03:56 PM

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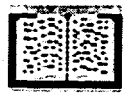

Title/Name: Protocol for Identifying a Potential Off-Site Mixed Waste Treatment Option in the DSTP; STP26

Format	Hard Document
Author(s)/Expert(s)	Ron F. Duvall, DOE-HQ, EM-32, Phone: (301)903-7655, Fax: (301)903-7168
Point of Contact	Ron F. Duvall, DOE-HQ, EM-32, Phone: (301)903-7655, Fax: (301)903-7168

Subject Area:

Primary	STP Guidance
Secondary	Treatment System
Tertiary	Options Analysis

Abstract:
The guidance describes a planning and evaluation process to be used to determine whether a potential off-site treatment option can be identified to treat a particular waste stream in the DSTP. It also describes the coordination necessary between the shipping and receiving sites to support the identification of an off-site option as the preferred off-site treatment option in the DSTP.

Prepared By: Twain E. Harwood **Date Completed:** 04/11/94 01:19:50 PM

FFCAct Clearinghouse

Title/Name: Treatment Selection Guides; STP24

Format	Hard Document
Author(s)/Expert(s)	Paulette Saunders, SAIC, 20201 Century Blvd., Germantown, MD 20874; Phone: (301)353-8345
Point of Contact	Steve Domotor, US DOE, EM-351, Trevion II, Washington D.C. 20585-0002; Phone: (301) 903-5053; Paulette Saunders, SAIC, 20201 Century Blvd., Germantown, MD 20874; Phone: (301)353-8345

Subject Area:

Primary	STP Guidance
Secondary	Treatment System
Tertiary	Options Analysis

Abstract:
To ensure that the treatment options identified in the CSTP are evaluated in a uniform manner, DOE developed a set of treatment selection guides that should be used to evaluate treatment options and select preferred options. The criteria (referred to as guides) should be used to evaluate the treatment option and assist n determining the DOE preferred option.

These guides were developed though a review and compilation of criteria already in use by DOE and others. The document provides definitions and a sample ranking system for the seven primary guides and their subelements. The seven primary guides are:

- Regulatory Compliance
- Environmental, Health & Safety
- Treatment Effectiveness
- Implementability
- Stakeholder Concerns
- Life-Cycle Cost, and
- Technology Development

Prepared By: Twain E. Harwood **Date Completed:** 05/06/94 08:42:06 AM

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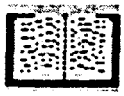

Title/Name: Mixed Waste Treatment Technology Analysis: Historical Perspective and Analytical Tools; LA-UR-94-662; STP33

Format	Hard Document
Author(s)/Expert(s)	Leon Borduin, LANL, P.O. Box 1663, MS K557, Los Alamos, NM 87545, Phone: (505)667-3150
Point of Contact	Steve Domotor, US DOE, EM-351, Trevion II, Washington D.C. 20585-0002; Phone: (301)903-5053; Fax: (301)903-7451; Pete Castle, WINCO/EM-351, Phone: (301)601-1408

Subject Area:

Primary	STP Guidance
Secondary	Technology
Tertiary	Options Analysis

Abstract:
This document presents the history and nature of MWTP and developed technical analysis tools and provides guidance on their application during preparation of draft site treatment plans (DSTPs). The document facilitates application of the DSTP development framework. Mixed waste treatment flowsheets, treatment process functional and operational requirements, the mixed waste matrix/contaminant grid, and a range of database analytical reports. Examples of applications to site-specific waste streams are also provided.

Prepared By: Twain E. Harwood **Date Completed:** 05/06/94 08:13:13 AM

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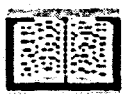

Title/Name: Mixed Waste Inventory Report, Phase I and II Data Release; STP37

Format	Hard Document
Author(s)/Expert(s)	Lydia Chang, DOE-HQ, EM-351, FFCAct Task Force, 19901 Germantown Rd., Germantown, MD 20874-1290; Phone: (301)903-7136; Fax: (301)903-9770
Point of Contact	Lydia Chang, DOE-HQ, EM-351, FFCAct Task Force, 19901 Germantown Rd., Germantown, MD 20874-1290; Phone: (301)903-7136; Fax: (301)903-9770

Subject Area:

Primary	STP Guidance
Secondary	Waste Stream and Treatment System Data
Tertiary	

Abstract:
The Phase I data includes mixed waste stream data from 25 sites and treatment system data from all sites except the Fernald Environmental Management Project and the Weldon Spring Site Remedial Action Project. The remaining data on waste stream and treatment system is provided within the Phase II release. All technology development data will be provided as the Phase III release (no scheduled release date).

The data package consists of the following items:

- a table showing the type of data and the sites to be released under the current phased approach and the projected schedule;

- a table listing treatment systems that were included in the Interim MWIR but not in this database system and the reason for their exclusion;.

- tables, one for waste streams and the other for treatment systems, providing general clarification and comments on the completeness and quality of the data, along with HQ's subjective assessment of the level of confidence in the data;

- a user's guide on how to install and operate the database system; and

- data diskettes containing the raw data and the operating system, which includes a query system.

Prepared By: Twain E. Harwood Date Completed: 04/26/94 10:07:05 AM

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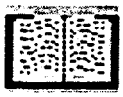

Title/Name: National Summary Report of Conceptual Site Treatment Plans; Volume I; March 1994; STP36

Format	Hard Document
Author(s)/Expert(s)	Steve Domotor, US DOE, EM-351, Trevion II, Washington D.C. 20585-0002, Phone: (301)903-5053, Fax: (301)903-7451;
Point of Contact	Steve Domotor, US DOE, EM-351, Trevion II, Washington D.C. 20585-0002, Phone: (301)903-5053, Fax: (301)903-7451;

Subject Area:

Primary	STP Guidance
Secondary	Conceptual
Tertiary	CSTP Summary

Abstract:
This report summarizes the Dec. 31, 1992 mixed waste inventories and five-year projections for 1993 through 1997. The CSTP Summary Report is divided into three volumes. Each volume carries a separate yet related function in helping readers understand the national mixed waste inventory and the treatment systems identified to treat mixed wastes. Volume I presents and explains data summed from the sites' data on the volume of DOE mixed wastes and the tratment status of DOE mixed wastes.

Prepared By: Twain E. Harwood **Date Completed:** 10/04/94 09:08:04 AM

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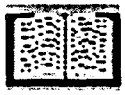

Title/Name: ER Proposed Strategy for Complying with Site Treatment Plan; August 9, 1994

Format	Hard Document
Author(s)/Expert(s)	Claude Magnuson; DOE-HQ, EM-431
Point of Contact	Claude Magnuson; DOE-HQ, EM-431, (301 427-1668 or Linda Suttora (301) 427-1665

Subject Area:

Primary	STP Guidance
Secondary	DOE
Tertiary	FFCAct Task Force

Abstract:
The purpose of this memorandum is to transmit the proposed strategy for incorporating environmental restoration wastes in the Site Treatment Plans (STP) required by the Federal Facility Compliance Act (FFCAct) of 1992. The draft strategy should be used internally (until finalized) to evaluate the FFCAct compliane options available for environmental restoration wastes and as a guide for preliminary discussions with your regulators. This strategy has already been reviewed and generally accepted by the FFCAct Policy Coordination Group and the STP Working Group which are headed by the Office of Waste Management and include representatives from other HQ Offices and the Operations Offices.

Prepared By: Lorinda J Messenger **Date Completed:** 09/30/94 10:05:33 AM

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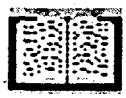


Title/Name: Overview of the Draft Site Treatment Plans; August 26, 1994

Format	Hard Document
Author(s)/Expert(s)	Patty Bubar
Point of Contact	Patty Bubar

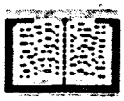
Subject Area:

Primary	STP Guidance
Secondary	DOE
Tertiary	Overview

Abstract:
The purpose of this Overview is to present a summary of the emerging complex-wide treatment configuration resulting from the individual treatment options presented in the Draft Site Treatment Plans. DOE is developing Site Treatment Plans to provide treatment capacity for its mixed waste. This overview describes the process used by these sites in preparing Draft Site Treatment Plans and summarizes the locations for treatment identified in these plans.

Prepared By: Lorinda J Messenger **Date Completed:** 09/30/94 10:51:31 AM

FFCAct Clearinghouse



Title/Name: Nuclear Waste - Much Effort Needed to Meet Federal Facility Compliance Act's Requirements; May 1994

Format	Hard Document
Author(s)/Expert(s)	United States General Accounting Office
Point of Contact	Twain Harwood, FFCAct Clearinghouse; EG&G Idaho, Inc., P.O. Box 1625, Idaho Falls, ID 83415-2420; (208) 526-1446; FAX (208) 526-8878

Subject Area:

Primary	GAO Report
Secondary	
Tertiary	

Abstract:
The FFCA requires that the General Accounting Office report on, among other things, (1) DOE's progress with submitting treatment plans and entering into compliance orders; (2) DOE's efforts to characterize, develop technologies for, and provide the capacity to treat mixed wastes; and (3) the additional actions needed to completely implement the act. Because DOE has over 1500 mixed waste streams at 50 sites, the Senate Committee on Environment and Public Works and House Committee on Energy and Commerce agreed that in order to evaluate DOE's progress on a judgmentally selected group of individual mixed waste streams at several key sites - specifically the Fernald, Ohio; Idaho Falls, Idaho; and Oak Ridge, Tennessee, sites.

Prepared By: Lorinda J Messenger **Date Completed:** 10/04/94 09:09:24 AM

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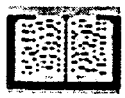

Title/Name: Draft Presentation to States on DSTP Options

Format	Hard Document
Author(s)/Expert(s)	Patty Bubar, EM-33, FFCA Task Force; (301)903-7130; FAX: (301)903-7168
Point of Contact	Patty Bubar, EM-33, FFCA Task Force; (301)903-7130; FAX: (301)903-7168

Subject Area:

Primary	STP Guidance
Secondary	State
Tertiary	DSTP Briefing

Abstract:
Analysis of the Draft Site Treatment Plan Options Database. Site-preferred options are reflected in this briefing.

Prepared By: Lorinda J Messenger Date Completed: 09/30/94 02:45:05 PM

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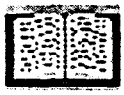

Title/Name: National Summary Report of Draft Site Treatment Plans (DRAFT); September 12,1994

Format	Hard Document
Author(s)/Expert(s)	FFCA Task Force
Point of Contact	Jennifer Sands, Federal Facility Compliance Act Task Force, Office of Waste Management (EM-33), U S Department of Energy; (301) 903-7115; FAX: (301) 903-9770

Subject Area:

Primary	Treatment Options
Secondary	DSTP
Tertiary	

Abstract:
The National Summary Report of the Draft Site Treatment Plans summarizes the treatment options presented in the Draft Plans being developed by each of the sites that manage DOE mixed waste or expects to manage it in the future. It will be used to provide a national picture of the compiled treatment options, and will provide a basis for discussions among DOE, the States, and interested members of the public.

The National Summary's Volume I, National Overview of Mixed Wastes and Treatment Options, provides a summary overview of the Draft Plans by waste type, including the type of treatment proposed, volume of waste to be treated, the number of existing and new facilities proposed to be used, and a discussion of what wastes are proposed to be treated on-site versus those to be transported to another location for treatment. A summary of each site's Draft Plan is provided in Volume II, Site Summaries.

Prepared By: Lorinda J Messenger **Date Completed:** 09/30/94 03:45:56 PM

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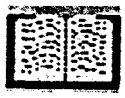

Title/Name: Mixed Waste Technology Development for FY-93 within the Office of Technology Development (EM-50); DRAFT; Jan. 28, 1994

Format	Hard Document
Author(s)/Expert(s)	Office of Technology Development (EM-50)
Point of Contact	Stan Wolf; Office of Technology Development; (301) 903-7962

Subject Area:

Primary	Technology
Secondary	DOE
Tertiary	

Abstract:
This document describes 122 on-going OTD technology development activities relating to mixed waste in support of EM's missions. Table 1 includes 61 technologies organized according to the Office of Waste Management's prescribed treatment and waste matrix categories, based upon the DOE Mixed Waste Inventory Report (MWIR), and functional technology areas in which OTD activities are grouped; the OTD program monitoring the work is also given. An additional 61 technologies were identified from the 1995 internal budget review for OTD, input from OTD program managers, and the technology development listed in the DOE MWIR (May 1993). This compilation of technologies may be updated annually when funding actions are completed for each fiscal year.

Prepared By: Twain E. Harwood Date Completed: 10/03/94 01:15:42 PM

FFCAct Clearinghouse

Title/Name: DOE Mixed Waste Treatment Capacity Analysis; June 1994

Format	Hard Document
Author(s)/Expert(s)	W. A. Ross, R. R. Wehrman, J. R. Young, S. R. Shaver
Point of Contact	Office of Scientific and Technical Information, P.O. Box 62, Oak Ridge, TN 37831, (615) 576-8401

Subject Area:

Primary	Waste Type
Secondary	DOE
Tertiary	Capacity Analysis

Abstract:
This initial DOE-wide analysis compares the reported national capacity for treatment of mixed wastes with the calculated need for treatment capacity based on both a full treatment of mixed low-level and transuranic wastes to the Land Disposal Restrictions and on treatment of transuranic wastes to the WIPP waste acceptance criteria. The status of treatment capacity is reported based on a fifty-element matrix of radiation-handling requirements and functional treatment technology categories. The report defines the classifications for the assessment, describes the models used for the calculations, provides results from the analysis, and includes appendices of the waste treatment facilities data and the waste stream data used in the analysis.

Prepared By: Lorinda J Messenger **Date Completed:** 09/30/94 03:56:57 PM

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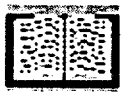

Title/Name: MWTP Functional and Operational Requirements for an Integrated Facility; August 30, 1992

Format	Hard Document
Author(s)/Expert(s)	T. K. Thompson, Los Alamos National Laboratory
Point of Contact	T. K. Thompson, Los Alamos National Laboratory

Subject Area:

Primary	Waste Type
Secondary	Treatment System
Tertiary	Treatment

Abstract:
The DOE Office of Waste Operations established the Mixed Waste Treatment Project (MWTP) to provide treatment technology and processing options for treating present and future low-level mixed waste within the DOE complex. The MWTP analyzed existing DOE data bases to identify types and volumes of mixed wastes. Broad mixed waste treatment categories were then defined. A baseline flowsheet was constructed which identified the individual process steps necessary to accommodate the mixed waste treatment categories and produce an acceptable final waste form. The baseline flowsheet was then expanded into Functional and Operational Requirements (F&OR) documents, pre-conceptual design reports, for each process train of a prototype mixed waste treatment facility. This document presents the resulting F&ORs for this prototype plant.

Prepared By: Lorinda J Messenger **Date Completed:** 10/03/94 01:22:11 PM

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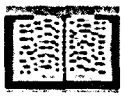

Title/Name: DSTP Development Framework Implementation Guidance; May 11, 1994; Revision 1

Format	Hard Document
Author(s)/Expert(s)	FFCA Task Force, EM-33, Technical Analysis Division
Point of Contact	Steve Domotor, US DOE, EM-351, Trevion II, Washington D.C. 20585-0002, Phone: (301)903-5053, Fax: (301)903-7451; Ken Kuzio, Sandia National Laboratory, 20201 Century Blvd., Germantown MD 20874, Phone: (301)601-1504

Subject Area:

Primary	STP Guidance
Secondary	Draft
Tertiary	

Abstract:
This document provides step-by-step guidance to be used in implementing each step of the Framework. The approach identified in the Framework and this guidance document is most applicable to mixed low-level waste and Non-Defense transuranic (TRU)waste. Revision 1 of this guidance is a follow-up to Revision 0 (February 15,1994) which was distributed to the PCG in February 1994.

Prepared By: Twain E. Harwood Date Completed: 10/03/94 03:47:05 PM

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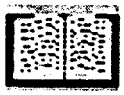

Title/Name: National Institutes of Health: Mixed Waste Stream Analysis; August 1994; DOE/LLW-208

Format	Hard Document
Author(s)/Expert(s)	N. P. Kirner, G. P. Faison, and D. R. Johnson
Point of Contact	Marijo Kerr, National Low-Level Waste Management Program, LITCO, (208)526-8364

Subject Area:

Primary	Waste Type
Secondary	Mixed
Tertiary	Biomedical

Abstract:
This report presents the methodology and findings of a technical analysis conducted on the many biomedical mixed waste streams generated by the National Institutes of Health (NIH) that are believed to be representative of the biomedical mixed waste community. The analysis included the characterization of the mixed waste streams based on information contained in an NIH mixed waste management database; the report combines the characterization information into similar process categories. The resulting information will help define and characterize the mixed waste streams generated by the biomedical community so that an identification can be made of the waste streams that can and cannot be minimized and treated by current options.

Prepared By: Twain E. Harwood **Date Completed:** 10/04/94 02:46:27 PM

FFCAct Clearinghouse

Title/Name: Paul Krumrine - Senior Scientist

Format	Technical Expert
Author(s)/Expert(s)	Dr. Paul H. Krumrine - Technology
Point of Contact	Dr. Paul H. Krumrine; Waste Policy Institute; 555 Quince Orchard Rd.; Gaithersburg, MD 20878; Phone: (301) 990-3005; Fax: (301) 990-4889

Subject Area:

Primary	Technology
Secondary	Treatment System
Tertiary	Chemical

Abstract:
A chemical engineer with 14 years industry experience developing new products and processes in glass and chemical (inorganic) fields. Experience includes familiarity with glass compositional effects, vitrification and solidification technologies, silicate chemistry, ion exchange/water treatment, technology assessment, and pilot plant operations. Dr. Krumrine is currently a Senior Scientist with the Waste Policy Institute under contract to support DOE HQ Office of Environmental Restoration and Waste Management. He is familiar with all aspects of the MAWS program development.

Prepared By: Twain E. Harwood **Date Completed:** 12/29/93 02:05:07 PM

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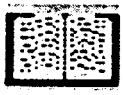

Title/Name: Susan D. Carson, Ph. D.

Format	Technical Expert
Author(s)/Expert(s)	Environmental Chemistry, Characterization, Treatment, and Technology
Point of Contact	Susan D. Carson, Sandia National Laboratories, MS 0720, P.O. Box 5800, Albuquerque, New Mexico 87185-0720

Subject Area:

Primary	Facility, Technology
Secondary	Technology Process & Treatment Systems
Tertiary	Physical, Chemical, & Characterization

Abstract:
Relevant work experience:

Senior member of the Technical Staff, Sandia National Laboratories, 1992-present

- Project Leader for the Interim Mixed Waste Inventory Report. responsibilities included preparation of text, data tables and waste stream data sheets for 18 DOE sites.

- Member of DOE-HQ teams for analysis and verification of waste stream data for the Draft Mixed Waste Inventory Report. Evaluated data for Los Alamos, Portsmouth, Pantex, Argonne, and Brookhaven.

- Prepared initial versions of SOPs for solidification of SNL liquid low-level and mixed wastes.

Technical Manager/Principal Staff Member, BDM International, Inc., Albuquerque, NM, 1985-1992

- Manager, Environmental Sciences Group.

- Technical consultant on environmental and advanced materials technologies to the Rio Grande Development corporation, an organization dedicated to providing financial, technical and marketing support to businesses with promising new products in these areas.

- Development of materials research budgets for DOE-EM's Office of Technology Development.

Prepared By: Twain E. Harwood **Date Completed:** 01/25/94 02:35:47 PM

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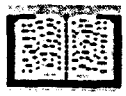

Title/Name: Christine A. Langton

Format	Technical Expert
Author(s)/Expert(s)	Christine A. Langton - Materials Scientist, Solid and Liquid Waste Treatment Technology and Process Development and Evaluation
Point of Contact	Christine A. Langton; Savannah River Technology Center, Building 773-43A, SRS, Aiken, SC 29803; (803)725-5806; Fax (803)725-4704

Subject Area:

Primary	Technology, Waste Type
Secondary	Treatment System
Tertiary	Lead, Mercury

Abstract:
C.A. Langton developed the SRS Z-Arca process and wasteform in addition to several proposed treatment processes for the future SRS Hazardous and Mixed Waste Treatment Building. She is also providing technical support for SRS industrial waste water treatment.

She has a working knowledge of RCRA, NEPA, and SC State regulations. She is providing support to the SRS draft Site Treatment Plan (DSTP) and is on a Task Team to provide support for developing DSTPs for the small DOE sites throughout the complex.

Prepared By: Twain E. Harwood Date Completed: 01/25/94 02:34:23 PM

FFCAct Clearinghouse

Title/Name: Gary S. Robinson

Format	Technical Expert
Author(s)/Expert(s)	Regulatory
Point of Contact	Gary S. Robinson; Westinghouse Hanford Co., P.O. Box 1970, Richland, WA 99352; (509)376-1794; Fax (509)376-2816

Subject Area:

Primary	Regulatory
Secondary	
Tertiary	

Abstract:
Senior Scientist - Regulatory Analysis Group

- Track and evaluate environmental regulations and legal developments. Contact for RCRA, TSCA, and CAA.

- Past experience includes: Regulatory compliance assistant and chemist for a permitted RCRA, CERCLA, and PCB waste treatment and disposal company. Research and development chemist for a cosmetic manufacturer.

- Bachelor of Science in Biology, 1982, and Juris Doctor, 1987

Prepared By: Twain E. Harwood **Date Completed:** 01/25/94 02:47:05 PM

FFCAct Clearinghouse

Title/Name: Michael B. Heiser

Format	Technical Expert
Author(s)/Expert(s)	Michael B. Heiser - Technology, Treatment, Characterization, Wasteform, and regulatory
Point of Contact	Michael B. Heiser; WINCO, P.O. Box 4000, MS-3202, Idaho Falls, ID 83403; (208)526-3317; Fax (208)526-5465

Subject Area:

Primary	Technology
Secondary	Treatment System
Tertiary	Debris Treatment

Abstract:
Capable of providing direction on how to write the STP and what is required in the document. Can provide assistance with treatment-technology selection, characterization requirements, waste forms and their acceptability and regulatory information. Also can provide help with debris and its treatment and disposal requirements.

Prepared By: Twain E. Harwood **Date Completed:** 01/26/94 03:49:03 PM

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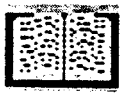

Title/Name: Skid Mounted/ Mobile Treatment Units

Format	Technical Expert
Author(s)/Expert(s)	Stan Zygmunt
Point of Contact	Stan Zygmunt, Los Alamos National Laboratory, P.O. Box 1663, MS-E51, Los Alamos, NM 87546;

Subject Area:

Primary	Facility, Technology
Secondary	Treatment System (mobile)
Tertiary	Existing

Abstract:
LANL is currently developing skid mounted mobile mixed waste treatment units for various waste streams including: Lead decontamination, reactive metal, plating waste, and the DETOX process. Other skid mounted units are being considered and evaluated.

Prepared By: Twain E. Harwood Date Completed: 01/26/94 04:49:21 PM

FFCAct Clearinghouse

Title/Name: Ian Pegg - Adj. Assoc. Prof. of Physics

Format	Technical Expert
Author(s)/Expert(s)	Ian Pegg - Technology
Point of Contact	Dr. Ian L. Pegg, The Catholic University of America, Vitreous State Laboratory, Washington, D.C. 20064; Phone: (202) 319-6700; Fax: (202) 319-4469

Subject Area:

Primary	Technology
Secondary	Treatment Systems, Innovative Tech.
Tertiary	Char., TSD, Liquids, Gases, Soils, etc

Abstract:
Dr. Pegg has for the last six years, been actively involved in the development and characterization of glasses for high-level nuclear waste disposal. Dr. Pegg developed key statistical process models for the West Valley vitrification process and has made extensive studies of the composition dependence of, and mechanisms for, the corrosion of glasses under aqueous attack. Dr. Pegg is a Co-Principal Investigator for the West Valley support task at VSL and has responsibility for preparation of major elements of the Waste Form Qualification Report for the West Valley Defense Plant. He is also the Project Manager for the MAWS project to demonstrate integration of vitrification, soil washing, and ion exchange on site at Fernald. Dr. Pegg has published over 40 research papers and spoken at numerous meetings. He is a member of ASTM Committees C26.13 (Repository Materials) and C26.07 (Waste Materials) and is actively involved in the development of standards for glass waste form characterization and prediction of long-term durability.

Prepared By: Twain E. Harwood **Date Completed:** 01/27/94 02:06:34 PM

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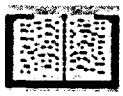


Title/Name: Pedro Macedo - Professor of Physics/Co-Director of VSL

Format	Technical Expert
Author(s)/Expert(s)	Dr. Pedro B. Macedo - Technology
Point of Contact	Dr. Pedro B. Macedo, The Catholic University of America, Vitreous State Laboratory, Washington, D.C. 20064; Phone: (202) 319-5329; Fax: (202) 319-4469

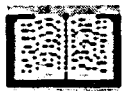
Subject Area:

Primary	Technology
Secondary	Treatment System, Innovative Tech.
Tertiary	Char., TSD, Thermal, Chem., Waste Form

Abstract:
He is Co-director of the subcontracting university's laboratory and Professor of Physics at the CUA, as well as a Director and Board Member of Offeror. He leads an interdisciplinary team of more than 70 professionals. The primary emphasis of the team's research has been the development of materials and methods to safely dispose of nuclear wastes. As part of this continuing effort, Dr. Macedo has become a world leader in the development of highly sensitive analytical methods for the analysis of nuclear waste waters and leach water in contact with nuclear glasses. Dr. Macedo has led research on the development of optical fibers, foam glasses, and fluoride glasses, is CO-inventor of the Durasil ion-exchange media, and is a leader in the development of nuclear waste vitrification processes.

Prepared By: Twain E. Harwood **Date Completed:** 01/27/94 02:17:00 PM

FFCAct Clearinghouse



Title/Name: Nicholas Beskid - Assistant Program Manager OWMP

Format	Technical Expert
Author(s)/Expert(s)	Mr. Nicholas J. Beskid - Technology
Point of Contact	Mr. Nicholas J. Beskid, Argonne National Laboratory, 9700 South Cass Ave., Argonne, IL 60439-4837; Phone: (708) 252-6677; Fax: (708) 252-5912

Subject Area:

Primary	Technology
Secondary	Treatment System, Innovative Tech., DOE
Tertiary	Project Management - Waste Mgmt.

Abstract:
He is an Assistant Program Manager in the Office of Waste Management Programs where he is responsible for the technical management of applied research and development activities which support DOE's environmental restoration and waste management program. A certified Professional Geological Scientist with a B.S. in Geology from Youngstown State University and a M.S. in Geology/Geochemistry from Miami University (Ohio), Mr. Beskid formerly directed multidisciplinary teams of scientists and engineers at Argonne, assisting DOE's Formerly Utilized Sites Remedial Action Program (FUSRAP). He held management positions in Battelle Memorial Institute's Project Management Division (1980-87) in programs supporting DOE's high-level waste program.

Prepared By: Twain E. Harwood **Date Completed:** 01/27/94 02:26:14 PM

FFCAct Clearinghouse

Title/Name: James Mazer - Assistant Chemist

Format	Technical Expert
Author(s)/Expert(s)	Dr. James J. Mazer - Technology
Point of Contact	Dr. James J. Mazer, Argonne National Laboratory, 9700 South Cass Ave., CMT/205, Argonne, IL 60439-4837; Phone: (708) 252-7362; Fax: (708) 252-5246

Subject Area:

Primary	Technology
Secondary	Treatment System, Innovative Tech., DOE
Tertiary	Char., TSD, Physical, Thermal, Chem., etc

Abstract:
Dr. Mazer has a Ph. D. in Geochemistry from Northwestern University. He is currently responsible for overseeing and performing the Phase I long-term durability testing of MAWS glasses. He has previously performed research on high-level nuclear waste glasses and investigated their long-term durability. He has also used his extensive laboratory and analytical experience in studies of the natural and experimental weathering of natural glasses of great age and applied the results of these studies to projections of high-level nuclear waste glass durability.

Prepared By: Twain E. Harwood Date Completed: 01/27/94 02:36:47 PM

FFCAct Clearinghouse

Title/Name: Xiangdong Feng - Principal Investigator

Format	Technical Expert
Author(s)/Expert(s)	Dr. Xiangdong Feng - Technology
Point of Contact	Dr. Xiangdong Feng, Argonne National Laboratory, 9700 South Cass Ave., Argonne, IL 60439-4837; Phone: (708) 252-7362; Fax: (708) 252-5246

Subject Area:

Primary	Technology
Secondary	Treatment System, Innovative Tech., DOE
Tertiary	Char., TSD, Treatment Processes, Waste Forms

Abstract:
Dr. Feng joined the Chemical Technology Division of Argonne National Laboratory in 1991 as a technical staff, after serving as a Group Leader and Research Scientist at the Vitreous State Laboratory of the Catholic University of America. He has been actively involved in the formulation, optimization, and testing of waste glasses for the past eight years. He developed structural thermodynamic models for the optimization of West Valley high-level nuclear waste glass composition. Dr. Feng is a Principal Investigator for the PCF/MAWS project at ANL. He has over 45 scientific publications related to waste forms.

Prepared By: Twain E. Harwood **Date Completed:** 01/27/94 02:48:16 PM

FFCAct Clearinghouse

Title/Name: Andrea Wollerman - Chemical Engineer

Format	Technical Expert
Author(s)/Expert(s)	Andrea Wollerman - Technology
Point of Contact	Ms. Andrea L. Wollerman, SAIC, 545 Shoup Ave. Idaho Falls, ID 83405; Phone: (208) 528-2111; Fax: (208) 528-2194

Subject Area:

Primary	Regulations, Technology
Secondary	Waste Acceptance Criteria
Tertiary	TSD

Abstract:
Ms. Wollerman's area of expertise is in mixed waste treatment, storage, and disposal (TSD) including: treatment feasibility studies, engineering support to treatment implementation such as incineration, vitrification, and solidification, development of permitting and facility documentation such as operating and treatment permits, safety reports, sampling and analysis plans, and waste acceptance criteria. Ms. Wollerman has experience in dealing with RCRA Land Disposal Restricted wastes and is familiar with other RCRA TSD regulations for such wastes. In addition, Ms. Wollerman has experience in thermal treatment technology, offgas treatment technology assessments, and related regulatory requirements, as applicable to mixed waste treatment.

Prepared By: Twain E. Harwood **Date Completed:** 01/27/94 03:07:51 PM

FFCAct Clearinghouse

Title/Name: Richard K. Blauvelt

Format	Technical Expert
Author(s)/Expert(s)	Richard K. Blauvelt - Technical Support Team member
Point of Contact	Richard K. Blauvelt, BDM Federal, Inc., 1900 Founders Drive, Kettering, Ohio 45420; (513)256-4006; Fax: (513)259-4545

Subject Area:

Primary	Regulatory
Secondary	MW Management
Tertiary	Strategic Planning

Abstract:
Mr. Blauvelt has over 27 years of experience in the DOE complex, primarily in the environmental area. He directed waste management activities at Mound Plant for 16 years before joining BDM Federal, Inc. in 1990. With BDM, he has provided support to DOE EM 10, EM 30, EM 50 and EM 60. He has served on numerous task groups dealing with TRU, LLW, and LL Mixed Waste issues and was chairman of the Ad Hoc Waste Operating Contractors Committee for 8 years, which provided him with a thorough knowledge of the DOE contractor community. Mr. Blauvelt is currently chairman of the ASME Mixed Waste Committee which has sponsored two Mixed Waste Symposiums and provided extensive training in mixed waste management. His expertise and experience include:

- working knowledge of RCRA and LDR regulations
- Chemical and Nuclear Engineering Degrees, Registered P.E.
- active DOE Q clearance
- participation in Peer Review of Rocky Flats Mixed Waste TD Program
- Facilitator - '93 Albuquerque Site Treatment Plan Technology Exchange Workshop
- conducted Mixed Waste Management training; ASME, Government Institutes, Net-Werc
- knowledge of FFCAct requirements and DOE plan for response
- trained in the use of Mixed Waste Technology Selection Tools
- attended Technology Support Team Workshop
- Knowledge of DOE Mixed Waste Inventory Report (Waste Streams and Treatment Technologies)
- experience in facilitating development of strategic plans, roadmaps, and exercises in problem-solving

Prepared By: Twain E. Harwood **Date Completed:** 02/03/94 08:30:38 AM

FFCAct Clearinghouse

Title/Name: Technology Support Teams (Fact Sheet)

Format	Technical Expert
Author(s)/Expert(s)	US DOE, Office of Waste Management (EM-30) with the cooperation of the Office of Technology Development
Point of Contact	Steve Domotor, US DOE, EM-351, Trevion II, Washington D.C. 20585-0002; Phone: (301)903-5053; Fax: (301)903-7451; Pete Castle, TST Project Manager, WINCO/EM-351; Phone: (301)601-1408; Fax: (301)601-1452

Subject Area:

Primary	Technology, Regulatory, Waste Mgmt.
Secondary	Innovative and Baseline Technology
Tertiary	

Abstract:
The Technology Support Teams (TSTs) have been formed to provide technical services to sites during and after the preparation of site treatment plans for mixed waste required by the Federal Facilities Compliance Act (FFCA). A major goal in supplying these services, in addition to helping to meet the requirements of the FFCA, is to provide a consistent technical approach to the analysis of waste stream treatment requirements and treatment system selection throughout the DOE complex.

The TSTs are comprised of experienced engineers, technologists, and regulatory experts representing a number of the large sites throughout the DOE complex. Members for the teams are drawn from the waste management arena and the EM-50 Mixed Waste Integrated Program to provide a balance in understanding of the options presented by mature technologies and developing technologies.

The TSTs have available a set of analytical tools and methods which they employ in determining a site's waste stream treatment requirements and treatment system needs. These tools include baseline flowsheets, "consolidated" flowsheets, the Waste Management Automated Technology Catalog, and several others.

The TSTs will provide workshops to educate the sites in the use of the tools in determining their waste stream treatment requirements and the process of selecting treatment technology options which will meet treatment requirements. The TST can perform a more extensive analysis with site personnel to work through the treatment system analysis for the site.

Prepared By: Twain E. Harwood **Date Completed:** 04/18/94 12:55:10 PM

FFCAct Clearinghouse

Managed By: Radioactive Waste Technical Support Program (RWTSP)
EG&G Idaho, Inc.
P.O. Box 1625
Idaho Falls, ID 83415-2420

Telephone: (208) 526-1446

FAX: (208) 526-8878

Primary Contact: Twain Harwood, RWTSP Project Manager-FFCAct Clearinghouse, EG&G Idaho, Inc.
Phone (208) 526-1446, FAX (208) 526-8878

DOE Field Contact: Walt Sato, DOE Idaho Operations Office
Phone (208) 526-0193

DOE-HQ Contact: Stephen Domotor, Applied Technology Program Manager, EM-351, Phone (301) 903-5053, FAX (301) 903-7451

Hours: 7:30 a.m. - 4:30 p.m.
Monday - Friday

Time Zone: Mountain

Objective: The clearinghouse is a central location for collecting and cataloging information relevant to the Federal Facility Compliance Act (FFCAct). It provides access to information that could be useful for responding to the requirements of the FFCAct, focusing on the development of Site Treatment Plans (STPs).

Description of Services: The clearinghouse provides access to a card catalog of available information (e.g., technical reports and listing of technical experts) for routing information requests to the appropriate source. The clearinghouse also provides assistance in performing searches on particular topics and issues related to STP development.

The FFCAct clearinghouse is not intended to be a central library of "hard copy" documents, a center for electronic data, or a generator of new information. However, "key" information related to the development of Site Treatment Plans may be distributed directly by the clearinghouse, as appropriate.

Sponsoring Organization: U.S. Department of Energy (DOE), Office of Waste Management (EM-30)

Types of Information Available: The clearinghouse includes information on characterization, retrieval, treatment, storage, and disposal elements of waste management as they relate to the FFCAct and the treatment of mixed wastes.

Subject areas of information being compiled include:

- ✓ Commercial treatment capabilities
- ✓ Listings of technical experts for assistance in selecting and evaluating treatment options and technologies
- ✓ Mixed waste data and treatability groups
- ✓ Guidance on STP development
- ✓ Life-cycle cost planning estimates for facilities
- ✓ References to documentation on available technologies and technology development activities
- ✓ Waste Acceptance Criteria (WAC) for treatment facilities
- ✓ Regulatory, health and safety issues associated with treatment facilities and technologies
- ✓ Computer databases, applications, and models for identifying and evaluating treatment facilities and technologies

Audience: Access to the FFCAct clearinghouse is available to the DOE and its DOE contractors involved in STP development and other FFCAct activities.

Publications: A directory of the information resources will be compiled, distributed, and periodically revised based on information contained in the card catalog. An FFCAct clearinghouse brochure and quarterly newsletter will also be distributed.

Access: For further information on the services available through the clearinghouse, information requests, and assistance in searching for information on key subject areas, contact Twain Harwood, (208) 526-1446, FAX (208) 526-8878.

FFCAct clearinghouse

Request for Information
to Populate FFCA Clearinghouse

1. **Title/Name:**			
2. **Format:** (Mark one)	Hard Document _____	Computer Application _____	Technical Expert _____
3. **Author(s)/Expert(s):**			
4. **Point of Contact:** (Name: Affiliation: Address: Phone: FAX:)			
5. **Abstract:** (use only space provided)			

Prepared by: _____ Date Completed: _____

Request for Information
to Populate FFCA Clearinghouse

6. Subject Area: (Check most applicable)

Primary	Secondary	Tertiary
	Cost _____	Characterization _____
		Retrieval _____
Facility _____	Technology Process _____	Pretreatment _____
		Treatment _____
	Waste Acceptance Criteria _____	Storage _____
		Disposal _____
	Treatability Group _____	Physical _____
		Thermal _____
Technology _____	Treatment System _____	Chemical _____
		Immobilization _____
	Baseline Tech. _____	Existing _____
		Planned _____
	Innovative Tech. _____	Organic _____
		Aqueous _____
Waste Type _____	Commercial _____	Cemented _____
(Ref: Waste Matrix/Contaminant Matrix)		Heterogeneous _____
	DOE _____	Soils _____
		Lab Pack _____
	EPA _____	Reactive _____
		Explosives _____
Regulatory _____	NRC _____	Gases _____
		Mercury _____
	State _____	Lead _____
		Batteries _____
	Local _____	ORGDST _____
		WWTOR _____
STP Guidance _____	Conceptual _____	METRM _____
		STABL _____
	Draft _____	METRC _____
		HGSEP _____
	Final _____	DECON _____
		NEUTR _____
Other _____	Other _____	DEACT _____
		Other _____