94-1 R&D Program Review for FY-2002

Materials Identification and Stabilization Technologies

Lead: W. Dworzak

Materials Identification and Stabilization Technologies Objectives

- **WBS 1.1, Materials Identification and Stabilization Technologies (Level 2 WB under WBS1.0, 94-1 R&D)**
- **Provide technical support in order to ensure that sites are able to meet requirements in DOE-STD-3013-2000 for packages sent to long-term storage.**
- **Provide technical support to help closure sites meet commitments for inventory removal.**

94-1 R&D Program Review for FY-2002

Materials Identification and Stabilization Technologies Subtasks and Principal Investigators

- **WBS 1.1.1 Pu Materials Characterization and Handling: B. Bender**
- **WBS 1.1.2 Shipping, Receiving and Packaging: B. Bender**
- **WBS 1.1.3 MIS Inventory & Database Maintenance: B. Bender/J. Watts**
- **WBS 1.1.4 Implementation of NDA Analytical Methods: K. Hollis/L. Morales**
- **WBS 1.1.5 Stabilization and Packaging Support: W. Dworzak**
- **WBS 1.1.6 Disposition Processing Technologies: W. Dworzak**

94-1 R&D Program Review for FY-2002

Materials Identification and Stabilization Technologies Relationships Between Project Elements and Requirements

DNFSB 94-1: "Improved Schedule for Remediation in the Defense Nuclear Facility Complex"

Letter, DNFSB to T.J. Glauthier: Approval for Standard 3013-1999 and Endorsement of Representation

DOE-STD-3013-2000: Packaging/Storage Specifications

DOE Programmatic Objectives: Site Closure, Material Disposition, Material/Vault Management

Pu Materials Characterization and Handling

- Analysis and Characterization of Candidate Items and Problematical Materials
- MIS Inventory Retention for Representation and Resolving Processing or Storage Problems

Shipping, Receiving and Packaging*

- Receive Items from Sites
- Package Materials and Send Back to Sites

MIS Inventory and Database Maintenance

- Update MIS Database with Information on Represented Materials
- Verify Accuracy of Previous Data that was Urgently Loaded
- Maintain Database

Implement NDA Analytical Methods

- Extend Range of TGA-FTIR and TGA-MS
- Develop Prompt Gamma for Impurities, Deploy at RF, HO, LANL, LLNL, SRS
- Validate NM, Deploy at RF, LANL, SRS

Stabilization & Packaging Support

- Support Processing & Packaging at Sites Through Surrogate and Pu Studies
- Determine Effects of Parameters on Moisture Uptake and Corrosion

Disposition Processing Technologies*

- Develop Technologies to Enable Final Disposition: Oxide Purity & Reactivity for MOX, Unforeseen Issues Related to Storage

* Unfunded in FY-2003