Glass Waste Storage Project
Defense Waste Processing Facility

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Waste Management Committee
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Purpose

- Satisfy 2014 Waste Management Committee Work Plan requirement.
- Describe the scope of the project which is NOT another Glass Waste Storage Building.
CD-0 – Approve Mission Need for a construction project with a conceptual scope and cost range
CD-1 – Approve Design Scope and Project Cost and Schedule Ranges (Project will re-affirm CD-1 based on a newly selected alternative.)
CD-2 – Approve Project Performance Baseline
CD-3 – Approve Start of Construction
CD-4 – Approve Start of Operations or Project Closeout

ALARA  As Low As Reasonably Achievable
BOP  Balance of Plant
CDR  Conceptual Design Report
CTS  Canister Transfer Station
DWPF  Defense Waste Processing Facility
GWSB  Glass Waste Storage Building
HQ  Headquarters
RFP  Request For Proposal

• Optimization Study: Reviewed Canister Interim Storage Project conceptual design and added transportation capability.
Agenda

- Introductions /Background
- Schedule Activities, Funding Profile, Issues
- Canister Production Chart
- Support Information
Proposed Canister Storage

Glass Waste Storage Building

Proposed Project Location at DWPF

Proposed Storage Containers
Critical Decision (CD)-1 for GWSB #3 approved March 10, 2010;

Due to flat lining of EM budget, alternative study conducted, less than GWSB #3;

Project cost range of $40M to $64M, GWSB #3 $140M;

Conceptual Design Report (CDR) issued February 2013 for Glass Waste Storage Project;

FY14 Initiated Optimization Study to fine-tune CDR for CD-1 and;

Seeking re-affirmation of the alternative selected.
Schedule Activities

- **FY14** Optimization Study: Complete in November 2014

- **FY15** Re-Affirm CD-1, Prelim. Design, prep Request For Proposals (RFP),

- **FY16** Issue RFP/evaluate container, carrier, cart, power, site prep, complete design

- **FY17** Achieve CD-2 and CD-3, begin fabricate container, carrier, start site prep, power, start construction

- **FY18** Continue construction transfer station, storage pad, road, fire water

- **FY19** Complete Transfer Station, Storage Pad/ Road, Start Up test, Readiness Assessment, achieve CD-4

**Issues:**

- Funding for FY15.
• Scope of Project
• Site Plan
• Container Description
• Container Transfer Station and Transfer Process
• Canister Transfer Equipment
Scope of Project

- Relocate Utilities: Relocate 13.8KV & Fire-Water Line;
- Temporary Constr. Power; GWSB2 Fence; Remove Buildings 250-1S, 2S, 4S & 5S;
- Replace 250-4S Pad;
- Site Preparation: Clear & Grub, Grading, Storm Water and Detention Basin;
- Construct Canister Transfer Station (CTS), Storage Pad (570), Container Staging Area, Carrier Garage, Fence, and ContainerFab Area;
- Construct Balance of Plant (BOP) and Utility Tie-Ins: Install Transfer Car, Operator Console and Tie-in Electrical Power, Phone, and Public Address System;
- Engineered Equipment: Containers (2), Transfer Car, Underhung Trolley & Hoist, Container Carrier, Operator Console, Cameras and;
- Transportation Capability will be installed in phase 2 of project, many years out;
Container (Canister Storage Container):

- Concrete-reinforced with 30" wall x 12' diameter x 15.5' high;
- 106 tons empty; 126 tons loaded w/7 canisters;
- Preliminary Consolidated Hazards Analysis indicated due to the mass:
  - Low center of gravity due to height-to-diameter ratio
  - Container will not tip during high winds or a tornado
- Not licensed for shipment: Storage container, not a Nuclear Regulatory Commission transportation cask
Container Transfer Station and Transfer Process

- Remove canisters from GWSBs as required to support production;
- Shielded Canister Transporter removes canister from GWSB, moves to Transfer Station;
- Places canister in position in container on the Transfer Cart using cameras and guides;
- Operator will remove and replace container lid remotely using cameras;
- Transfer Cart moves container out of Transfer Station; and
- Carrier picks up full container (7 canisters), moves to storage pad.
Canister Transfer Equipment

Transfer Cart

Container Carrier

Shielded Canister Transporter
Risks:
- Completion of project before Glass Waste Storage Building #2 storage space expires;

Opportunities:
- Multi-purpose Project: Storage and shipping considered in design;
- Provides for canister storage for life of liquid waste campaign.