Presentation to the
SRS Citizens Advisory Board
Waste Management Committee

Transuranic (TRU) Project Update

May 25, 2010

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Acronyms

ARRA	American Recovery and Reinvestment Act
CAB	Citizens Advisory Board
CH	Contact Handle
DOE	Department of Energy
FGE	Fissile Gram Equivalent
FY	Fiscal year
HA	High activity
NDA	Non-Destructive Assay
NDE	Non-Destructive Examination
NRC	Nuclear Regulatory Commission
PEC	Plutonium Equivalent Concentration
RCRA	Resource Conservation and Recovery Act
RH	Remote Handle
SCDHEC	South Carolina Department of Health and Environmental Control
SRS	Savannah River Site
TRUPACT III	Transuranic waste shipping container III
TRU	Transuranic
V&P	Vent and Purge
WIPP	Waste Isolation Pilot Plant

Agenda

- TRU Waste Inventory Overview
- Progress and Accomplishments
- TRU Metrics
- Safety Environment
- Challenges
- 200 Cubic Meters of Very Difficult Waste
- Summary

Overview Background

- **Phase I (FY01 – 2Q, FY09):**
  - **CH-TRU Drums *(~30,500 drums or ~ 6,000 m^3)***
  - **Emptied 7 TRU Pads (Pads 7 -13)**
  - **Lessons learned incorporated into the Phase II Process**

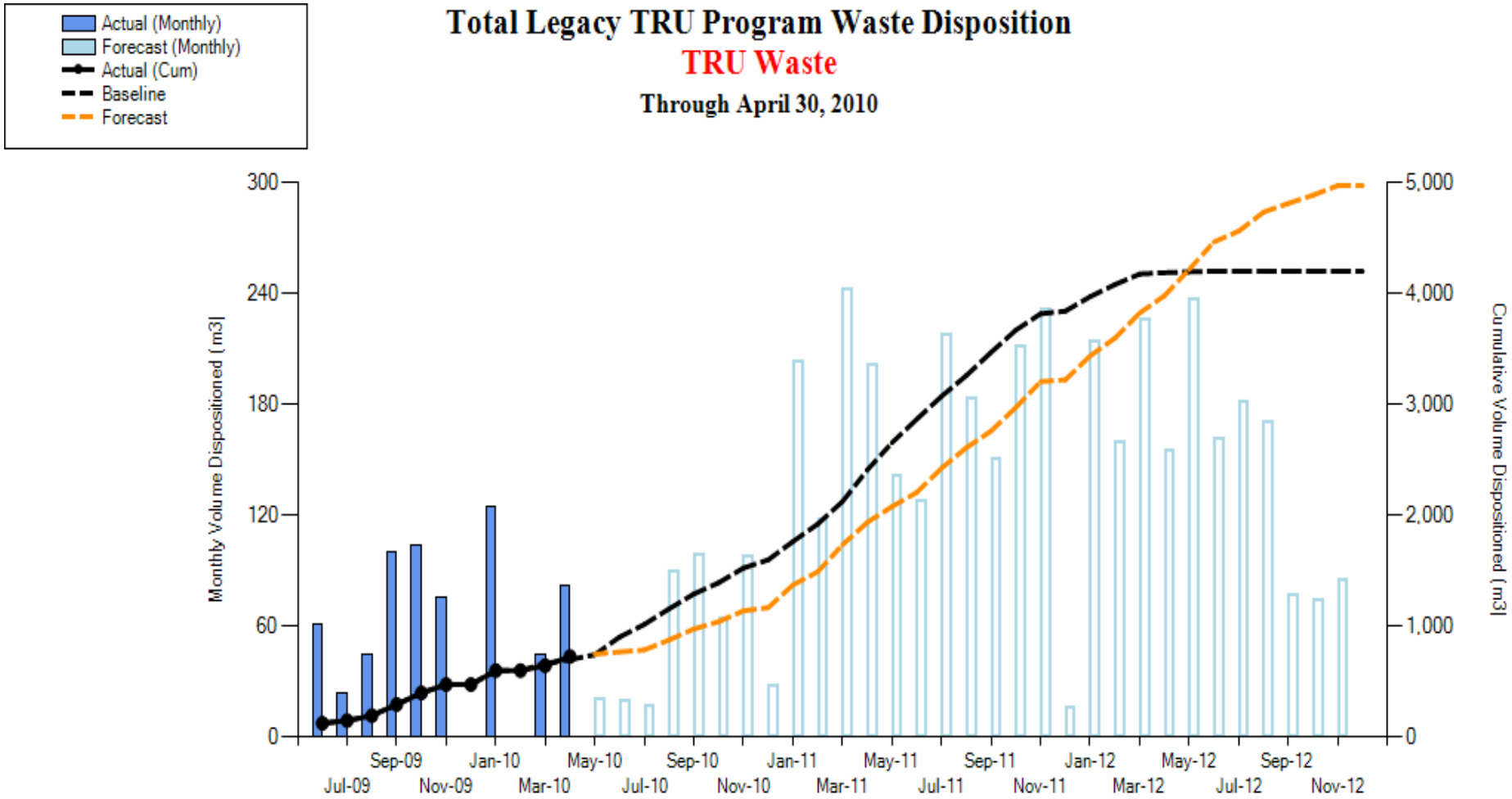
1st TRU Waste Shipment – May, 2001

1,000th TRU Waste Shipment – June, 2009

Recent Accomplishments
February through April 2010

- **F Canyon**
  - **Started Pad 1 drum remediation**
  - **Dismantled and removed old enclosure from truckwell**
  - **Restarted the F canyon warm crane**
- **H Canyon**
  - **Started box size reduction (Box #12)**
  - **Completed 11 large boxes (6 repackaging and 5 remediation)**
- **E Area**
  - **Completed 20 WIPP shipments for March and April**
  - **Progressing with final retrieval phase on TRU Pad 1**
  - **Start large box X-ray testing**
  - **Started box repackaging on Pad 6 on March 31**

Overall TRU Waste Volume Disposed



Field Progress and Highlights
1st Year under ARRA

Pad 1 Culvert Excavation

Pad 1 Drum Mining

WIPP Shipment Inspection under "Big Top"

Mock Up Training for Drum Remediation

Overview Remaining Scope

- **Phase II (3Q, FY09 – CY12):**
  - **Disposition of 5,000 m^3 remaining legacy CH- and RH-TRU wastes with significantly higher levels of PEC and/or larger physical sizes including:**
    - **1600 Special Case CH-TRU Drums**
    - **Pad 1 Drums and Boxes (300 cubic meters)**
    - **4,300 Cubic Meters Non-Drum CH-TRU Containers**
    - **RH-TRU Containers**
  - **$400 Million Project**
  - **American Recovery and Reinvestment Act of 2009 Funded**
  - **December 2012 Completion Date**
  - **200 m^3 of very difficult waste planned post ARRA**

ARRA – Ongoing/Enhanced Safety Focus

- **Mandatory Safety Training**
  - General Employee Training
  - Safety Culture Orientation
  - Hazards Recognition
- **Additional Project/Facility Requirements**
  - Rad Worker Training
  - Facility Orientation Training
  - Procedures Training
  - Mockup Training
  - Safety Basis Requirements Training
  - Local Safety Improvement Teams
  - BBS Program
- **Conduct of Operations Enhancement**
  - Mentor Program
  - HPI Tools
  - Daily Hot Wash
  - Housekeeping Routine

✓ISMS

✓Management Field Presence

✓ESH&Q Functional Support

✓Independent Oversight

✓External Safety Assessment

✓Safety Improvement Actions

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Large Boxed Waste Challenges

Boxed TRU Waste on Pad 26

200 m3 of Very Difficult Waste

- High Gamma Emitting Wastes – NDA issues
  - Concrete casks from SRNL
  - Silver Saddles from F- & H-Canyons
- High Curie Content Wastes – over WIPP and/or NC limits
  - Mound and Los Alamos wastes on Pad 1
- Highly Contaminated Wastes – up to 400 million dpm alpha
  - Stainless steel boxes from H-Canyon Hot Sample Aisle
  - Robotic manipulators from 235-F
  - One-pack plywood boxes from H-area B-Line
- Waste with Integral Lead Shielding – NDA and NDE issues
  - Stainless steel boxes from H-Canyon Hot Sample Aisle
- Oversized RH Debris – size reduction needed

Summary

- Worker Safety Highest Priority
- 30,000 Drum Inventory Complete
- Multiple Size Reduction/Remediation Facilities Needed to Complete the Remaining Legacy Inventory
- Significant Technical Challenges Remain
- Progress to Date Is a Little Behind Plan