

# Waste Management Activities Update



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Low-Level and Mixed Low-Level Waste

July 24, 2006

Community Environmental Monitoring Program

Mount Charleston, Nevada

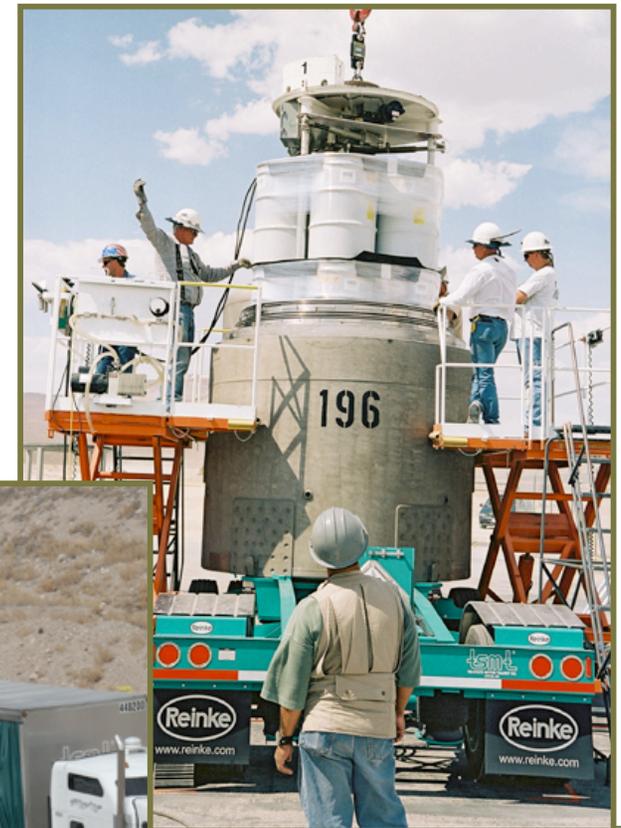
**U.S. Department of Energy Nevada Site Office  
Environmental Management**

# Waste Management Sub-Projects

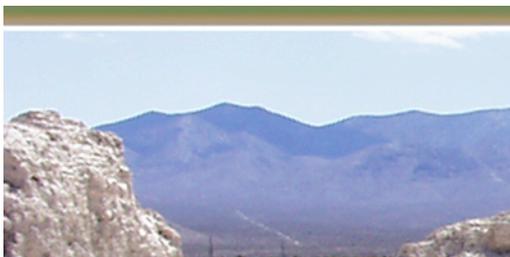
Low-Level Waste (LLW)



Transuranic (TRU) Waste



Mixed LLW



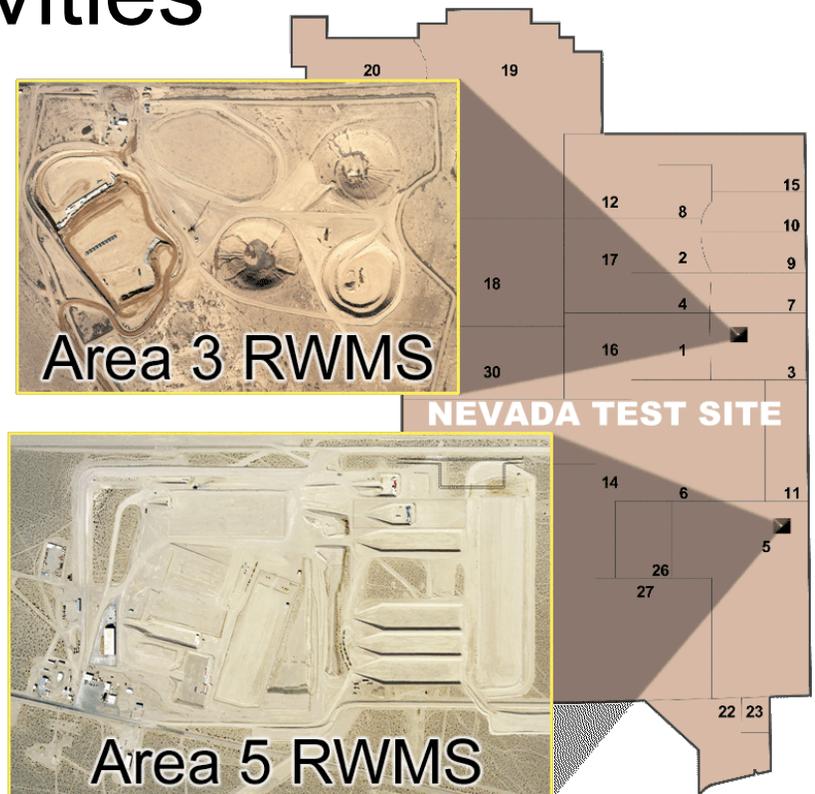
# Radioactive Waste Definitions

- LLW – radioactive waste not classified as high-level waste, TRU waste, spent fuel, or by-product material (typical waste includes metal, debris, soils, clothing, tools, etc.)
- Mixed LLW – LLW combined with a hazardous components (i.e. toxic, corrosive, reactive or ignitable) such as solvents
- TRU waste – contains items contaminated by man-made radioactive elements heavier than uranium (atomic number 92) and half-lives greater than 20 years – examples include contaminated laboratory equipment

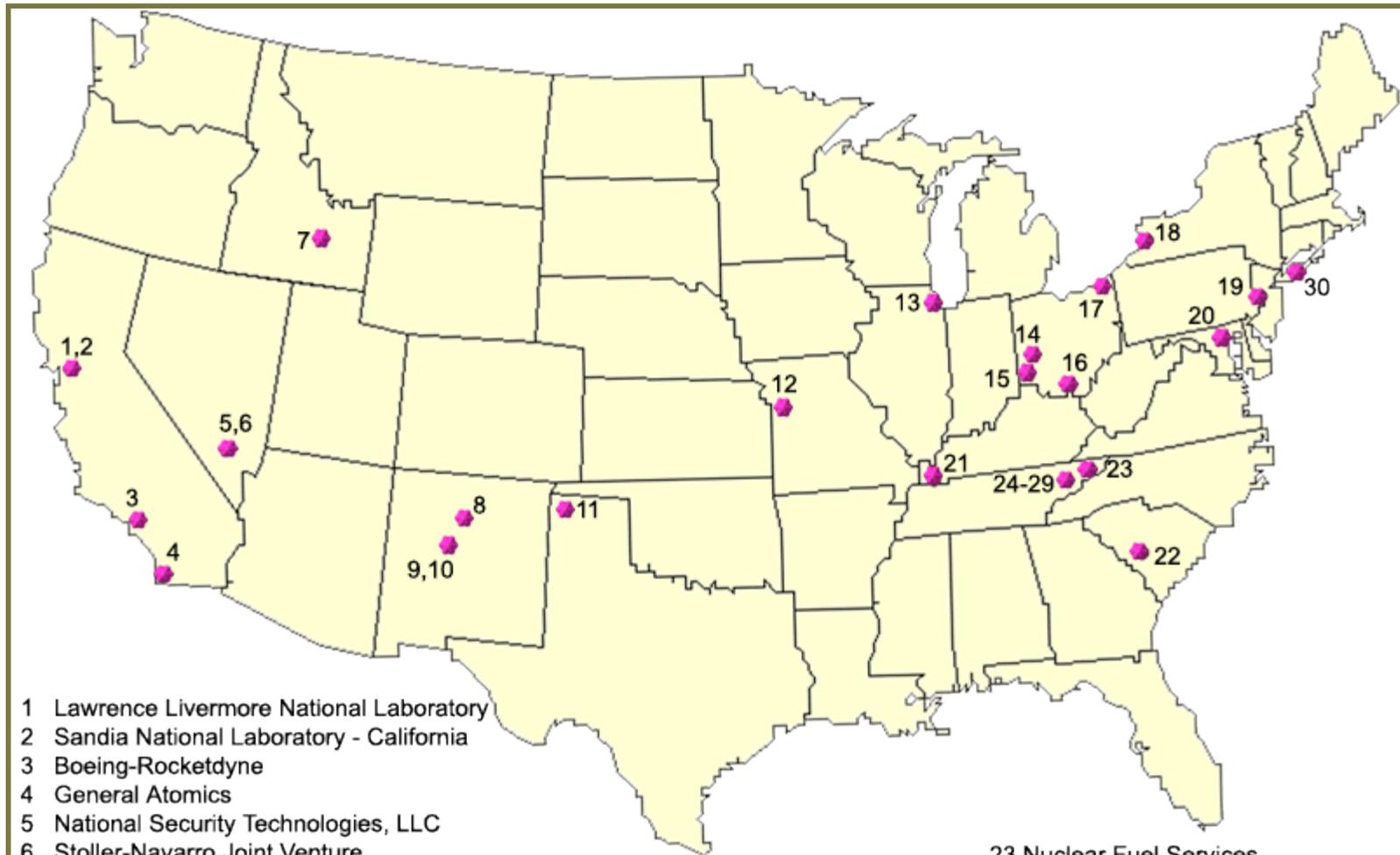


# LLW Activities

- NTS plays a pivotal role in the cleanup of historic nuclear weapons-related sites across United States by providing a permanent disposal facility
- LLW disposed in engineered pits and trenches and subsidence craters at two Radioactive Waste Management Sites (RWMSs) at the NTS
- Radioactive Waste Acceptance Program ensures all LLW and Mixed LLW streams conform to waste acceptance criteria prior to granting approval for disposal at the NTS



# Approved NTS LLW Generators

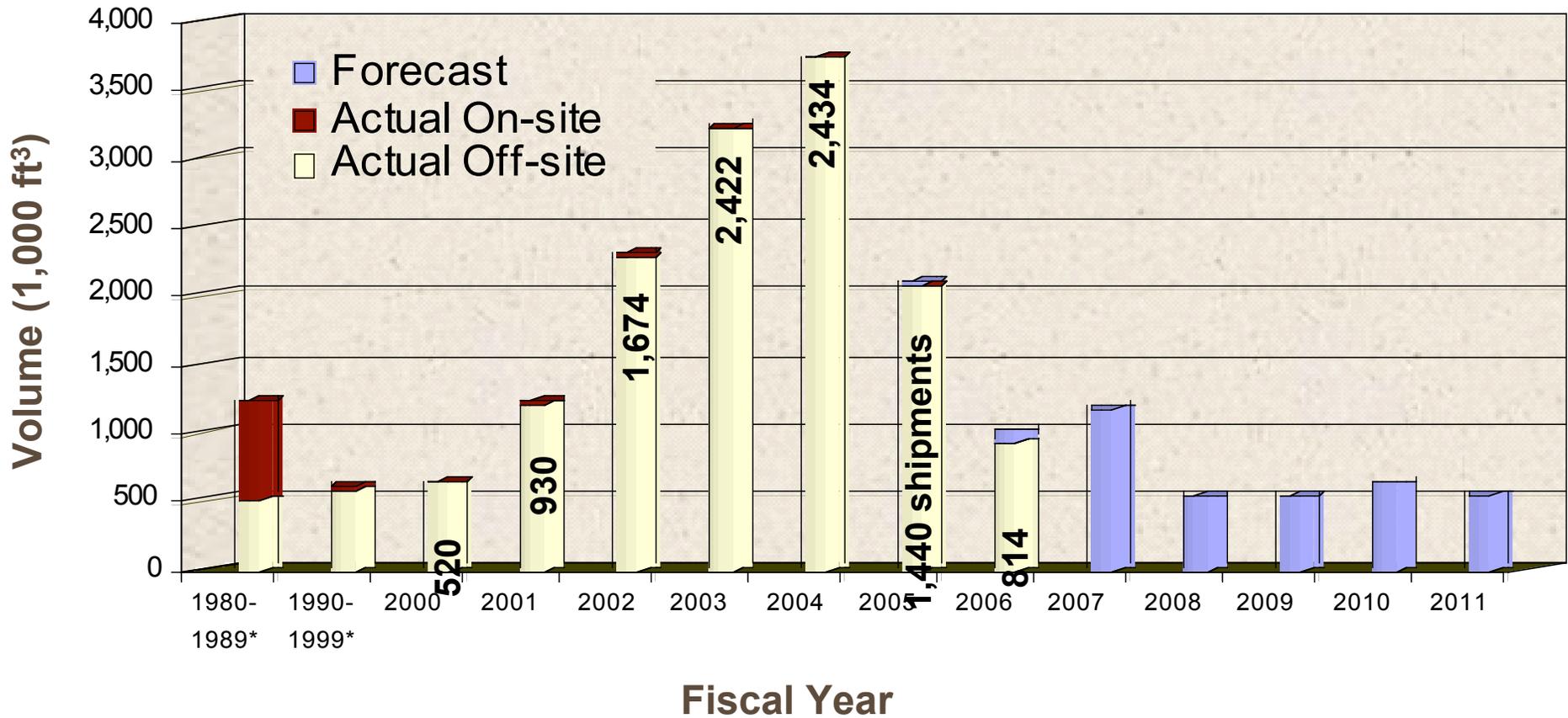


- 1 Lawrence Livermore National Laboratory
- 2 Sandia National Laboratory - California
- 3 Boeing-Rocketdyne
- 4 General Atomics
- 5 National Security Technologies, LLC
- 6 Stoller-Navarro Joint Venture
- 7 Idaho National Laboratory
- 8 Los Alamos National Laboratory
- 9 Lovelace Respiratory Research Institute
- 10 Sandia National Laboratory - New Mexico
- 11 Pantex Plant
- 12 Kansas City Plant
- 13 Argonne National Laboratory
- 14 Fernald

- 15 Mound
- 16 Portsmouth
- 17 Reactive Metals Incorporated
- 18 West Valley Demonstration Project
- 19 Princeton Plasma Physics Laboratory
- 20 Aberdeen Proving Grounds
- 21 Paducah
- 22 Savannah River Site

- 23 Nuclear Fuel Services
- 24 Perma-Fix
- 25 Duratek
- 26 Foster-Wheeler
- 27 Oak Ridge National Laboratory
- 28 Oak Ridge Reservation
- 29 BWXT Y-12
- 30 Brookhaven National Laboratory

This slide will be updated by the end of the week  
**NTS LLW Disposal History**



FY 2003 (total) – 3,239,726 ft<sup>3</sup>  
 FY 2004 (total) – 3,743,572 ft<sup>3</sup>  
 FY 2005 (total) – 2,091,771 ft<sup>3</sup>  
 FY 2006 (total received as of 6/25/2006) – 938,694 ft<sup>3</sup>  
*\*Indicates average per year for that decade*

## Mixed LLW Activities

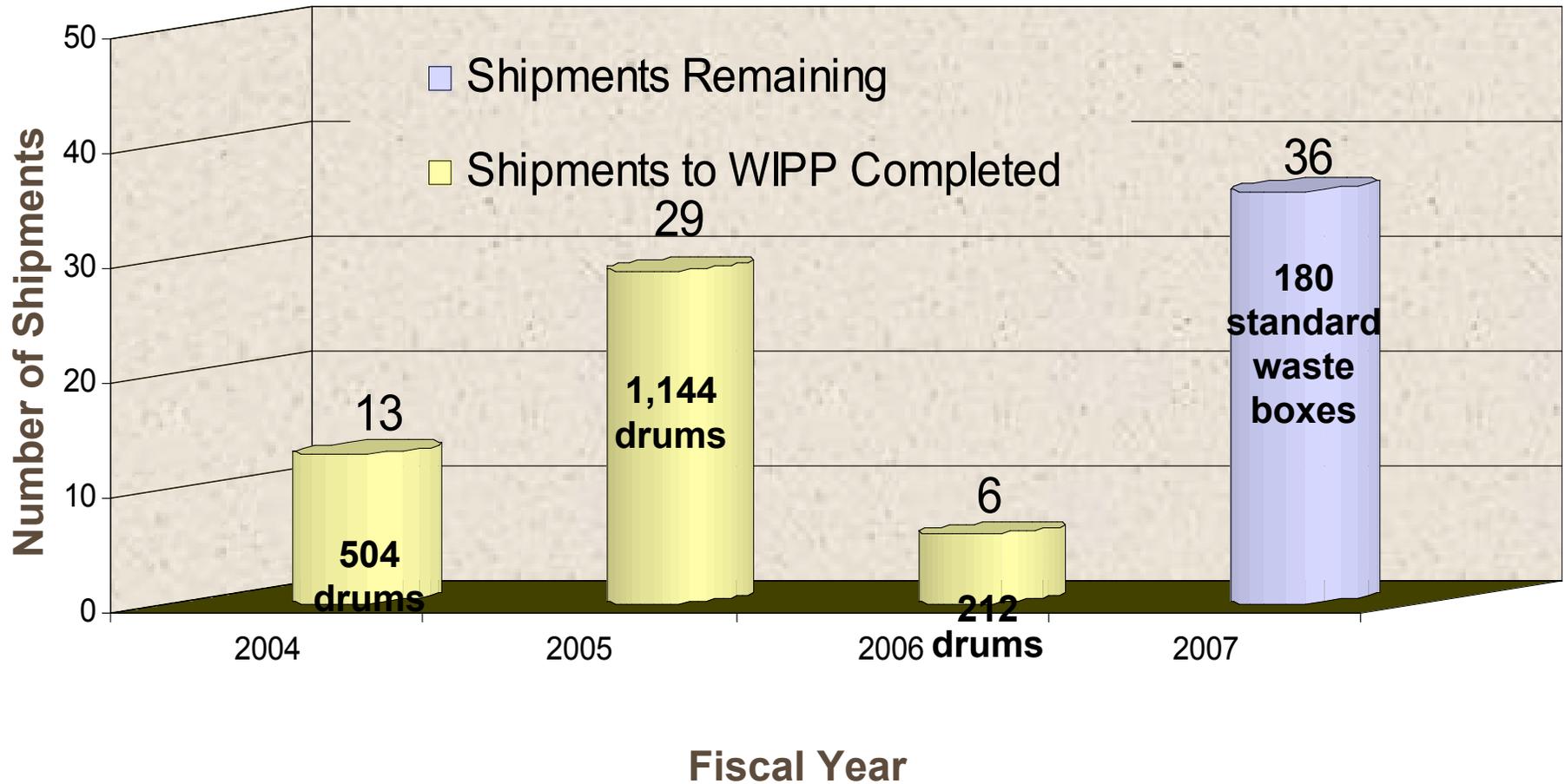
- Mixed LLW disposal at NTS regulated by the State of Nevada under the Resource Conservation and Recovery Act
- State of Nevada Division of Environmental Protection renewed permit in December 2005 which limits the disposal of mixed LLW generated outside the state to 20,000 cubic meters until December 2010, whichever comes first
- Mixed LLW is disposed in a separate pit at the Area 5 RWMS
- Three approved generators have shipped 135 cubic meters of mixed LLW to the NTS for disposal under the terms of the permit as of June 25, 2006



# TRU Waste Activities

- Most TRU managed at the NTS was generated as part of nuclear weapons research and development at Lawrence Livermore National Laboratory (legacy waste)
- Legacy waste shipped to NTS for temporary storage between 1974 and 1990
- Small quantity of TRU waste generated by environmental restoration activities on the NTS
- All TRU waste requires characterization and certification for shipment and permanent disposal at the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico
- 1,860 drums of NTS TRU waste disposed at WIPP
- 58 oversize boxes and approximately 200 drums of TRU waste remain at NTS awaiting further characterization and repackaging

# NTS TRU Waste Shipments to WIPP



# TRU Oversized Boxes

- 58 oversized boxes to be repackaged and waste segregated
- Some waste expected to be characterized as mixed LLW and disposed on-site
- Waste characterized as TRU or mixed TRU will be shipped to another DOE facility where it will be prepared for disposal at WIPP
- Work to be performed during fiscal year 2007



Questions???

