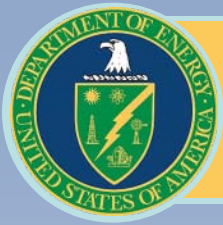


# Advanced Mixed Waste Treatment Project

*Citizens Advisory Board Meeting  
May 18, 2011*



Jeff Mousseau, P.E.  
President and General Manager  
Bechtel BWXT Idaho

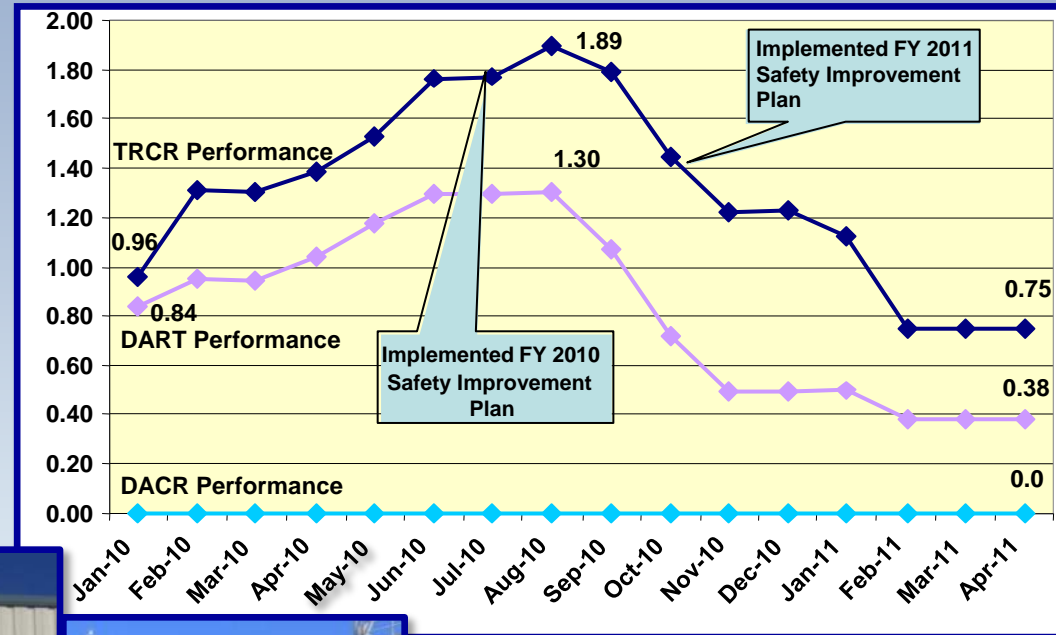


# First Things First – Safety

*AMWTP is a Voluntary Protection Program Star Site*

## Best In Class Safety Performance

- VPP Star Site
- ISMS process
- 11.8 million safe hours
- Employee-based safety programs
- Protection of the public, our workers and the environment



*Zero is our goal!*



*The VPP Star Site Flag flies high at AMWTP*

*Safety improvements pay dividends*





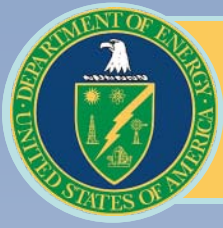
# AMWTP Mission

*Bechtel BWXT Idaho manages and operates the Advanced Mixed Waste Treatment Project for the U.S. Department of Energy at the Department's Idaho Operations site.*

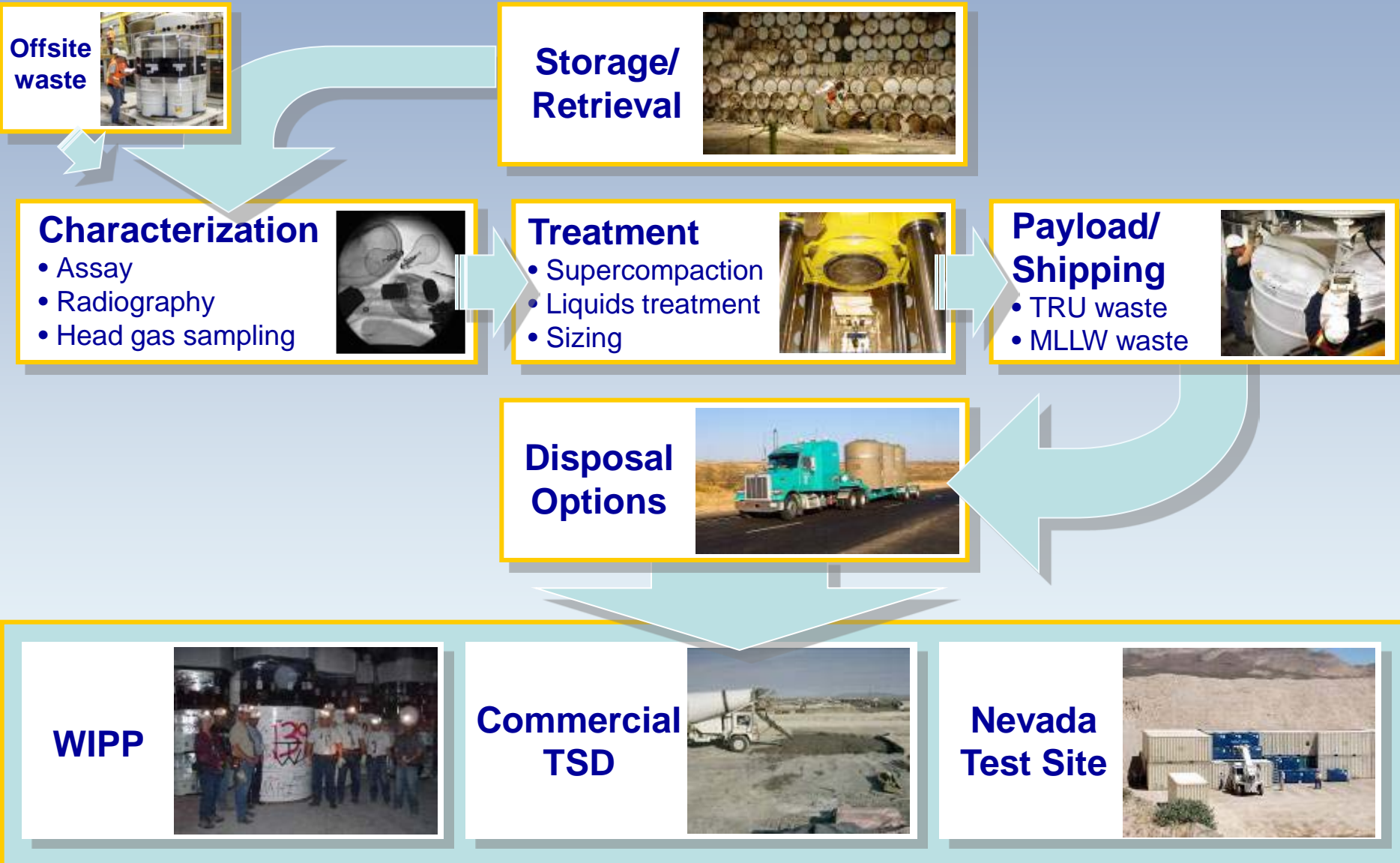


*A transuranic waste shipment leaves AMWTP, the start of a 1,200 mile one-way trip to the Waste Isolation Pilot Plant.*

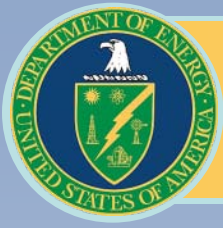
- Legacy stored transuranic waste
- Offsite waste
- Buried waste shipments
- Settlement Agreement
- Site Treatment Plan



# AMWTP Process Flow







# Waste Characteristics

## Sources

- Rocky Flats Plant, 1970-1985
- Mound, Bettis, INL, et.al.

## Est. Remaining Inventory

- 3,200 TRU/MLLW boxes
- 48,500 TRU/MLLW drums
- 23,000 m<sup>3</sup>

## Waste Composition

- TRU = ~60%
- MLLW = ~40%
- Debris = ~65%
- Sludges = ~35%

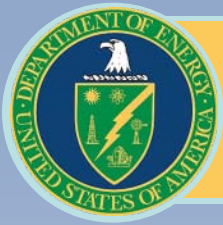
TRU = Transuranic Waste  
MLLW = Mixed Low Level Waste



*Retrieved waste boxes and drums in storage awaiting processing*

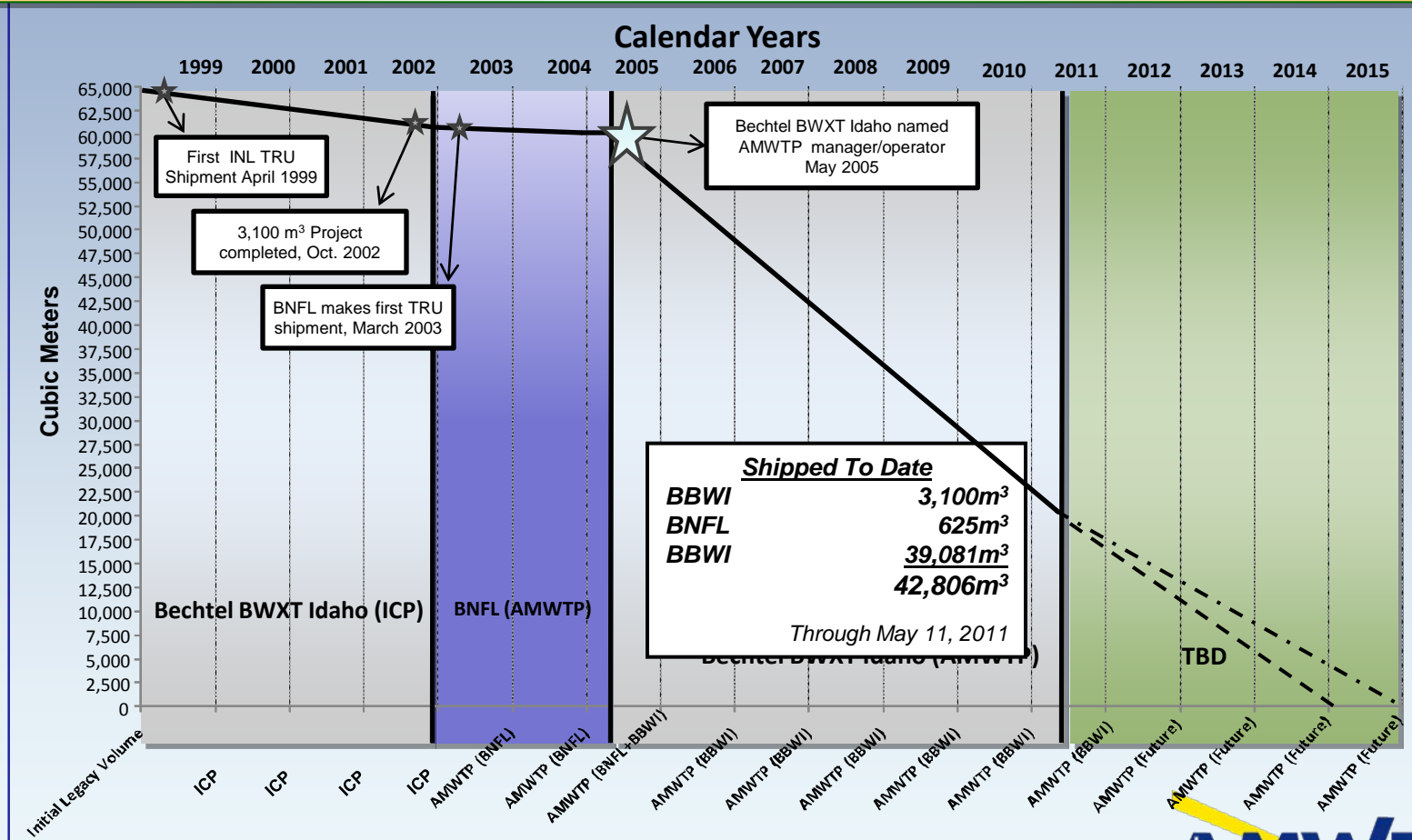


*Retrieved waste with containers in poor condition*



# Optimized And Reliable Waste Disposition

## Consistent Progress In TRU Waste Workoff

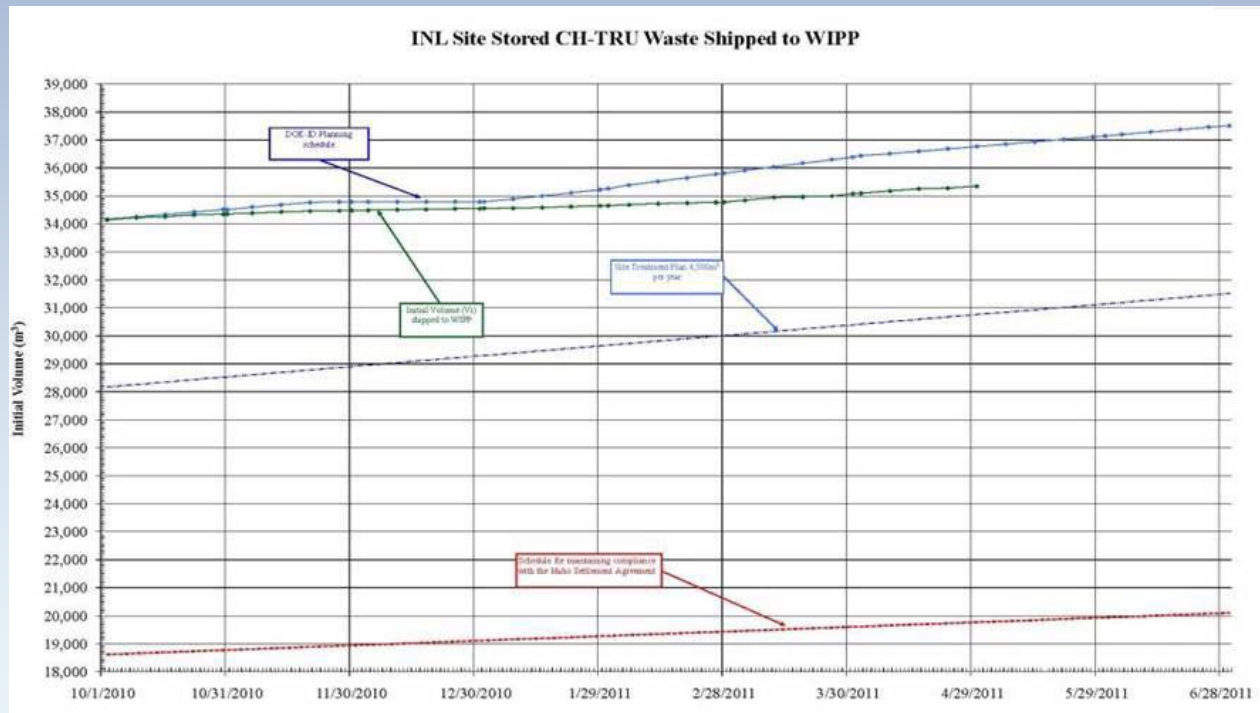




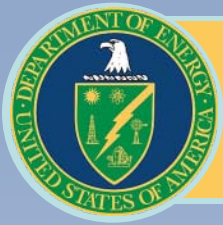
# Maintaining Regulatory Commitments



- Three years ahead of Settlement Agreement production milestone
- Straight forward approach to performance measurement
- 8,038 m<sup>3</sup> of MLLW historically managed as TRU has also been disposed out of state



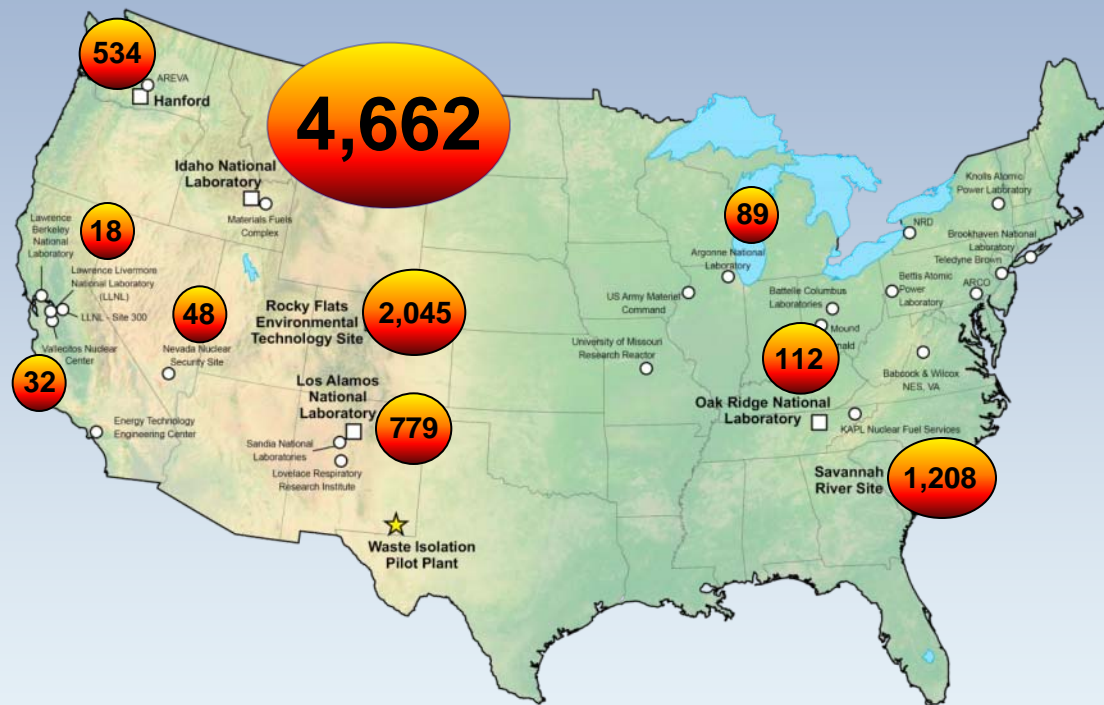
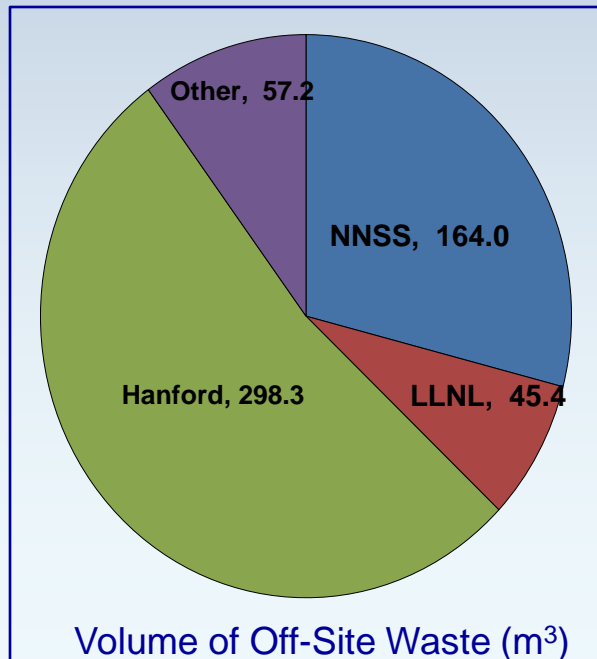




# AMWTP Achievements

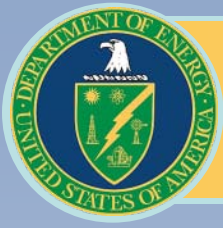
## Cost, Schedule, Performance

- Number 1 shipper to WIPP
- More than 3,700 TRU waste shipments
- 477 MLLW shipments
- Receipt, validation, and processing of 565 m<sup>3</sup> of off-site waste



*Transuranic waste shipments from DOE sites to WIPP as of May 9, 2011. AMWTP has shipped 49 percent of the waste to WIPP, more than any other facility in the complex.*





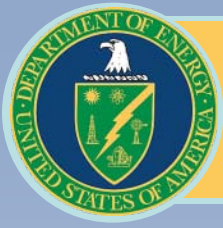
# Transuranic Storage Area



*Waste placement, Pad 1, Circa. 1971*



*Pad 1, August 2010*

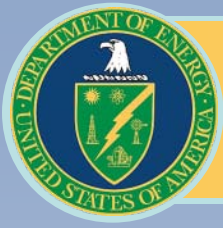


# Waste Storage & Retrieval

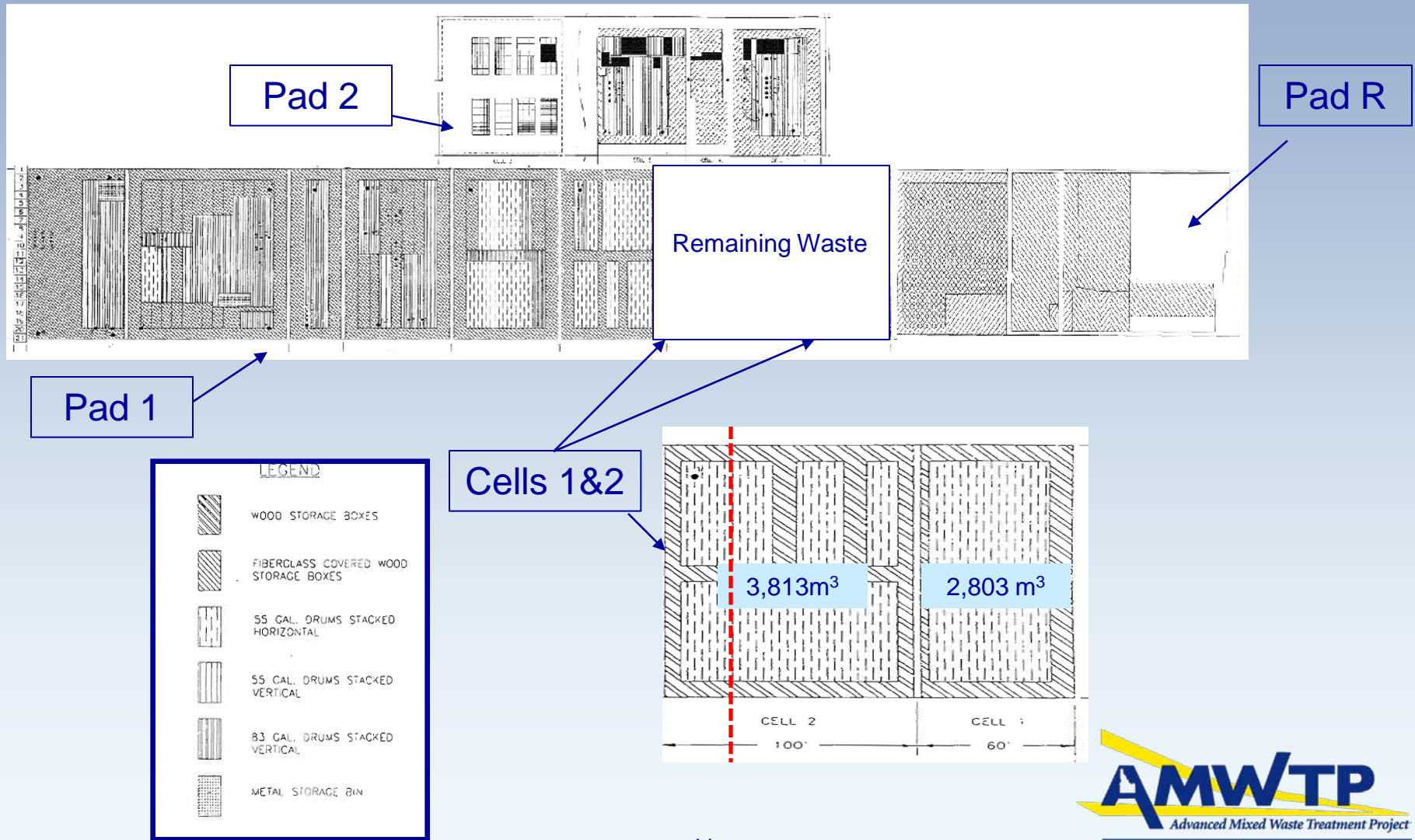


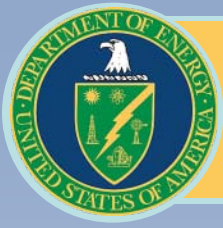
Nearly 90 percent of all radioactive waste stored at AMWTP has been retrieved. The final 10 percent, seen above, is waste that has been stored on site for 40 years and represents our greatest retrieval challenge.





# TSA-RE Waste Retrieval

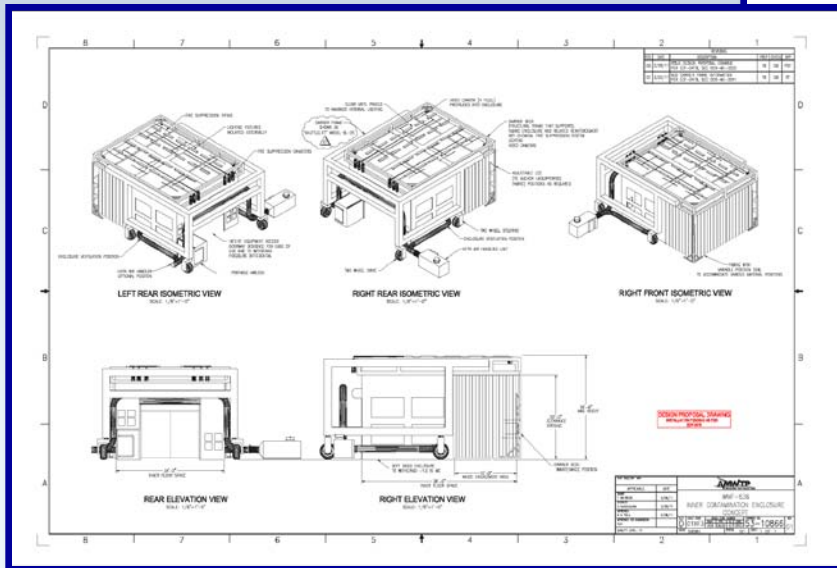




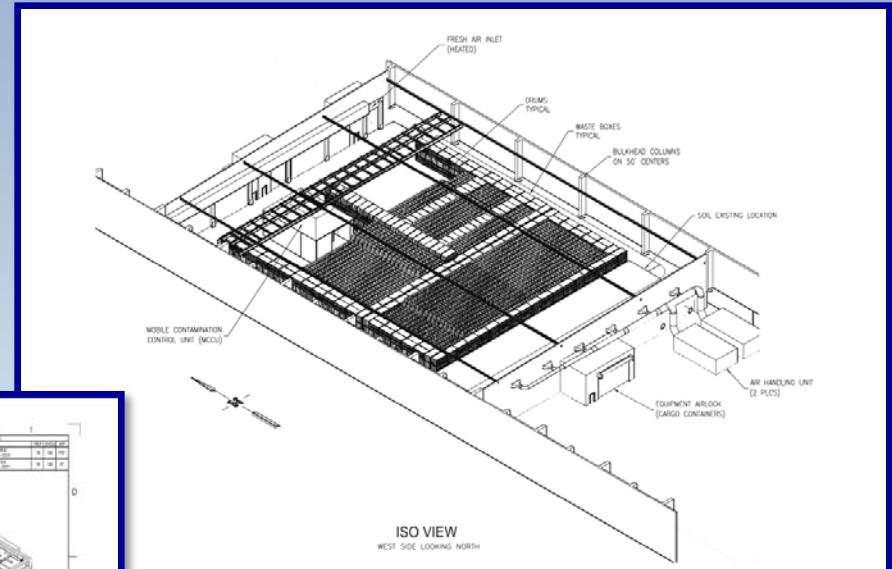
# Engineered Improvements

## Contamination Enclosures

- Constructing a 47,000 ft<sup>2</sup> enclosure around the remaining waste stack for contamination control
- Controlled air flow and HEPA filtered exhaust stack
- Upgraded PPE required
- Management self assessment and both contractor and DOE readiness assessments for start-up

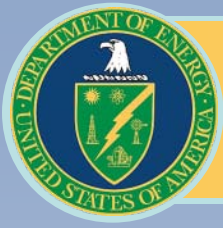


Inner Contamination Enclosure



Retrieval Contamination Enclosure





# Construction





# Technology Improvements

## *Accelerating Production And Expediting Completion*

### Gas Generation Testing

- Installed 40 additional GGT units
- Accelerates organic sludge waste for shipment to WIPP



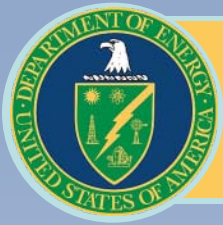
### Onsite macroencapsulation

- Uses standard cargo container with stainless steel liner
- Proven process
- 60% cheaper



*Empty, loaded, and sealed cargo container*





# Technology Improvements

## *Accelerating Production And Expediting Completion*

### Sludge Treatment

- Uses existing capabilities to process organic sludge waste
- Provides solution to disposal of PCB contaminated sludge waste
- Expedites sludge treatment



*Sludge treatment process testing*

### Plasma Torch

- Size reducing large waste items
- New equipment allows for easy movement of items, reducing risk of injury from handling heavy, sharp objects
- Reduced sized items can be compacted and disposed in WIPP saving funds



*Large pipe in boxline*



*"Live" plasma testing and employee in Level B protective suit*



# Cost and Schedule Achievements



## Improved Operations

- Continuous process improvements resulted in savings of nearly \$11.4 million in 2010
- AMWTP 2010 operations reduced the waste volume by 2,053 m<sup>3</sup>, or 9,870 55-gallon drums, eliminating 360 shipments to WIPP, while saving more than 200,000 gallons of fuel

## American Recovery and Reinvestment Act

- Completed all work ahead of schedule
- Created jobs for 52 new employees and integrated into workforce
- Shipped an additional 3,715 m<sup>3</sup> of waste out of Idaho

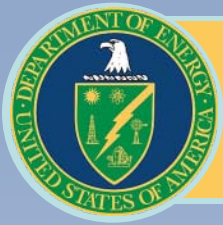


*Brandon Blackmon, former ARRA funded, now full-time AMWTP employee*

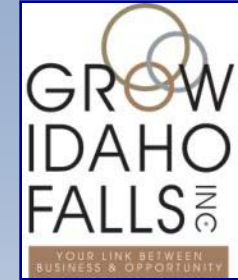
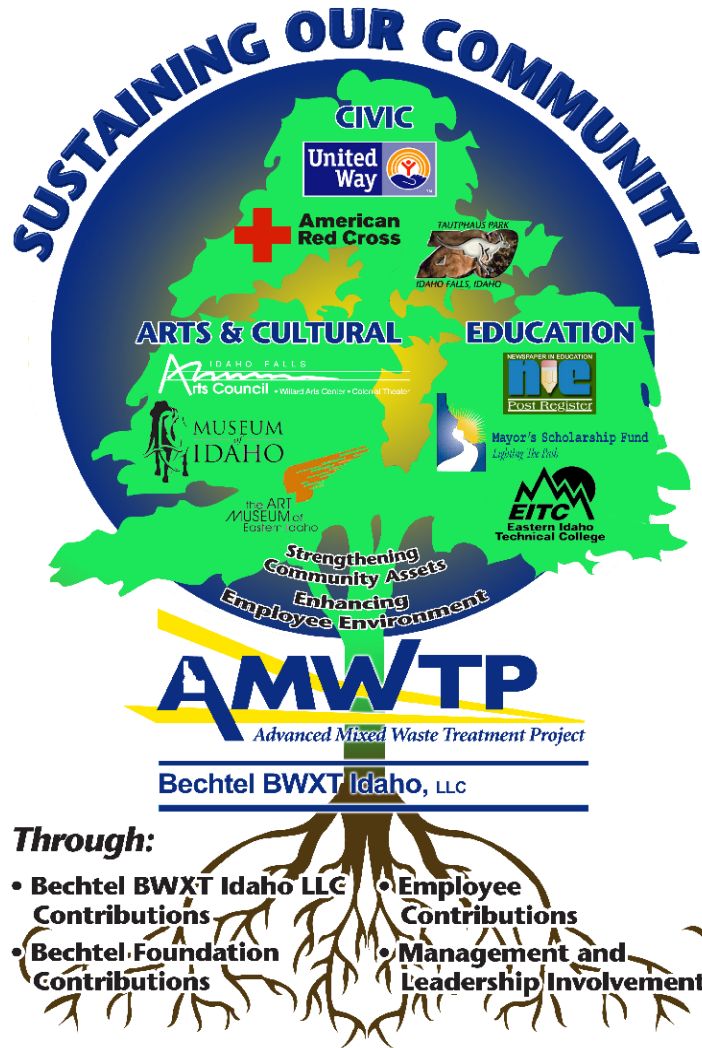


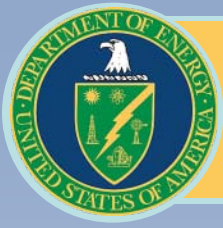
*ARRA funded retrieval crew*





# A Partner In The Community

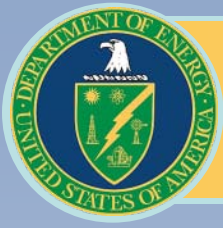




# AMWTP Pride: It's Our People







# Meeting The Public's Interest

- Safe site for employees where work protects Idaho's environment
- Providing value to taxpayers with lowest waste processing costs
- DOE's regional resource for transuranic waste treatment
- Bottom line: We're getting the waste out of Idaho



*First shipment of treated Hanford off-site waste leaves AMWTP for WIPP on Sept. 23, 2010*



*MLLW shipment leaving AMWTP*

