

# *EM Citizen's Advisory Board*

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## *Advanced Mixed Waste Treatment Project Status Update*

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*Department of Energy*

*Idaho Operations Office*

*November 15, 2011*



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# ***Advanced Mixed Waste Treatment Project Mission***

***The U.S. Department of Energy's (DOE's) Advanced Mixed Waste Treatment Project (AMWTP) is committed to meeting all of the technical and regulatory requirements to safely retrieve, characterize, treat and package approximately 65,000 cubic meters of transuranic waste and shipping it out of Idaho to the Waste Isolation Pilot Plant in New Mexico.***

***Operations at AMWTP require the retrieval, characterization, treatment and packaging of transuranic waste currently stored at DOE's Idaho Site. The project's schedule is aligned with court-mandated milestones in a 1995 Governor's Settlement Agreement between the state of Idaho, the U.S. Navy and DOE to remove the waste from Idaho.***



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# AMWTP Key Facilities



- Treatment – 1
- Retrieval - 2
- Storage – 3
- Characterization – 4
- Payload – 5
- Shipping - 6



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# AMWTP Timeline

**BNFL**

**BBWI**

**ITG**

1996

1999

2002

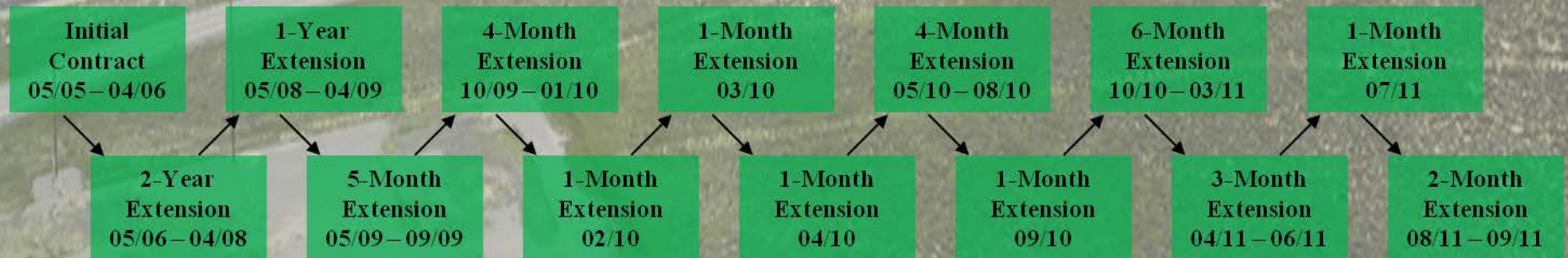
2005

2008

2011

2014

2016



# *AMWTP Completion Contract*

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- *On May 27, 2011, DOE - Idaho awarded the AMWTP completion contract on to the Idaho Treatment Group (ITG).*
  - *ITG was to takeover the contract on August 1.*
  - *Protest was filed on June 14, invoking an automatic stay of performance.*
  - *On July 29, the protest was withdrawn.*
  - *ITG assumed operations on October 1, 2011 after a 45-day transition period.*



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# *Idaho Treatment Group, LLC*

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- *Team consists of :*
  - *Babcock & Wilcox*
  - *URS*
  - *EnergySolutions*
- *Contract baseline cost - \$417 million.*
- *Contract scope: Ship all waste out of Idaho by September 2015.*
- *Workforce reduced from 840 to 620 employees.*
- *Fee is paid only when waste leaves State of Idaho.*



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# AMWTP Progress-to-Date

- Cumulative:** Since 1999, 45,097 m<sup>3</sup> of waste – out of approximately 65,000 m<sup>3</sup> of waste that was historically managed as transuranic waste has been safely shipped out of Idaho for disposal.

*This volume includes:*

- 36,849 m<sup>3</sup> of CH-TRU waste,
- 8,248 m<sup>3</sup> of MLLW (historically managed as TRU waste)

| <b>Annual:</b>           | <b>CH-TRU Shipped</b> | <b>MLLW Shipped<sup>(2)</sup></b> | <b>Total Shipped</b> |
|--------------------------|-----------------------|-----------------------------------|----------------------|
| – FY 2007                | 6,158 m <sup>3</sup>  | 21 m <sup>3</sup>                 | 6,179 m <sup>3</sup> |
| – FY 2008                | 5,335 m <sup>3</sup>  | 2,254 m <sup>3</sup>              | 7,589 m <sup>3</sup> |
| – FY 2009                | 5,504 m <sup>3</sup>  | 2,778 m <sup>3</sup>              | 8,282 m <sup>3</sup> |
| – FY 2010                | 4,396 m <sup>3</sup>  | 2,007 m <sup>3</sup>              | 6,403 m <sup>3</sup> |
| – FY 2011                | 2,392 m <sup>3</sup>  | 456 m <sup>3</sup>                | 2,848 m <sup>3</sup> |
| – FY 2012 <sup>(1)</sup> | 219 m <sup>3</sup>    | 0 m <sup>3</sup>                  | 219 m <sup>3</sup>   |

Note (1): FY 2012 progress is through November 3, 2011

Note (2): 'MLLW Shipped' is MLLW historically managed as part of the 65,000 m<sup>3</sup> TRU waste inventory

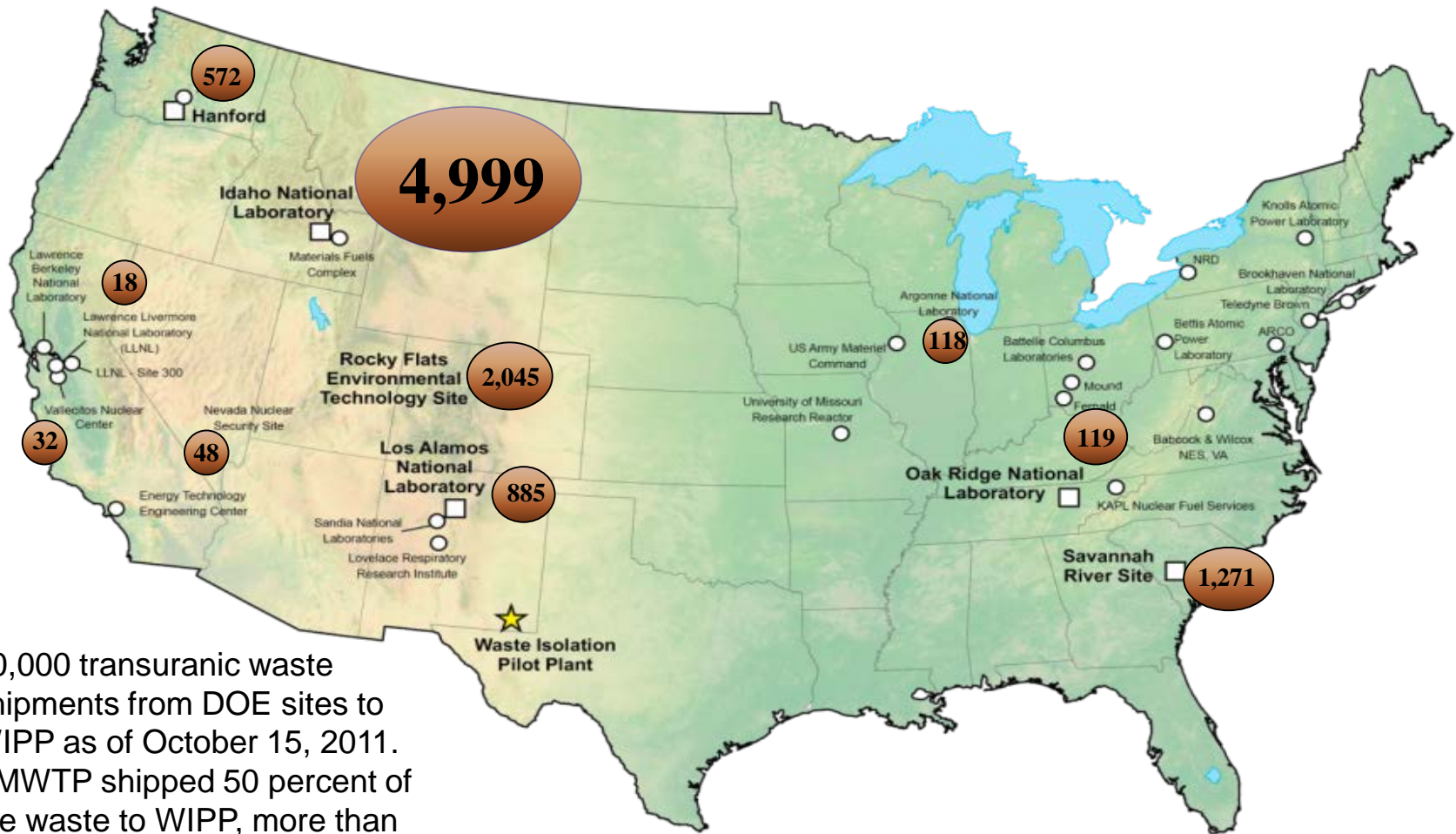


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# TRU Waste Shipments to WIPP



10,000 transuranic waste shipments from DOE sites to WIPP as of October 15, 2011. AMWTP shipped 50 percent of the waste to WIPP, more than any other facility in the complex.



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# *AMWTP Safety Performance*

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- *12.5 million man-hours worked without a lost-time injury.*
  - *Almost 8-years*
- *ITG's goal is "Target Zero" accidents and injuries.*
- *VPP Star Site since 2009.*
- *Integrated Safety Management System.*
- *Employee-based safety program.*
  - *Employee Safety Improvement Team (ESIT)*
  - *Participation with Union*



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# ***Retrieval Contamination Enclosure/Inner Contamination Enclosure (RCE/ICE)***

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- ***Operational events disclosed the need for enhanced confinement of retrieval activities inside the Transuranic Storage Area Retrieval Enclosure (TSA-RE).***
- ***Significant amounts of oldest waste yet to be retrieved:***
  - ***800 boxes in various stages of degradation.***
  - ***19,000 drums, in-place since 1971.***
- ***Construction of the RCE/ICE began April, 2011, and completed July 31, 2011.***
- ***ITG will provide start-up plan to DOE in November, 2011.***



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# *Sludge Treatment*

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- *850 m<sup>3</sup> (4000-5000 drums) of organic PCB-contaminated sludge waste remaining.*
- *Old Process: sludge drums one at-a-time through the Drum Treatment Tent in WMF-628.*
  - *~30% reject rate*
  - *Manually labor intensive*
- *New process: in Treatment Facility.*
  - *Remote Brokk arm mixes sludge with Microcell-E solidification agent in a trough.*
  - *Drums enter as a six-pack, and exit in new liners and drums through a glovebox.*
- *66 drums processed as of October 31, 2011.*



## *Offsite CH-TRU Waste*

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- *AMWTP has received offsite contact-handled transuranic waste from eight sites during calendar year 2011.*
  - *The total amount of waste received is approximately 137 cubic meters through October 31, 2011.*
  - *The estimated volume that might yet be shipped this calendar year is approximately 3 cubic meters.*



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## ***Backup Information***

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- ***Built and operated by BNFL until 2005***
- ***Current contractor Bechtel BWXT, Inc. (BBWI)***
  - ***Initial BBWI involvement was a one-year extension to INL contract.***
  - ***Followed by a series of extensions, including: a two-year extension, a seventeen month extension, a four month extension with two one-month options and a four month extension with a one month option.***
  - ***2011 contract extension included a base of six months with two three-month options. The first three-month option was exercised followed by one-month out of the final three-month option. Two months - of the final three-month option - can still be exercised (Aug – Sept 2011).***



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# Backup Information

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## Offsite CH-TRU Waste

- **Hanford (through 6/30/11)**                      39 ship      467 drums 99 m<sup>3</sup>
  - No additional waste shipped during remainder of FY 11
- **SNL (through 6/30/11)**                      2 ship              16 drums 3.4 m<sup>3</sup>
  - Remainder of FY 11                      2 ship              18 drums    3.8 m<sup>3</sup>
- **SR (through 6/30/11)**                      1 ship              14 drums 3.0 m<sup>3</sup>
  - Remainder of FY 11                      2 ship              17 drums    3.6 m<sup>3</sup>
- **LBNL (through 6/30/11)**                      1 ship              1 drum                      0.212 m<sup>3</sup>
  - No additional waste shipped during remainder of FY 11
- **NRD (through 6/30/11)**                      3 ship              87 drums                      18.4 m<sup>3</sup>
  - No additional waste shipped during remainder of FY 11
- **ANL-E (est. August 2011)**                      7-8 ship      90-120 drums    20-25 m<sup>3</sup>

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