



U.S. DEPARTMENT OF  
**ENERGY**

OFFICE OF  
**ENVIRONMENTAL  
MANAGEMENT**

# Status of Idaho Transuranic Waste Program

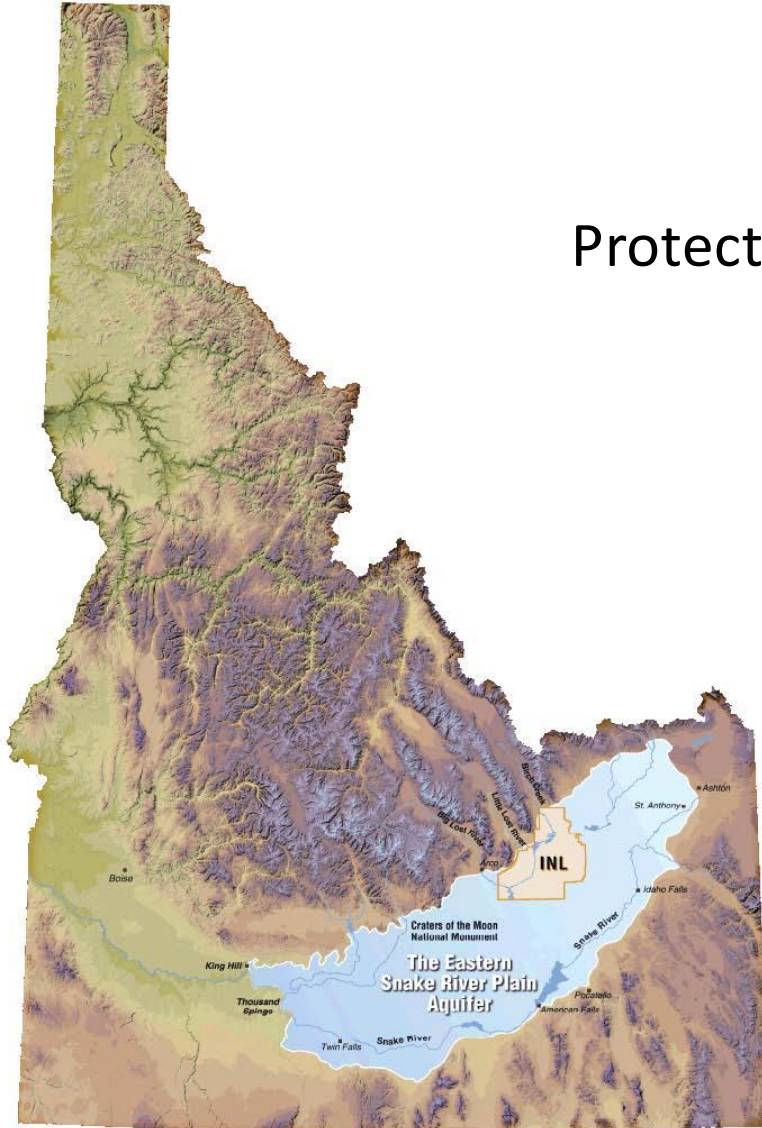
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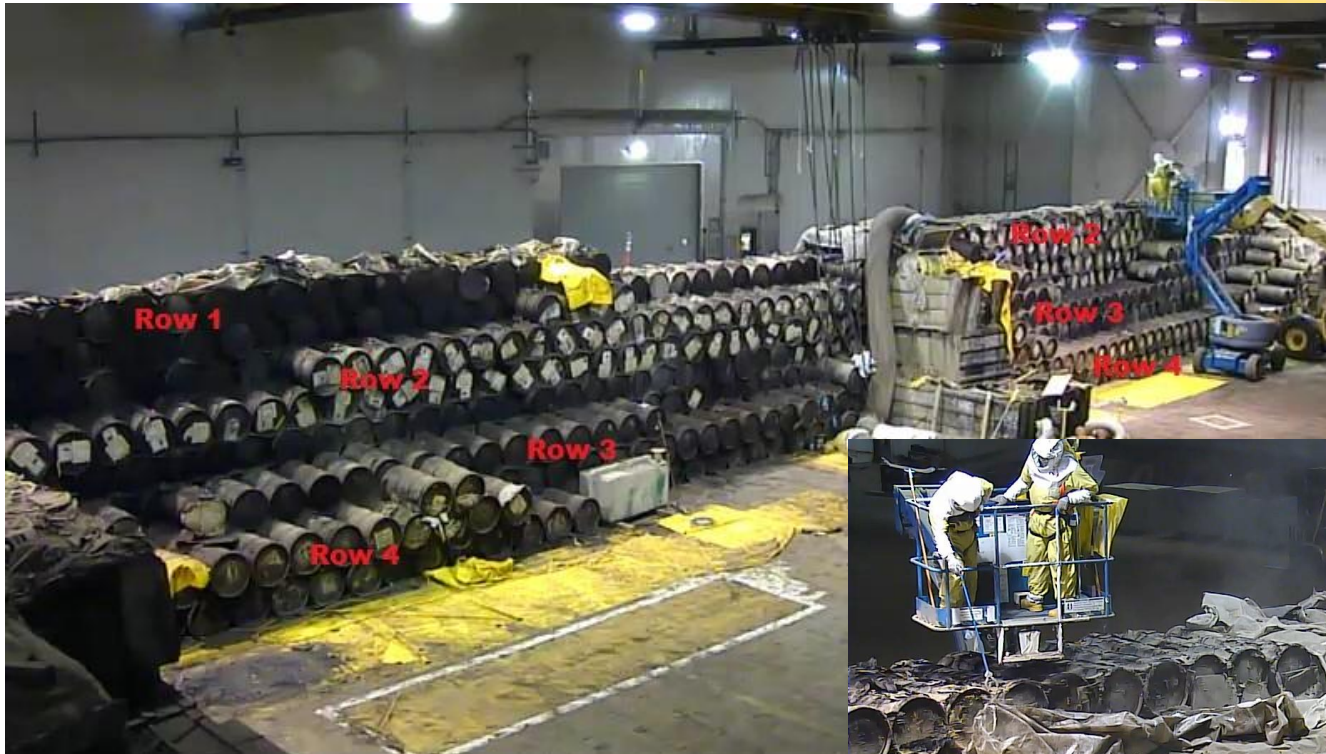
**National Cleanup Workshop**  
**September, 2016**

## Protecting Snake River Plain Aquifer



- Largest aquifer in Idaho
- Sole source of drinking water for nearly 300,000 people
- Covers more than 10,000 square miles
- Contains an estimated 1 billion acre feet of water





- 55,126 cubic meters shipped offsite
- Remaining inventory to be treated or certified: 10,300 cubic meters
- Remaining waste to be retrieved: 170 boxes/bins, 1,250 drums
- Complete unloading 31 cargo containers

Retrieval of the estimated 65,000 cubic meters of stored transuranic waste is nearly complete.

There are approximately 820 equivalent shipments of contact-handled waste and 90 equivalent shipments of remote-handled waste that were certified ready to ship to WIPP in storage at AMWTP.

- Previously certified waste is currently being reviewed to ensure it meets updated WIPP waste acceptance criteria



The white drums (above) are 55-gallon drums of waste, while the black drums (left) are 100-gallon product drums of waste, certified ready to ship to WIPP.







Debris repack project



Drum packaging station

## Re-use of ARP Facilities:

- Supports repackaging and treatment of post-1970 sludge and debris waste
- Sludge Repackage Project at ARP-V remediates sludge – repack of 8,105 sludge drums and 60 boxes complete
- Debris Repackage Project at ARP-VII has implemented capability to repackage large debris boxes – 29 boxes processed so far

- Complete treatment facility box line BROKK replacement
- Restart of WMF-635 tent treatment operations
- Accelerate hot cargo recovery
- Enhance CH-TRU Program to address new AK requirements and challenging waste streams:
  1. Chemical compatibility evaluation technical support – vendor contract
  2. Increase NDA and AK staff to support evaluation of difficult waste streams
  3. Evaluation of high gamma NDA methods ongoing
  4. Developing a “Roadmap to 2018” to meet ISA milestone



New BROKK will be installed soon in the box line (above). At left, old BROKK that is being replaced.





Exhumation of targeted buried waste drums

## Accelerated Retrieval Project:

- 26,978 containers characterized and shipped to WIPP
- 852 containers characterized and shipped to offsite low-level waste facilities
- ARP-VIII retrieval operations ongoing – 1.72 acre area, over 54 percent complete
- ARP-IX (last retrieval enclosure) under construction

- Completed 364 total RH-TRU shipments to WIPP
- Completed treatment of Lot 6/7 bulk RH-TRU sodium
- Implemented water treatment capability at CPP-659 hot cell
- Completed radiochemical sampling of Lots 9C and 9E
- Start-up activities underway at CPP-666 hot cell to prepare for repackaging high FGE Lot 2B waste
- Completed chemical compatibility for Lot 1-8 RH-TRU waste streams
- Completed repackaging of Lot 9G suspect RH-TRU concrete monolith



Spritzing reaction chamber

Vigorous water reaction





On right, transuranic waste stacking, circa 1971. At left, transuranic waste retrieval, circa 2015.

- Largest shipper of TRU waste in the complex
- Excellent safety record: over 218,000 entries into Rad Work Permit areas over last three years with just two ORPS reportable personnel contamination events
- State of the art remote waste handling and treatment capabilities have significantly reduced disposal volumes and number of waste shipments
- Excellent cooperation from regulators has allowed efficient repurposing of facilities
- Experienced and well-trained workforce has been productive and safe
- Bottom line: the Snake River Plain Aquifer is significantly safer and better protected after more than a decade of waste retrieval, exhumation, treatment and off-site disposal



View from top of soil berm within TSA-RE. Photo was taken February, 2006. The waste under this berm has all been retrieved and repackaged.



Photo on top was taken in 1978 and shows original stacking of drums filled with TRU waste. Notice the plastic wrapping. Photo below was taken on Aug. 23, 2016, showing technicians removing the original plastic wrap.