Radioactive & Hazardous Materials Committee

Waste Isolation Pilot Plant

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WIPP Mission

- Public Law 102-579 (WIPP Land Withdrawal Act) defines WIPP's mission
  - Dispose of ONLY defense-generated transuranic waste defined as "waste containing more than 100 nanocuries of alpha-emitting transuranic isotopes per gram of waste, with half lives greater than 20 years"
- WIPP's mission is expected to continue until the nation's defense-generated TRU waste was safely disposed, not to exceed 6.2 million ft^3
- WIPP may not dispose of
  - High-level radioactive waste
  - Spent nuclear fuel
- WIPP received first shipment on March 26, 1999
- Although the first 17 shipments to WIPP were non-mixed TRU waste, WIPP does accept mixed hazardous TRU waste

TRU Waste at WIPP

WIPP defines two categories of TRU waste

- Contact-Handled (CH)
  - 200 mrem/hour or less at surface of waste container
  - Approximately 96% total waste disposal
- Remote-Handled (RH)
  - Greater than 200 mrem/hour and may not exceed 1,000 rem/hour at surface of waste container
  - No more than five percent by volume of RH waste received may exceed 100 rem/hour
  - Approximately 4% total waste disposal, may not exceed 250,000 cubic feet in volume

WIPP Shipments

- Continue to support LANL shipments as a priority
- LANL, INL, SRS and ORNL main sites shipping TRU waste
- Projected shipments this week
  - INL 6
  - LANL 2
  - ORNL 2
- Current Goal: Maintain 10 shipments/week, with gradual increase
- Goal is 17 shipments/week by 2023*

*Aligns with pre-2014 numbers

LANL TRU Shipments

LANL Shipments Jan 2021 to 2022	
Current	Projected
23 *(as of July 5)*	80

LANL Shipments Snapshot

- Currently scheduled for 2 shipments per week
- Nine to 12 weeks of certified waste available

LANL Waste Characterization

- NNSA – Producing an average of 10 waste containers a week
- EM – No projection due to current Safety Basis issues at TA-54

Efficiencies

- Both NNSA/EM shipping from RANT facility.
- Comingling NNSA/EM waste characterization

Dilute and Dispose

Plutonium oxide (PuO_2) and Blend Can Kits are placed in a glovebox

DOE-STD-3013 containers are opened for PuO_2 blending

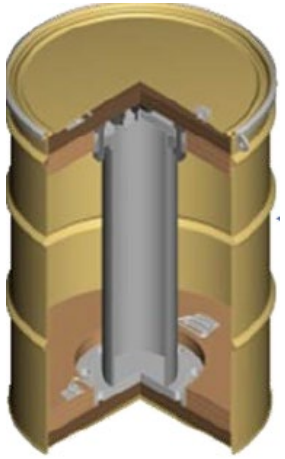
PuO_2 is added to adulterant in "blend can"

PuO_2 is blended with multicomponent adulterant

Lids are press-fit to close Robust Outer Container (ROC)

ROC reduces radiation exposure for handling of Dilute Surplus Plutonium (DSP)

DSP is packaged in Can/Bag/Can outside glovebox

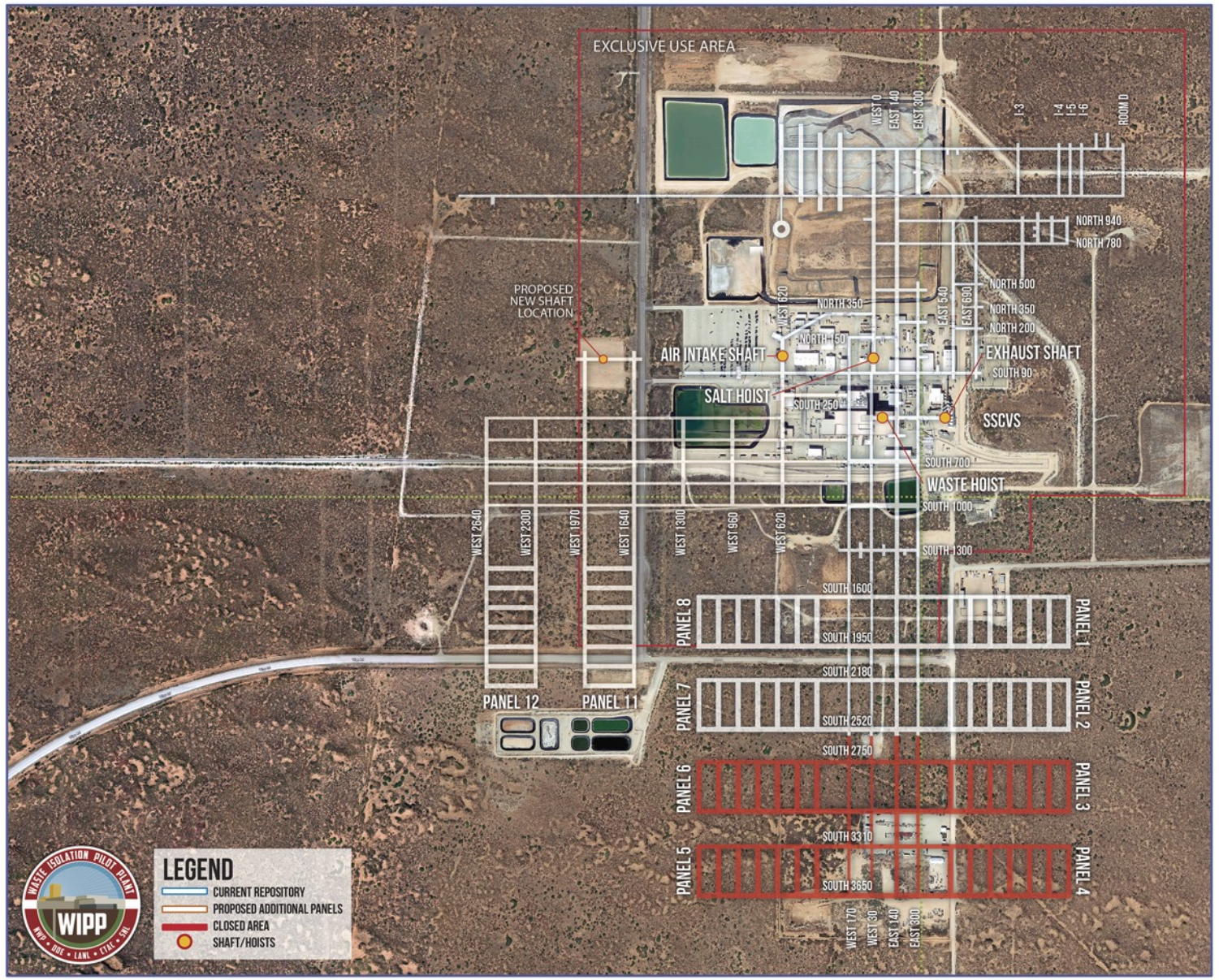


DSP is loaded in Criticality Controlled Overpack (CCO) for Disposal at WIPP

Following Characterization CCOs are loaded in TRUPACT-II for transport

Panels 11 and 12

- NEPA Supplement Analysis (SA) for Panels 11 & 12 became effective on April 8, 2021
- DOE determined that the existing EIS remains adequate
- Panels 11 & 12 are replacement panels to for lost capacity in other closed rooms/panels
- Class 3 PMR for Panels 11 & 12 will be submitted to NMED shortly
- Planning outreach activities for future WIPP operations
- EM will determine if additional National Environmental Policy Act analysis for panels beyond 12 is required



WIPP Status

- Current WIPP operations support the critical cleanup and national security mission at LANL and for the entire nation
- WIPP will continue to prioritize the disposal of LANL TRU waste
- During the first 20 years of operations, WIPP has reached approximately 40% of its congressionally authorized disposal volume
- WIPP continues to evaluate alternatives for waste emplacement consistent with the WIPP Land Withdrawal Act requirement and other regulatory agreements in a safe and compliant manner

Questions?