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# *Subsurface Disposal Area Progress*

*Status Update to the Citizens Advisory Board  
March 15, 2011*

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# Subsurface Disposal Area at the Radioactive Waste Management Complex

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## Subsurface Disposal Area (SDA) Activities

- Grouted 21 trench and vault locations to reduce technetium-99 and iodine-129 mobility.
- Accelerated Retrieval Project (ARP) enclosure structure construction.
- Retrieval of soil and buried waste.
- Shipment of transuranic (TRU) waste to the Waste Isolation Pilot Plant (WIPP).
- Removal of organic compounds from the vadose zone (OCVZ).



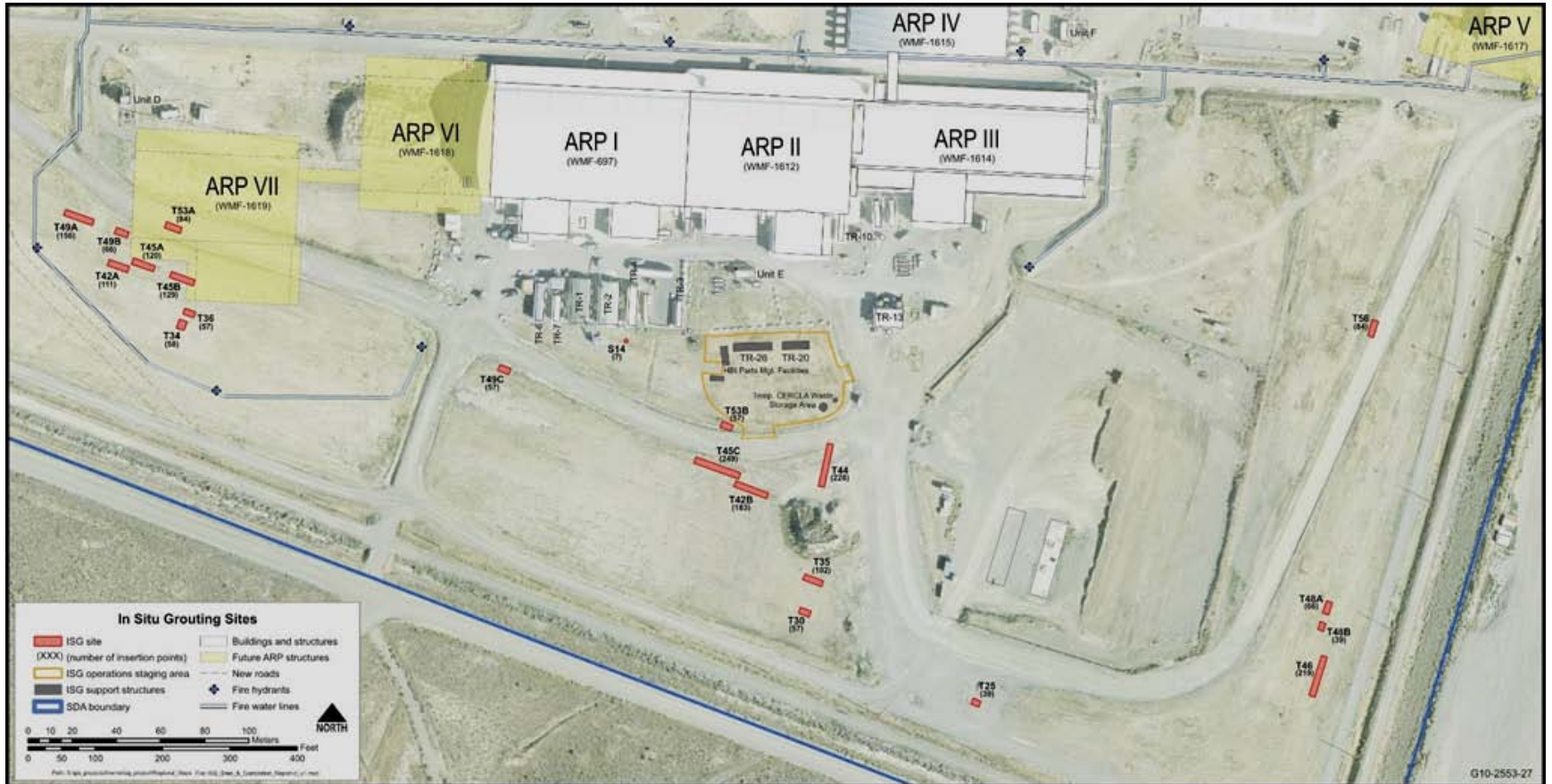
## Grouting Status

Grouting of the 21 selected trench and vault locations is complete; ahead of schedule and under originally estimated cost.

- Active grouting was completed 8/25/10.
- Equipment removal, final waste disposal and temp. utilities removal completed 10/1/10.
- *Interim Completion Report for Phase 2 Operable Unit 7-13/14 In Situ Grouting* (DOE-ID-11436) submitted to the Agencies 1/19/11



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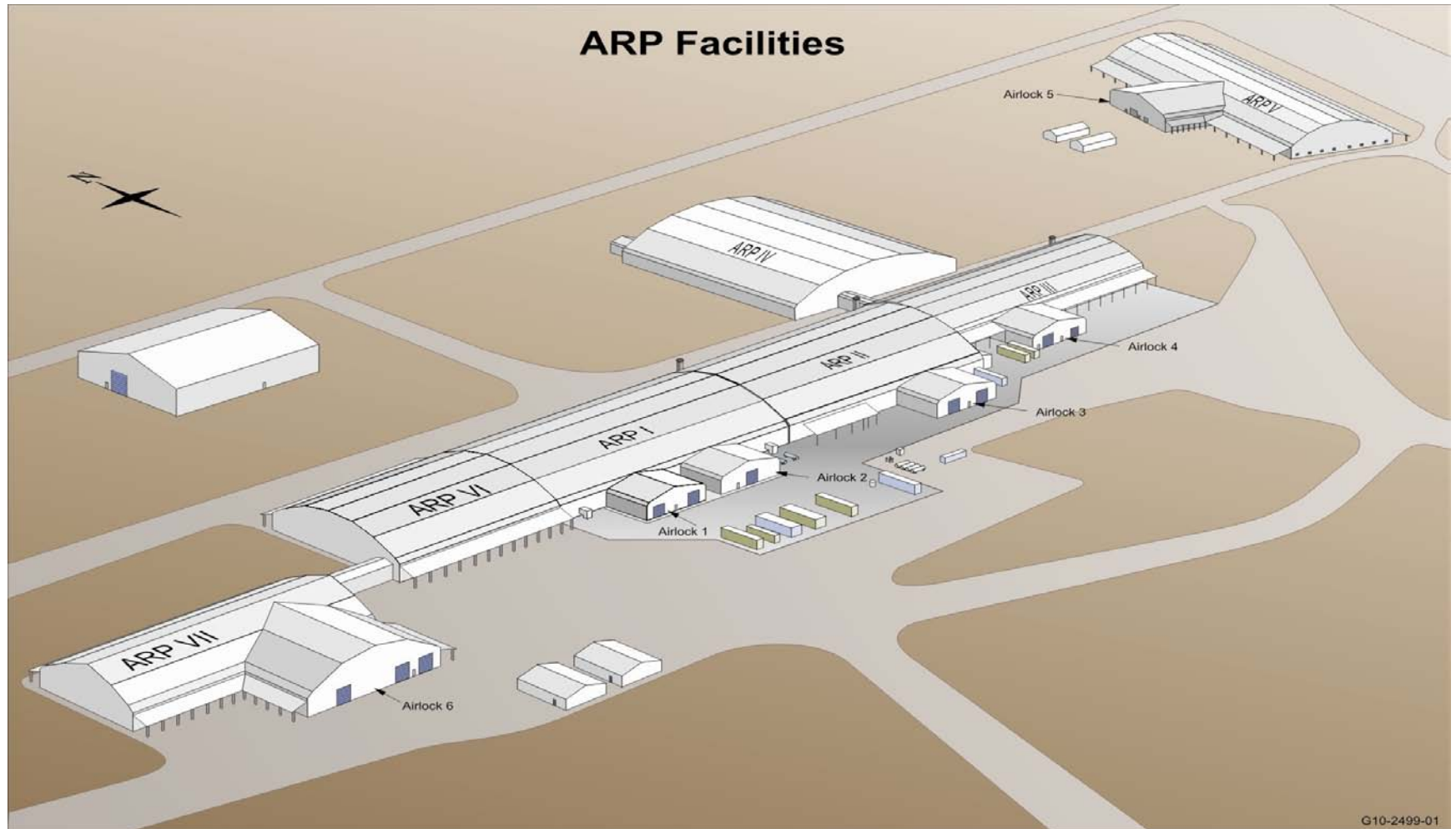
## *ARP Construction Progress*

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- Completed ARP V (over Pit 9) construction – exhumations began in January.
- Completed ARP VI (over Pit 4 west) construction – exhumations will begin in March.
- Current construction focus is ARP VII (over Pit 10 west).



## *SDA Layout for the ARP facilities*



G10-2499-01



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## *Retrieval Status:*

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### Exhume Targeted Waste from 5.69 acres in the SDA Status through February 2011:

ARP I (Pit 4) (.50 acres) Completed Mar 08

ARP II (Pit 4/6) (0.34 acres) Completed June 09

ARP III (Pit 6) (0.38/0.43 acres) Completed Oct 09

*(ARRA funded from April 2009 to completion)*

ARP IV (Pit 5) (0.79 acres) Exhumation completed in January, waste processing continues *(ARRA funded)*

ARP V (Pit 9) (.55 acres) 18% complete – Began retrievals in Jan 2011

Total exhumed: 2.13 acres (37.4 % of total requirement)



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## *ARP V (Pit 9) Exhumation*

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## ARP V Exhumation Showing Drums



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## Agreement to Implement Requirement:

Retrieve 6,238 m<sup>3</sup> of Targeted Waste; Measured by Packaging 7,485 m<sup>3</sup> of Targeted Waste

Status through February 2011:

4,653 m<sup>3</sup> packaged (22,370 drums) 62.2 % of requirement

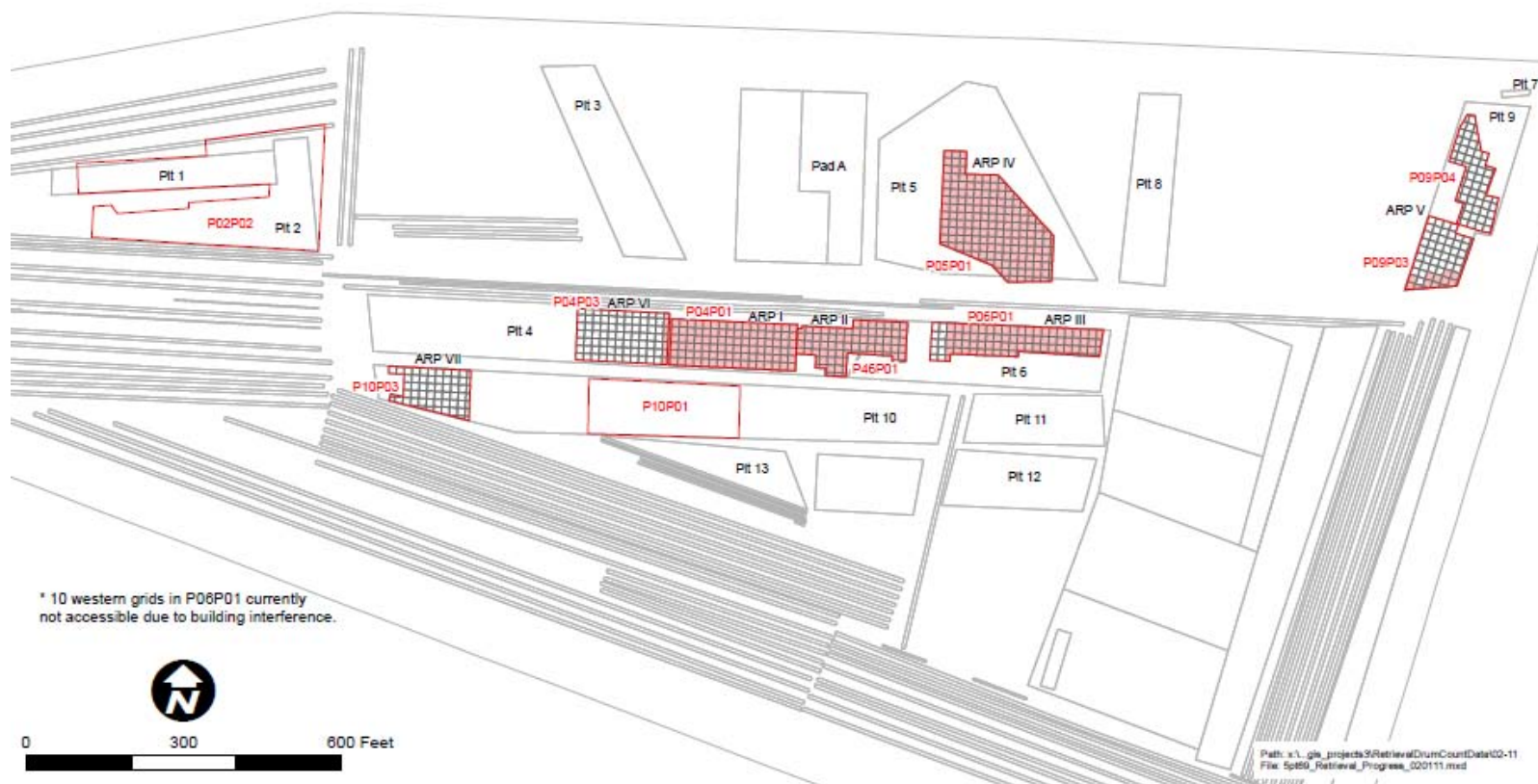
3,838 m<sup>3</sup> shipped offsite (18,452 drums) 51.3 % of requirement

The current percentage of targeted waste packaged (62.2%) is greater than the current percentage of exhumed acreage (37.4%) because Pits 4 and 6 (ARPs I,II,III) had the highest concentration of targeted waste density and were completed first.



# *Retrieval Status Map to February 2011*

5.69 Acre Retrieval Progress  
as of 02/01/11



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## *OCVZ Unit Status*

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Since January 1996, when operations began, the 3 Organic Contamination in the Vadose Zone (OCVZ) units have removed ~235,050 lbs. total volatile organic compounds the vadose zone under the SDA.

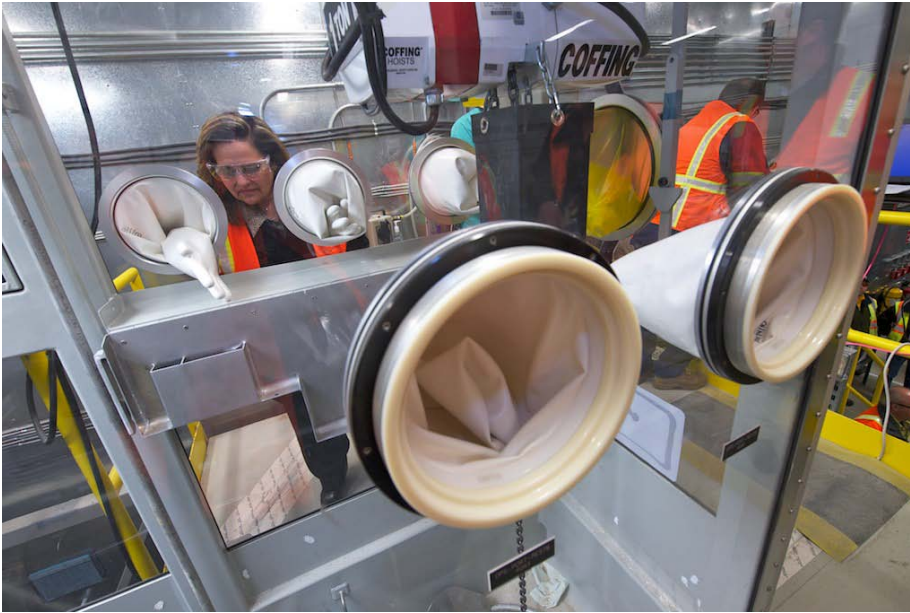
Of which, ~136,563 lbs. has been carbon tetrachloride.





## *Recent Tour of ARP V*

2/23/2011: Ines examines waste sorting station



2/23/2011: Ines and others in front of ARP-V (Pit 9) exhumation facility



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## *Plans for Future*

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- Design ARPs VIII ( Pits 1&2) & IX (Pit 10E) in FY 2011/2012.
- Start ARP VII exhumations in FY 2012.
- Start ARP VIII construction in FY 2012.
- Start ARP IV removal in FY 2012/2013.
- Start ARP IX construction in FY 2013.
- Complete exhumations in FY 2015, pending funding.



## *History of Subsurface Disposal Area (SDA)*

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- The SDA is the landfill area of the Radioactive Waste Management Complex (RWMC).
- It was established in 1952 and now occupies 97 acres within the fence boundary with waste occupying ~35 acres.
- The SDA received waste from all INL Site operations, the Rocky Flats Plant and other DOE sites.
- Disposal of transuranic waste was discontinued in 1970 in favor of retrievable storage.
- The Federal Facility Agreement and Consent Order was signed in 1991 – RWMC was designed WAG 7.
- The Record of Decision (ROD) for OU 7-08, Organic Contamination of the Vadose Zone was signed in 1994.
- Idaho Settlement Agreement was signed 1995.



## *SDA History (cont.)*

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- DOE demonstrated waste retrieval in Pit 9 (GEM Project) in February 2004.
- The Advanced Mixed Waste Treatment Project began processing stored waste and shipping to Waste Isolation Pilot Plant (WIPP) in March 2004.
- DOE began waste exhumations in Accelerated Retrieval Project (ARP) I in January 2005 and completed in March 2008.
- The Agreement to Implement the 2006 U.S. District Court Order on Buried Waste was signed in July 2008.
- The ROD for OU 7/13/14, Radioactive Waste Management Complex, was signed in October 2008.



## Targeted Waste Retrieval Areas – Aerial View

