

# How does the WIPP shutdown Impact New Mexico, Idaho, and South Carolina?

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# INL – March 3, 2015



# Idaho TRU waste dumping-1954-70



# Idaho Digging up Waste



# Idaho TRU Waste Complex



# Savannah River Site – March 25, 2015



# MIXED OXIDE (MOX) Fuel Plant



# LANL – September 29, 2015



# WIPP Underground – October 1, 2015



# WIPP's Mission

- “Start Clean, Stay Clean” to dispose of up to 175,564 m<sup>3</sup> of defense transuranic (TRU) waste
- Safely transport waste through more than 20 states without serious accidents or releases
- Safely clean up TRU waste at DOE sites
- Safely close, decontaminate, and decommission the WIPP site beginning in about 2030 or earlier

# WIPP - 3/26/1999 - 2/5/2014

11,894 truck shipments from 12 sites

INL-5,844 (49%); SRS-1,654 (14%); LANL-1,344 (11%)

90,627 m<sup>3</sup> of CH waste emplaced

INL-42,744 (47%); SRS-17,507 (19%); LANL-9,162 (10%)

641 m<sup>3</sup> of RH waste emplaced

INL-324 (51%); SRS-38.3 (6%); LANL-14.2 (2%)

171,064 waste containers emplaced

Panels 1-6 filled; Panel 7 - 276 containers

19 shipments from LANL, SRS, INL;

145 m<sup>3</sup> of CH waste on surface

# LANL TRU WASTE

Stored CH TRU in WIPP Inventory - 6,520 m<sup>3</sup>

Stored RH TRU in WIPP Inventory - 79 m<sup>3</sup>

WIPP Annual TRU Waste Inventory Report - 2014

(Data as of December 31, 2013)

Stored at Waste Control Specialists - 372 m<sup>3</sup>  
~\$5 million/year of LANL cleanup funds

LANL operations generate more TRU waste  
that is not in the WIPP inventory

126 containers in FY 14 not shipped to WIPP

71 containers in FY 15 (as of 8/16/15)

364 containers (113 m<sup>3</sup>) in TA-55 (as of 8/16/15)

# WIPP Capacity in Panels 7 & 8

## Panel 7

CH-TRU = ~ 16,000 m<sup>3</sup>

RH-TRU = 0 in canisters

## Panel 8

CH-TRU = 18,750 m<sup>3</sup>

RH-TRU = 650 m<sup>3</sup> in canisters

Total CH-TRU = 34,750 m<sup>3</sup>

Capacity shortfall = 27,310 m<sup>3</sup>

Total RH-TRU = 650 m<sup>3</sup>

Capacity shortfall = 2,971 m<sup>3</sup> or 4,941 m<sup>3</sup>

# WIPP Recovery Cost

“Also, it is too early to estimate the total cost of reopening WIPP to once again receive shipments of transuranic waste.”

- DOE FY 2016 Budget Request, p. 6, 2/2/2015

FY 2013 WIPP Funding = \$197.838 million

FY 2014 WIPP Funding = \$221.170 million

FY 2015 WIPP Funding = \$324.455 million

FY 2016 WIPP Request = \$248.178 million

- DOE FY 2016 & FY 2015 Budget Requests

# LANL Clean Up Funding

FY 2013 Funding = \$192.033 million

FY 2014 Funding = \$224.787 million

FY 2015 Funding = \$189.600 million

FY 2016 Request = \$188.625 million

- DOE FY 2016 & FY 2015 Budget Requests

# WIPP Permit Modification Process

Draft modification distributed

Pre-submittal meeting held

Modification request submitted to NMED

60-day public comment

NMED makes a decision in 30 or 60 days (class 2)

NMED issues draft permit for public comment (class 3)

Negotiations with NMED, DOE, NWP, NGOs

Settlement agreement or not

Public hearings - expert testimony, cross-examination

Hearing Officer recommended decision

NMED Secretary issues Final Order

# Why re-open WIPP?

- For all WIPP existing TRU waste
- Expand WIPP for:
  - Hanford high-level tank waste
  - Greater-Than-Class C waste
  - West Valley, NY commercial waste
  - Surplus weapons-grade plutonium
  - Mercury surface storage
  - TRU waste surface storage
  - Heater tests for high-level defense waste

# What You Can Do

- Discuss the long-term plans for TRU waste at LANL.
- Examine NNSA waste generation and its impact on LANL cleanup and budget.
- Look at the exhumation of much larger volumes of waste at INL in comparison to what might be required at Area G.

# Website Information Sources

DOE WIPP Recovery:

<http://www.wipp.energy.gov/WIPPRecovery/Recovery.html>

NM Environment Dept. WIPP Documents:

<http://www.nmenv.state.nm.us/NMED/Issues/WIPP2014.html>

EPA WIPP webpage:

<http://www.epa.gov/radiation/wipp/index.html>

SRIC website:

<http://www.sric.org>

Snake River Alliance website:

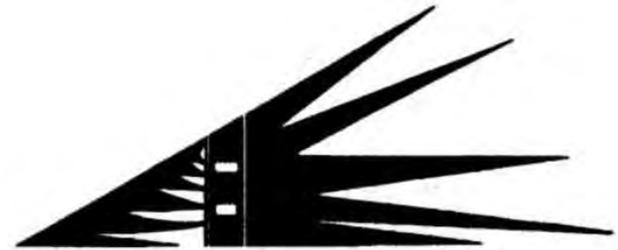
<http://www.snakeriveralliance.org>

SRS Watch website:

<http://www.srswatch.org>

# Contact Information

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# WIPP Capacity Limits

WIPP PERMITTED VS. ACTUAL CAPACITY							Chart 1
(in cubic meters) - As February 5, 2014							
	CH-Permitted	Actual	% Used	RH-Permitted	Actual	% Used	
Panel 1	18,000	10,497	58.32%	0			
Panel 2	18,000	17,998	99.99%	0			
Panel 3	18,750	17,092	91.16%	0			
Panel 4	18,750	14,258	76.04%	356	176	49.44%	
Panel 5	18,750	15,927	84.94%	445	235	52.81%	
Panel 6	18,750	14,468	77.16%	534	214	40.07%	
Panel 7	18,750	387		650	16		
Panel 8	18,750			650			
Totals	148,500	90,627		2,635	641		
Panels 1-6	<b>111,000</b>	<b>90,240</b>	<b>81.30%</b>	<b>1,335</b>	<b>625</b>	<b>46.82%</b>	
Panels 1-8**	148,500	127,740	86.02%	2,635	1,925	73.06%	
Legal Capacity	168,485			7,079			
Panel 9*	18,750			650			
Panel 10*	18,750			650			
Panels 9-10***	<b>186,000</b>	<b>165,240</b>	<b>98.07%</b>	<b>3,935</b>	<b>3,225</b>	<b>45.56%</b>	
Notes: *Panels 9 and 10 proposed capacities. ** If Panels 7-8 are filled to capacity.							
***Total capacity if Panels 9 and 10 filled to proposed capacities.							
"CH" is Contact-Handled waste; "RH" is Remote-Handled							
"Permitted" refers to the capacity limits in the New Mexico WIPP permit							

# CH-TRU Waste remaining at DOE sites

INL - ID	24,100 m <sup>3</sup>	
Hanford - WA	19,800 m <sup>3</sup>	
Savannah River – SC	8,320 m <sup>3</sup>	
Los Alamos - NM	6,520 m <sup>3</sup>	
Oak Ridge - TN	1,150 m <sup>3</sup>	
Livermore - CA	996 m <sup>3</sup>	
Knolls - TN	771 m <sup>3</sup>	
Argonne - IL	175 m <sup>3</sup>	
Nevada NSS	143 m <sup>3</sup>	
Sandia - NM	51 m <sup>3</sup>	
Material & Fuels - IL	31 m <sup>3</sup>	
NRD - NY	3 m <sup>3</sup>	
Lawrence Berkeley - CA	<1 m <sup>3</sup>	<b>Total = 62,060 m<sup>3</sup></b>

- WIPP Annual TRU Waste Inventory Report - 2014

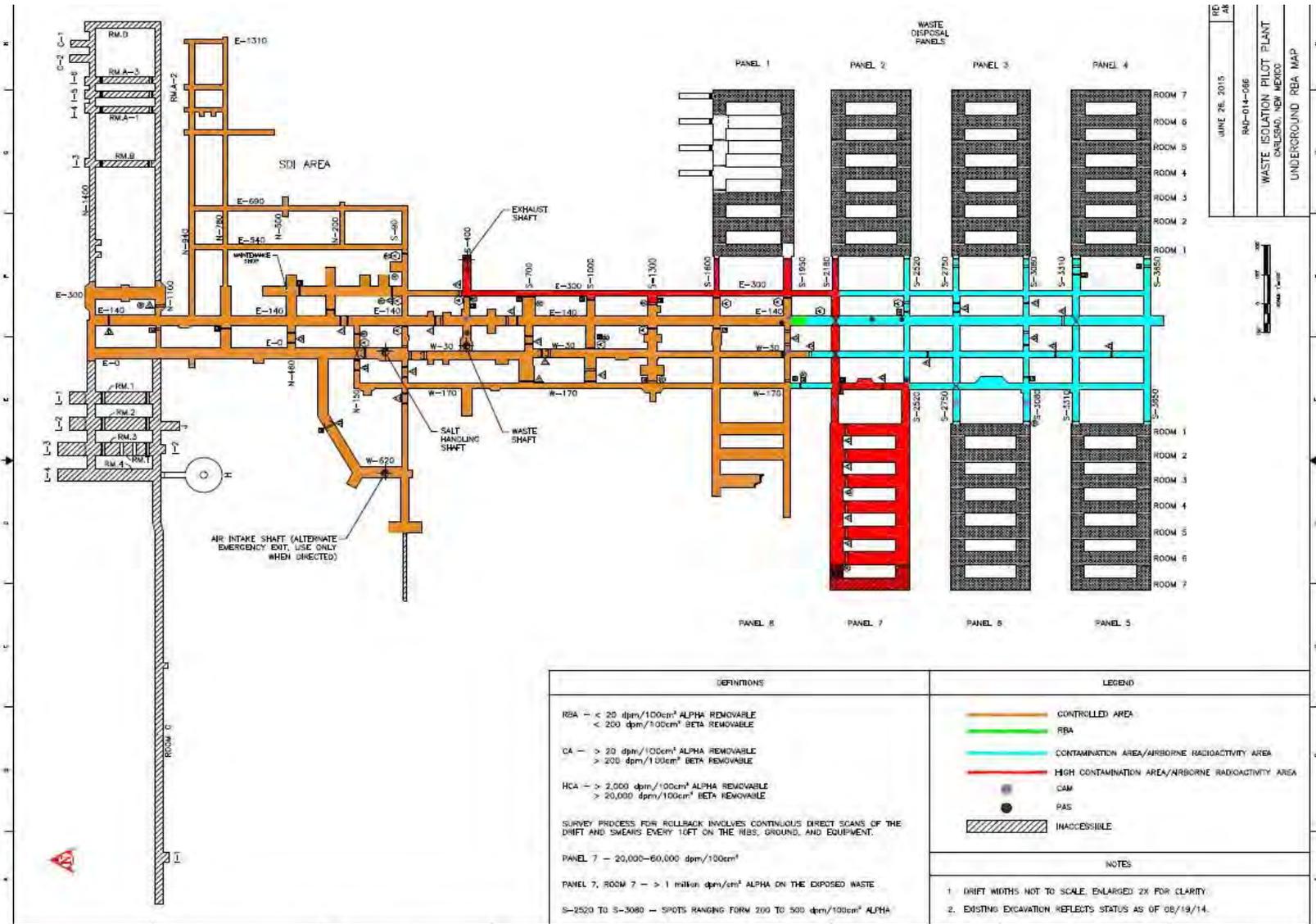
(Data as of December 31, 2013)

# RH-TRU Waste remaining at DOE sites

Hanford - WA	2,860 m <sup>3</sup>	
Oak Ridge - TN	432 m <sup>3</sup>	
Idaho National Lab	208 m <sup>3</sup>	
Material & Fuels – IL	93 m <sup>3</sup>	
Argonne - IL	84 m <sup>3</sup>	
Los Alamos - NM	79 m <sup>3</sup>	
Savannah River – SC	44 m <sup>3</sup>	
Knolls - NY	15 m <sup>3</sup>	
Sandia - NM	9 m <sup>3</sup>	
Bettis - PA	5 m <sup>3</sup>	Total = 3,829 m <sup>3</sup>
		5,591 m <sup>3</sup>

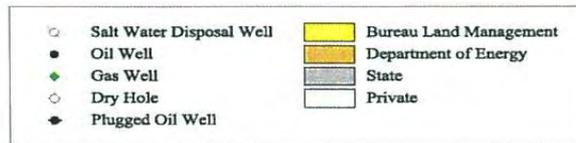
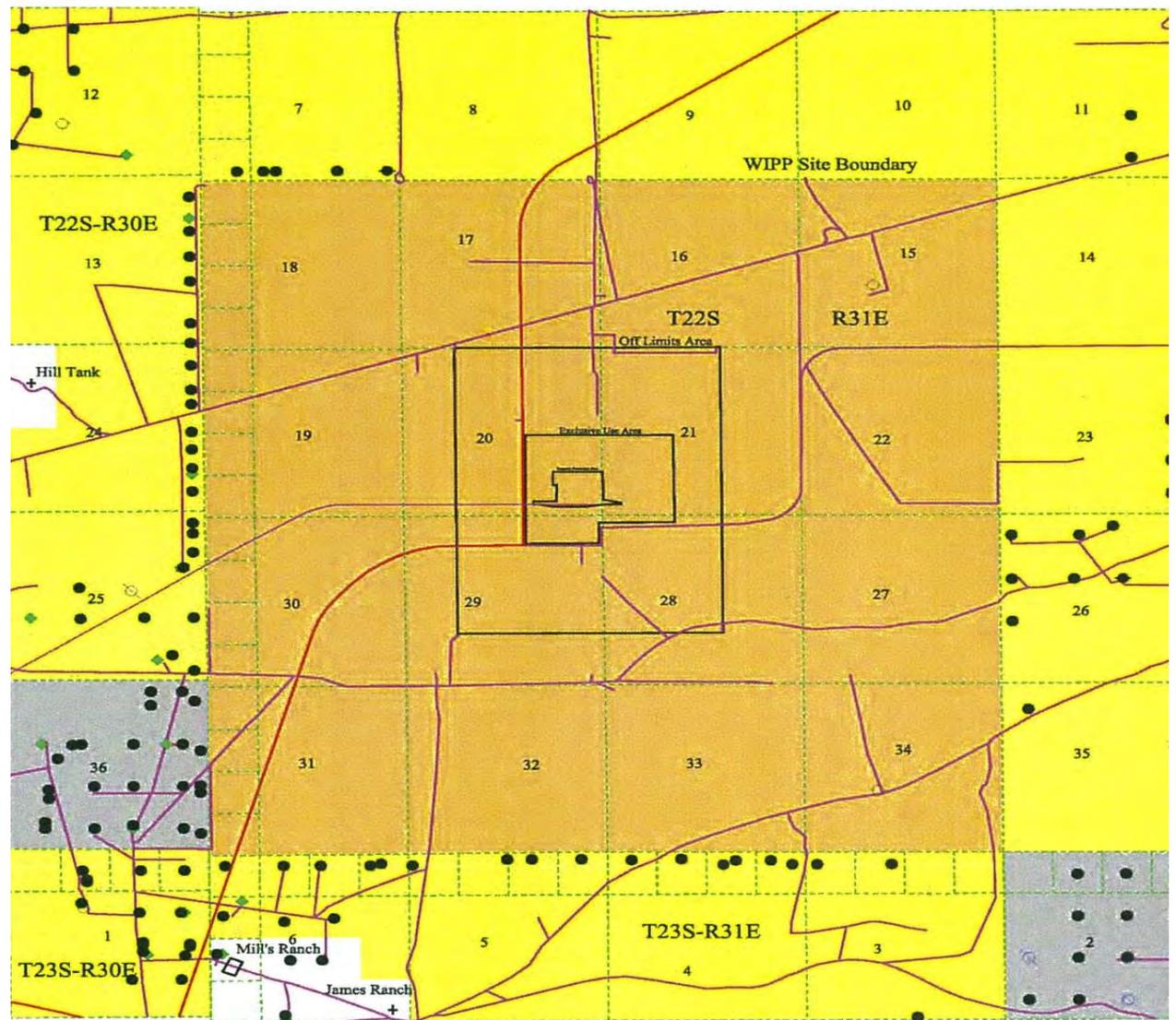
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# More than 8,000 feet of contaminated tunnels



Status of the WIPP Underground Rollback Areas for this Reporting Period - June 26, 2015

There are more than 100 active oil and gas wells within one mile of the WIPP Site



STATUS OF HYDROCARBON ACTIVITY  
 WITHIN ONE MILE OF THE WIPP SITE  
 September 1, 2012

# Fire on February 5, 2014



Location operator saw  
orange glow.

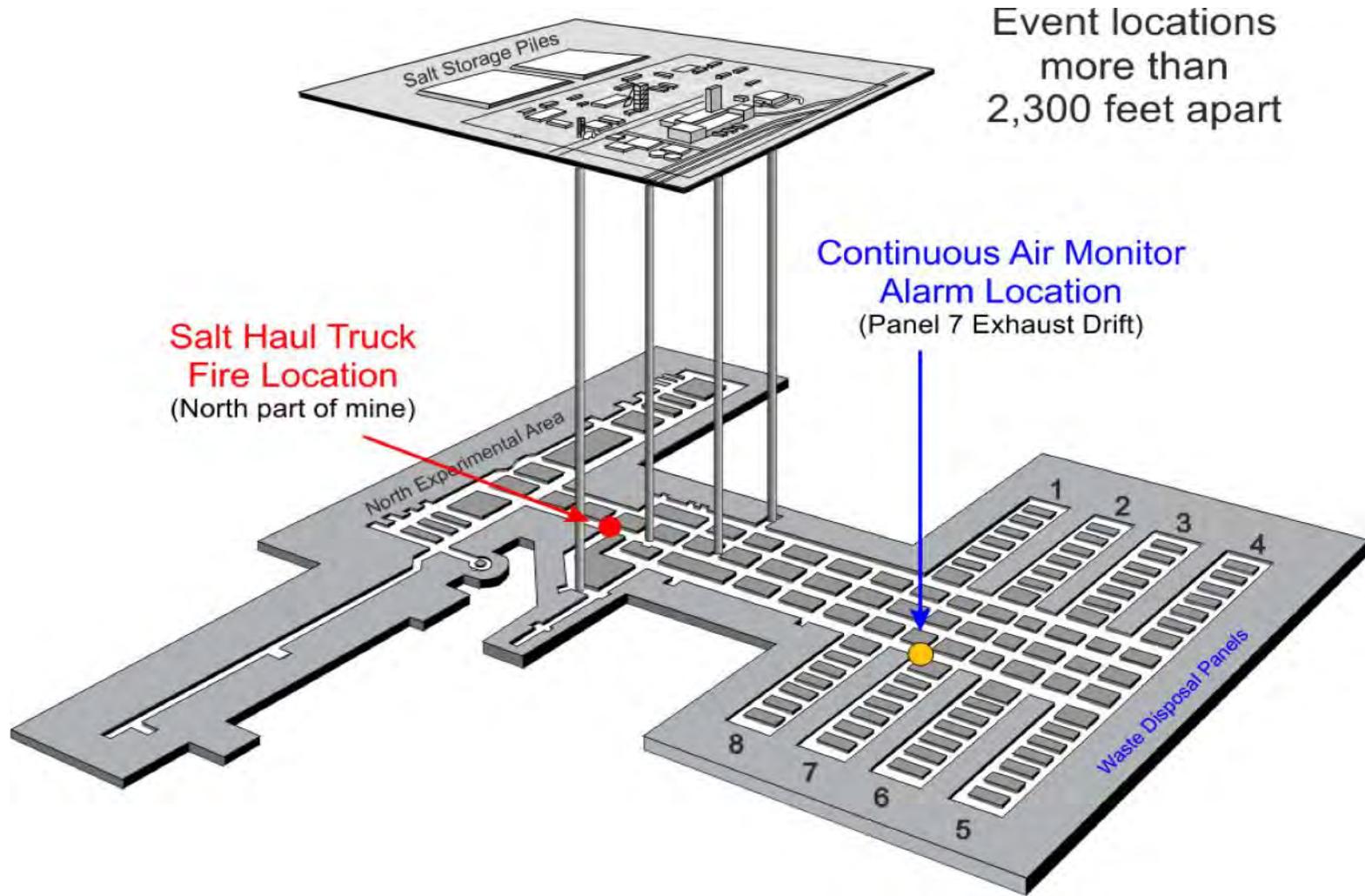
Feb. 5.  
2014  
Smoke  
comes  
out the  
Salt  
Shaft



# Fire Results

- 13 workers treated for smoke inhalation of 86 underground
- At least 1 worker was disabled; he sued and settled with the contractors
- Waste Hoist out of service because of soot; 11 months+ to clean
- Pervasive lack of maintenance, equipment replacement, worker training, emergency response, and mine safety practices

# Radiation release



# DOE stated

- “No personnel contamination has been identified” - 2/15 at 2:49 pm
- “No contamination has been found on any equipment, personnel, or facilities” - 2/15 at 9:17 pm
- “No surface contamination has been found on any equipment, personnel or facilities” - 2/16 at 6:32 pm
- “DOE emphasizes there is no danger to human health or the environment” - 2/16 at 6:32 pm

# In reality

- CEMRC radiation monitor shows release
- All 13 workers on surface internally contaminated
- Bioassay testing requested on February 19; Workers notified of contamination on Feb. 26
- 9 workers contaminated on Feb. 15 – not notified until March 9, March 27, or later
- No medical treatment being provided
- No screening of vehicles, homes, family members
- Supposedly received <10 millirem dose

# CH-TRU Waste at Waste Control Specialists

39 shipments from LANL to WCS from  
April 2 to May 8, 2014

372 m<sup>3</sup> of waste

# WIPP Transportation Routes

