

Will EPA Recertify the Waste Isolation Pilot Plant (WIPP)?

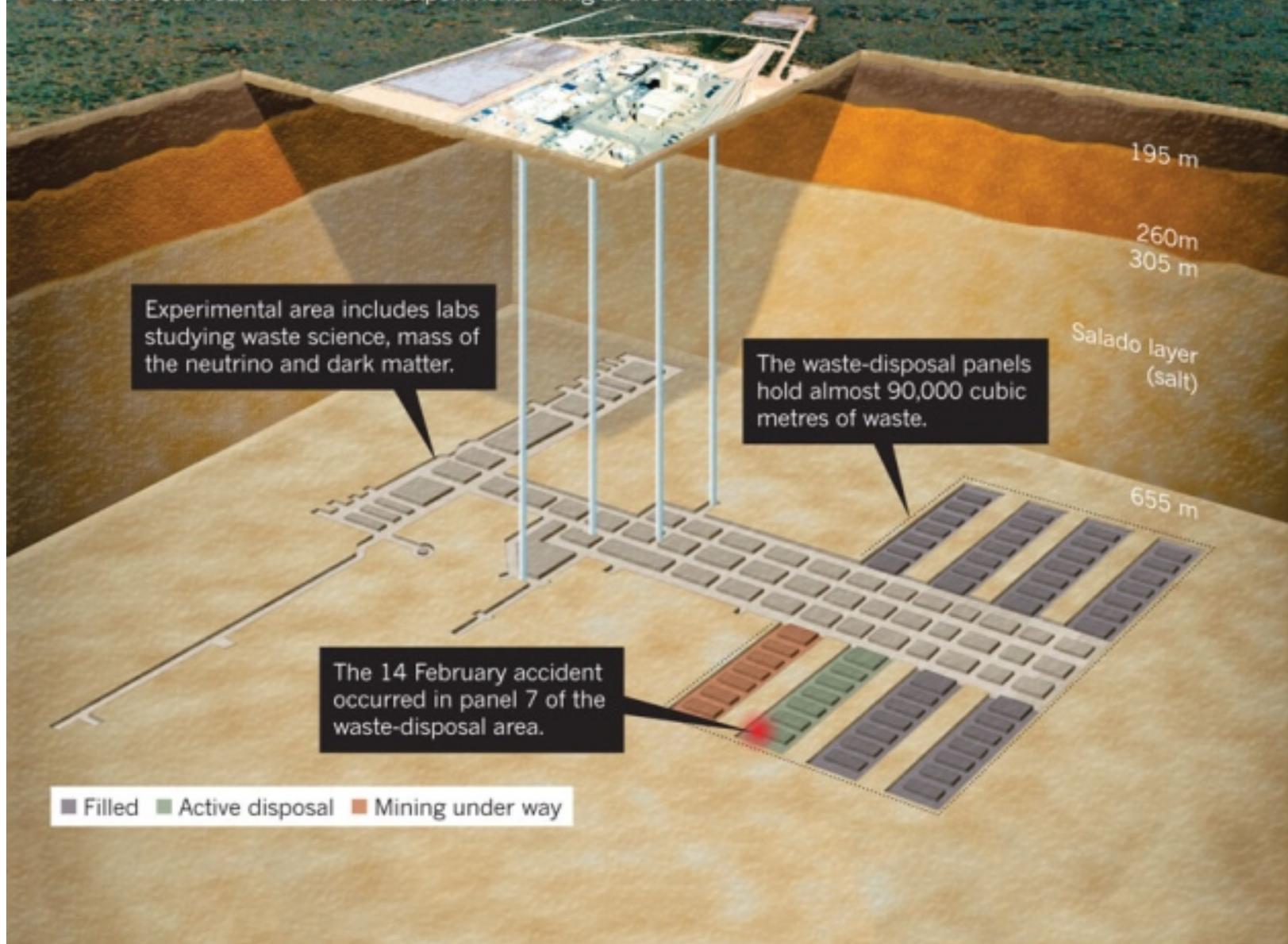
Don Hancock
Southwest Research and Information Center

June 9, 2015

at
SouthWest Organizing Project

DEEP TROUBLE

The Waste Isolation Pilot Plant is carved out of a layer of salt that will eventually encapsulate the stored low- and medium-level nuclear waste. It consists of eight waste-disposal panels at the southern end, where the accident occurred, and a smaller experimental wing at the northern end.



WIPP's Mission

- “Start Clean, Stay Clean” to dispose of up to 175,564 m³ of defense transuranic (TRU) waste
- Safely transport TRU 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 2033 or earlier

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

- 11,894 truck shipments from 12 sites
- 2 shipments returned (INL and LANL)
- 90,627 m³ of CH waste emplaced
- 641 m³ of RH waste emplaced
- 171,064 waste containers emplaced
- Panels 1-6 filled; Panel 7 - 276 containers
- 19 shipments from LANL, SRS, INL;
145 m³ of CH waste on surface

What is EPA's role with WIPP?

- Certify that WIPP meets disposal standards - Done on May 18, 1998
- Recertify every 5 years - based on DOE applications in 2004, 2009, 2014
- Limit public annual radiation dose to:
 - < 25 millirem whole body;
 - < 75 millirem any critical organEPA not monitoring at time of release - modeling of 0.005 millirem at Smith Ranch

WIPP Fire on February 5, 2014



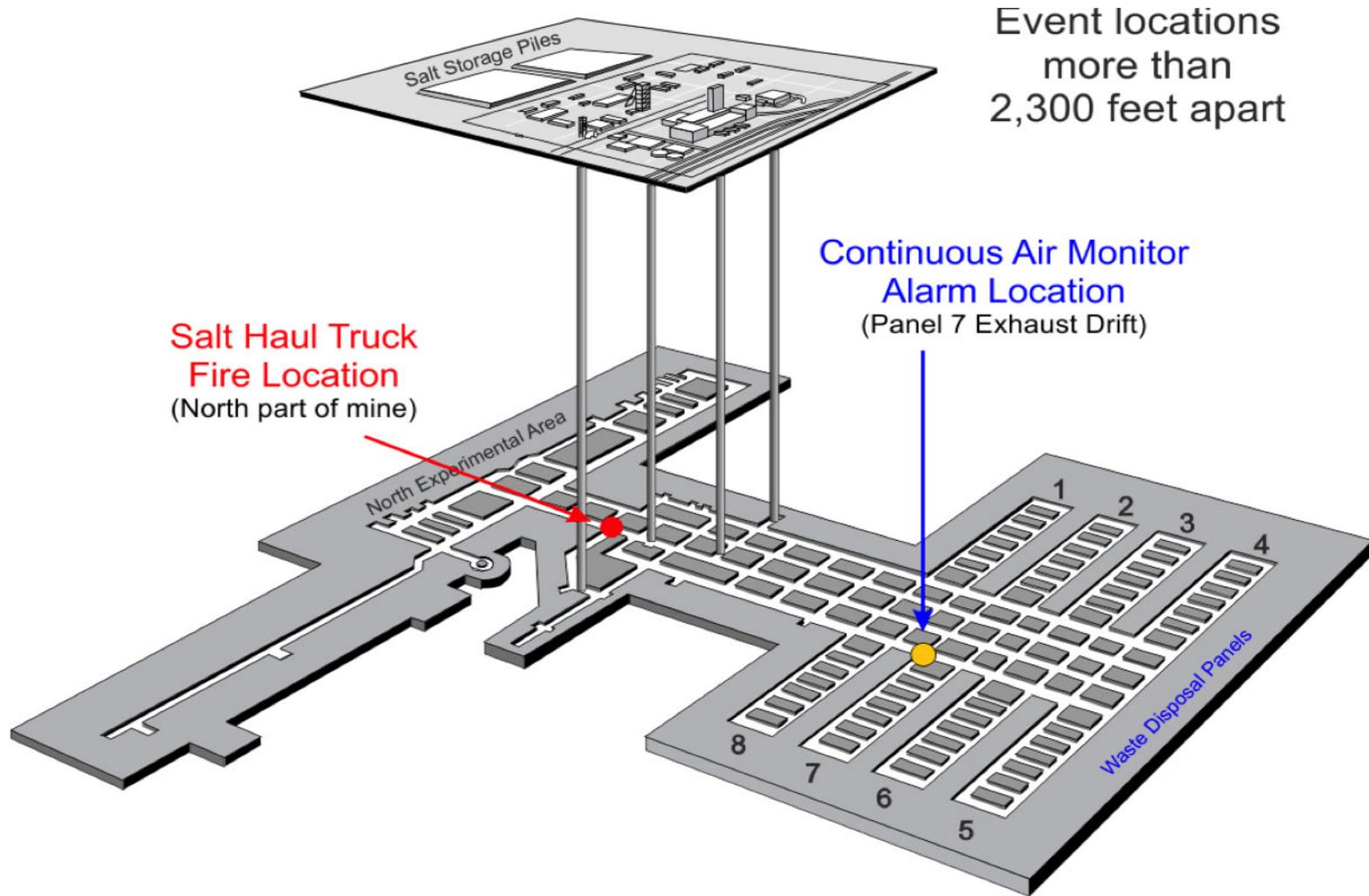
Feb. 5.
2014
Smoke
comes
out the
Salt
Shaft



Fire Results

- 13 workers treated for smoke inhalation of 86 workers underground
- At least 1 worker still being treated; disabled & suing 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

Radiation Monitoring on Feb. 14, 2014

- EPA not monitoring
- NM Environment Department (NMED) shut down its monitoring months before
- Carlsbad Environmental Monitoring and Research Center (CEMRC) air sampling showed WIPP release on the surface - public notified on February 19, 2014

Night Workers on Valentine's Day

- 13 on the surface - all internally contaminated
- Bioassay testing requested on February 19;
Workers notified of contamination on
February 26
- No more urine, fecal, and whole body count
testing
- No medical treatment because estimated <
10 millirem exposure
- No screening of vehicles, homes, family
members

Workers on February 15

- More than 135 reported for work
- Four notified of contamination on March 9
- Four others were notified on March 27
- On May 15, DOE announced that 22 workers were contaminated as determined by fecal tests (21) and urine sampling (1) with < 10 millirem
- No medical treatment as estimated < 10 millirem exposure
- No screening of vehicles, homes, family members

RCA - March 26, 2014

- Information as of December 31, 2012
- WIPP complies with disposal regulations
- No mention of radiation release; WIPP shutdown
- Includes Panels 9 and 10 - now abandoned
- Does not include new exhaust shaft and ventilation system
- Does not mention whether WIPP will re-open before recertification

What You Can Do: Attend EPA Public Meetings

- Wednesday, June 17 at Embassy Suites - 1000 Woodward Pl, NE (Lomas and I-25)
- 2:30 to 6:00 - Roundtable discussion with EPA and WIPP officials, and public
- 7:00 to 9:00 - Public comments

You might say

- EPA PROTECT US - Don't recertify WIPP
- EPA TELL DOE WIPP CAN'T RE-OPEN without EPA recertification and approval
- An application must fully discuss:
 - the causes of the radiation release
 - the impacts of the radiation release
 - underground contamination
 - changed repository - No Panels 9 & 10
 - changed waste characterization requirements: radiation characterization was inadequate

WIPP's capacity is insufficient for:

62,000 m³ of Contact-Handled Waste at:

Hanford - WA;

Savannah River Site - SC

Los Alamos - NM

Oak Ridge - TN

Livermore - CA

Knolls - TN

Argonne - IL

Nevada NSS

Sandia - NM

Material & Fuels - IL

NRD - NY

Lawrence Berkeley - CA

WIPP's capacity is insufficient for:

5,600 m³ of Remote-Handled Waste at:

Hanford - WA

Oak Ridge - TN

Idaho National Lab

Savannah River Site - SC

Material & Fuels - IL

Argonne - IL

Los Alamos - NM

Knolls - NY

Sandia - NM

Bettis - PA

WIPP Capacity in Panels 7 & 8

Panel 7

CH-TRU = ~ 16,000 m³

RH-TRU = 0 in canisters

Panel 8

CH-TRU = 18,750 m³

RH-TRU = 650 m³ in canisters

Total CH-TRU capacity = 34,750 m³

Capacity shortfall = 27,310 m³

Total RH-TRU capacity = 650 m³

Capacity shortfall = ~ 4,900 m³

Why re-open WIPP?

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

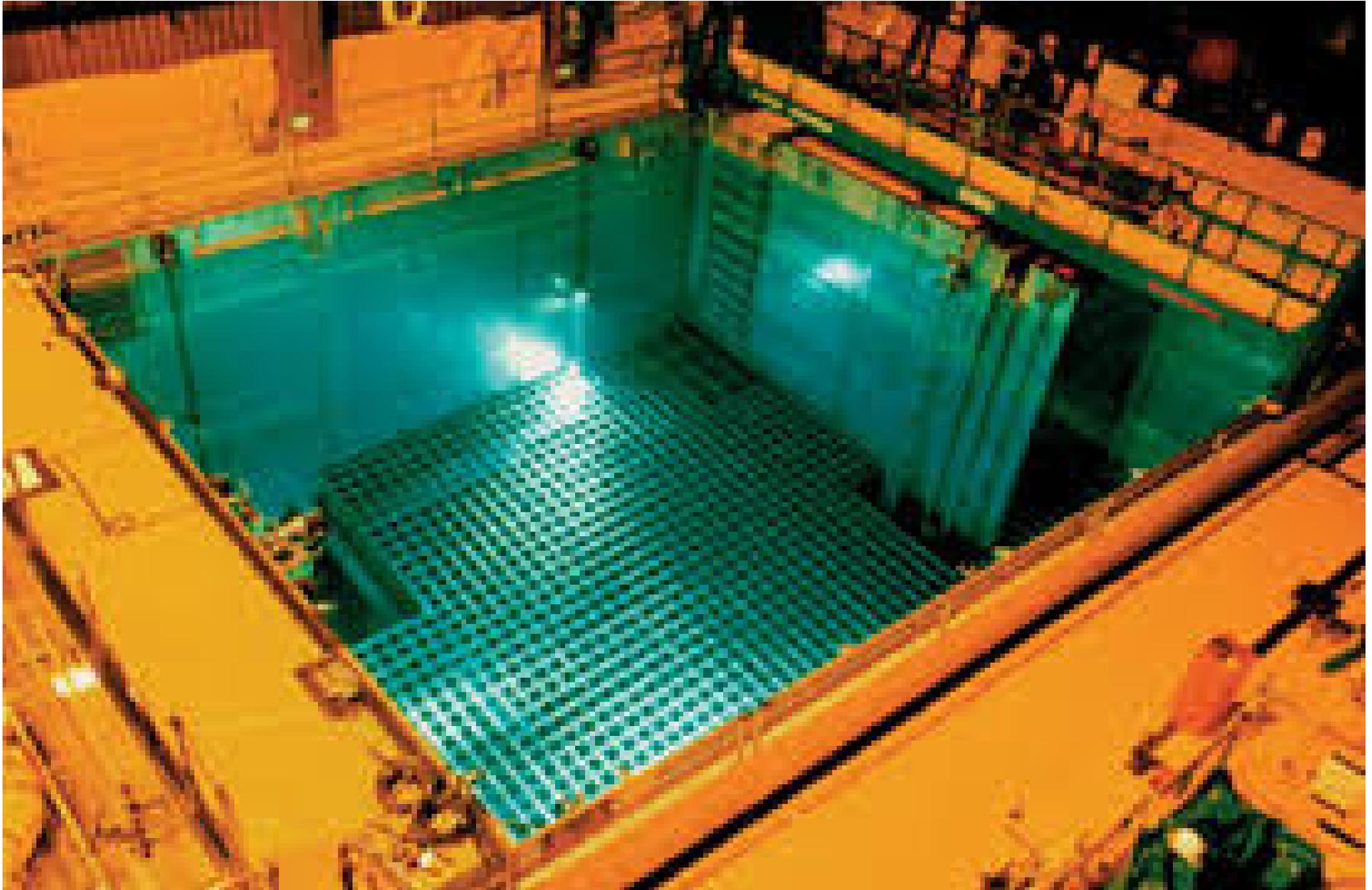
What will EPA do?

- Consider comments from the public meetings and written comments
- Ask for and review additional information from DOE
- Decide that the RCA is complete
- Notice end date for written comments
- Within 6 months of completeness determination, EPA must issue a decision

Commercial spent fuel storage in New Mexico?

- On April 10, 2015 Gov. Martinez wrote DOE Secretary Moniz: “I support the ELEA and its member cities and counties in their efforts to establish a consolidated interim storage facility in southeastern New Mexico.”
- Eddy/Lea Energy Alliance - two counties and Carlsbad and Hobbs partner with Holtec, Inc. to promote surface storage of commercial spent fuel

Commercial Spent Fuel in Wet Storage



Commercial Spent Fuel in Dry Storage



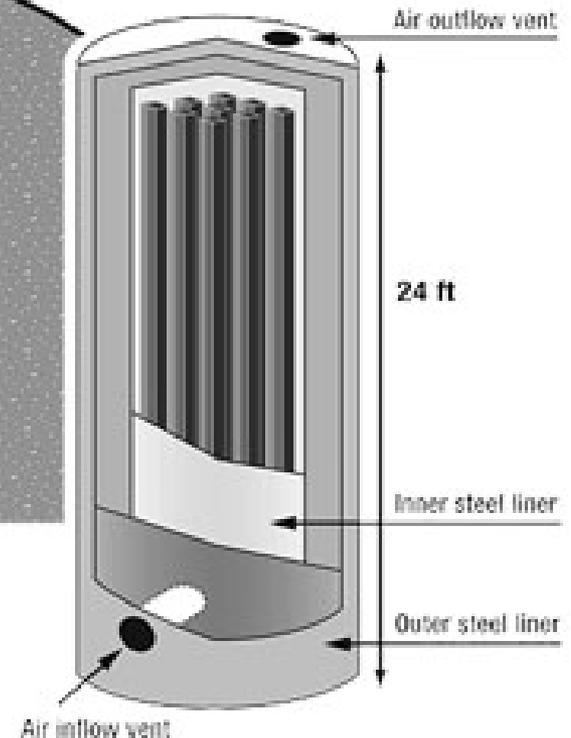
Better Dry Storage Alternative: HOSS

Earth/gravel berms should surround each cask and hide from ground-level view.



**Potential Target: 24 to 36
Bundles of Nuclear Rods**

Nuclear rods cooled by
simple air convection.



Can the Governor bring SNF?

No.

- Federal law doesn't allow it
- New Mexicans oppose SNF storage
- Previous proposals have failed:
 - 1990s on Mescalero land
 - ELEA with AREVA in 2012
 - Private Fuel Storage in UT
 - Sites in TN, OK, WY, and other states

What Can You Do

- Tell Governor Martinez “NO”
- Tell the Congressional Delegation “NO”
- Organize
- Write letters to editor
- Engage on social media
- Talk with friends and family

Contact Information

Don Hancock

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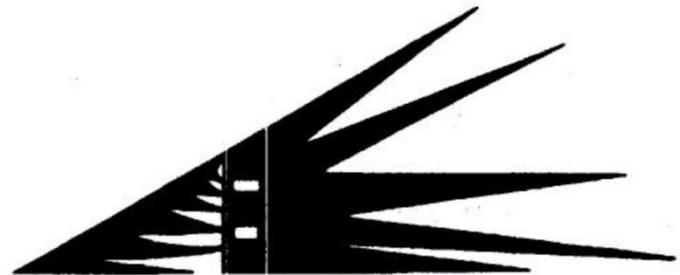
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www.sric.org



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>

Eddy-Lea Energy Alliance webpage:

<http://www.eddyleaenergyalliance.com>

Additional background slides

WIPP Recovery Plan Schedule

<u>Activity</u>	Contract		
	<u>Schedule</u>	<u>Bonus</u>	<u>Actual</u>
Panel 6 initial closure	12/31/14	8/30/15	4/4/15
EPA re-certification	3/31/15		???
Re-open for on-site waste	4/1/16		???
Re-open for off-site waste	7/1/16		???
Full operations	2/15/18		???

Cost of Re-opening

“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 Budget = \$197.838 million

FY 2014 WIPP Budget = \$221.170 million

FY 2015 WIPP Budget = \$324.455 million

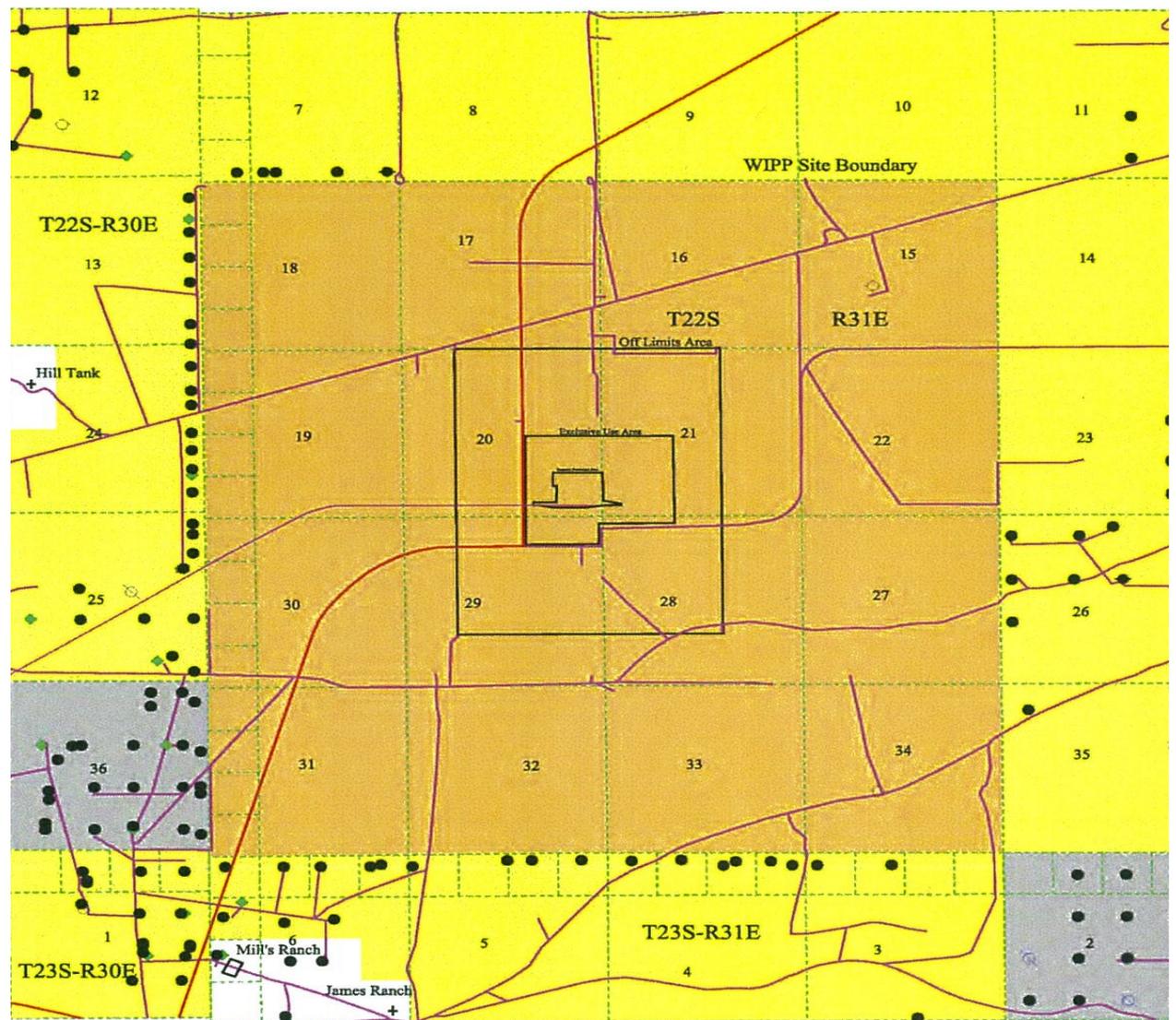
FY 2016 WIPP Request = \$248.178 million

- DOE FY 2016 & FY 2015 Budget Requests

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	111,000	90,240	81.30%	1,335	625	46.82%	
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***	186,000	165,240	98.07%	3,935	3,225	45.56%	
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							

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



- | | | | |
|---|--------------------------|---|------------------------|
| ○ | Salt Water Disposal Well | ■ | Bureau Land Management |
| ● | Oil Well | ■ | Department of Energy |
| ◆ | Gas Well | ■ | State |
| ○ | Dry Hole | □ | Private |
| ◆ | Plugged Oil Well | | |



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

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

WIPP Shipment Routes

