

SOUTHWEST RESEARCH AND INFORMATION CENTER

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**A PERSPECTIVE ON THE
WASTE ISOLATION PILOT PLANT (WIPP)
MISSION AND PERFORMANCE
AND EXPANSION PROPOSALS**

By

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**Before the
INTERIM RADIOACTIVE AND
HAZARDOUS MATERIALS COMMITTEE**

October 8, 2013

Carlsbad, NM

WIPP's mission is to demonstrate whether the federal government and its contractors, at the cost of billions of dollars, can:

- (1) safely operate WIPP to meet the facility's "start clean, stay clean" standard for up to 175,564 cubic meters (m³) of defense transuranic (TRU) waste, the legal capacity limit;
- (2) safely transport TRU waste through more than 20 states without serious accidents or release of radioactive or hazardous contaminants;
- (3) meet commitments, including timeframes, to clean up TRU waste at about 20 Department of Energy (DOE) nuclear weapons sites; and
- (4) safely close, decontaminate, and decommission the WIPP site, beginning in about 2030 or earlier.

No deep geologic repository has yet accomplished such a mission. The Germans put about 84,000 cubic meters of non-high-level commercial waste in two deep geologic repositories (Asse and Morsleben) between 1967 and 1998. But both of those facilities have failed and have been closed without completing their missions.

Some measurements of WIPP's results as of September 30, 2013:

- 89,142 m³ of waste disposed, which is 50.8% of the legal limit
- 11,632 shipments to WIPP, two shipments returning waste to the originating site
- Waste shipped directly from 12 DOE sites; waste has come from another 16 sites
- LANL 3706 Campaign should be completed before June 30, 2014

And:

- Actual costs approaching \$6 billion (Current Year \$), plus an estimated \$3 billion to \$3.5 billion more for future years
- Failing to handle all the Remote-Handled (RH) TRU waste; Less than 1% of the emplaced volume is RH; actual capacity for only about 45% of RH legal limit
- Volume of waste being shipped is decreasing each year, although more than 50,000 m³ of TRU waste remains at DOE sites
- Failing to meet performance measures for waste volumes emplaced
- Significant changes proposed for underground operations
- Expansion proposals divert resources from mission and create public opposition

REMOTE-HANDLED (RH) WASTE

- Not using the majority of permitted RH capacity
- Not correctly counting RH emplacement volumes
- Not engaging in public process to discuss options to address the RH capacity failure

WIPP PERMITTED VS. ACTUAL CAPACITY

Chart 1

(in cubic meters)

	<u>CH-Permitted</u>	<u>Actual</u>	<u>% Used</u>	<u>RH-Permitted</u>	<u>Actual</u>	<u>% Used</u>
Panel 1	18,000	10,500	58.33%	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			534	214	40.07%
Panel 7	18,750			650		
Panel 8	18,750			650		
Panel 9*	18,750			650		
Panel 10*	18,750			650		
Totals	186,000	75,775	40.74%	3,935	625	15.88%
Panels 1-5	92,250	75,775	82.14%	801	411	51.31%
Panels 1-6				1,335	625	46.82%
Panels 1-8**	148,500	132,025	88.91%	2,635	1,925	73.06%
Legal Capacity	168,485		78.36%	7,079		27.19%
Panels 9-10***		169,525	100.62%		3,225	45.56%

Notes: *Panels 9 and 10 expected capacities. ** If Panels 6-8 are filled to capacity.

***Total capacity if Panels 9 and 10 filled to expected capacities.

"CH" is Contact-Handled waste; "RH" is Remote-Handled

"Permitted" refers to the limits in the New Mexico WIPP permit

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SOME EXPANSION PROPOSALS:

1. Bring 10,000 metric tons of mercury for long-term storage on the surface at WIPP.

DOE's *Final Long-Term Management and Storage of Elemental Mercury Supplemental Environmental Impact Statement* (DOE/EIS-0423-S1), September 2013, includes an area within the WIPP site and two locations adjacent as reasonable alternatives to the Waste Control Specialists (WCS) preferred alternative site.

2. Rename high-level waste (HLW) in 11-20 tanks at Hanford (WA) and ship it to WIPP.

DOE's *Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland Washington* (DOE/EIS-0391), November 2012, would rename HLW waste in up to 20 tanks as TRU and ship it to WIPP.

A similar proposal in 2003 resulted in WIPP Permit Section 2.3.3.8 that provides:

Excluded Waste

TRU mixed waste that has ever been managed as high-level waste and waste from tanks specified in Permit Attachment C are not acceptable at WIPP unless specifically approved through a Class 3 permit modification.

On April 8, 2013, WIPP submitted a class 2 permit modification request to the New Mexico Environment Department (NMED), despite knowing of strong public opposition and NMED's position that any such request would be a class 3 modification. More than a thousand commentors objected to the request and on July 2, NMED determined that it would be a class 3 request.

3. Bring commercial Greater-Than-Class C waste to WIPP in shielded containers.

DOE's *Draft Environmental Impact Statement for the Disposal of Greater-Than-Class C (GTCC) Low-Level Radioactive Waste and GTCC-Like Waste* (DOE/EIS-0375) and forthcoming, but long-delayed, Final EIS will include WIPP as a reasonable, and possibly preferred, alternative site.

Any such proposal is contrary to WIPP authorizing legislation – PL 96-213(a) and the WIPP Land Withdrawal Act (PL 102-579, as amended by PL 104-201).

Rep. Pearce wants to change the WIPP laws

Rep. Stevan Pearce's bill (HR 1879) and amendment to the Defense Authorization Bill (HR 1960) would change the WIPP laws to allow an unknowable amount of waste to be renamed as transuranic by DOE now and in the future and be brought to WIPP.

WIPP is supposed to be a "pilot plant" – not the only DOE repository. Congress and New Mexicans have always known that waste other than defense TRU must go to additional repositories. Until there are other such repositories, commercial waste, spent nuclear fuel, and defense high-level waste waste must be – and can be – safely stored in other locations, at or near where the waste is now located.

COMMERCIAL SPENT NUCLEAR FUEL STORAGE

- Historic “non-consent” by New Mexicans to spent nuclear fuel and high-level waste as evidenced by WIPP and Mescalero Apache proposals.

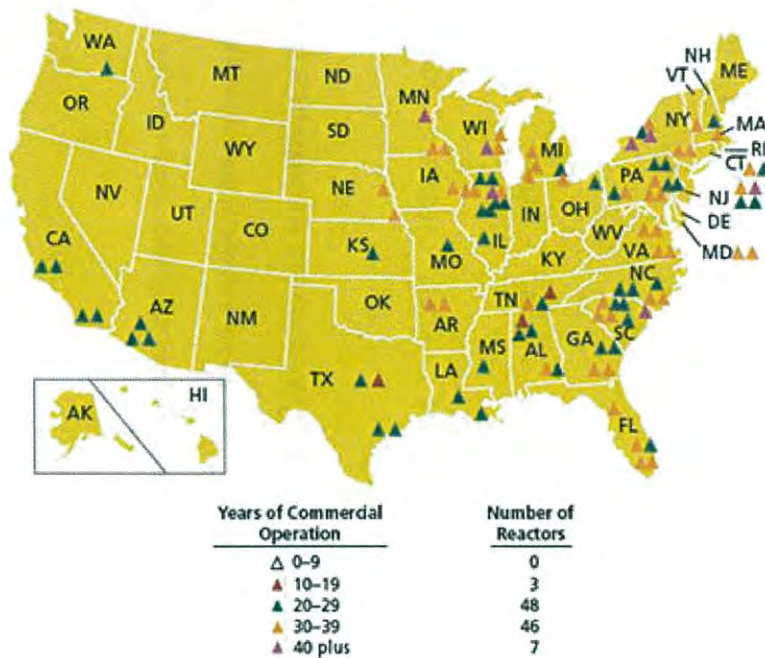
The WIPP Land Withdrawal Act, Section 12 states:

BAN ON HIGH-LEVEL RADIOACTIVE WASTE AND SPENT NUCLEAR FUEL.

The Secretary [of Energy] shall not transport high-level radioactive waste or spent nuclear fuel to WIPP or emplace or dispose of such waste or fuel at WIPP.

- The Western Governors’ Association (WGA) has pointed out that 88% of commercial spent nuclear fuel has been generated east of the 100th meridian, and WGA Policy Resolution 11-3 further states that “current federal law for addressing spent nuclear fuel and high-level waste places a disproportionate share of the national burden on Western states.”
- Spent Nuclear Fuel will and should remain on-site at reactors where dry storage should be accelerated and improved.

U.S. Commercial Nuclear Power Reactors—
Years of Operation by the End of 2010



Note: Ages have been rounded up to the end of the year.

Source: U.S. Nuclear Regulatory Commission

WIPP BUDGET REQUESTS, APPROPRIATIONS, PERFORMANCE MEASURES

	<u>FY2003</u>	<u>FY2004</u>	<u>FY2005</u>	<u>FY2006</u>	<u>FY2007</u>	<u>FY2008</u>	<u>FY2009</u>	<u>FY2010</u>	<u>FY2011</u>	<u>FY2012</u>	<u>FY2013</u>	<u>2003-2013</u>
DOE REQUEST (in \$000)	\$193,228	\$214,207	\$231,612	\$212,629	\$213,278	\$219,739	\$211,524	\$220,340	\$220,245	\$220,161	\$198,100	\$2,355,063
APPROPRIATION (in \$000)	\$209,734	\$223,056	\$229,444	\$228,331	\$228,818	\$234,585	\$231,661	\$234,981	\$220,006	\$215,134	\$202,293	\$2,458,043
% of Request	108.5%	104.1%	99.1%	107.4%	107.3%	106.8%	109.5%	106.6%	99.9%	97.7%	102.1%	104.4%
Am. Recovery & Reinv.							\$21,676	\$86,608	\$64,091			\$172,375
PERF. MEASURE* (cubic meters)	4,605	12,170	13,318	10,185	11,710	10,765	10,130	6,659	9,761	10,687		99,990
Am. Recovery & Reinv.							180	2,967	4,884			8,031
TOTAL PERF. MEASURE							10,310	9,626	14,645	10,687		107,841
ACTUAL DISPOSAL** (cubic meters)	7,542	8,810	7,657	10,556	8,549	5,944	6,175	7,822	7,314	5,701	5,117	76,070
% of Perf. Measure	163.8%	72.4%	57.5%	103.6%	73.0%	55.2%	61.0%	117.5%	74.9%	53.3%		76.1%
% of Total Perf. Measure							59.9%	81.3%	49.9%	53.3%		70.5%

Sources: *Presidential Requests to Congress, **WIPP WASTE INFORMATION SYSTEM

American Recovery and Reinvestment Act funds are not included in the Request and Appropriation totals.

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