

# THE WORKBOOK

\$3.50

Winter 1997

Southwest Research and Information Center

Vol. 22, No. 4



## WIPP

### WHY IT'S STILL UNSAFE



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**WIPP**

**No Solution  
to the  
Nuclear  
Waste  
Legacy**

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by Don Hancock

**"A cornerstone to the [DOE] cleanup strategy is the nation's first deep geologic radioactive waste disposal facility, the Waste Isolation Pilot Plant, located near Carlsbad, New Mexico."**

*– Accelerating Cleanup: Focus on 2006. U.S. Department of Energy, June 1997<sup>1</sup>*

**"The high priority given to WIPP, which is part of a flawed repository program, is largely due to politically expedient promises made to states during the Cold War that enabled DOE to continue focusing on weapons production."**

*– Containing the Cold War Mess: Restructuring the Environmental Management of the U.S. Nuclear Weapons Complex. Institute for Energy and Environmental Research, October 1997<sup>2</sup>*

**A**lthough the U.S. Department of Energy (DOE) nuclear weapons facilities pose major public health risks, the agency's efforts over the past 25 years have focused on trying to solve a political problem rather than developing a comprehensive, scientifically sound, publicly acceptable program to address those risks. Designated by DOE as its "cornerstone" facility, the Waste Isolation Pilot Plant (WIPP), located in southeastern New Mexico, would be the world's first nuclear waste repository. It is to handle less than two percent of DOE's existing nuclear weapons waste, leaving the majority of the wastes with no "disposal" site. During the next 35 years WIPP is to be the financial and public relations centerpiece of DOE's "cleanup" efforts, while very few sites would be cleaned up and closed. DOE's major facilities will be maintained — and in some cases even expanded to provide longterm capability to manufacture nuclear weapons.

As an example of how WIPP does not address public health risks, in its environmental impact statements for WIPP, DOE concludes that it is safer to leave the wastes in those existing storage sites for up to 100 years than to ship them to WIPP.<sup>3</sup> The dangers posed by the facility go beyond the deaths and injuries during its lifetime, as WIPP is a technically flawed facility that poses longterm threats to future generations.

DOE's determination to open WIPP in May 1998 implicates other government agencies that have regulatory authority over the facility. If those agencies rubberstamp DOE's plans, it will further undermine public confidence in those institutions. The problems of WIPP and the obstacles to its opening are key aspects of debate and citizen action in New Mexico, and the courts will certainly become involved in the decisions. But people far beyond New Mexico will be affected by those decisions as millions live along transportation routes that pass through 22 other states. Moreover, what happens in the next few months will have profound implications for the federal government's management of all its nuclear wastes.

## BACKGROUND

In the 1960s, the federal government's manufacturing facility for the plutonium core of nuclear bombs, the Rocky Flats Plant north of Denver, Colorado, had a series of fires that raised public concerns about the plant's safety. To lessen those concerns in Colorado, DOE's predecessor agency (the Atomic Energy Commission) began shipping wastes by train from Rocky

Flats to the Idaho National Engineering Laboratory. The government promised Idaho that the wastes would be there only temporarily, until 1980, when they would be shipped to a disposal site — even though no such site existed.

The first chosen disposal site was an abandoned salt mine near Lyons, Kansas. But in the early 1970s that site was dropped because of technical problems and because of opposition by political leaders. Federal officials began to look for other salt sites, including in the Salina Basin of Michigan, Ohio, Pennsylvania, and New York. When the Republican governors of those states objected to having a waste site in their states, Nixon administration officials turned to southeastern New Mexico, encouraged by some local officials and businesses.

The current WIPP site was chosen in 1975, after the initial siting criteria were changed because no location fully met them. Public education efforts and DOE meetings and hearings heightened public awareness about WIPP in 1977 and 1978, as the Carter administration tried to fashion a comprehensive policy approach to nuclear waste management. In December 1979, Congress authorized WIPP as a "research and development facility" and because of its important role to provide a waste site to support nuclear weapons production exempted it from several requirements for repositories, including licensing by the Nuclear Regulatory Commission (NRC) and state authority to veto the project.<sup>4</sup> But when the Carter administration finalized its nuclear waste policy, it concluded that WIPP should be cancelled, and that transuranic (TRU, plutonium-contaminated) wastes should be disposed in another site that would be the first repository and would also handle spent fuel from commercial nuclear power plants.

Congress and the Carter administration had different views about nuclear waste policy and WIPP, which came to a stalemate. One of the first acts of the Reagan administration was to issue a Record of Decision regarding WIPP, on January 22, 1981. DOE declared that WIPP would dispose of TRU waste stored at Idaho National Engineering Laboratory by 1990.<sup>5</sup>

After the first round of litigation over WIPP, DOE began construction on July 4, 1981. As flaws with its policy and with the site became more apparent (see *The Workbook*, Vol. 12, No. 1, pp. 1–5; Vol. 13, No. 1, pp. 7–12; Vol. 14, No. 4, pp. 134–144), Congress began in 1987 what would become five years of

**WIPP:**  
The Solution to  
Nuclear  
Pollution

▲  
*Slogan on  
buttons and  
flyswatters  
distributed by  
Westinghouse*

considering a comprehensive new law for WIPP. In 1991, then-DOE Secretary James Watkins decided to stop waiting for Congress to enact WIPP legislation, announcing that he would open the facility in a week for a five-year "test phase." His action was prevented by a lawsuit brought by New Mexico Attorney General Tom Udall, which was joined by the state of Texas, New Mexico citizen groups, national environmental organizations, and three members of Congress.<sup>6</sup>

Passage of the WIPP Land Withdrawal Act in 1992<sup>7</sup> set up requirements for the facility. It established the Environmental Protection Agency (EPA) as independent regulator to partially compensate for the lack of NRC licensing, and it mandated WIPP's compliance with other laws before it could open. But that law was amended and weakened in 1996, eliminating some of EPA's authority (see *The Workbook*, Vol. 17, No. 4, p. 193; Vol. 20, No. 3, pp. 108-109; Vol. 21, No. 3, p. 149). In 1993, DOE dropped its plans for a test phase after they were strongly criticized. DOE said it would instead focus efforts to comply with requirements to open the facility, including EPA certification that WIPP meet radioactive waste disposal regulations and permitting requirements of the Resource Conservation and Recovery Act (RCRA).<sup>8</sup>

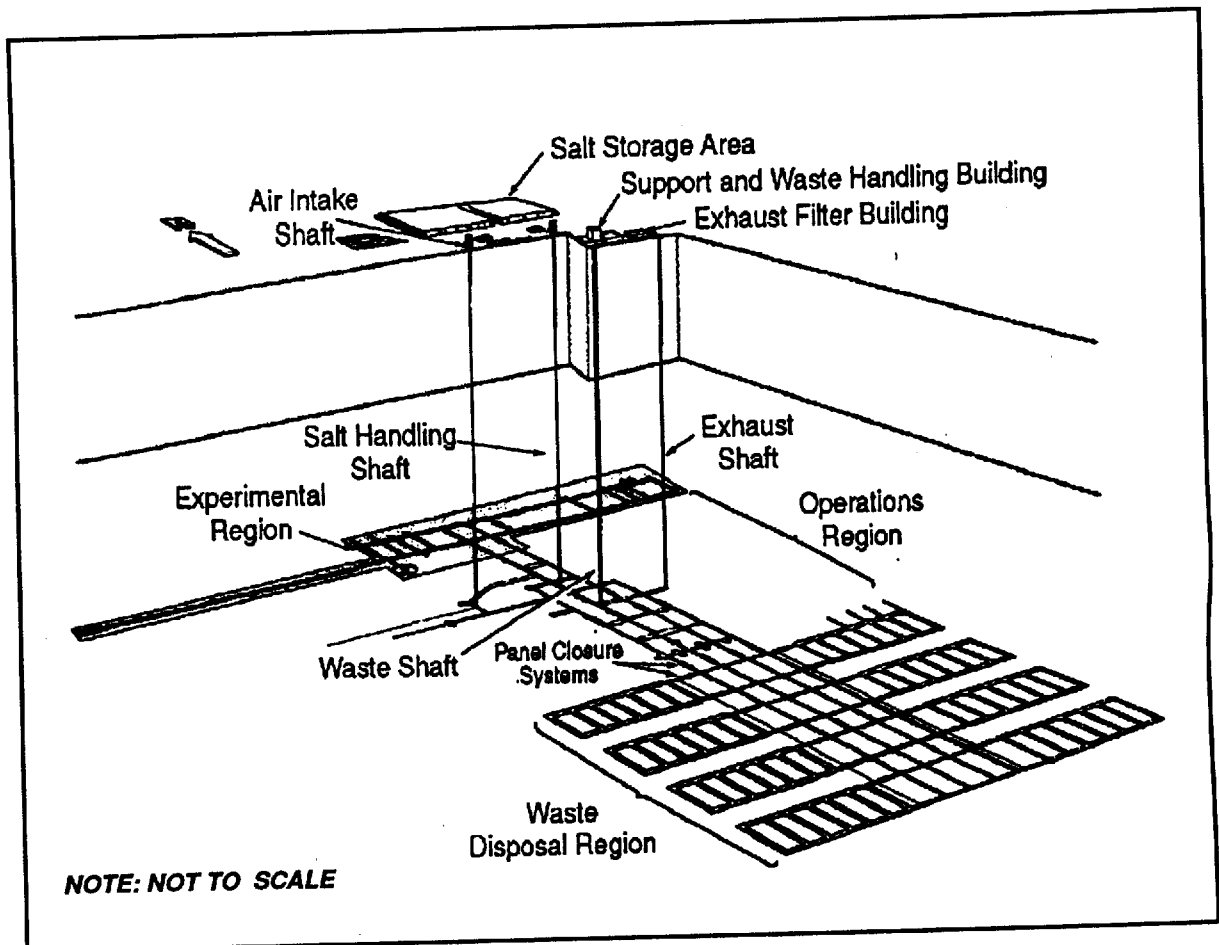
## WHAT IS WIPP?

The Waste Isolation Pilot Plant is a 16-square-mile site in southeastern New Mexico, midway between Carlsbad and Hobbs. The fenced surface area comprises about 34 acres with various administrative and support buildings, two piles of salt mined from underground, and an 84,000-square-foot waste handling building. The waste disposal level is 2,150 feet underground, and is ultimately to consist of more than 60 rooms, each about 300 feet long, 33 feet wide, and 13 feet high, spread over 100 acres (see figure below).

WIPP is to dispose of about 6.2 million cubic feet (175,000 cubic meters) of materials used in producing nuclear bombs contaminated by plutonium and other radionuclides as well as hazardous chemicals. The wastes would be trucked to WIPP over a 35-year period from 10 sites (see map on p. 154).

The transuranic (TRU) wastes<sup>9</sup> vary greatly from one facility to another, because different weapons production sites had responsibility for various aspects of bomb making. Workers used 55-gallon drums and plywood boxes as garbage cans to throw away anything that might be contaminated with plutonium and did not keep records of what the wastes were. The wastes include materials ranging from gloves, clothes,

The WIPP repository—  
surface and  
underground  
facilities



and booties worn by workers, to equipment used in the production process, to sludges and near-bomb-grade plutonium residues.

By volume, the vast majority of TRU wastes are designated as contact-handled (CH), meaning that for storage they do not require special shielding beyond that provided by the drums or boxes. Some of the wastes are classified as remote-handled (RH) and require special shielding or robotic handling to protect workers from the higher levels of radioactivity.

## THE LESS THAN TWO PERCENT "SOLUTION"

*"Sixty million Americans, almost a quarter of the population, live within 50 miles of military-related nuclear waste storage sites. A decade after WIPP's opening, the department says, that number would be cut to four million."*

—New York Times, February 6, 1997<sup>10</sup>

U.S. nuclear weapons production has generated about 4 million cubic meters (140,000,000 cubic feet) of spent fuel, high-level waste, transuranic waste, and low-level waste (see chart below). (Not included in that total are even larger amounts of radioactive wastes from uranium mining and processing and contaminated soil from wastes dumped into the ground. Non-radioactive hazardous waste and solid wastes have also been generated in large quantities.)

By volume, TRU wastes constitute less than six percent of that legacy of nuclear wastes, and only about one-third of those TRU wastes are "retrievably" stored so that they can be packaged and shipped to WIPP. The large majority of the wastes were dumped into trenches until 1970. Since there are few reliable records of those "buried" wastes, the exact volumes and compositions of those materials are not known. But some of the buried wastes have migrated in the soil and in some cases into ground water, posing a significant threat because they are not contained. As a recent report by the Institute for Energy and Environmental Research, an independent nonprofit organization, states:

### RADIOACTIVE WASTES AT SITES SENDING TRU WASTE TO WIPP

	(In cubic meters)										
	--TO WIPP--		--- WASTES NOT DESIGNATED FOR WIPP ---							Total	% to WIPP
	STORIED	STORIED	Buried	Spent	Mixed		Buried				
	CH-TRU	RH-TRU	TRU	Fuel	High-Level	Low-Level	Low-Level	Low-Level			
Argonne (Illinois)	25			0.1		564	91		680.1	3.7%	
Hanford (Washington)	11,450	273	63,600	378	233,500		8,273	630,234	947,708	1.2%	
Idaho Nat. Eng. Lab (INEL)	39,300	200	57,000	493	11,170	18,634	25,736	149,899	302,432	13.1%	
Los Alamos (New Mexico)	11,262	94	14,000	1			6,801	224,198	256,356	4.4%	
Lawrence Livermore (Calif.)	257					644	455	9,102	10,458	2.4%	
Mound (Ohio)	274					3,392	142		3,808	7.2%	
Nevada Test Site	616					301	306	501,332	502,555	0.1%	
Oak Ridge/K-25/Y-12 (Tenn.)	1,339	1,842	176	17		18,414	48,763	442,382	512,933	0.6%	
Rocky Flats (Colorado)	1,978					5,463	13,749		21,190	9.3%	
Savannah River (S. Carolina)	6,977		4,870	130	126,500	1,616	7,050	688,976	834,121	0.8%	
Ames (Iowa)	0					18	1	200	219	0.0%	
Argonne-W (Idaho)	3	22		9			425		459	5.4%	
Battelle (Columbus, OH)	0			9		297	27	839	1,172	0.0%	
Energy Tech. (Canoga Park, CA)	2	6				425	1		434	2.0%	
Lawrence Berkeley (CA)	0.624					35	7		42.624	1.5%	
Paducah (KY)	2					5,200	4,962	7,613	17,777	0.1%	
Pantex (TX)	0.624					208	135	134	477.624	0.0%	
Sandia (Albuquerque, NM)	7		1	6		360	70	3,218	3,662	0.2%	
West Valley (NY)	43	529	1,350	11	2,200	14,936	230		19,299	3.0%	
Others	0	581		228		175,268	14,155	355,330	545,562	0	
<b>Totals</b>	<b>73,536</b>	<b>3,547</b>	<b>140,997</b>	<b>1,282</b>	<b>373,370</b>	<b>245,775</b>	<b>131,379</b>	<b>3,011,459</b>	<b>3,981,345</b>	<b>1.9%</b>	

Note: Numbers rounded. WIPP's capacity is 175,600 cubic meters, including 7,080 cubic meters of RH wastes.

Source: DOE, Integrated Data Base Report-1995: U.S. Spent Nuclear Fuel and Radioactive Waste Inventories, Projections, and Characteristics, DOE/RW-0006, Rev. 12, December 1996. Tables 0.6 and 0.7

This [buried] waste threatens many vital water resources including the Snake River Plain Aquifer, the Columbia River, and the Tuscaloosa Aquifer beneath the Savannah River Site.<sup>11</sup>

Oil and gas exploration and production in the immediate vicinity of WIPP until

October

1993.

DOE has resisted several attempts by Congress and the public to focus on the buried TRU waste problem. In 1982, Congress ordered DOE to develop disposal plans for all TRU wastes.<sup>12</sup> DOE has not done so. In the 1992 WIPP Land Withdrawal Act, DOE was required to survey all TRU wastes at all sites and make comprehensive recommendations to Congress for the disposal of all TRU wastes as a precondition for WIPP's opening. But DOE prevailed upon Congress to drop that requirement in the 1996 amendments act.

So while federal law requires that all TRU and high-level wastes be disposed in geologic repositories, DOE does not know how much buried TRU (and contaminated soil) exists, and it has no plans for

disposal other than to leave the waste in existing locations. It diverts attention from that serious problem by focusing on WIPP's opening and the transfer of less than one-third of the existing TRU wastes to WIPP over 35 years as "the solution" to the waste problem.

DOE's assertion that the public will be at less risk if WIPP opens is baseless. In fact, DOE has not even been able to document its claim, reported by the *New York Times*, that 60 million people live within 50 miles of the waste storage sites. DOE's own Waste Management Programmatic Environmental Impact Statement calculates fewer than 25 million people live within 50 miles of nine major TRU waste storage sites, all of which would still have wastes 10 years after WIPP opens.<sup>13</sup>

Indeed, all of the sites that are to send TRU wastes to WIPP have larger amounts of other nuclear wastes that will remain at those sites, unless other disposal sites are found. So all of the facilities are actually longterm waste storage or disposal sites. WIPP will simply be an additional waste disposal site, and the millions of people living near existing storage locations will continue to be at risk from the larger volumes and higher levels of radioactivity of wastes not coming to WIPP.

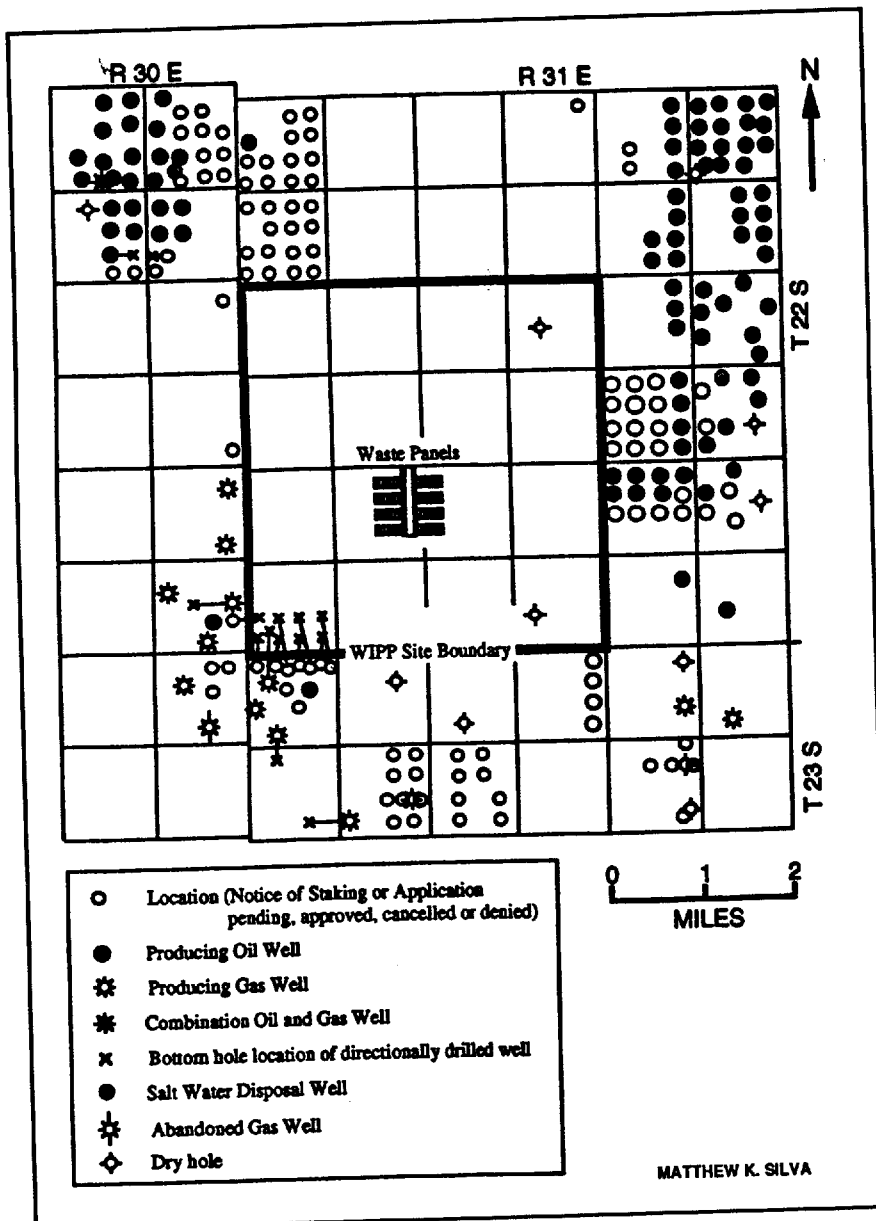
## WIPP: A TECHNICALLY FLAWED SITE

It is not surprising that a site selected to solve a political problem and which violated the initial siting criteria would have technical flaws that make it difficult to meet regulatory requirements to protect public health and safety. Although DOE has spent more than \$2.5 billion on WIPP over the past 25 years, many technical problems remain and many scientific issues have not been resolved.

## OIL, NATURAL GAS, AND POTASH

Southeastern New Mexico has long been the nation's leading production area for potash and a significant producer of oil and natural gas. So initial siting criteria were to avoid areas with potash, oil, and natural gas resources and to find locations more than two miles from any borehole. Mineral resources areas are to be avoided because exploration or production would compromise the integrity of the site and would contradict the fundamental reason for geologic disposal — to isolate wastes permanently.

Because of continuing oil and gas production in New Mexico, the WIPP site is virtually surrounded with exploration and production drillholes (see figure at left). Since 1990, more than 500 holes



were drilled within six miles of the WIPP site boundary.<sup>15</sup> Scientific work has shown that massive amounts of radioactivity, far exceeding the limits set by the EPA disposal regulations, could be released under likely conditions.

An example of an event that could occur is the "Hartman scenario," which is an actual event at the Hartman #2 Bates well, about 45 miles from the WIPP site. According to scientific testimony and a jury's verdict in a lawsuit brought by Mr. Hartman, thousands of gallons of brine injected to increase production at Texaco wells flowed two miles to reach the Hartman well.<sup>16</sup> Using information from the Hartman event, Dr. John Bredehoeft, a retired hydrogeologist from the U.S. Geological Survey and a former member of the National Academy of Sciences' WIPP Panel, examined the implications for WIPP. He concluded that a similar event would seriously compromise WIPP, even if the drilling occurred outside of the current site boundary. His model showed that fluids injected could travel through a non-salt "marker bed" into the waste rooms and carry large amounts of wastes offsite through the marker beds or to the surface in case of drilling into the site.<sup>17</sup>

Dr. Bredehoeft also examined how drilling directly into the waste rooms could cause releases and showed that drilling with air, currently used in the area because it is faster and cheaper in certain situations than mud drilling, could result in very large releases.<sup>18</sup>

The difficulties of containing the wastes during drilling are compounded by the large amounts of pressurized brine which underlie the site, about 800 feet below the waste rooms. The brine is under such pressure that it can flow to the surface or to the overlying aquifers, bringing along wastes (see graphic at right).

The salt at the WIPP site has been mined for centuries and is thought to be a good disposal material for TRU wastes because the surrounding rock will gradually move to fill in cavities mined out, thereby containing the wastes. But there are also operational difficulties with the facility, caused by the premature mining of the first seven waste rooms when DOE planned to open WIPP in the 1980s. Those rooms are collapsing, but DOE still intends to use them because they are the only underground areas available for the waste expected in 1998. Abandoning those rooms would delay WIPP's opening for several months, which is unacceptable to DOE.

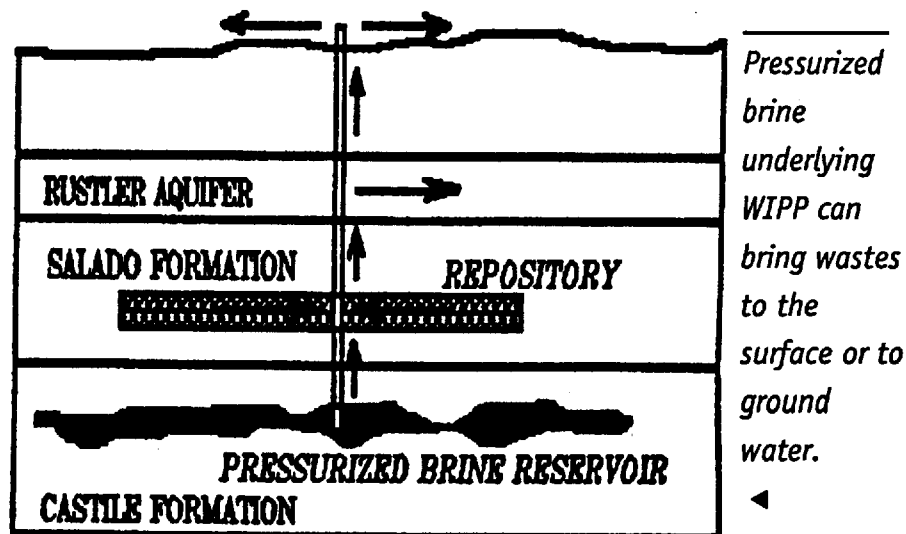
A longstanding technical concern is that salt and brine are highly corrosive to the carbon steel drums in which much of the waste is stored. Within a few years, the drums will corrode, generating gas and releasing wastes into the salt. Gas-pressurizing the repository would provide a mechanism to push waste into fractures in the marker beds or out of the waste rooms in the event of drilling intrusions. DOE's decision to use magnesium oxide backfill in each waste room significantly reduces the gas generation problem, except in cases of massive brine intrusions from the brine reservoir or fluid injection, which would overwhelm the capability of the backfill to absorb most of the brine and gas as they are produced.

### THE WASTES

There is also uncertainty about the composition and nature of the wastes because of the inadequate records of the waste's origin. Consequently, DOE now must determine what is inside each container in order to provide the necessary information to meet transportation, storage, and disposal requirements. DOE expects to accomplish that by using "process knowledge" (information about the types of waste materials generated by a particular manufacturing process), "real-time radiography" (taking X-rays of the drums), and "headspace gas sampling" (taking samples of the amount of gas in each drum to identify some of the toxic chemicals). While these techniques provide more data, they do not provide full information, for example, whether or not full bottles of explosive liquids are present. Full characterization requires opening each drum, which is more time-consuming

**"One can also hope that [our descendants] will be wise enough not to blame science alone for placing radioactive waste in one of the few places on earth where it will be blown to the surface."**

— Dr. Roger Y. Anderson<sup>14</sup>



and costly and would also increase exposures to workers unless it is done robotically. And the first few drums that were fully characterized demonstrated that current process knowledge characterization is frequently wrong.<sup>19</sup>

**"Asking EPA to oversee DOE is like asking Bambi to ride herd over Godzilla."**

- Rep. Howard Wolpe, July 21, 1992<sup>21</sup>

Moreover, for the remote-handled waste, not even mechanical characterization measures will be available

until at least 2002. Thus, if DOE opens WIPP before that time, it will have to change its waste loading design described in its permit applications, which provides for the RH wastes to be emplaced in the walls before the contact-handled wastes are stacked in the room.

Among other unresolved problems related to RH wastes are that the transportation containers are not certified and the portion of the building designated for handling RH wastes is more than 10 years old and obsolete; major changes will have to be made before it can be used.

**TRANSPORTATION**

Transportation concerns affect tens of millions of people along the transportation routes through 23 states. There is no question that accidents will occur, causing deaths and injuries. DOE's own most recent analysis estimates eight deaths and 39 injuries from accidents, even though it assumes that no one will be

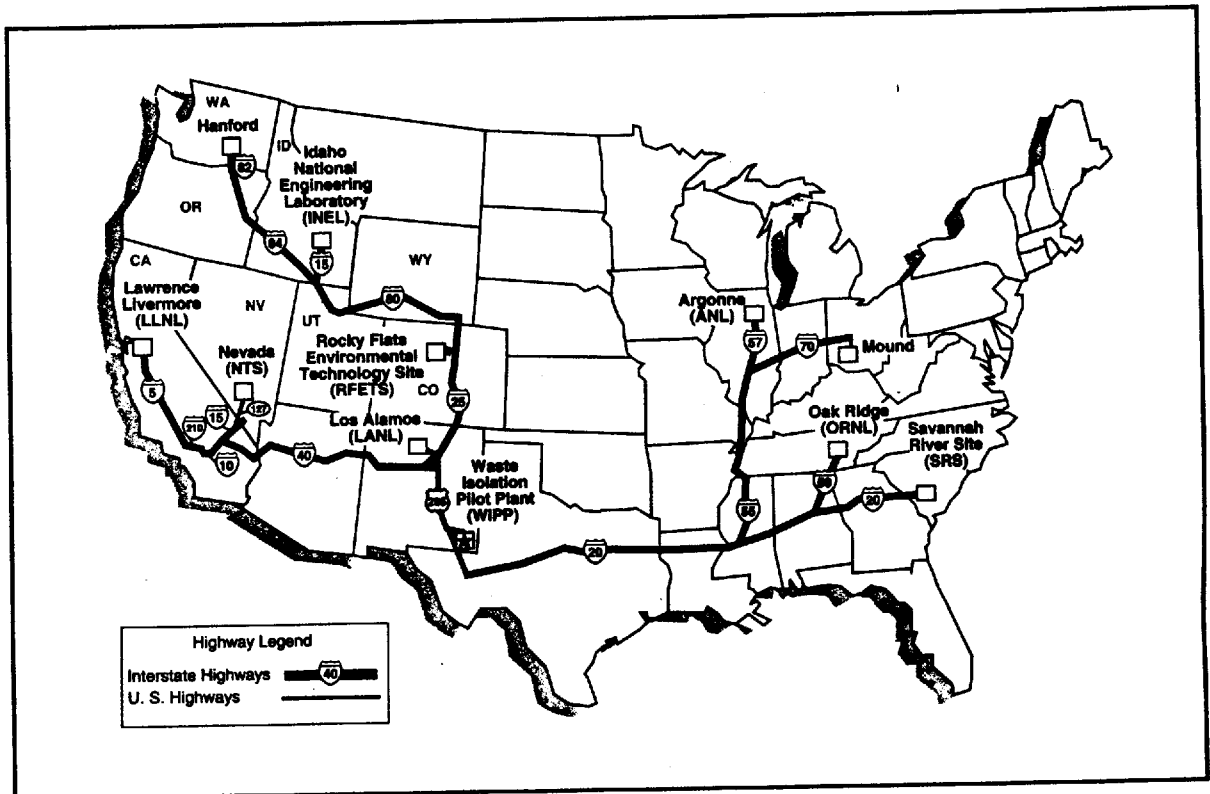
killed or injured from radioactive releases.<sup>20</sup> While some training and equipment have been provided to some of the hundreds of thousands of emergency response personnel along the transportation routes, and mock accidents have been staged in several states to provide actual experience, the staff turnover and the large cost of training all responders leave major questions about how well and how quickly emergency responders will react to accident reports and how well hospitals can treat accident victims. One waste accident could raise public awareness nationwide about waste transportation, and it could cause significant economic loss to any area that has been contaminated.

**REGULATORY AND LEGAL REQUIREMENTS**

While involved citizens knew in 1992 that EPA didn't have the technical capability to certify WIPP, they expected that with the funding provided by the WIPP Land Withdrawal Act and with eight to 10 years to prepare before DOE's certification application would be filed, that EPA would develop the necessary expertise and the political will to independently regulate WIPP. But DOE's decision to drop the Test Phase dramatically shortened the timeframe for its compliance application.

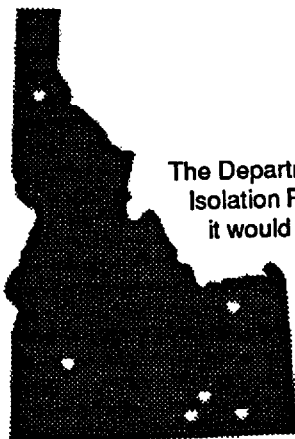
At the same time, some members of Congress, especially those from Idaho, with support from New Mexico's congressional delegation, pushed for a quick opening of WIPP. The Idaho governor signed a controversial agreement to allow more wastes from

Waste transportation routes pass through 22 states.





## IDAHOANS OPPOSE WIPP



The Department of Energy (DOE) has spent 20 years and \$2 billion trying to open the Waste Isolation Pilot Plant (WIPP) in New Mexico. If WIPP opens according to the latest schedule, it would be the first nuclear waste repository in the world and would store some of the less perilous waste in the DOE complex.

WIPP should not open. The selection of the WIPP site was not based on sound science. In fact, the first environmental impact statement on transuranic (TRU) waste disposal rejected WIPP's salt caverns. That was in 1980. WIPP's technical problems showed up right from the beginning, and the DOE has never been able to resolve them.

Furthermore, in exchange for creating environmental problems at WIPP, the DOE would not really be lessening problems elsewhere. The waste slated to leave Idaho, for instance, is not the waste that most directly imperils the Snake River Aquifer. INEL "WIPP waste" (65,000 cubic meters according to the governor's agreement; 28,000 cubic meters according to the DOE) is containerized and stored above ground. It's quite likely that the money spent operating WIPP will actually peel funds from imperative cleanup projects here in Idaho.

—Snake River Alliance Newsletter, Jan./Feb. 1997

the Navy's nuclear submarines to come into the state in exchange for DOE promises that wastes would begin going to WIPP by 1999.<sup>22</sup> A direct result of the pressure was the 1996 amendments to the WIPP Land Withdrawal Act. EPA was also pressured by DOE in secret meetings in December 1995 and January 1996 to weaken its proposed compliance regulations establishing requirements for DOE's certification application (CCA).<sup>23</sup> So it was no surprise that on October 23, 1997, less than one year after DOE submitted its initial CCA, EPA issued its proposed decision to certify WIPP.<sup>24</sup>

That proposed decision completely disregards some of the mechanisms that would cause massive releases of radioactivity, such as air drilling. It states that fluid injection will not cause major releases at WIPP, even though it provides no analysis of the Hartman well failure. It underestimates the likelihood of drilling into the site and the amount of brine reservoir releases, and it accepts DOE's waste characterization analysis, even for RH wastes that have not been characterized. It underestimates how quickly radionuclides could move through aquifers and fractured marker beds. It accepts some of DOE's models that are demonstrably wrong, such as the fracture model. Other serious problems with EPA's analysis will undoubtedly emerge during the public comment period.

EPA's bow to political pressure regarding WIPP will undermine the agency's credibility not only in New Mexico but also in other states being considered for waste sites. At a time when the Clinton administration and Congress are considering how to develop independent regulation of DOE facilities, EPA also has not issued cleanup standards for DOE sites.

*"DOE must obtain a RCRA permit from the State of New Mexico Environment Department before it can operate WIPP as a TRU waste disposal facility."*

—DOE, WIPP SEIS-II, September 1997<sup>25</sup>

When Secretary Watkins tried to open WIPP in 1991, one of the issues that DOE was sued over was not having a permit from the State of New Mexico under RCRA for the hazardous materials that are mixed with the radioactive wastes. While DOE has consistently maintained that some of the drums are purely radioactive and not covered by RCRA, it admits that the majority of wastes are mixed and are subject to that law. For the last several years, DOE has agreed that it would have a permit before it opened WIPP, making about a dozen such assertions in its second supplemental environmental impact statement, issued in September 1997.

But the New Mexico Environment Department (NMED) will not issue a permit by May 1998, so DOE is now saying that it will open WIPP without the permit. DOE and WIPP supporters have pressured the NMED Secretary to agree that the facility could open without a permit so long as it is with purely radioactive wastes.<sup>26</sup> If DOE opens WIPP without a permit, NMED's authority to regulate the facility will be seriously impaired, as the agency would be faced with either allowing unsafe conditions or requiring wastes already emplaced to be removed. The RCRA application is seriously flawed in many respects. Among the problems are that it includes inadequate characterization information for CH wastes and no characterization information for RH wastes. The waste handling building cannot safely handle RH wastes. It proposes

use of the seven rooms currently mined, despite the dangers those rooms pose to workers from roof falls and floors buckling.

*"This [preferred] alternative presumes that Idaho TRU waste is held until a [high-level-waste] repository is available; then the waste is disposed of there."*  
—DOE, WIPP EIS, October 1980<sup>27</sup>

*"DOE is not reconsidering the 1981 WIPP siting decision, and alternative disposal sites are not reasonable alternatives for analysis in SEIS-II.... Further consideration of disposing of TRU waste at the first high-level waste repository is not warranted."*  
—DOE, WIPP SEIS-II, September 1997<sup>28</sup>

DOE has now issued three environmental impacts statements (EIS) for WIPP — in 1980, 1990, and 1997. All of these EISs have major elements in common, including analysis that leaving the wastes where they are for at least a century will result in less radiation exposure to the public than if they are transported to WIPP. The majority of people who testified at the public hearings on the three draft statements, including those from states other than New Mexico, opposed using WIPP. People have objected to DOE's failure to address the buried TRU wastes, and have expressed concerns about transportation risks and the flaws of the WIPP site. The 1980 final EIS's preferred alternative, a result of Carter administration policy, was to not use WIPP. DOE nevertheless persists in promoting WIPP, ignoring its own analysis as well as negative public comment.

The current SEIS-II omits any discussion of alternative sites, including the preferred alternative from the final EIS, contains no analysis of disposal of all TRU

wastes, ignores many of the technical problems with the site, and inadequately analyzes transportation risks.

Since the National Environmental Policy Act requires an agency to prepare its EIS before making decisions, DOE publicly maintains that it has not yet made a decision to proceed with WIPP. Such statements ring hollow given all of DOE's public assertions and plans to make WIPP the "cornerstone" of its national waste cleanup program.

### WHAT HAPPENS NOW?

The regulatory processes will continue, with EPA's 120-day comment period (until February 27, 1998) on its proposed certification. Public hearings will be held in New Mexico in January 1998, and many citizens can be expected to participate. EPA plans to issue its final certification in early May 1998. Sometime in 1998 NMED will likely issue a draft RCRA permit, which will be subject to extensive adjudicatory hearings in which many citizens will also participate. A final permit could not be issued before late 1998.

Decisions from the two regulatory proceedings are subject to judicial review — EPA's decision in the federal courts of appeals and NMED's decision in the New Mexico Court of Appeals. Even before those final decisions could be litigated, lawsuits could be brought to challenge DOE's Record of Decision on the SEIS-II and any decision to open the facility without a RCRA permit.

Any successful litigation would at least delay WIPP's opening until additional work is done. If WIPP does not open in 1998, Congress will have another opportunity to consider continued spending for WIPP — currently estimated to cost at least \$19.1 billion during the next 35 years.

### FOR MORE INFORMATION

Department of Energy  
P.O. Box 3090  
Carlsbad, NM 88221  
800/336-9477  
<http://www.wipp.carlsbad.nm.us>

Environmental Protection Agency  
Office of Air and Radiation  
401 M St., SW  
Washington, DC 20460  
800/331-9477  
<http://www.epa.gov/radiation/WIPP/>

Southwest Research  
and Information Center  
P.O. Box 4524  
Albuquerque, NM 87106  
505/262-1862  
[src@igc.org](mailto:src@igc.org)

New Mexico  
Environment Dept.  
P.O. Box 26110  
Santa Fe, NM  
87502-6110



### CONCLUSION

Thousands of New Mexicans will be embroiled in the WIPP debate, public hearings, and litigation. While DOE's and EPA's intentions seem clear, it is uncertain how the courts will respond. Also uncertain is how citizens and policymakers in other states will react to any changes in WIPP's schedule and to the growing understanding that WIPP really does not solve their waste problems.

And clearly unpredictable is how, regardless of what happens with WIPP, the nation will address the vast volume of nuclear waste that is the enduring legacy of nuclear weapons production.

*DON HANCOCK is Director of SRIC's Nuclear Waste Safety Program.*

## ENDNOTES

1. *Accelerating Cleanup: Focus on 2006*. Discussion Draft. U.S. DOE, June 1997. DOE/EM-0327, p. ES-3.
2. *Containing the Cold War Mess: Restructuring the Environmental Management of the U.S. Nuclear Weapons Complex*. Institute of Energy and Environmental Research, October 1997, p. 9.
3. *Waste Isolation Pilot Plant Disposal Phase Final Supplemental Environmental Impact Statement (SEIS-II)*. U.S. DOE, September 1997. DOE-EIS-0026-S-2, Vol. I, pp. 3-57 to 3-65.
4. Public Law 96-164, December 29, 1979, 93 STAT 1265.
5. "The WIPP facility will dispose of defense transuranic (TRU) waste stored retrievably at the Idaho National Engineering Laboratory (INEL). By approximately 1990 all existing waste stored at INEL will have been removed to WIPP, and the WIPP facility would be in a position to receive and dispose of TRU waste from other defense waste generating facilities." Record of Decision for WIPP. 46 *Federal Register* 9162, January 28, 1981.
6. *State of New Mexico, et al v. Watkins*, 783 F. Supp. 628 (D.D.C. 1991 and 783 F. Supp. 633 (D.D.C. 1992). The D.C. Circuit Court of Appeals decision upholding the district court's injunction is *State of New Mexico, et al v. Watkins*, 969 F. 2d 1122 (D.C. Cir. 1992).
7. Public Law 102-579, October 30, 1992, 106 STAT 4777. Amended in Public Law 104-201, September 23, 1996, 110 STAT 2422.
8. Letter of October 21, 1993, from Tom Grumbly (DOE) to Robert Sussman (EPA).
9. Transuranic wastes are those elements greater than uranium on the periodic table. Concentrations of those elements greater than 100 nanocuries per gram of material of radionuclides with half-lives greater than 20 years are considered TRU (if they were not produced as high-level waste); lower concentrations are classified as low-level. The WIPP Land Withdrawal Act also prohibits TRU wastes with a surface dose rate of more than 1,000 rems per hour from being disposed at WIPP.
10. "Underground Haven, Or a Nuclear Hazard?" James Brooke. *New York Times*, February 6, 1997, p. A12.
11. *Containing the Cold War Mess*, p. 9.
12. Public Law 97-90, December 4, 1981, 95 STAT 1163.
13. *Final Waste Management Programmatic Environmental Impact Statement*. U.S. DOE, May 1997, DOE/EIS-0200-F, Vol. 1, p. 8-30. The author has twice written to DOE to request documentation and justification, including a comprehensive risk assessment, for the statements. The responses have not included such justification.
14. *The Pressurized Brine Reservoir Beneath the Waste Isolation Pilot Plant (WIPP): A Case History in the Politics of Science*. Roger Y. Anderson, 1991, p. 6. Dr. Anderson is a retired Professor of Geology at the University of New Mexico, and an early consultant to the federal government regarding the WIPP site because much of his research has focused on the Delaware Basin, the region where the WIPP site is located.
15. *SEIS-II*, Vol. I, p. 4-17, shows drillholes until 1993; dozens of additional holes have been drilled since then.
16. *Hartman v. Texaco*, CIV93-1349M, Federal District Court in New Mexico.
17. "The Hartman Scenario: Implications for WIPP." John Bredehoeft, March 1997.
18. "Air Drilling into WIPP." John Bredehoeft, October 1997.
19. *No-Migration Determination Annual Report for the Period October 1991 through August 1992*. U.S. DOE, February 1993. DOE/WIPP 92-057, Rev. 1.
20. *SEIS-II*, Vol. I, pp. 5-15 and 5-18.
21. Rep. Wolpe's comments occurred during House floor consideration of the WIPP Land Withdrawal Act. 138 *Congressional Record* H6310 (July 21, 1992).
22. *Public Service Co. of Colorado v. Batt*, No. CV 91-0635-S-EJL (D Id), October 16, 1995 Settlement Agreement.
23. The Compliance Criteria are published as 40 CFR 194, 61 *Federal Register* 5224 (February 9, 1996). DOE's pressure is documented in various memos in the EPA docket: Docket A-92-56, IV-H-2, 8, 9, 10, 11, 12.
24. 62 *Federal Register* 58792 (October 30, 1997). Public hearings on EPA's proposed certification will be held January 5-9, 1998, in Carlsbad, Albuquerque, and Santa Fe, New Mexico.
25. *SEIS-II*, Vol. III, p. 10-13.
26. Letter of September 26, 1997, from Susan M. McMichael, NMED Office of General Counsel, to Cooper Wayman (DOE) and Gloria Barnes (Westinghouse); letter of October 9, 1997, from Rep. John Heaton to Mark Weidler; and letter of October 14, 1997, from Weidler to Heaton.
27. *Final Environmental Impact Statement for the Waste Isolation Pilot Plant*. U.S. DOE, October 1980, pp. 1-7 and 1-8.
28. *SEIS-II*, Vol. III, p. 1-17.