

**Lessons Learned from WIPP:
New Mexico's Perspective**

for the Blue Ribbon Commission on America's Nuclear Future

**New Mexico Environment Department
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New Mexico has a long history with America's nuclear industry, beginning with the Manhattan Project and the Trinity Test at the dawn of the nuclear age and continuing through the end of the nuclear cycle with the disposal of radioactive waste from atomic energy defense activities at the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico. The state is also the home of two national laboratories, two underground nuclear explosion sites from the Atomic Energy Commission's Project Plowshare tests conducted in the 1960s, extensive uranium deposits in the northwest portion of the state, and a new uranium enrichment facility near Eunice.

As the host state to WIPP, the nation's only deep geologic repository for the disposal of transuranic (TRU) nuclear waste, New Mexico also has a unique perspective on the siting, opening, and operation of a nuclear waste repository. New Mexico's perspective is comprised of diverse opinions from private citizens, business interests, non-profit organizations, and elected officials and civil servants representing city, county, and state government. Each group has its core values and beliefs with respect to issues such as nuclear waste disposal.

There is general consensus among WIPP observers that it took much longer for WIPP to open, from preliminary siting of the repository in 1975, commencement of surface construction in 1981, and first receipt of waste in 1999, than had been anticipated. However, the fact that it did open in the face of significant opposition is in many respects remarkable. Clearly, the federal government retains full responsibility to provide for the ultimate disposition of long-lived radioactive wastes. Why did WIPP succeed in getting certified, permitted, and opened? What lessons can be learned?

If nothing else, the WIPP experience has shown that the federal government can site and open a nuclear waste repository. The road to opening WIPP succeeded in large part because of the significant roles played by numerous parties. While federal laws such as the National Environmental Policy Act (NEPA) provide for public involvement in critical environmental decisions, for the most part the federal government retains primacy in the final decision.

Finding a receptive host community is one critical component of siting a nuclear waste repository. The community of Carlsbad, New Mexico and nearby areas have benefitted from the economic impact of WIPP through a highly educated workforce, stable jobs, above average salaries, and the ability to seek additional benefits from the federal government in the form of appropriations for infrastructure and educational institutions. Indeed, the presence of WIPP was likely a major factor in ameliorating the local effects of the recent and ongoing nationwide economic downturn gripping the nation. For these reasons, New Mexico is keen to host and support WIPP and other major federal facilities in the state.

host community and state is a crucial part of the solution, and from the WIPP experience that are applicable to future

- *Seek early involvement of interested parties.* It is human nature to seek opinions and input from friendly sources that confirm our opinion rather than challenge them. A clear principle of building consensus is to identify and engage potentially affected parties early on in the process so all issues can be addressed at the beginning. A partial list of interested parties identified for WIPP includes:
 - The federal government and its contractors, including the WIPP owner and operators, their science advisors, and facilities around the country (known as generator/storage sites) with an inventory of potentially WIPP-eligible TRU waste
 - EPA, who certifies compliance with the radioactive waste disposal standards
 - The State of New Mexico and its executive agencies
 - Site-specific citizen advisory boards associated with each major generator/storage site who are eager to see their site cleaned up and all TRU waste sent to WIPP
 - States with generator/storage sites who are also eager to see TRU waste leave their state
 - Sovereign tribal nations through which nuclear waste is transported
 - Any independent technical oversight entity that might exist
 - The New Mexico Legislature, including the Legislative Radioactive and Hazardous Materials Committee, and other elected officials representing potentially affected parties
 - The New Mexico Attorney General
 - The New Mexico congressional delegation, and the delegations of other potentially affected states
 - The National Academy of Sciences, who evaluate technical and scientific aspects of repository issues
 - The City of Carlsbad and Eddy and Lea Counties, and any other affected local communities, including elected and other community leaders, who have taken different positions on the WIPP and its mission, or simply be proximal to WIPP-related activities such as transportation of TRU waste to WIPP
 - Citizen groups, both local to New Mexico and national, who may advocate for or oppose WIPP and its mission
 - The general population, including those living adjacent to generator/storage sites, transportation routes, the WIPP site, and anyone interested in nuclear waste disposal

- *Attempt to articulate a clear facility mission for the licensing, certification, or permitting phase.* The mission of the facility should also be stated early on and, subsequently tailored to adapt to requirements in the licensing or permitting phase. In the early days of planning for WIPP, the federal government preferred to reserve the right to have maximum flexibility to determine the mission as the project moved forward. Earliest plans envisioned WIPP as an unlicensed research and development facility for defense TRU waste, but the initial Draft EIS in 1979 identified the mission as a combined military/commercial nuclear waste repository

licensing. Congress directed the mission back to defense
authorizing the construction of WIPP passed later that year.

Questions regarding the mission of a high-level waste repository that should be addressed up front include: 1) Will it accept civilian waste, military waste, or both? 2) Will it accept high-level waste, used nuclear fuel, or both? 3) How will it be sized and will it have the potential to expand?

- *Seek consensus early and often.* Consensus does not mean that all potentially affected parties completely agree on each issue. In fact, true consensus is rarely encountered in the real world of public involvement. However, seeking consensus and identifying where there are differences provides the opportunity to then focus on those tough issues that can only be addressed through the process of informed consent with the opponents of the project. This is a process whereby all potential options are fully identified and evaluated, such that most people will go along with a particular course of action even if they know it's not reflective of their opinions, if they can be assured that it is the most reasonable choice among a universe of alternatives. At a minimum, this process will help identify those lingering issues that ultimately may have to be resolved in the courts, but again it is best to identify and deal with these issues early.
- *Recognize the multifaceted nature of the project – technical, political, social, economic.* A cursory review of the above list of potentially affected parties illustrates the spectrum of interests from which one may infer certain inherent biases with respect to nuclear waste disposal. It has been New Mexico's observation that representatives of some of the parties tend to view the nature of nuclear waste disposal issues in a narrow and thus simpler context, excluding the broader view which embodies more of the complexity of the issues. Very few view WIPP as a purely technical project.

Significant progress can be made to help parties obtain as much of what they seek when they recognize that nuclear waste disposal is not a problem solved by limiting the scope of issues weighed in the balance. The decision making process has evolved over time to be a very public process where multiple perspectives are taken into consideration thus accommodating different viewpoints. New Mexico's experience is that even opposing parties can be brought together, acknowledge their differences, and yet in the end hammer out solutions acceptable to all parties through the negotiation process.

- *Reveal and discuss scientific and technical issues openly as they arise.* Invariably, scientific investigations sometime yield unexpected findings or results. Whenever possible, share these problems openly even with project critics after identifying them. New Mexico's experience with the WIPP facility management and consultants is that they seek out interested parties' opinions on tough technical issues or even compliance problems encountered. This approach fits in with some of the other lessons learned, such as maintaining openness and transparency as well as helping to establish a reputation for being truthful and credible.

In the end, there is no recipe for guaranteed success in opening another nuclear waste repository. The President's Blue Ribbon Commission on America's Nuclear Future has a



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...the mistakes of the past and make recommendations for clear fuel and high-level waste. While there are recommendations, New Mexico believes that learning these lessons from our experience with WHT will greatly facilitate the potential for a successful outcome.