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WIPP Background

Prepared for Michael H. Jordan, CEO
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What Is the Waste Isolation Pilot Plant?

The Waste Isolation Pilot Plant (WIPP) is the nation's first deep geologic radioactive waste disposal facility. The U.S. Department of Energy (DOE) oversees the project; Westinghouse Waste Isolation Division (WID) is the management and operating contractor.

WIPP is designed and engineered to permanently isolate transuranic (TRU) radioactive waste left from the production of nuclear weapons, in turn, protecting humans and the environment. Congress passed a law prohibiting any high-level waste from going to the WIPP.

Located near Carlsbad, New Mexico, the underground facility lies 2,150 feet beneath the surface in a huge formation of thick, bedded salt approximately 250 million years old.

Why Salt?

The site selection process began in the 1950s, when the National Academy of Sciences conducted a nationwide search for geological formations stable enough to contain the TRU waste for thousands of years. The NAS recommended salt deposits.

Salt offers the following advantages:

- Most salt deposits are in stable geologic areas with little earthquake activity, ensuring the stability of a repository.
- The existence of salt deposits demonstrates the absence of flowing fresh water that could move waste to the surface. Such water would have dissolved the salt formation.

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- Salt is relatively easy to mine.
- Salt has a plastic property. It heals its own fractures. Therefore, it will slowly and progressively move in to fill mined areas and safely seal off the radioactive waste from the accessible environment.

Early History of WIPP

In 1970, the U.S. Atomic Energy Commission, predecessor to the DOE, decided to begin interim storage of transuranic waste, rather than shallow burial. In 1974, the WIPP site was selected as a potential site for a permanent disposal facility for this waste.

Through the DOE National Security and Military Applications of Nuclear Energy Authorization Act of 1980 (PL 96-164), Congress mandated the DOE to proceed with the WIPP, to provide "a research and development facility to demonstrate the safe disposal of radioactive wastes..."

Congress also directed the Secretary of Energy to enter into a "Consultation and Cooperation" agreement with the state of New Mexico, a result of pressures from New Mexico's citizens and political officials.

Within months after the DOE decided to proceed with construction of the WIPP, several law suits were filed by the New Mexico Attorney General and two New Mexico environmental groups. In July 1981 DOE and the state of New Mexico entered into a "stipulated agreement" to settle the litigation. This agreement stayed the lawsuits under the condition that the DOE promised to thoroughly test the facility design prior to waste emplacement.

So began the relationship between the DOE and the state of New Mexico.

What Is TRU Waste?

Transuranic waste earmarked to go to the WIPP for disposal consists of clothing, tools, rags, and other items contaminated with trace amounts of manmade radioactive elements – mostly plutonium.

Although TRU waste is not as hazardous as high-level waste, the presence of small amounts of long-lived radioactive elements in TRU waste requires its isolation from the human environment for thousands of years. Although these elements cannot penetrate the body through the skin, they can pose serious health hazards to people if ingested or inhaled.

These manmade elements are called "transuranic," because they are heavier than uranium – the heaviest naturally-occurring element.

Land Withdrawal

In the Land Withdrawal Act of 1992, Congress withdrew the WIPP site from public use for completion of the development of the nation's first TRU waste repository.

In 1996, an amendment to the Land Withdrawal Act expressed Congress' intent to begin waste receipt in November 1997, "...provided that before that date all applicable health and safety standards have been met and all applicable laws have been complied with."

Establishment of the Carlsbad Area Office

In 1993, the DOE established its Carlsbad Area Office (CAO) to review and integrate the safe management of all TRU waste in the United States. CAO's mission includes opening and operating the nation's first deep geologic disposal system for TRU waste and integrating all WIPP-related efforts at 10 major generator and storage sites nationwide.

In 1994, CAO conducted reviews and implemented a new mission which included an accelerated schedule for opening the WIPP. The CAO set precedent by involving stakeholders and regulators early in the regulatory process. The CAO developed a realistic and responsible decision-making basis for the most cost-effective path to the timely opening of the WIPP.

Current Status

CAO has submitted two major permit applications, both of which currently are undergoing rigorous reviews:

- Compliance Certification Application (CCA) to the U.S. Environmental Protection Agency (EPA). The CCA demonstrates and documents how the WIPP meets all regulatory requirements. This 84,000-page application was submitted to EPA in October 1996. EPA is reviewing the application for completeness and technical accuracy. CAO expects certification in October 1997.
- Resource Conservation and Recovery Act (RCRA) Permit application, to the State of New Mexico. EPA has designated New Mexico as RCRA regulator, so the CAO submitted the RCRA permit application in May 1995 to the New Mexico Environment Department. The CAO expects a final permit in 1997.

Background on RCRA

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Before the Secretary of Energy can decide in October 1997 whether to use the Waste Isolation Pilot Plant for permanent disposal of transuranic waste, the U.S. Department of Energy (DOE) must obtain a Resource Conservation and Recovery Act (RCRA) permit from the New Mexico Environment Department (NMED).

Congress passed RCRA in 1976 to establish procedures for managing hazardous waste. In addition to containing radioactive contamination, much of the waste to be disposed of at the WIPP contains hazardous chemicals. Therefore, the WIPP must have a permit to comply with the Act. The NMED, which was delegated permitting authority by the U.S. Environmental Protection Agency (EPA), is responsible for granting or denying a permit for the WIPP.

The permit application has two parts, Part A and Part B. Part A is a set form that identifies the types and quantities of waste intended to be disposed at the site. Generally, timely submission of a Part A and notification of hazardous waste activities qualify owners and operators of existing hazardous waste management facilities (which are required to have a permit) for interim status.

Facilities with interim status are treated as having been issued a permit until the EPA or its designee (in WIPP's case, the state of New Mexico) makes a final determination on the permit application. However, in a legal dispute over the deadline for submitting the WIPP's Part A, the New Mexico Attorney General has challenged the WIPP's interim status. The U.S. Department of Justice is representing the DOE on this issue.

Part B is an extensive narrative on how the facility will operate to meet the requirements of RCRA. Part B includes waste characterization information on the hazardous wastes to be handled at the WIPP, a description of hazardous waste procedures, security procedures and equipment, seismic and floodplain information, and closure and post-closure plans, including groundwater monitoring.

DOE initially submitted Part A and B of the application to the NMED in 1991. The original application described activities pertaining to **tests** with radioactive waste in the WIPP. DOE requested and was granted in September 1994 the opportunity to revise Part B because of its decision in 1993 to perform these tests with radioactive waste in national laboratories, rather than in the WIPP itself.

In May 1995, the DOE submitted its revised part B (which reflected the program changes) to pursue a permit for the disposal of transuranic mixed waste at the WIPP.

The NMED approval process began with an administrative review. The WIPP application contained all required administrative information, and the state determined the application administratively complete in July 1995.

NMED is reviewing Part B of the application to determine if it satisfies technical requirements of the Act. NMED can issue notices of deficiencies, to which DOE must respond within 30 days unless the NMED approves an extension. Deficiencies may be as simple as requesting a copy of procedures or as complex as rewriting one or more chapters of the application. Once the NMED reviews the DOE response, it has several options:

- Certify the application as technically adequate and write the draft permit.
- Certify the application as technically adequate and write the draft permit, but impose conditions that must be met.
- Issue an additional notice of deficiency.
- Declare the application as technically inadequate by issuing an intent to deny.

Once the New Mexico Environment Department prepares a draft permit or a notice of intent to deny, the public has 45 days for review and comment. If a draft permit is issued and the Secretary receives a timely written notice of opposition from anyone, the NMED and the DOE will respond to the request in an attempt to resolve the issues.

Anyone can request to the Environment Secretary that NMED conduct a public hearing on the draft permit. The Secretary can direct its department to hold a public hearing, with or without a request for one. After such a hearing, NMED considers the comments and issues or denies the permit.

The final decision becomes effective 30 days after the DOE has received the notice of the decision.

NMED can terminate a permit for noncompliance, or for failure in the application or during the permitting process to disclose fully all relevant facts. It can also terminate the permit if the applicant has misrepresented any relevant fact at any time, or to protect human health and the environment.

A standard RCRA permit is issued for a fixed term not to exceed 10 years. Several permit renewals will be necessary during the operation of WIPP.

Justification for Meeting With Governor Johnson

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Issue: If the New Mexico Environment Department does not issue the WIPP RCRA Permit in a timely manner, WIPP will not be allowed to open in November.

Action: Meet with New Mexico Governor Gary Johnson (505) 827-3000, and New Mexico Secretary of Environment John Weidler (505) 827-2855.

Encourage New Mexico to lead the nation in opening the WIPP. Emphasize the importance of the project to the future of nuclear energy. Stress the importance of the RCRA permit and its effect on WIPP's opening. Identify other business and industry executives who want to see WIPP open.

Expected results:

- The state will see the top-level attention the WIPP is getting.
- The state will expect to see other high-level business people express their interest in opening WIPP.
- The state will feel it has a vital leadership role in responsibly addressing the nation's nuclear waste management issues.
- The state will issue the WIPP RCRA permit in a timely manner.

Talking Points on RCRA

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Key Concerns:

- The state must issue the WIPP RCRA permit before the WIPP can open in November 1997. If the state postpones issuing the permit, it also delays WIPP's opening. I hear that the state may not issue this permit until 1998. I know Congress wants the WIPP to open in November.

Please consider these points:

- The Congressional schedule can be achieved if New Mexico provides the attention this permit and this project deserves.
- DOE submitted to New Mexico's Environment Department Part B of the RCRA Permit application in May 1995. To date, the state has had 21 months to review the application. That is substantially more time than the Environmental Protection Agency has to review the 84,00-page Compliance Certification Application.
- The Environmental Protection Agency is committed to continuing to provide technical assistance to New Mexico to complete the permitting process in a timely manner.
- WIPP is important to the environmental good health of our nation and our people. It has been more than 20 years in the making. DOE has met its responsibility by submitting a permit application and responding to the state's every request.
- The state must consider all stakeholders – nationwide – who are counting on the WIPP to remove transuranic waste from their environments and safely and permanently isolate it underground at the WIPP.

- **As a corporate executive in the nuclear industry, I encourage the state to show leadership and responsibility by issuing this permit this summer.**
- **As a citizen of the United States, I encourage the state to show leadership and responsibility by issuing this permit this summer.**
- **As a property owner in Santa Fe, I encourage the state to show leadership and responsibility by issuing this permit this summer.**
- **As a future resident of New Mexico, I encourage the state to show leadership and responsibility by issuing this permit this summer.**

Conclusion:

- Congress agreed on an opening date – November 1997.
- The DOE has met all its obligations to ensure the WIPP is safe, including 20 years of exemplary science and engineering, thorough documentation, and commitment to work with NMED and respond to NMED's requests and requirements.
- I encourage New Mexico to lead the way to the opening of WIPP by proceeding with the permitting process and issuing the permit in a timely manner.