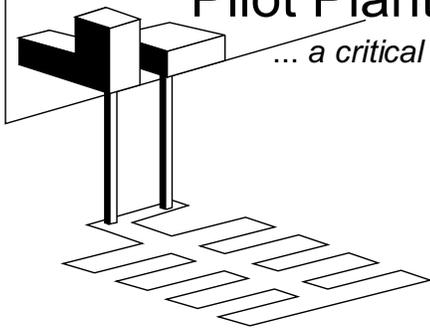


# Waste Isolation

## Pilot Plant

*... a critical step toward solving the nation's nuclear waste disposal problem*



# Why WIPP?

WIPP, or the Waste Isolation Pilot Plant, became the nation's first operating underground repository for defense-generated transuranic radioactive waste on March 26, 1999. The U.S. Department of Energy's (DOE) Carlsbad Field Office administers the WIPP project and its associated programs.

Located in southeastern New Mexico, the WIPP is designed to demonstrate the safe, permanent disposal of transuranic radioactive waste left from the production of nuclear weapons. Project facilities include excavated rooms 2,150 feet (almost one-half mile) underground in an ancient, stable salt formation.



**The TRUPACT-II transporter approaches the WIPP site.**

WIPP is a critical step toward solving the nation's nuclear waste disposal problem. WIPP is setting the standard for cost-effective, safe, and environmentally sound geologic disposal of defense-related radioactive waste. It is the benchmark for the disposal of other categories of nuclear waste. Current temporary storage of nuclear waste was never intended to provide a permanent environmentally sound solution to nuclear waste. WIPP is essential to reducing risks to public health, workers, and the environment posed by wastes that are now stored at 5 major DOE sites and 18 other locations across the country. The nation must meet its responsibility to solve this problem so it won't be passed to future generations.

Proven environmentally safe, DOE used laboratory and field tests, along with computer modeling, to demonstrate WIPP's validity as a permanent disposal solution. The U.S. Environmental Protection Agency (EPA) certified in May 1998 WIPP's ability to protect the environment and human health, while assuring continued compliance through periodic recertification.

## **Providing safe transportation**

WIPP's transuranic waste transportation system is setting the standard for safety. WIPP trucks, operated by highly trained drivers, will carry transuranic waste in Nuclear Regulatory Commission-certified containers. Each shipment will be monitored by a satellite tracking system. The trucks meet the highest federal transportation standards and will follow procedures for inclement weather, safe parking, and notification to the states, tribal and local responders. WIPP-specific training of state, tribal, and local emergency response personnel is a key element of this safe transportation system.

## **What is transuranic waste?**

Transuranic waste consists of clothing, tools, rags, residues, debris and other such items contaminated with small amounts of radioactive elements -- mostly plutonium. These elements are radioactive, man-made, and have an atomic number greater than uranium -- thus transuranic (beyond uranium).

Transuranic waste began accumulating in the 1940s with the beginning of the nation's nuclear weapons program. A synthetic byproduct of the nuclear weapons program, this waste remains radioactive for thousands of years. Sound environmental practice requires this material to be permanently isolated, protecting human health and the environment for future generations. Congress declared that DOE must not allow commercial or high-level waste at WIPP -- only defense-related transuranic waste.

## **WIPP authorized**

As early as the 1950s, the National Academy of Sciences recommended disposal of radioactive waste in stable geologic formations, such as deep salt beds. Government scientists searched for an appropriate site during the 1960s, testing the area of southeastern New Mexico in the 1970s. In 1979, Congress authorized the WIPP. DOE constructed the facility 26 miles southeast of Carlsbad, New Mexico, during the 1980s.

In late 1993, DOE created the Carlsbad Area Office to lead the nation's transuranic waste disposal efforts. In 2000, the Carlsbad Area Office was elevated in status to become the Carlsbad Field Office, (CBFO), taking on significant new responsibilities. These include protecting the environment

along the U.S. - Mexico border and serving as an international center for the study of waste management. The Carlsbad Field Office coordinates the transuranic program at waste-generating/storage sites and national laboratories, and other participants involved in developing the permanent disposal of this man-made radioactive waste. For program and policy direction, the manager reports to the DOE Assistant Secretary for Environmental Management in Washington, D.C., and receives administrative support from DOE's Albuquerque Operations Office.

The mission of DOE's Carlsbad Field Office is to protect human health and the environment by opening and operating WIPP for safe disposal of transuranic waste and by establishing an effective system for management of transuranic waste from generation to disposal.

## Oversight

Numerous organizations are involved with the WIPP program, including the EPA, which is responsible for certifying whether radioactive and hazardous material disposal requirements are met; the state of New Mexico, which regulates the handling of the hazardous components of mixed wastes (waste that contains both radioactive and hazardous materials); and the Environmental Evaluation Group, an independent technical oversight group that participates in and comments on various WIPP issues and activities. Several other agencies, committees, and panels monitor progress at the WIPP and contribute to the project's development through regulation, review, and comment at the state and federal levels.



U.S. Department of Energy  
Carlsbad Field Office  
The Waste Isolation Pilot Plant

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Rev. January 2003