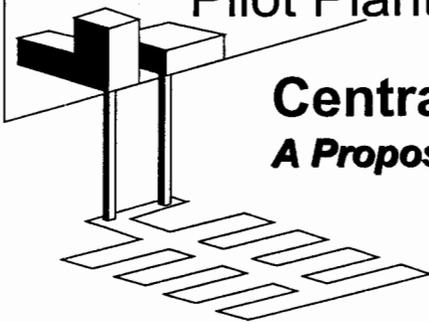


## Waste Isolation Pilot Plant



# Centralized Waste Characterization at WIPP

## *A Proposal for Breaking the Transuranic Waste Gridlock*

### **Summary and background**

When the U.S. Department of Energy's (DOE) Waste Isolation Pilot Plant (WIPP) began disposal operations March 26, 1999, DOE officials had a clearly defined path forward. The plan was to safely and efficiently clean up defense-generated transuranic radioactive waste temporarily stored at 23 sites nationwide.

Before waste is shipped to WIPP, however, the hazardous waste facility permit issued by the New Mexico Environment Department (NMED) in October 1999 requires that the waste to be properly characterized. Characterization means all activities necessary to determine information about the physical, chemical, and radiological properties of transuranic waste needed to properly manage and dispose of the waste at WIPP. This is where the transuranic waste "gridlock" occurs.

Currently, only a few of the larger transuranic waste sites have facilities to fully characterize the waste for disposal at WIPP. Conversely, sites temporarily storing smaller quantities of waste have neither the facilities nor the funding for characterization.

In the past, DOE has said it would either transport the waste from small quantity sites to a larger waste-generating facility, or build facilities at these small sites to characterize waste.

The problem with the first option is that waste would have to be transported on the nation's highways twice – once for characterization at a larger DOE facility and again for final disposal at WIPP. Not only is this option expensive, it also increases the amount time for site cleanup and unnecessarily adds additional potential risk to the public and environment.

The second option – to build waste characterization facilities at 18 or more small quantity sites – isn't a practical solution either. Also, each site that constructs a waste characterization facility must have established procedures and processes in place. The DOE, EPA and NMED must approve these procedures and processes as part of each site's waste characterization program and certify the site for characterization. Obtaining certification is time consuming and averages \$2 to \$5 million per site. In the meantime, waste remains at these sites and in these states for years, rather than safely and permanently disposed deep below the earth's surface at WIPP.

### **What is proposed**

The DOE proposes a new approach that is safe, cost-effective, and efficient, which means resources can be redirected to meet other environmental restoration priorities. The plan consists of two main components:

1. Dispatch private contractors with specialized mobile equipment to characterize waste for transportation at each of the 18 small quantity sites. Once the waste is characterized for transportation, it would be sent to WIPP.

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2. In parallel with waste characterization activities at each of the sites, the DOE plans to add equipment and processes at WIPP where waste will undergo final characterization before it is permanently disposed.

Once at WIPP, the transuranic waste characterization activities would be subject to the same quality assurance standards that are required at the larger transuranic waste sites like the Rocky Flats Environmental Technology Site, the Idaho National Engineering and Environmental Laboratory, and the Hanford Site.

This level of scrutiny will ensure that data generated by waste characterization at WIPP is of sufficient quality to comply with stringent waste acceptance criteria. Records of these activities will be maintained at WIPP for inspection by NMED.

## **Conclusion**

The main advantage of a waste characterization facility at WIPP, in addition to significant cost savings and greater efficiency, would be to accelerate disposal of transuranic waste from numerous sites with small inventories. The facility would also allow DOE to characterize waste from sites with larger inventories, thereby allowing these sites to expedite waste shipments to WIPP.

## **For more Information**

For more information about this proposal or to be placed on the WIPP mailing list, call the WIPP Information Center at 1-800-336-WIPP (9477). Or you may visit the WIPP Home Page at [www.wipp.carlsbad.nm.us](http://www.wipp.carlsbad.nm.us).

**If you prefer, write to:**  
WIPP Information Center  
U.S. Department of Energy  
Carlsbad Area Office  
P.O. Box 3090  
Carlsbad, NM 88221

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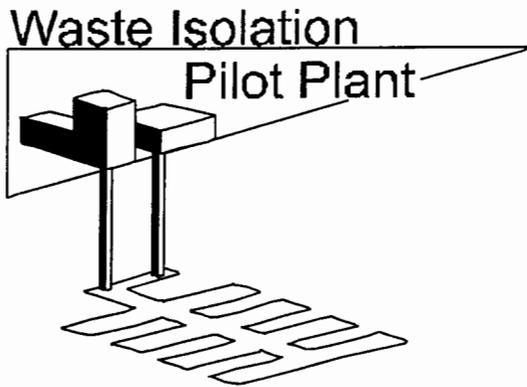
## ***Transportation Characterization vs. Disposal Characterization***

**Characterization activities for transportation** can be standardized and performed by DOE using mobile systems that do not require transferring of waste to larger sites or constructing costly characterization facilities. Waste characterization for transportation involves the identification and removal (or treatment) of items prohibited from being transported in Nuclear Regulatory Commission-certified shipping containers (like the TRUPACT-II).

**Characterization activities for disposal** means all activities necessary to determine whether the physical, chemical, and radiological properties of the waste are within the requirements of the WIPP's primary regulators (EPA and NMED). Writing adequate procedures for transuranic waste disposal characterization is expensive, time consuming, and requires extensive coordination with the DOE's Carlsbad Area Office, which administers the WIPP and National Transuranic Waste programs. Once a site's program is audited, the Carlsbad Area Office must approve the facility's characterization program before waste can be disposed. Both NMED and EPA must also evaluate the site's waste characterization program and make independent judgements of its adequacy.

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## **DOE Proposes to Increase Aboveground Storage Capacity, Expand Storage Locations, and Duration of Storage**

### ***Summary and background***

The U.S. Department of Energy (DOE) has proposed a modification to its Hazardous Waste Facility Permit for the Waste Isolation Pilot Plant (WIPP) that would support establishment of a centralized waste characterization facility at WIPP.

As part of a Class 2 modification request, DOE proposes to 1) increase aboveground storage capacity for transuranic radioactive waste by 25 percent, 2) remove the time limit for temporarily storing waste aboveground at WIPP, and 3) expand the capacity of storage areas within the WIPP Waste Handling Building. These proposed changes, which the DOE submitted to the New Mexico Environment Department (NMED) on July 24, 2000, will not adversely affect worker safety, human health, or the environment. NMED issued the Permit in October 1999.

The DOE's main priority at WIPP is to safely dispose of transuranic waste from United States defense activities in an expedient, cost-effective and environmentally sound manner so that DOE facilities with this waste can be cleaned up as quickly as possible. The permit requires waste characterization prior to permanent disposal at WIPP. This presents a problem for some DOE sites that are storing only small quantities of transuranic waste and lack the needed characterization facilities.

### **What is Waste Characterization?**

Waste characterization is the process to identify and describe the physical, chemical, and radiological properties of transuranic waste. DOE uses this information to determine whether the waste meets regulatory requirements for disposal at WIPP.

To resolve this problem, DOE is proposing to locate a centralized waste characterization facility at WIPP. Under this proposal, waste would be transported directly to WIPP where it would be characterized for disposal.

***What is Proposed?***

In an effort to operate the WIPP facility in an environmentally sound and fiscally responsible manner, DOE proposes the following:

- Modify the existing Permit to increase aboveground storage capacity in the Waste Handling Building by 25 percent.

Under the current Permit, DOE is allowed to store 122 cubic meters of transuranic waste on site. An increase of 25 percent would allow DOE to temporarily store an additional 30.7 cubic meters of waste. Coupled with the increase in storage capacity will be an expansion of the storage areas within the Waste Handling Building to allow more effective waste management at WIPP.

- Remove the time limit for temporarily storing waste containers aboveground at WIPP before they are permanently disposed underground.

Under the current Permit, DOE is allowed to store waste containers on the surface for 60 days. This change will allow DOE to accept waste for characterization without impacting the receipt of waste for disposal from other DOE sites (e.g., Rocky Flats Environmental Technology Site, Idaho National Engineering and Environmental Laboratory, and the Hanford Site).

***For more Information***

For more information about transuranic waste shipments and procedures, or to be placed on the WIPP mailing list, call the WIPP Information Center at 1-800-336-WIPP (9477). Or you may visit the WIPP Home Page at [www.wipp.carlsbad.nm.us](http://www.wipp.carlsbad.nm.us). If you prefer, write to:

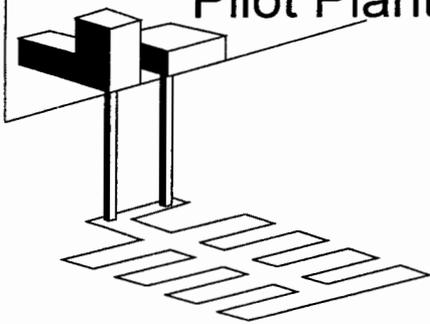
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The Waste Isolation Pilot Plant

## Waste Isolation

### Pilot Plant



## DOE Proposes to Modify the Audit and Surveillance Program For Waste Characterized at WIPP

### **Summary and background**

The U.S. Department of Energy (DOE) has proposed a modification to its Hazardous Waste Facility Permit for the Waste Isolation Pilot Plant (WIPP) that would support establishment of a centralized waste characterization facility at WIPP. The proposal requests – for transuranic waste characterized at WIPP – that DOE's in-house, New Mexico Environment Department (NMED)-regulated assessment program be substituted for the current audit and surveillance program. This proposed change, which DOE submitted to the NMED on July 24, 2000, will not adversely affect worker safety, human health, or the environment. The NMED issued the Permit in October 1999.

The intent of the current audit and surveillance program is to ensure transuranic waste sites have implemented and comply with the WIPP Waste Analysis Plan (WAP). Specifically, the WAP establishes requirements for the sites' waste characterization activities.

### **What is Proposed?**

The audit and surveillance program was established so that NMED could indirectly oversee compliance with the WAP at sites located outside of New Mexico. Since the WIPP facility is already under the regulatory authority of NMED, the need for a separate audit program to ensure compliance with the WAP is not necessary for waste characterized at WIPP.

DOE will develop a quality assurance project plan to ensure data generated during waste characterization at WIPP meets regulatory requirements for disposal. Additionally, WIPP will undergo independent procedural and operations assessments in accordance with the quality assurance project plan. These assessments will achieve the same objectives as the current audit and surveillance program.

### **What is Waste Characterization?**

Waste characterization is the process to identify and describe the physical, chemical, and radiological properties of transuranic waste. DOE uses this information to determine whether the waste meets regulatory requirements for disposal at WIPP.

This level of scrutiny will ensure that data generated at WIPP complies with the stringent WAP. Records of these activities will be maintained at WIPP and are available for inspection by NMED at any time. Hazardous waste activities performed at WIPP are under the direct regulatory purview of NMED.

***For more  
Information***

For more information about transuranic waste disposal, or to be placed on the WIPP mailing list, call the WIPP Information Center at 1-800-336-WIPP (9477). Or you may visit the WIPP Home Page at [www.wipp.carlsbad.nm.us](http://www.wipp.carlsbad.nm.us). If you prefer, write to:

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