



RECERTIFICATION OVERVIEW

2005 EPA WIPP RECERTIFICATION FACT SHEET No.1

The WIPP Site

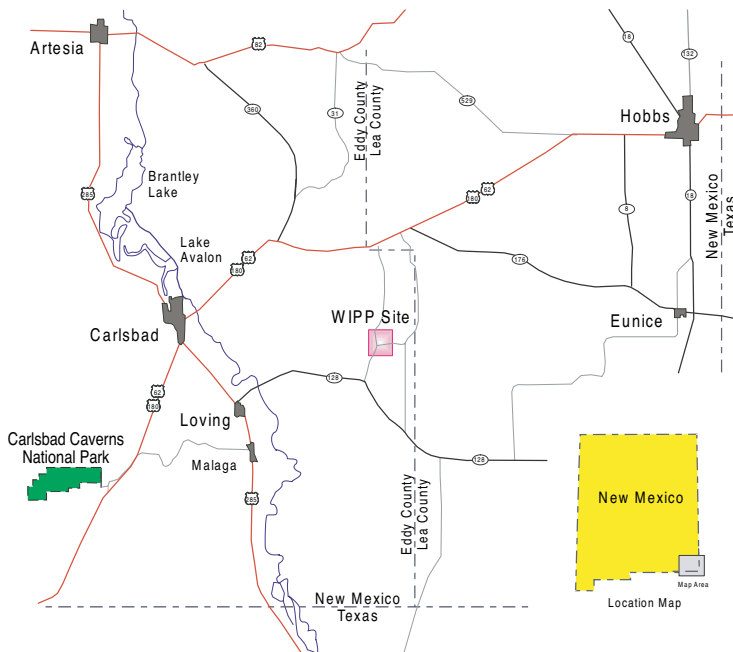
The Waste Isolation Pilot Plant, or WIPP, is the world's only permanent disposal site for transuranic (TRU) radioactive waste created during the research and production of nuclear weapons. The WIPP site is located outside of Carlsbad, New Mexico, where TRU waste is entombed in a 2,000 foot thick layer of natural salt 2,150 feet below the surface.

The U.S. Department of Energy (DOE) currently estimates that 137,080 cubic meters of TRU wastes from DOE sites across the country will ultimately be disposed of at WIPP. However, that number may increase as high as the WIPP capacity of 175,570 cubic meters.

Recertification Facts

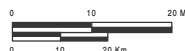
Recertification requires DOE to submit documentation of WIPP's continuing compliance with the disposal regulations to EPA no later than five years after first receipt of TRU waste for disposal, and every five years thereafter. WIPP began waste disposal operations on March 26, 1999. In March 2004, DOE submitted the first Recertification Application to EPA.

- The recertification process is not a reconsideration of the decision to open WIPP, but a process to reaffirm that the WIPP meets all requirements of EPA's disposal regulations.
- Recertification ensures that WIPP is operated using the most accurate and up-to-date information available.
- DOE cannot propose significant changes during the recertification process; EPA will address any such proposals in a separate process.



The WIPP repository will limit radionuclide releases to the accessible environment and therefore protect people and the environment from exposure to these wastes for at least 10,000 years.

- Federal Highway
- State Highway
- Other Roads



EPA's Role at WIPP

While the WIPP facility is managed by DOE, EPA has responsibility for ensuring that the facility complies with EPA's radioactive waste disposal regulations.

EPA's Recertification Process

1. Completeness Determination

EPA needs to first determine that the Recertification Application addresses all the required regulatory elements and provides sufficient information for EPA to conduct a full technical evaluation.

The completeness evaluation is conducted according to guidelines described in EPA's WIPP Compliance Application Guidance, Recertification Guidance, and numerous letters to DOE over the past few years that describe EPA's priorities for recertification. Since receipt of Recertification Application, EPA has sent four letters to DOE requesting additional information in the following areas:

- Waste inventory
- Waste chemistry
- Performance assessment
- Monitoring.

All EPA requests and DOE responses can be found on EPA's WIPP website.

EPA will provide DOE written notification of its completeness determination and publish the determination in the Federal Register. A completeness determination is expected in Summer 2005.

Once a completeness decision is made, EPA has six months to finish a technical evaluation of the application and reach a final decision regarding WIPP's continued compliance with waste disposal regulations.

2. Technical Review

Once all the information for the recertification application is complete, EPA begins a more in-depth technical review. The Agency focuses its review on areas of change identified by DOE, in order to ensure that their effects have been addressed.

DOE must demonstrate that WIPP will continue to meet all disposal regulations before EPA will approve recertification. EPA must provide DOE a formal response on the application within six months of the completeness determination. EPA has already begun the technical review on many areas of the Recertification Application.

Waste Regulations

At the WIPP, the specific release limits are based on the amount of waste in the repository at the time of disposal. While these limits allow for the release of small amounts of radioactive material into the environment, they do not pose a threat to human health and the environment. Regulations regarding the release of radioactive material, called radionuclides, can be found in Title 40 of the Code of Federal Regulations, Part 191. These regulations dictate that releases of radionuclides to the accessible environment must be unlikely to exceed specific limits for 10,000 years after disposal. A radionuclide is an unstable form of an element, with the capability to emit radiation through spontaneous transformation to a more stable form.

For more general information on radiation please see the EPA's "Understanding Radiation" website at: www.epa.gov/radiation/understand/index.html

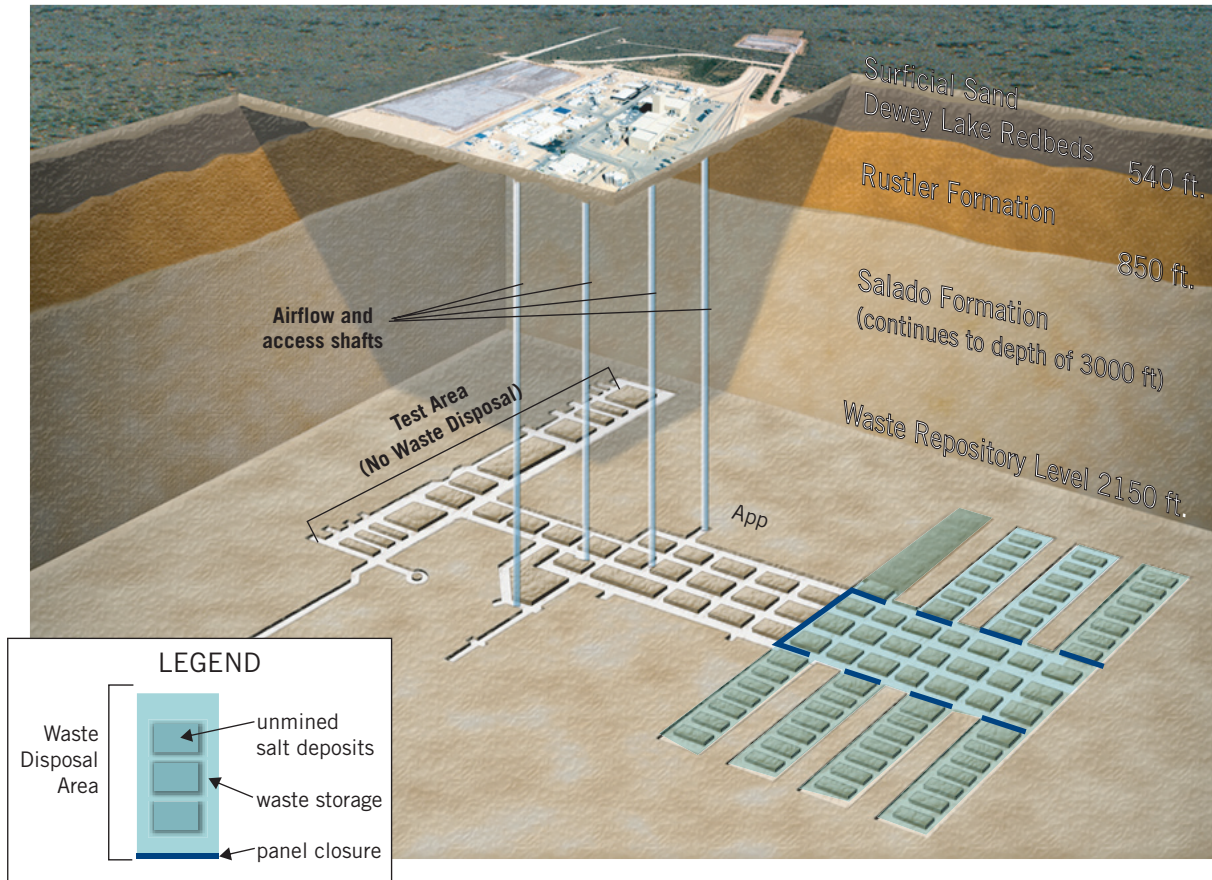
Transuranic (TRU) Waste

"Transuranic" literally means "beyond uranium." Transuranic waste is a specific type of radioactive waste that includes elements that are heavier than the element uranium. These elements, including plutonium, americium, curium, and neptunium are created during the production of nuclear weapons. Transuranic waste can include not only the transuranic elements themselves, but also contaminated soils, and items such as gloves, tools, and protective clothing used to handle TRU waste.

While TRU waste is identified primarily by the presence of transuranic elements and how the waste has been managed, it is further defined by concentration. Radioactive material is measured in curies. TRU waste has a concentration of over 100 nanocuries (or one hundred millionth of a curie) per gram. Waste with a concentration of under 100 nanocuries per gram is classified as low-level radioactive waste, even if it contains transuranic elements.

Waste Isolation Pilot Plant

- U.S. Department of Energy Facility
- Designed for permanent disposal of transuranic radioactive waste



This diagram shows underground orientation of the WIPP repository 2,150 feet beneath the surface.

Viewing the Recertification Application

The Recertification Application is a very large document spanning eight volumes, each with 500-1,000 pages. All but the first volume are appendices and references. An Executive Summary provides a clear overview of the entire application. The application is available at EPA's WIPP website where it can be downloaded as an Adobe portable data file (PDF).

The format of the Recertification Application follows that of the original Certification Application, but it is color-coded to indicate where new information has been inserted, and old information has been updated:

- Text that has remained unchanged is in black.
- Text that has been deleted is crossed through in black.
- New and updated text appears in blue italics.

What's New in the Recertification Application?

The following areas of the Recertification Application contain significant new or updated information:

- **Quality Assurance:** DOE has extensively revised this chapter to include results of new Quality Assurance (QA) Programs, and updates to existing QA programs. See Chapter 5 of the Recertification Application.
- **Peer Review:** This section was revised to include peer review reports performed since the submission of the original Certification Application. See Chapter 9 of the Recertification Application.
- **Performance Assessment:** DOE conducted a new performance assessment for the Recertification Application (recertification performance assessment), to demonstrate that limits for the release of radioactive materials continue to be met. See Chapter 6 of the Recertification Application.
- **Waste Characterization:** DOE provided an updated inventory of the waste disposed of at WIPP and for waste that will potentially go to WIPP. See Chapter 4 of the Recertification Application.

How to Find Out More About WIPP Recertification

EPA has prepared a series of fact sheets and technical issue papers to provide information on the WIPP recertification process. The fact sheets provide basic information on key issues of WIPP recertification. The issue papers provide more in-depth, technical information on selected issues identified as important by stakeholders. All documents listed here are available on EPA's WIPP website.

Fact Sheets

Fact Sheet # 1 – Recertification Overview. Provides general information on the recertification process.

Fact Sheet # 2 – Public Information and Input on WIPP. Provides information on how the public can learn about WIPP, stay up to date on current topics, and provide input to the EPA on WIPP related issues.

Fact Sheet # 3 - Performance Assessment. Provides information on the new Performance Assessment (PA) conducted for the Recertification Application. The PA is an assessment of the likelihood that the WIPP will meet release limit requirements. EPA required DOE to conduct a PA as part of the original Certification Application, and has now directed DOE to conduct a new PA for the Recertification Application. This fact sheet also includes information on human intrusion.

Fact Sheet # 4 – TRU Waste Inventory. Summarizes the Waste Inventory quantities, locations, and waste material parameters for TRU waste currently stored at DOE sites across the country.

Fact Sheet # 5 – Groundwater. Provides information on how DOE monitors the flow of groundwater on and around the WIPP site to better understand the potential pathways for releases of radioactive material.

Fact Sheet # 6 – Karst. Provides information on EPA's response to stakeholder concerns about the presence of karst at the WIPP site. Karst is a geologic feature resulting from the dissolution of rocks, creating sink-holes and large voids.

Issue Papers

Issue Paper #1 – Public Comment and EPA Response. Provides a summary of public comment and EPA response on Recertification issues.

Issue Paper #2 – WIPP Drilling Rate. Some stakeholders are concerned that the estimated deep drilling rate is underestimated in PA calculations. This issue paper details the results of DOE calculations to determine the impact of “doubling the drilling rate.”

Issue Paper #3 – Hanford Tank Wastes and K-Basin Sludges. The Land Withdrawal Act stipulates that DOE shall not dispose of high-level radioactive wastes (HLW) at the WIPP site. Recently, stakeholders have expressed concerns regarding the potential waste streams referred to as the Hanford Tank Wastes and K-Basin Sludges. This issue paper provides information on EPA's review of these wastes and their potential for disposal at the WIPP site.

Issue Paper #4 – Station A Air Monitoring. Air Monitoring at Station A is of particular interest to stakeholders because it monitors the primary pathway for any release of waste from the WIPP during the waste emplacement phase. This paper addresses the ability of DOE to monitor and capture radioactive releases, if they were to occur, at the WIPP site.

Issue Paper #5 – Stakeholder Karst Proposal. Provides information on EPA's response to a request by the stakeholder organizations Citizens for Alternatives to Radioactive Dumping and the Loretto Community to further consider the existence of karst at the WIPP site using specific technologies.

All fact sheets and issue papers can be found on EPA's WIPP web site at <http://www.epa.gov/radiation/wipp>.

Additional information about WIPP can also be found at DOE's web site at <http://www.wipp.ws>.

Fact Sheets in this Series:

Recertification Overview	Fact Sheet No. 1
Public Involvement	Fact Sheet No. 2
Performance Assessment	Fact Sheet No. 3
TRU Waste Inventory	Fact Sheet No. 4
Groundwater	Fact Sheet No. 5
Karst	Fact Sheet No. 6