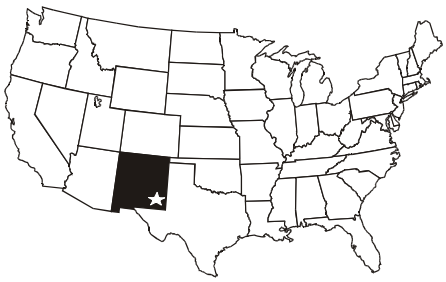
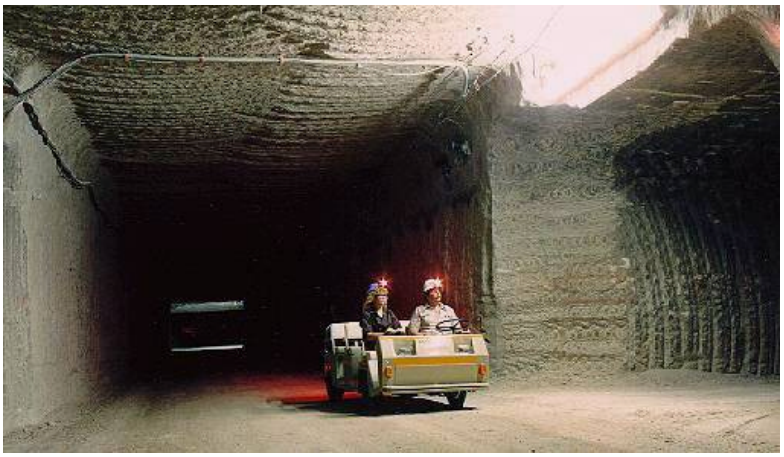
SECONDARY ARTICLE: WIPP—Waste Isolation Pilot Project

You have probably heard of Yucca Mountain, the proposed site for commercial nuclear waste storage in the U.S., but most people don't know that there is already a repository that has been safely storing nuclear waste for the last five years. The Waste Isolation Pilot Program, also known as WIPP, stores low-level nuclear waste from the research and production of nuclear weapons at Department of Energy sites in Idaho, Colorado, New Mexico, California, Illinois, South Carolina, Tennessee, Washington, Ohio, and Nevada.





Located in the remote Chihuahuan Desert of Southeastern New Mexico near Carlsbad, the WIPP site was chosen for its geological characteristics. The area sits on top of large beds of salt. The disposal rooms are mined areas 2,150 feet underground in a 2000-foot thick salt formation that has been stable for more than 200 million years. Today, there are over seven miles of tunnels and pathways in the disposal area. Disposal in the salt deposits was chosen for several reasons. Salt deposits have no flowing water that could move the waste to the surface and they are relatively easy to mine. In addition, rock salt heals its own fractures because of its plastic quality. The salt formations at WIPP will slowly and progressively move in to fill mined areas and safely seal the radioactive waste from the environment.

The only type of nuclear waste that WIPP accepts is transuranic waste. **Transuranic** literally means 'beyond uranium' and consists of elements (mostly plutonium) that have an atomic number greater than uranium. Transuranic waste consists of clothing, tools, rags, residues, debris and other items contaminated with small amounts of radioactive elements. The principal radiation from plutonium is the alpha particle. Alpha radiation is totally stopped by a single sheet of paper or an inch of air. They cannot penetrate even the outer layer of human skin. The risk to humans from these particles is mainly through inhalation. The reason they must be contained is that, although they are not highly dangerous, they remain radioactive for thousands of years. There have been no fatal injuries from plutonium in the nuclear industry in the United States.

Transuranic waste began accumulating in the 1940s with the development of the nation's nuclear weapons program. The waste increased significantly during World War II and the Cold War that followed. It has been stored at many sites across the country. The waste is packed in drums and special containers and shipped by WIPP trucks with trained drivers over routes approved by Federal and state regulators. Every shipment is monitored by satellite while en route.

WIPP has been accepting waste since 1999, but its development was not a quick process. In 1970 the federal government began looking for a place to store waste, and in 1974 focused on Carlsbad, New Mexico. Congress first authorized the research for WIPP in 1979. From that point, it took twenty years to conduct tests on the area, build the facilities, collect public input, and meet regulations before movement and storage of waste could begin. In 1998, the Environmental Protection Agency certified WIPP's ability to protect the environment and human health.

WIPP has had no major safety problems since it began accepting waste on March 26, 1999. More than 1,000 shipments have been received and stored so far. The Department of Energy projects that the site will be receiving old waste for the next ten years, as well as newly created waste until the 2030s, when the Department of Energy projects the site will be full. There are plans to put warnings around the site that will protect future generations for 10,000 years. WIPP is a critical step toward solving the nation's nuclear waste disposal problem by setting the standard for cost-effective, safe, and environmentally sound disposal of defense-related radioactive waste.