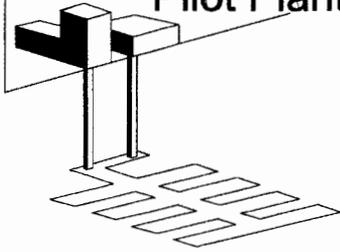




Waste Isolation
Pilot Plant



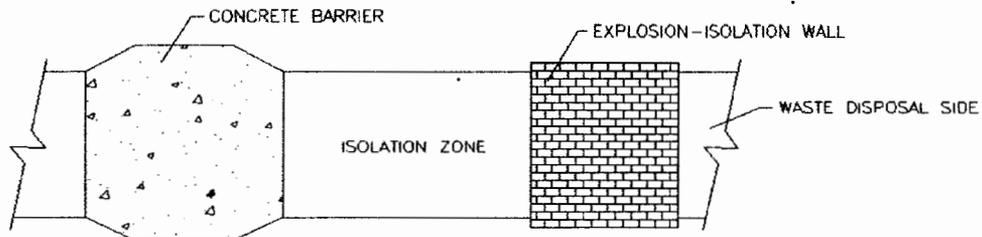
Fact Sheet

**DOE Proposed Panel Closure Redesign
Planned Change Request**

Background

The Waste Isolation Pilot Plant (WIPP) is the nation's only repository for defense generated transuranic (TRU) waste. The WIPP underground facility is mined out 2,150 feet beneath the earth's surface in ancient salt beds that date back 250 million years. Both contact-handled and remote-handled TRU radioactive waste is disposed of in the WIPP underground facility.

The U.S. Department of Energy (DOE) has submitted a planned change request to the U.S. Environmental Protection Agency (EPA) to modify Condition 1 of EPA's Final WIPP Certification Decision (May 18, 1998) for 40 CFR Part 194. Condition 1 specifies that the panel closure system to be used at WIPP is the one designated as Option D. The Option D design consists of the installation of a concrete block explosion/isolation wall, removal of the majority of the disturbed rock zone (DRZ) in the area of the closure, and emplacement of a large Salado Mass Concrete (SMC) monolith. SMC is a salt-saturated concrete originally designed to seal the shafts on repository closure. The Option D panel closures would be installed in each panel of the repository after waste emplacement in that panel is complete.



OPTION D. EXPLOSION ISOLATION WALL AND CONCRETE BARRIER WITH DRZ REMOVED

Figure 1. Option D Panel Closure

What is Proposed?

DOE is proposing to use a redesigned panel closure called the Run-Of-Mine Panel Closure (ROMPC). This closure system has two components: steel ventilation bulkheads and run-of-mine salt. In the base design, two ventilation bulkheads will be used at either end of the run-of-mine salt. In those panels where an explosion (block) wall has already been installed, this wall will form the inside end of the closure, with a steel ventilation bulkhead installed at the outer end after placement of the ROM salt. The ROM salt will be emplaced until the entire drift is filled over a minimum distance of 100 feet. The ROM salt will be placed in contact with the sides and roof of the drifts. A variety of techniques are available for emplacing the ROM salt. Over time, creep closure of the drifts will ensure that the salt consolidates to a condition approaching intact salt with a low permeability. The fabrication, installation, and maintenance of bulkheads, such as those proposed for the closure, are standard practices at the WIPP facility. The construction methods and materials to be used in the ROMPC design have been proven in mining and construction projects.

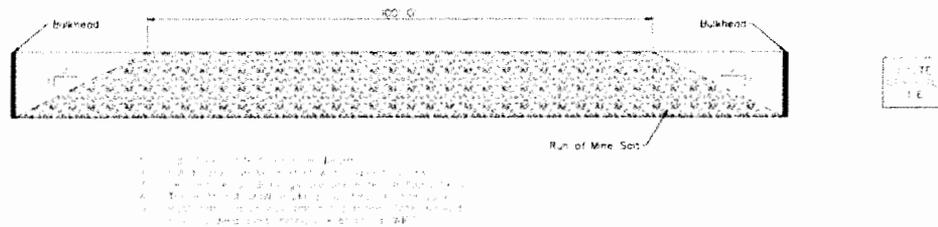


Figure 2. Conceptual Panel Closure Design

Impact on WIPP

The analyses provided with the planned change request (see electronic link below) demonstrate that the ROMPC design will contain Volatile Organic Compounds to below regulatory limits, and therefore perform its desired function of protecting workers, the public, and the environment before repository closure. After repository closure, analyses also confirm that while there might be a small difference in early performance, the long-term performance of the revised design will be very similar to that for Option D and that the impact of the proposed new closure design on long-term performance is within the EPA limits.

For More Information

This Planned Change Request is available for review on the EPA website at <http://www.epa.gov/radiation/news/wipp-news.html#panelclosure>