



WIPP Transportation System



Type B containers undergo rigorous testing.

The U.S. Department of Energy has established an elaborate system for safely transporting transuranic, or TRU, radioactive waste to the Waste Isolation Pilot Plant (WIPP) for permanent disposal. The waste is transported in four shipping containers approved for use by the U.S. Nuclear Regulatory Commission (NRC).

Two shipping containers, the TRUPACT-II and HalfPACT, are designed for hauling contact-handled (CH) TRU waste, while the RH-72B and CNS 10-160B are used to transport remote-handled (RH) TRU waste to WIPP. All four containers meet NRC and U.S. Department of Transportation radiation limits for public safety.



TRUPACT-II

- Used for contact-handled TRU waste
- Constructed with inner and outer containment vessels
- Measures 8 feet in diameter and 10 feet high
- Holds up to fourteen 55-gallon drums, two standard waste boxes, or a 10-drum overpack



HalfPACT

- Used for contact-handled TRU waste
- Lighter and shorter than the TRUPACT-II to efficiently transport heavier waste drums
- Measures 7 ½ feet high and 8 feet in diameter
- Holds up to seven 1000-pound waste drums



RH-72B

- Used for remote-handled TRU waste
- Lead-shielding protects people and the environment
- Approximately 12 feet long and 3 ½ feet in diameter
- Holds one canister loaded with three 55-gallon drums or one direct loaded canister



CNS 10-160B

- Used for remote-handled TRU waste
- Lead shielding protects people and the environment
- Approximately 7 feet high and 6 ½ feet in diameter.
- Carries ten 55-gallon drums

Each of these Type B shipping containers was tested to rigorous criteria to verify that they would remain leak tight in any credible traffic accident.

Did you know ...

WIPP shipping containers are part of the WIPP fleet. It is the sealed waste containers inside the shipping containers that are removed and disposed underground at WIPP.

Approximate costs to fabricate the specialized shipping containers were:

- \$400,000 per TRUPACT-II or HalfPACT
- \$725,000 per RH-72B
- \$900,000 per CNS 10-160B

WIPP Transportation System

The DOE employs two professional trucking firms that offer excellent safety records and years of experience in transporting radioactive materials.



"The system proposed for transportation of TRU waste to WIPP is safer than that employed for any other hazardous material in the United States today"

National Academy of Sciences, 1989

WIPP drivers must pass stringent safety and emergency response examinations and maintain good driving records.

Drivers work in pairs to assure that the truck and payload are attended at all times and that drivers are rested when it is their turn to drive.

Tractor-Trailer Carriers

WIPP uses conventional diesel tractors and trailers. Specially designed trailers can carry a total of three TRUPACT-IIs or HalfPACTs, one RH-72B or one CNS 10-160B per shipment.

Features in the tractor cab include:

- A computer keyboard linking the vehicle with a satellite tracking system
- Continuous tracking by a central control room at the WIPP site
- Redundant two-way communication systems

State police inspect the trucks to Commercial Vehicle Safety Alliance Level VI standards, the industry's highest level, prior to departing a TRU waste site. WIPP drivers are required to stop and check their trucks and payload every 150 miles or three hours en route. The trucks are also subject to inspection at state ports of entry.

Other transportation safeguards include:

- Designated safe parking areas along all routes for use in inclement weather or off-normal conditions
- The ability to replace or repair tractors en route within eight hours

Shipping Routes

U.S. Department of Transportation regulations require radioactive materials to be shipped on the interstate highway system unless states designate other routes. WIPP shipment protocols were developed through cooperative efforts of the states, tribal governments and the U.S. Department of Energy.

For more information

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