

Radioactive Materials Transportation in Wyoming

Wyoming is crossed by three distinct streams of radioactive material shipments, each supported by federal programs.

Waste Isolation Pilot Plant (WIPP) Shipments

The WIPP in New Mexico is the nation's only permanent disposal facility for Transuranic (TRU) waste, which is a byproduct of the U.S. nuclear defense program. TRU waste consists of contaminated items like tools, rags, clothing, sludges, and soil, primarily containing plutonium (elements with atomic numbers greater than uranium).

WIPP manages two types of waste: Contact-Handled (CH) and Remote-Handled (RH) TRU waste. Although RH waste has a higher internal dose rate, both types are transported in heavily shielded casks, ensuring the same low dose rate limit on the exterior of the shipping containers.

Approximately 360 trucks per year traverse Wyoming. The route enters at Evanston (west) and exits south of Cheyenne into Colorado.

Naval Nuclear Propulsion Program (NNPP) Shipments

These rail shipments support the Department of Defense (DOD) in maintaining the nuclear-powered fleet. The materials are transported via rail, entering at Cheyenne and exiting at Cokeville, destined for the Idaho National Laboratory (INL) Naval Reactor Facility (NRF). While the DOD provides limited advance information on the frequency or timing of these movements, the state tested its emergency response capabilities for this type of rail transport with a full-scale exercise conducted in Granger, WY, in November 2015.

High Burnup Research Cask (HBURC) Shipment

This is a specific, planned shipment of high burnup spent nuclear fuel (SNF) from North Anna, VA, for a research program managed by the Department of Energy (DOE) at INL. The shipment will be carried by the dedicated Atlas Railcar and will most likely follow the same rail path as the NNPP shipments due to existing track capability.

Planned Timeline:

- **Spring 2027:** A "dry run" (empty cask) shipment is planned, including a "whistle-stop" tour for first responders and stakeholders.
- **Fall 2027:** The full, live SNF shipment is scheduled.

Advanced Notice Shipments

Advanced Notice Shipments cover less frequent movements of high-activity radioactive sources, typically utilized in the medical field. When these shipments meet the U.S. Nuclear Regulatory Commission (USNRC) "route controlled" levels of radioactivity, they are subject to a mandatory advanced notification process. The Wyoming Office of Homeland Security (WOHS) and the Wyoming Highway Patrol are the designated points of contact within the state to receive these notifications, ensuring local awareness and readiness.

Wyoming Office of Homeland Security (WOHS) Preparedness

WOHS is the lead state agency for coordinating readiness and response efforts across the state.

WOHS actively advises on program efficiency and planning by sitting on both the WIPP Technical Advisory Group (TAG) and the HBURC Ad-hoc Working Group coordinated by the DOE.

WOHS ensures first responder readiness by furnishing and annually calibrating radiation detection equipment for all Regional Emergency Response Teams (RERT's), Wyoming Highway Patrol Level IV Inspectors, Public Health Coordinators, Emergency Management Agencies, and Hospitals.

Additionally, WOHS coordinates the Modular Emergency Response Radiological Transportation Training (MERRTT) for key personnel, which includes instruction on radiation safety, detection, patient handling, and decontamination protocols.