

## Transportation of Radiological Waste Streams and Nuclear Materials

Description	Origin	Destination	Mode	Shipper	Comments
Commercial spent fuel	72 reactor sites in 33 states around the nation - especially in the southeast and midwest	Mostly nowhere for now - there is no disposal or consolidated storage facility.	Past shipments have usually been by truck – future shipments will likely be both truck and train	Nuclear utilities	NRC regulated  Some utilities occasionally move spent fuel between different reactor sites. There is also a spent fuel storage facility in Illinois separate from any reactor.
University spent fuel	~ 25 university sites around the nation	To storage at Idaho National Laboratory or the Savannah River Site (South Carolina).	Truck	Research reactor operators	NRC regulated  Frequency varies. Fewer than 10 per year total.
Foreign Research Reactor (FRR) spent fuel and nuclear materials	~ 40 countries around the world	Savannah River Site, Idaho National Laboratory and Y-12 National Nuclear Security Complex in Tennessee.	Ship/train/truck	DOE	NRC regulated  Other than from Canada, these materials arrive in the U.S. by ocean-going vessel at the Joint Base Command-Weapons Station (formerly Naval Weapons Station-Charleston) in South Carolina. It is then moved by truck or train to the Savannah River Site. Some is then moved by truck on to Idaho. Approximately 4 shipments per year.
Navy spent fuel	Puget Sound Naval Shipyard, Bremerton, Washington; Portsmouth Naval Shipyard, Kittery, Maine; Norfolk Naval Shipyard, Portsmouth, Virginia	Idaho National Laboratory.	Rail	DOD/DOE	Shipment schedules are classified. Armed Federal agents accompany each shipment.

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Transuranic (TRU) waste	U.S. Department of Energy (DOE) sites around the nation, primarily Idaho National Laboratory, Oak Ridge (Tennessee), Los Alamos (New Mexico), Savannah River Site and Hanford (Washington)	Disposal at the Waste Isolation Pilot Plant (WIPP) in New Mexico.	Truck	DOE	All shipments treated as HRCQ, by policy.  Generally between 20 and 30 shipments are made each week – both contact-handled and remote-handled.
DOE low-level and mixed low-level waste	DOE sites around the nation - both large and small	Treatment facilities in Washington state, South Carolina, Florida and Tennessee; federal disposal site at Nevada Test Site; commercial disposal at Energy Solutions Site in Utah.	Mostly truck, some rail	DOE	Shipments occur daily.
Commercial low-level and mixed low-level waste – Class A, B and C	Universities, medical facilities, research facilities, industries located all over the nation	US Ecology Site near Richland, WA; Energy Solutions Barnwell Site in South Carolina; Waste Control Specialists in Texas; Energy Solutions Clive facility in Utah. Commercial treatment facilities in Washington state, South Carolina, Florida and Tennessee.	Mostly truck, some rail	Private	Shipments occur daily. US Ecology Site is limited to 11 Western and Rocky Mountain states. Energy Solutions Barnwell is limited to three states (South Carolina, Connecticut, New Jersey). Waste Control Specialists serves Texas and Vermont but is making space available to the remaining 34 states Energy Solutions Clive facility can accept Class A waste from any state.

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Sealed Sources (Recoveries and Disposition)	Universities, medical facilities, research facilities, industries located all over the nation	DOE sites or DOE-subcontracted storage facilities	Mostly truck	Private, DOE	About 50 shipments a year. Shipments are made in accordance with applicable regulations.

Note: DOE has its own spent nuclear fuel stored at the Hanford Site in Washington state, the Idaho National Laboratory, and the Savannah River Site. All of the DOE spent fuel is expected to stay at each of these sites until there is a national geologic repository available. The same holds true for defense high-level waste at the same three sites and commercial high-level waste at the West Valley Site in western New York.

DOE is in the process of finalizing an Environmental Impact Statement for the disposal of Greater-Than-Class C waste (the most highly radioactive of the commercial low-level waste). It is stored and generated throughout the country. No disposal facility is expected to be operational before 2019.