



Background and Information on Transportation of Spent Nuclear Fuel and High-Level Nuclear Waste

- Spent nuclear fuel currently is in 121 communities across 39 states because the country lacks a permanent geologic repository to dispose of the waste ([MAP](#)). To fulfill the Federal government's legal and moral obligation, we will have to transport the material to its final resting place.
- Transportation of spent nuclear fuel is one of the most heavily regulated and secure transportation activities. There is a long track record of safety: the Nuclear Regulatory Commission (NRC) [notes](#), "Over the last 40 years, thousands of shipments of commercially generated spent nuclear fuel have been made throughout the United States without causing any radiological releases to the environment or harm to the public" and globally, the World Nuclear Association states there has [never been an accident](#) involving transporting nuclear waste that resulted in a transport cask with radioactive materials getting breached or leaked.
 - VIDEO: [Mr. Steven P. Nesbit of the Nuclear Infrastructure Council spoke to the safety and security of transporting spent nuclear fuel](#) at the Environment Subcommittee's legislative hearing on the Nuclear Waste Policy Amendments Act
- The NRC, in conjunction with the Department of Transportation, oversees the transportation of radioactive materials. In addition to vigorous transportation canisters, [NRC and DOE impose security requirements](#), including armed escorts, coordination with law enforcement, background checks, and stringent route planning.
- Transportation casks have [multiple steel shells](#) and must be proven to withstand severe accident scenarios including a [sequential test consisting](#) of a "30-foot drop onto a rigid surface followed by a fully-engulfing fire of 1475 degrees Fahrenheit for 30 minutes. These very severe tests equate to the package hitting a concrete highway overpass at high speed, and being involved in a severe and long-lasting fire. The test sequence encompasses more than 99 percent of vehicle accidents."
- Independent scientific review of transportation issues validates the safety of transporting SNF. In 2006, a [report](#) by the National Academies of Sciences found there are "no fundamental technical barriers to safe transport" of SNF and HLW, though steps could be taken to improve management of "social risks." In 2014, a [comprehensive risk study by the NRC](#) found doses from routine transportation would "be less than 1/1000 the amount of radiation people receive from background sources each year" and "there is less than a 1 in a billion chance that radioactive material would be released in an accident." More recently, DOE's [Sandia National Laboratory completed](#) an eight-month, 14,500-mile experiment to gather data to inform safe transportation requirements. The experiment found transportation impacts are far lower than previously expected.
- For further information on issues associated with transporting nuclear material see the Energy and Commerce Subcommittee on Environment and the Economy hearing titled, "[Transporting Nuclear Materials: Design, Logistics, and Shipment.](#)"