

[Radioactive Waste](#)[Low-Level Waste](#)[Waste Incidental to Reprocessing](#)[High-Level Waste](#)[Uranium Mill Tailings](#)[Low-Level Waste Disposal](#)[High-Level Waste Disposal](#)[Storage of Spent Nuclear Fuel](#)[Transportation of Spent Nuclear Fuel](#)[Home](#) > [Radioactive Waste](#) > Transportation of Spent Nuclear Fuel

Transportation of Spent Nuclear Fuel

What We Regulate

Spent nuclear fuel refers to uranium-bearing fuel elements that have been used at commercial nuclear reactors and that are no longer producing enough energy to sustain a nuclear reaction. Once the spent fuel is removed from the reactor the fission process has stopped, but the spent fuel assemblies still generate significant amounts of radiation and heat. Because of the residual hazard, spent fuel must be shipped in containers or casks that shield and contain the radioactivity and dissipate the heat.

Over the last 30 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.

Most of these shipments occur between different reactors owned by the same utility to share storage space for spent fuel, or they may be shipped to a research facility to perform tests on the spent fuel itself. In the near future, because of a potential high-level waste repository being built, the number of these shipments by road and rail is expected to increase.

How We Regulate

The NRC regulates spent fuel transportation through a combination of safety and security requirements, certification of transportation casks, inspections, and a system of monitoring to ensure that requirements are being met. For general information, see the [How We Regulate](#) page. For details, see the following pages under [Nuclear Materials Transportation](#):

- [Regulations, Guidance, and Communications](#)
- [Package Certification](#)
- [Shipping Requirements](#)
- [Oversight](#)

Related Information

- [Safety of Spent Fuel Transportation \(NUREG/BR-0292\)](#)
- [Diagram and Description of a Typical Spent Fuel Transportation Cask](#) 

Regulatory Initiatives

- [Package Performance Study](#)
- [Interim Staff Guidance for Public Comment](#)
- [SFST – 2010 Licensing Process Conference](#)