

Emergency Response Training Available for a DOE Spent Nuclear Fuel Shipment

The U.S. Department of Energy (DOE) is preparing to ship one container of spent nuclear fuel (SNF) from a nuclear power plant to a national laboratory to undergo further research. DOE is coordinating the shipment with Tribal and State governments and offering technical assistance and training.

What is DOE researching?

Today, nuclear fuel is being kept in nuclear power reactors longer to produce more electricity. This fuel is known as “high burnup.” DOE, in collaboration with the nuclear power industry, is studying how high burnup SNF behaves in long-term storage to verify that it can be stored safely for many years before being transported to a future Federal disposal facility. This project is being conducted on one container of SNF known as the “High Burnup Research Cask (HBURC).”

Shipping the HBURC

For the next stage of the research project, DOE will open the HBURC and examine the SNF rods inside. This can only be done safely in a specialized science facility like those available at DOE’s national laboratories.

In 2027, DOE plans to ship the HBURC from its current location at the North Anna Power Station near Mineral, Virginia, to the Idaho National Laboratory in Idaho. The cask weighs about 180 tons and will be shipped by rail using DOE’s Atlas railcar, which is specially designed, tested, and approved for transporting SNF.

Learn more about the High Burnup Research Cask Shipment Project
<https://curie.pnnl.gov/HBURC-Transport>



Safety and Security

To ensure the safety of this shipment, DOE is using a U.S. Nuclear Regulatory Commission-certified Type B transportation package, which will be loaded onto the Atlas railcar. The train will include armed guards in a specially designed security railcar and real-time safety monitoring on each railcar. DOE will coordinate the shipment with Federal agencies and with Tribal and State governments along the route. DOE will offer technical assistance to these entities and training for emergency responders through DOE’s Transportation Emergency Preparedness Program (TEPP).



Learn more about TEPP training at
<https://teppinfo.com>



Potential rail routes for the High Burnup Research Cask shipment.



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Spent Fuel and High-Level Waste Disposition

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