

## Transportation Safety

# Q: Could a transportation package protect its contents and prevent the release of radiation in case of fire?

Transportation packages are designed to protect their contents and prevent radioactive releases. To be certified by the NRC, a transportation cask must be proven, by analysis or test, to protect its contents if placed in a fully engulfing fire that burns for 30 minutes at 1,475 degrees Fahrenheit.

Additional full-scale tests, scale-model tests, and computer analyses are used to evaluate the ability of transportation casks to prevent the release of radiation in case of fire. NRC has used data collected from large-scale, real-life fires to evaluate the impact such a fire could have if a nuclear waste shipment were involved. As a result, NRC has concluded that casks designed to meet its requirements would not release their contents.

*Top photo — In a test conducted in the burn facility at Sandia National Laboratories, a transportation canister was positioned about three feet above the burning fuel for 30 minutes at 800 degrees Celsius or 1,475 degrees Fahrenheit.*

*Bottom photo — In a test conducted by Sandia National Laboratories in New Mexico, a full-scale transportation cask on a rail car was set on fire to evaluate the impact such a fire could have if a nuclear waste shipment were involved.*

