



*Center for Transportation Analysis
Research Capabilities Brief
Oak Ridge National Laboratory*

Hazardous Materials Transportation

**Center for Transportation Analysis
(CTA) Research Areas**

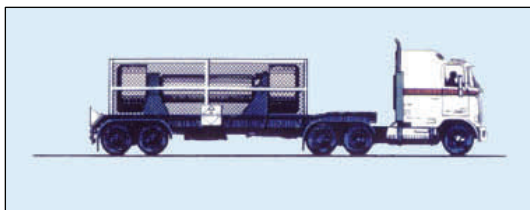
- Aviation Safety
- Air Traffic Management Analysis
- Data, Statistical Analysis
- Geo-Spatial Information Tools
- Defense Transportation
- Energy Policy Analysis
- Environmental Policy Analysis
- Highway Safety
- Intelligent Transportation Systems
- Logistics Management
- Supply Chain Management
- Modeling and Simulation
- Transportation Operations
- Planning and Systems Analysis
- Transportation Security

ORNL has a staff with extensive experience in planning hazardous materials transportation shipping campaigns.

Capabilities

- Regulatory Compliance, including DOT, NRC, IAEA
- Route planning for highway, rail, or waterway
- Packaging, including recommendation, design, and testing
- Detailed simulation of loading, transportation, and maintenance facilities for the transportation system
- Cost analysis

and waterway. If the Yucca Mountain, Nevada repository is approved and built, the transportation system will ship spent nuclear fuel and high-level radioactive waste from 131 temporary storage sites located in 39 states to the repository. There will be approximately 4,300 shipments over a 24 year period. The work at ORNL involves the simulation modeling of the different spent fuel and high-level waste storage facilities to determine resource requirements, use, and cost. ORNL is also developing logistics support software for schedule planning, transportation and packaging acquisition, and service acquisition. The software support also includes routing over the rail, highway, and waterway networks. Staff is also providing input for the regulatory analysis to ensure compliance with federal, state, local, and tribal laws.



Truck and Cask

Experience

ORNL is assisting the US Department of Energy Office of Civilian Radioactive Waste Management plan the transportation system for the shipment of spent nuclear fuel and high-level radioactive waste by rail, highway,



Package Testing

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