



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
**ENVIRONMENTAL
MANAGEMENT**

WebTRAGIS

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WebTRAGIS Overview

- A browser-based GIS tool for modeling transportation routing
- Offering numerous options for route calculation
- Providing access to network databases for highway, rail, and waterway infrastructures in the continental United States
- Providing population data for all transportation segments using the LandScan USA population distribution data model
- Web browser application, where the map display and user interface are accessed through a browser, while the routing engine is located on an external ORNL server.

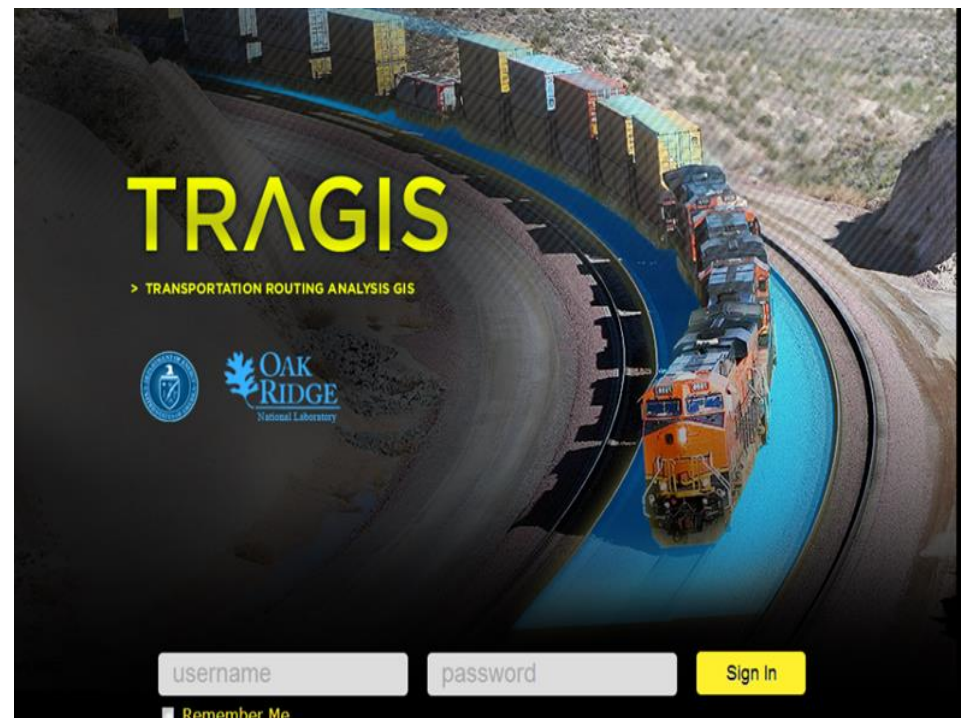
Routing Basics in WebTRAGIS

- WebTRAGIS is a standard routing GIS application
- Population data capability in WebTRAGIS has made it a useful application for the analysis of routes for the shipment of hazardous materials including radioactive material and spent nuclear fuel (SNF).
- TRAGIS has been used for --
 - Environmental Impact Statements (EIS) for shipping SNF from each nuclear power plant in the U.S.
 - Shipment of nuclear materials between DOE facilities
 - DOD shipments

Constrained Routing in WebTRAGIS

- WebTRAGIS is available for all three surface modes
- Constraints are two-fold --
 - Included in the characteristics of the underlying network
 - User determined or applied
- LandScan USA population count and density information --
 - Available within an 800 meter buffer
 - Resolution is ~90 meters
 - Several output formats can be used in RADTRAN

- Three networks: Highway, Railway, Waterway
- Route modifiers
 - Highway
 - HRCQ
 - Other Hazmat
 - Dedicated train
- LandScan population
 - 90m gridded cell population
 - Based on 2010 US Census



TRAGIS Demonstration

- <http://webtrapis.ornl.gov/trapis/app/login>