

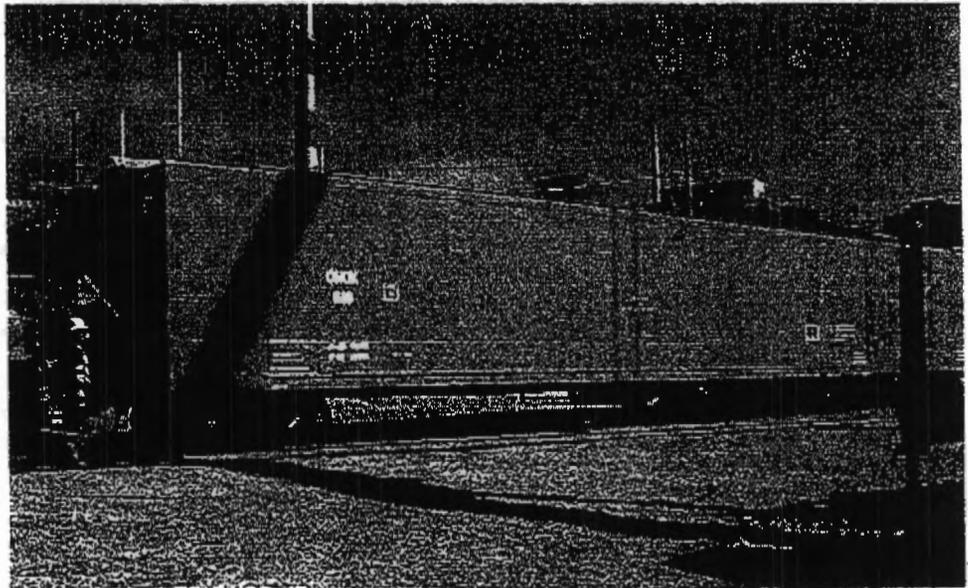


Ohio Field Office
 Miamisburg Environmental Management Project (MEMP) and
 National Transportation Program, Office of Environmental Management



Transporting Mound Laboratory's Transuranic Waste

Mound Laboratory was part of the nation's nuclear defense complex built in the city of Miamisburg, Ohio in 1946. The facility manufactured explosive components and in 1949 began work with radioactive materials. Past operations generated waste contaminated with radioactive materials, and the cleanup process is producing additional waste. Most of this is low-level radioactive waste that is shipped by truck or rail to a disposal site in Utah or to the U.S. Department of Energy (DOE) Nevada Test Site. A small portion of the waste is transuranic and will be shipped to the DOE Savannah River Site (SRS) in South Carolina. DOE expects to ship approximately 300 cubic meters of TRU waste (7 to 10 railcar shipments) between August 2001 and May 2002.



OHOX-610 Railcar

Defining Transuranic Waste

Transuranic (TRU) waste contains manmade elements heavier than uranium (usually plutonium), thus the name trans (beyond) uranic. There are two types of TRU waste: "contact handled" which can be safely handled by workers without special protective clothing and "remote handled" which is handled and transported in specially shielded containers because of its higher level of radioactivity. The Mound TRU waste includes piping, ductwork, equipment, gloves, protective clothing, filters and similar items contaminated during site operations or in the decommissioning of facilities. This waste is therefore considered "contact handled" waste.

Transportation Packaging

Most of the TRU waste containers at Mound are too large, too heavy, and/or contain radioactive material exceeding the regulatory size and weight load limits for shipping in the Transuranic Packaging Transporter-Model II (TRUPACT-II) containers used for shipping

TRU waste to the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico. After extensive research, DOE concluded that using railcars would be the most efficient and cost-effective method for shipping the waste to SRS for the processing necessary to meet the waste acceptance criteria for disposal at WIPP.

Two railcars, specifically modified to ship TRU waste, have been used in the past for shipment of DOE TRU waste and will be used for the Mound shipments. Designated OHOX, these railcars have been fully refurbished and certified to railroad and U.S. Department of Transportation (DOT) standards and are authorized for shipment of TRU waste under DOT Exemption E 5948, Revision 10. The OHOX railcars are top-loading gondola railcars with double-walled insulated steel construction and special design features to protect their contents. The radiation level on the outside of the railcar will be well below the DOT regulatory limits for transportation. Railcars carrying nonhazardous

cargo (buffer cars) will be used to separate the OHOX railcars from each other (if both are used on the same train) and from other hazardous cargo. The transportation plan provides for the railcars to be shipped separately to maintain one railcar in reserve.

Inside the railcar, Mound's TRU waste will be packaged in a variety of "Type A" boxes and drums that have been loaded in steel containers called overpacks. These could be 8-foot by 8-foot by 20-foot cargo containers or overpack boxes that measure approximately 8 feet by 6 feet by 5 feet high. Some special boxes, such as 4-foot by 4-foot by 14-foot boxes that contain used gloveboxes will also be used.

Type A packagings are designed to protect and retain their radioactive contents under normal transport conditions. Packaging designs must be capable of withstanding a series of transport conditions simulated by performance testing and/or engineering analyses (water spray, penetration, vibration, compression and free-drop tests).

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Identifying Shipment Contents

"Radioactive, Class 7" placards will be placed on the front, back, and both sides of each OHOX railcar carrying TRU waste, in accordance with DOT regulations. The containers inside each railcar will be labeled on two sides with the appropriate radioactive materials label to identify their contents and radioactivity level.

Shipment Routing

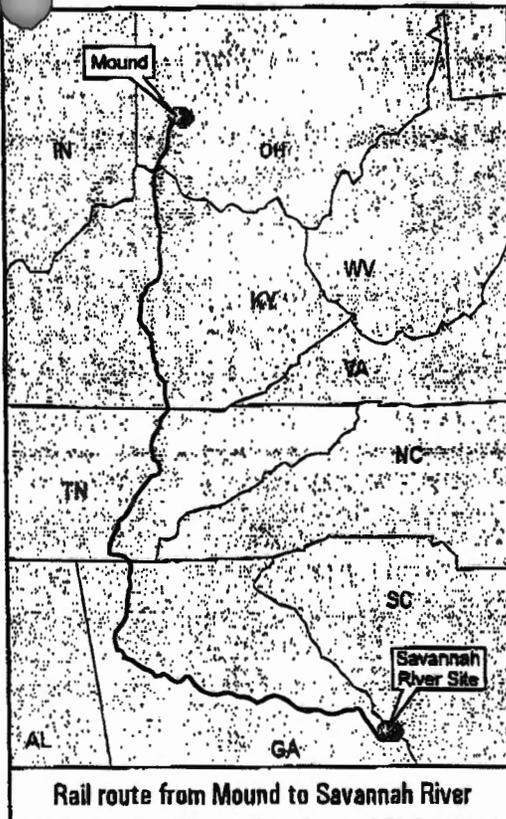
The OHOX railcars will be shipped in standard rail service along a route selected by the rail carrier. The preferred shipping route will transport the waste through parts of Ohio, Kentucky, Tennessee, Georgia, and South Carolina.

Inspections

Mound will perform radiological surveys of the loaded cars prior to their departure. Railcars and contents will be available to State rail inspectors during loading and prior to leaving Mound, as well as upon arrival and during unloading at SRS. Access to rail yards for in-transit inspection by State inspectors may be arranged with the rail carrier. DOT Federal Railroad Administration officials may also inspect the railcars at Mound before departure.

Shipment Tracking

The Mound TRU waste shipments will be monitored 24 hours a day using the shipment monitoring capabilities of the DOE Transportation and Tracking Communications system (TRANSCOM), a satellite tracking/communication system.



Rail route from Mound to Savannah River

Notification of State Officials

The DOE Miamisburg Environmental Management Project (MEMP) will inform affected States and stakeholder groups 2 weeks prior to each Mound TRU waste shipment. MEMP will also provide them with the following information: description of packaging and contents, rail routes, and approximate shipping schedules.

In addition, MEMP will call each State on the business day before the shipment reaches the

border with an estimated arrival time. This will allow State officials to place appropriate staff on standby.

Emergency Response

In the unlikely event of an accident or incident involving one of these shipments, State and local government agencies and the railroad would have the primary responsibility for response to the incident or accident. DOE has provided radiological training to some State and local emergency response units through its Transportation Emergency Preparedness Program (TEPP). DOE has also coordinated key emergency notification and response issues with the affected State emergency management agencies. DOE Radiological Assistance Program (RAP) teams are available at the Oak Ridge Operations Office and SRS, and in the event of an accident or incident could respond and provide on-scene support in approximately 4 hours if requested. Rail carriers have established emergency response plans and have contingency plans for cleanup and recovery if needed. MEMP, the shipper, has developed an Emergency Management Plan and will maintain a 24-hour emergency response telephone number to provide responders on-scene with comprehensive emergency response and incident mitigation information regarding the material in the shipment.

Additional Information

Requests for additional information on the Mound TRU waste shipments should be referred to Jane Greenwalt, DOE Public Affairs Officer at (937) 865-3116 (email: jane.greenwalt@ohio.doe.gov). TEPP program information is available on the Web at www.em.doe.gov/otem.

Additional information on DOE's National Transportation Program may be obtained from:

National Transportation Program
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400, MS SC-5
Albuquerque, NM 87185-5400

Phone: 505-845-6134
Fax: 505-845-5508

Website:
<http://www.nrp.doe.gov/>

DOE Center for Environmental
Management Information
P.O. Box 23769
Washington, DC 20026-3769

1-800-7EM-DATA
1-800-736-3282

Website:
<http://www.em.doe.gov/>

Transportation Resource Exchange Center
ATR Institute
University of New Mexico
1001 University Blvd., SE
Albuquerque, NM 87106-4342

Phone: 1-877-287-TREX (8739)
Fax: 505-246-6001
email: trax@unm.edu

Website:
<http://www.trex-center.org/>