

ISMS Training Document
Track 2, Activity 18 – November 2009
Packaging and Transportation Safety

Activity

Describe the features of the ORO Packaging and Transportation Safety Program.

At the completion of this activity, fill out the Self-Certification Form certifying that you have read this activity sheet.

Note: When regulations, Department of Energy (DOE) directives, or other industry standards are referenced in this ISMS activity, please use the most recent version. In addition, please note that DOE Guides provide preferred, non-mandatory, supplemental information about acceptable methods for implementing requirements, including lessons learned, suggested practices, instructions, and suggested performance measures. Guides do not impose requirements but may quote requirements if the sources are adequately cited. Alternate methods may be used if it can be demonstrated that they provide an equivalent or better level of performance.

Key Documents

- [49 CFR, *Transportation*](#)
 - [DOE O 440.2, *Aviation Management and Safety*](#)
 - [DOE O 460.1, *Packaging and Transportation Safety*](#)
 - [DOE O 460.2, *Departmental Materials Transportation and Packaging Management*](#)
 - [DOE G 460.1-1, *Implementation Guide for Use with DOE O 460.1A, Packaging and Transportation Safety*](#)
 - [DOE M 460.2-1, *Radioactive Material Transportation Practices Manual for use with DOE O 460.2*](#)
 - [DOE G 460.2-1, *Implementation Guide for Use with DOE O 460.2 Departmental Materials Transportation and Packaging Management*](#)
 - [DOE M 461.1-1, *Packaging and Transfer of Materials of National Security Interest Manual*](#)
 - [DOE O 461.1, *Packaging and Transfer or Transportation of Materials of National Security Interest*](#)
 - ORO Directives Management Group, Key Management Documents, http://www.ornl.gov/doe/doe_oro_dmg/oro_keymanagementdoc.htm
 - SCMS Procedures or other Oak Ridge Office documents
-

ISMS Training Document
Track 2, Activity 18 – November 2009
Packaging and Transportation Safety

What's In It For Me The DOE Packaging and Transportation Safety function includes packaging certification support for radioactive materials and technical support to the line organizations for all hazardous materials shipments conducted by all modes of transport, both off-site and on-site. This function also provides aviation safety support.

The completion of this activity is expected to help you become familiar with the general requirements applicable to hazardous material packaging and transportation and aviation safety, so that you are better able to recognize them as they relate to your job.

Program Owner DOE ORO line management is responsible for safety at DOE facilities and for meeting mission objectives and goals. The Packaging and Transportation Safety function is located in the Office of Assistant Manager for Environment, Safety, and Health organization.

Purpose of the ORO Packaging and Transportation Safety Program The purpose of the ORO Packaging and Transportation Program is to ensure that:

- Line management determines the appropriate level of oversight for packaging and transportation activities.
- Line management assigns sufficient personnel to oversee the contractors' packaging and transportation programs.

General Requirements Generally, there are two major types of packaging and transportation requirements – off-site safety and on-site safety (from DOE O 460.1):

- Off-site safety – “Each person who offers for transportation or transports a package of hazardous materials shall comply with the requirements of the Hazardous Materials Regulations (Title 49 Code of Federal Regulations (CFR) Parts 171-180) and applicable tribal, State, and local regulations not otherwise preempted by the U.S. Department of Transportation (DOT).”
- On-site safety – “On-site hazardous materials transfers shall comply with, 49 CFR Parts 171-180 or the site- or facility-specific Operations or Field Office approved Transportation Safety Document that describes the methodology and compliance process to meet equivalent safety for any deviation from the Hazardous Materials Regulations. For multiple-tenant DOE/NNSA sites safety documents for several contractor organizations may be combined into a single document. DOE-operated sites may approve their own Transportation Safety Documents.”

Refer to the Order for additional details, such as special requirements for packaging radioactive materials for transport, and other related requirements.

- Aviation activities at ORO are generally confined to charter services for aerial surveys and photography.

ISMS Training Document
Track 2, Activity 18 – November 2009
Packaging and Transportation Safety

**ORO Packaging and
Transportation
Program Duties**

The significant duties include the following:

1. Maintain communication with the counterpart contractor transportation personnel and monitor the performance and effectiveness of implementation of their packaging and transportation programs.
2. Conduct walkthroughs with DOE Facility Representatives, and conduct audits and assessments of contractor packaging and transportation activities.
3. Perform other oversight activities on a routine basis.
4. Provide support to other Federal personnel, as appropriate. This will include supporting program/project managers and Facility Representatives.
5. Assist line management in obtaining DOT special permits, as needed to support programmatic needs.
6. Maintain cognizance of regulatory changes that will impact ORO programs.

Relevance

The Oak Ridge Reservation transportation incident that occurred in May 2004, involved hazardous material that was improperly characterized and packaged. This directly contributed to the release of radioactive material onto both on-site and off-site roadways.

An important lesson learned from this incident is the need to recognize that characterization for transportation purposes is different from characterization of materials for disposal. Characterizing material only to waste acceptance criteria is generally insufficient in meeting DOT requirements.

A thorough knowledge of the DOT hazardous materials classification criteria is therefore essential to compliance, and only those personnel who are properly trained and knowledgeable of the transportation requirements should make decisions about packaging and transportation.

ISMS Training Document
Track 2, Activity 18 – November 2009
Packaging and Transportation Safety

To Learn More

Click on these documents for more information about the DOE and ORO Packaging and Transportation Safety Program.

- [49 CFR, *Transportation*](#)
 - [DOE O 440.2, *Aviation Management and Safety*](#)
 - [DOE O 460.1, *Packaging and Transportation Safety*](#)
 - [DOE O 460.2, *Departmental Materials Transportation and Packaging Management*](#)
 - [DOE G 460.1-1, *Implementation Guide for Use with DOE O 460.1A, Packaging and Transportation Safety*](#)
 - [DOE M 460.2-1, *Radioactive Material Transportation Practices Manual for use with DOE O 460.2*](#)
 - [DOE G 460.2-1, *Implementation Guide for Use with DOE O 460.2 Departmental Materials Transportation and Packaging Management*](#)
 - [DOE M 461.1-1, *Packaging and Transfer of Materials of National Security Interest Manual*](#)
 - [DOE O 461.1, *Packaging and Transfer or Transportation of Materials of National Security Interest*](#)
 - ORO Directives Management Group, Key Management Documents, http://www.ornl.gov/doe/doe_oro_dmg/oro_keymanagementdoc.htm
 - SCMS Procedures or other Oak Ridge Office documents
-