

ORDER

DOE O 460.1C

Approved: 5-14-2010

PACKAGING AND TRANSPORTATION SAFETY



U.S. DEPARTMENT OF ENERGY
Office of Environmental Management

PACKAGING AND TRANSPORTATION SAFETY

1. PURPOSE. To establish safety requirements for the proper packaging and transportation of Department of Energy (DOE), including National Nuclear Security Administration (NNSA), offsite shipments and onsite transfers of radioactive and other hazardous materials and for modal transportation.¹

2. CANCELLATION. DOE O 460.1B, *Packaging and Transportation Safety*, dated 4-4-03. Cancellation of a directive does not, by itself, modify or otherwise affect any contractual or regulatory obligation to comply with the directive. Contractor Requirements Documents (CRDs) that have been incorporated into a contract remain in effect throughout the term of the contract unless and until the contract or regulatory commitment is modified to either eliminate requirements that are no longer applicable or substitute a new set of requirements.

3. APPLICABILITY.

- a. Departmental Applicability. Except for the equivalencies/exemptions in paragraph 3c, this Order applies to all DOE elements, which are involved in activities associated with the packaging and transportation of offsite shipments and onsite transfers of radioactive and other hazardous materials and modal transport.

The Administrator of the National Nuclear Security Administration (NNSA) must assure that NNSA employees comply with their responsibilities under this directive. Nothing in this directive will be construed to interfere with the NNSA Administrator's authority under section 3212(d) of Public Law (P.L.) 106-65 to establish Administration-specific policies, unless disapproved by the Secretary.

In this Order, the terms "DOE," "Department," and "Departmental" generally include NNSA, except in Sections 4 and 5, in which the term "DOE" does not include NNSA but the terms "Department" and "Departmental" do include NNSA.

- b. DOE Contractors. Except for the equivalencies/exemptions in paragraph 3.c., the Contractor Requirements Document (CRD) sets forth requirements of this Order that will apply to contracts that include the CRD.

The CRD must be included in contracts that involve activities associated with the packaging and transportation of radioactive and other hazardous materials. The Heads of Operation Offices or Field Offices/Site Office Managers identified in paragraph 5c are responsible for notifying the contracting officer of the

¹ Offsite is any area within or outside a DOE site where the public has free and uncontrolled access; onsite is any area within the boundaries of a DOE site or facility to where access is controlled.

contracts which are affected. Once notified, the contracting officer is responsible for incorporating the CRD into each affected contract via the laws, regulations, and DOE directives clause of the contract.

c. Equivalencies/Exemptions for DOE O 460.1C.

An exemption from the requirements of this Order may be granted for DOE or NNSA packaging and transportation activities to the extent that an aspect is not regulated by the NRC, an Agreement State, or DOT, provided the proposed exemption:

- Is not prohibited by law;
- Does not present an undue risk to public health and safety, the environment, or workers;
- Will achieve an equivalent level of safety to the requirements in this Order from which the activity is being exempted; and
- Is determined to be necessary and appropriate to address national security or other critical interests.

Applications for DOE or NNSA exemptions must be prepared in accordance with the procedures in 49 CFR 107.105(c) and (d) and submitted to the HCO or NNSA CO, as appropriate, by the Head of the responsible Operations Office or Field Office/Site Office Manager.

All exemption decisions must be set forth in writing, including the reasons for granting or denying the exemption and, if granted, the basis for determining that the exempted activity achieves a level of safety equivalent to that required by this Order.

Central Technical Authority (or designee) concurrence is required for both exemptions and equivalencies to this Order for nuclear facilities.

- (1) Equivalency. In accordance with the responsibilities and authorities assigned by Executive Order 12344, codified at 50 USC sections 2406 and 2511 and to ensure consistency through the joint Navy/DOE Naval Nuclear Propulsion Program, the Deputy Administrator for Naval Reactors (Director) will implement and oversee requirements and practices pertaining to this Directive for activities under the Director's cognizance, as deemed appropriate.
- (2) Exemption. Operations conducted under DOE O 461.1A, *Packaging and Transfer or Transportation of Materials of National Security Interest*, dated 4-26-04.

- (3) Exemption. Operations conducted onsite under DOE M 440.1 1A, *DOE Explosives Safety Manual*, and dated 1-9-06.

4. REQUIREMENTS.

a. Offsite Safety.

- (1) Packaging and Transportation Safety. Each entity subject to this Order must perform packaging and transportation activities in accordance with the Department of Transportation (DOT) requirements of the Hazardous Materials Regulations (49 CFR Parts 171-180).
- (2) Special Requirements for Radioactive Material Packagings.
- (a) Use of Type B or Fissile Materials Certified Packagings. Each entity that offers for transportation or transports radioactive material in a Type B or fissile material packaging, as appropriate, certified by the Headquarters Certifying Official (HCO), NNSA Certifying Official (NNSA CO) or the U.S. Nuclear Regulatory Commission (NRC), must—
- 1 Meet the conditions specified in the Certificate of Compliance (CoC) or Offsite Transportation Certificate (OTC), as appropriate, for the package issued by the HCO, NNSA CO or NRC and
 - 2 Register in writing with the HCO or the NNSA CO prior to use.
- (b) Use of DOT International Atomic Energy Agency (IAEA) Certified Packagings. For an import or an export shipment pursuant to 49 CFR 173.471, 173.472 or 173.473, each entity must use a packaging certified by the U.S. Competent Authority (DOT) where—
- 1 The DOE or NNSA has been registered with the DOT as a User, and
 - 2 The entity has the required documentation for the use and maintenance of the packaging and makes the shipments in accordance with the terms of the certificate issued by the DOT.
- (c) Application for NRC or DOT Certified Packagings.
- 1 For a new NRC or DOT packaging certificate, each entity must file a request for a new certificate with the HCO or NNSA CO, as appropriate.

- 2 When DOE or NNSA is the holder of a packaging certificate issued by the NRC or DOT, each entity must file a request for revisions to or renewal of existing NRC or DOT certificate with the HCO or NNSA CO, as appropriate.
- 3 In all cases the HCO or NNSA CO will review and forward, if appropriate, the request to the NRC or DOT.
- (d) Application for other Type B or Fissile Materials Certified Packagings. For a new DOE or NNSA Type B or fissile material packaging each entity must submit an application to the HCO or NNSA CO, as appropriate, that includes a Safety Analysis Report for Packaging (SARP) and any other supporting documentation to demonstrate that the packaging meets the requirements of 10 CFR Part 71, Subparts E, F, G, and H, and any other applicable standards for certification prior to use.
- (3) Quality Assurance. Each entity that participates in the design, fabrication, procurement, use, or maintenance of a hazardous materials packaging must:
- (a) Have a QA program approved and audited by—
- 1 the HCO or NNSA CO, as appropriate, for certified Type B and fissile radioactive materials packagings satisfying the requirements of 10 CFR Part 71, Subpart H, *Quality Assurance*, or
- 2 the Head of Operations Office or Field Office/Site Office Manager, as appropriate, for all other radioactive and hazardous materials packagings satisfying the requirements of DOE O 414.1C, *Quality Assurance*;
- (b) Report deviations from the applicable requirements in compliance with DOE Order 231.1A, *Environment, Safety, and Health Reporting*.
- (c) Additionally, report deviations in the following areas to the HCO or the NNSA CO within 30 days:
- 1 any instance in which there is significant reduction in the effectiveness of any approved Type B or fissile packaging during use,
- 2 any discovery of any defects with safety significance in Type B or fissile packaging after first use, with details of

the means employed to repair the defects and prevent their recurrence, or

3 any instances in which the conditions of approval in the CoC were not observed in making a shipment.

(4) International Shipments. For use of the International Civil Aviation Organization's (ICAO) *Technical Instructions*, the International Maritime Organization's (IMO) *International Maritime Dangerous Goods (IMDG) Code*, Transport Canada's *Transportation of Dangerous Goods Regulations*, and/or the IAEA's *Regulations for the Safe Transport of Radioactive Material (TS-R-1)* for domestic segments of international transportation by air, vessel, rail, or highway, adherence to 49 CFR Part 171 is required.

b. Onsite Safety. Onsite transfer of hazardous materials, substances, and wastes must be conducted in accordance with one of the following:

(1) 49 CFR Parts 171-180 and the Federal Motor Carrier Safety Regulations (49 CFR Parts 350-399), or

(2) A Transportation Safety Document (TSD) approved by the Head of Operations Office or Field Office/Site Office Manager, as appropriate.

(a) The TSD must describe the methodology and compliance process to meet equivalent safety for any deviation from 49 CFR Parts 171-180 and 49 CFR Parts 350-399;

(b) For onsite transfers subject to 10 CFR Part 830, the TSD must comply with the safety basis requirements of 10 CFR Part 830, Appendix A to Subpart B, to identify the conditions, safe boundaries, and hazard controls necessary to protect workers, the public, and the environment from adverse consequences;

(c) For multiple-tenant DOE/NNSA sites, safety documents for several contractor organizations may be combined into a single document;

(d) For onsite transfers not subject to 10 CFR Part 830, the TSDs must be approved and in effect no later than one year from incorporation of the CRD of this Order into contracts;

c. Motor Carrier Safety. Each entity that operates a Government-owned or commercial motor carrier for transporting hazardous materials must act in accordance with 49 CFR Parts 350-399.

- d. Pipeline Safety Requirements. All transportation of hazardous materials by pipeline must be conducted in accordance with 49 CFR Parts 190-193, 195, and 199.
- e. Railroad Safety Requirements. All railroad operations must be conducted in accordance with the applicable regulations of the Federal Railroad Administration (49 CFR Parts 200-268).
- f. Special Permits.
 - (1) Any offsite hazardous materials packaging or shipment that is regulated by DOT and is not prepared in accordance with the HMR must be prepared in accordance with a valid DOT Special Permit.
 - (2) DOE applications for a DOT Special Permit must be submitted to the HCO to review, process, and forward to DOT. NNSA applications for a DOT special permit must be submitted to the NNSA CO to review, process, and forward to DOT. Applications must be prepared in accordance with the procedures in 49 CFR 107.105.
- g. Training. Each entity that offers for transportation, transports or transfers hazardous materials, substances and wastes must:
 - (1) Ensure that all personnel who support and/or perform packaging, transfer and transportation operations are appropriately trained and qualified; and
 - (2) Maintain auditable training records in accordance with approved DOE or NNSA or site-specific records schedule.
- h. Lessons Learned. DOE and NNSA will share packaging and transportation safety successes, problems, and corrective actions with other DOE and NNSA elements and the field through the use of the Department's lessons learned program.

5. RESPONSIBILITIES.

- a. Headquarters Certifying Official (HCO).
 - (1) Administers the DOE program for certification of fissile and Type B packagings.
 - (a) Provides guidance for the preparation of SARPs.
 - (b) Reviews the SARP included in an application for a DOE CoC, and any other supporting documentation, to determine if the packaging meets the requirements of 10 CFR Part 71, Subparts E,

- F, G, & H, and any other applicable standards for certification prior to use.
- (c) Issues DOE CoCs for approved packagings. The CoC and supporting review documentation provide the written approval of packaging designs and the QA programs for fissile material and Type B packages.
 - (d) Reviews and recertifies, in writing, CoCs.
 - (e) Curtails and suspends the use of specific packages, if warranted.
- (2) Coordinates the establishment of Departmental packaging standards for the transportation of hazardous materials, substances and wastes.
 - (3) Supports the development, adoption and use of voluntary consensus standards through a topical committee within the Department's Technical Standards Program.
 - (4) Establishes and maintains a program to test and evaluate Industrial Packagings and DOT Specification 7A Type A performance requirements and maintains records of all tests or evaluations.
 - (5) Approves, in writing, DOE contractor facilities for testing and evaluating industrial packagings and DOT Specification 7A Type A package designs for radioactive materials transportation, designed by DOE or DOE contractors.
 - (6) Provides the point of coordination for the Department in matters related to transportation and packaging safety with other federal agencies (i.e., DOT, NRC, Environmental Protection Agency, etc.) and international agencies/organizations (i.e., IAEA, International Maritime Organization, ICAO, etc.) and other agencies concerning domestic and international transportation safety and packaging regulations, packaging certification, and modal safety regulations.
 - (7) Reviews and processes DOE contractor applications for DOT Special Permits and renewals and forwards the applications to DOT.
 - (8) Reviews and grants or denies requests for DOE exemptions to DOE elements from the requirements of this Order.
 - (9) Reviews DOE requests for use of DOT-IAEA CoCAs or CACs for international transportation and NRC CoCs and forwards requests to the appropriate agency.

- (10) Provides technical assistance and training for packaging and transportation safety matters.
- (11) Coordinates Departmental review of, participation in, and comment on international, Federal, State, local, and tribal regulations relating to packaging and transportation safety.
- (12) Develops Departmental policy and guidance for transportation and packaging safety of hazardous materials, substances and wastes, and assists Departmental elements and contractors on related matters.
- (13) Audits DOE entities utilizing DOE or NNSA issued CoCs or OTCs as necessary for compliance with the packaging QA program and the requirements of 10 CFR Part 71, Subpart H.
- (14) Reviews and approves DOE package QA programs for Type B and fissile radioactive materials packagings in accordance with 10 CFR Part 71, Subpart H, before first use of the packaging.
- (15) Supports the sharing of packaging and transportation safety successes, problems, and corrective actions with other DOE elements and the field through the use of the Department's lessons learned program.

b. NNSA Certifying Official (NNSA CO).

- (1) Administers the NNSA program for NNSA certification of fissile and Type B packages.
 - (a) Provides guidance for the preparation of NNSA SARPs.
 - (b) Reviews the SARP included in an application for a NNSA OTC, and any other supporting documentation, to determine if the package meets the requirements of 10 CFR Part 71, Subparts E, F, G, & H, and any other applicable standards for certification prior to use.
 - (c) Issues NNSA OTCs for approved packages.
 - (d) Reviews and recertifies, in writing, NNSA OTCs.
 - (e) Curtails and suspends the use of NNSA packages, if warranted.
- (2) Establishes supplemental packaging standards for the transportation by NNSA of hazardous materials, substances and wastes.

- (3) Supports the development, adoption and use of voluntary consensus standards through a topical committee within the Department's Technical Standards Program.
- (4) Provides the point of coordination for NNSA in matters related to transportation and packaging safety that arise in discussions with other federal agencies (i.e., DOT, NRC, Environmental Protection Agency, etc.) and international agencies/organizations (i.e., IAEA, International Maritime Organization, ICAO, etc.) and other agencies concerning domestic and international transportation safety and packaging regulations, packaging certification, and modal safety regulations.
- (5) Reviews and processes NNSA contractor applications for DOT Special Permits and renewals and forwards the applications to DOT.
- (6) Reviews and grants or denies requests for NNSA exemptions to NNSA elements from the requirements of this Order.
- (7) Reviews NNSA requests for use of DOT-IAEA CoCAs or CACs for international transportation and NRC CoCs and forwards requests to the appropriate agency.
- (8) Provides technical assistance and training for packaging and transportation safety matters.
- (9) Provides the NNSA point of coordination in connection with Departmental review of, participation in, and comment on international, Federal, State, local, and tribal regulations relating to packaging and transportation safety.
- (10) Develops supplemental policy and guidance for NNSA transportation and packaging safety of hazardous materials, substances and wastes, and assists NNSA elements and contractors on related matters.
- (11) Audits NNSA entities utilizing DOE or NNSA issued CoCs or OTCs as necessary for compliance with the packaging QA program and the requirements of 10 CFR Part 71, Subpart H.
- (12) Reviews and approves NNSA package QA programs for Type B and fissile radioactive materials packagings in accordance with 10 CFR Part 71, Subpart H, before first use of the packaging.
- (13) Supports the sharing of packaging and transportation safety successes, problems, and corrective actions with other NNSA elements and the field through the use of the Department's lessons learned program.

c. Heads of Operations Offices or Field Offices/Site Office Managers.

- (1) Implement the requirements of this Order and ensure that contractors under their purview fully implement and comply with the requirements of this Order.
- (2) Review and approve, in writing, onsite TSDs.
- (3) Review and transmit requests to the HCO or NNSA CO for DOE or NNSA exemptions, DOT-IAEA CoCAs or CACs, DOT Special Permits and renewals, and NRC CoCs.
- (4) Review and process SARPs through the HCO or NNSA CO responsible for the facilities or activities applying for package certification.
- (5) Notify the contracting officer of which site/facility management contracts are affected by this order and ensure that the contracting officer incorporates the CRD into the contract.
- (6) Review existing contracts to determine whether existing requirements provide adequate safety protections. In contracts with inadequate protections, contact the contracting officer about having the CRD inserted into the contract.
- (7) Support the sharing of packaging and transportation safety successes, problems, and corrective actions with other DOE and NNSA elements as part of the Department's lessons learned program.
- (8) Obtain waivers from tribal, State, and local transportation laws, rules, and regulations, as needed to meet safety requirements. Provide copies of all such requests and waivers to the responsible Secretarial Officer/Deputy Administrator and the HCO or NNSA CO.
- (9) Review and process packaging QA programs for Type B and fissile radioactive materials packagings through the HCO or the NNSA CO for approval.
- (10) Review and approve, in writing, transportation and packaging QA programs for radioactive and hazardous materials packagings, other than certified Type B and fissile radioactive materials packagings, to satisfy the requirements of DOE O 414.1C, Quality Assurance.
- (11) Report to the HCO or NNSA CO, as appropriate, within 30 days of any instance of significant reduction in the effectiveness of any approved Type B or fissile packaging during use; any discovery of a defects with safety significance in Type B or fissile packaging after first use, with details of

the means employed to repair the defects and prevent their recurrence; or any instances where the conditions of approval in the CoC were not observed in making a shipment.

(12) Conduct oversight of hazardous materials packaging and transportation activities, including contractor/subcontractor procurement, use and maintenance of IP, Type A and Type B packagings of radioactive and fissile material for compliance with appropriate regulatory requirements and DOE Orders pursuant to DOE O 226.1A.

(13) Review and process requests for DOT Special Permits and DOE or NNSA exemptions through the HCO or the NNSA CO.

d. Central Technical Authority (CTA) or designee. Concurs on both exemptions and equivalencies to this Order for nuclear facilities.

6. REFERENCES.

- a. 10 CFR Part 71, Subparts E, F, G, and H, Packaging and Transportation of Radioactive Material.
- b. 10 CFR Part 830, Nuclear Safety Management.
- c. 49 CFR Part 107, Hazardous Materials Program Procedures.
- d. 49 CFR Part 171-180, Pipeline and Hazardous Materials Safety Administration, Department of Transportation. (Parts 171-180 are on packaging and transportation of hazardous materials by rail, aircraft, vessel, and public highway).
- e. 49 CFR Part 171, Subpart C, Authorization and Requirements for the Use of International Transport Standards and Regulations.
- f. 49 CFR Parts 190-199, Pipeline and Hazardous Materials Safety Administration, Department of Transportation. (Parts 190-199 are on pipeline safety and on transporting hazardous gas and liquid by pipeline).
- g. 49 CFR Parts 200-268, Federal Railway Administration, Department of Transportation.
- h. 49 CFR Parts 350-399, Federal Motor Carrier Safety Administration, Department of Transportation.
- i. Title XXXII of P.L. 106-65, National Nuclear Security Administration Act, as amended, which established a separately organized agency within the Department of Energy.

- j. DOE O 226.1A, *Implementation of Department of Energy Oversight Policy*, dated 5-15-07.
 - k. DOE O 231.1A, *Environment, Safety and Health Reporting*, dated 8-19-03.
 - l. DOE O 410.1, *Central Technical Authority Responsibilities Regarding Nuclear Safety Requirements*, dated 08-28-07.
 - m. DOE O 414.1C, *Quality Assurance*, dated 6-17-05.
7. CONTACT. Questions concerning this Order should be addressed to the Office of Packaging and Transportation at (202) 586-7976.

BY ORDER OF THE SECRETARY OF ENERGY:



DANIEL B. PONEMAN
Deputy Secretary

CONTRACTOR REQUIREMENTS DOCUMENT
DOE O 460.1C, *Packaging and Transportation Safety*

Regardless of the performer of the work, the contractor is responsible for complying with the requirements of this CRD. The contractor is responsible for flowing down the requirements of this CRD to subcontractors at any tier to the extent necessary to ensure the contractor's compliance with the requirements.

For the purpose of this CRD, use of the term "DOE" does not include NNSA; use of the term "Department" or "Departmental" does include NNSA.

This CRD establishes the requirements for DOE or NNSA contractors whose contracts implicitly or explicitly involve packaging or transportation of DOE or NNSA offsite shipments and onsite transfers of radioactive and other hazardous materials and for modal transport.

1. To the extent the contractor is regulated by the Nuclear Regulatory Commission (NRC), a state under an agreement with the NRC (Agreement State), or Department of Transportation (DOT), nothing in this CRD relieves the contractor of having to comply with any applicable regulatory requirements.
2. The contractor must perform onsite hazardous materials transfers in accordance with 49 CFR Parts 171-180 and 350-399, or the site- or facility-specific Operations or Field Office/Site Office approved Transportation Safety Document (TSD) that describes the methodology and compliance process to meet equivalent safety for any deviation from the 49 CFR Parts 171-180 and 49 CFR Parts 350-399. For onsite transfers subject to 10 CFR Part 830, the TSD must comply with the safety basis requirements of 10 CFR Part 830, Appendix A to Subpart B, to identify the conditions, safe boundaries, and hazard controls necessary to protect workers, the public, and the environment from adverse consequences.
3. The contractor must perform offsite packaging and transportation activities in accordance with the DOT requirements of the Hazardous Materials Regulations (HMR) (49 CFR Parts 171-180).
4. For specific radioactive material packagings for offsite shipments, the following apply:
 - a. Each contractor that offers for transportation or transports radioactive material in a Type B or fissile material packaging, as appropriate, certified by the Headquarters Certifying Official (HCO), NNSA Certifying Official (NNSA CO) or the U.S. Nuclear Regulatory Commission (NRC), must meet the conditions specified in the Certificate of Compliance (CoC) or Offsite Transportation Certificate (OTC), as appropriate, for the package issued by the HCO, NNSA CO or NRC and register in writing with the HCO or the NNSA CO prior to use.
 - b. For an import or an export shipment pursuant to 49 CFR 173.471, 173.472 or 173.473, each contractor must use a packaging certified by the U.S. Competent Authority (DOT) where the DOE or NNSA and the contractor have been registered with the DOT as a User, and the contractor has the required

- documentation for the use and maintenance of the packaging and makes the shipments in accordance with the terms of the certificate issued by the DOT.
- c. For a new NRC or DOT packaging certificate, the contractor must file a request for a new certificate with the responsible Head of the Operations Office or the Field Office/Site Office Manager for processing through the HCO or NNSA CO, as appropriate. When DOE or NNSA is the holder of a packaging certificate issued by the NRC or DOT, the contractor must file a request for revisions to or renewal of existing NRC or DOT certificate with the responsible Head of the Operations Office or the Field Office/Site Office Manager for processing through the HCO or NNSA CO.
 - d. For a new DOE or NNSA Type B or fissile material packaging, each contractor must submit an application to the responsible Head of the Operations Office or the Field Office/Site Office Manager for processing through the HCO or NNSA CO. This application must include a Safety Analysis Report for Packaging (SARP) and any other supporting documentation to demonstrate that the packaging meets the requirements of 10 CFR Part 71, Subparts E, F, G, and H, and any other applicable standards for certification prior to use.
5. The contractor must report to the responsible Head of the Operations Office or the Field Office/Site Office Manager within 30 days, of any instance of significant reduction in the effectiveness of any approved Type B or fissile packaging during use; any discovery of any defects with safety significance in Type B or fissile packaging after first use, with details of the means employed to repair the defects and prevent their recurrence; or any instances where the conditions of approval in the CoC were not observed in making a shipment.
 6. The contractor, when participating in the design, fabrication, procurement, use, or maintenance of hazardous materials packaging, must have a QA program approved and audited by—
 - a. The HCO or NNSA CO, as appropriate, for certified Type B and fissile radioactive materials packagings satisfying the requirements of 10 CFR Part 71, Subpart H, Quality Assurance, or
 - b. The responsible Head of Operations Office or Field Office/Site Office Manager, as appropriate, for all other radioactive and hazardous materials packagings satisfying the requirements of the CRD to DOE O 414.1C, or its successor, as found in its contract.
 7. For use of the International Civil Aviation Organization's (ICAO) *Technical Instructions*, the International Maritime Organization's (IMO) *International Maritime Dangerous Goods (IMDG) Code*, Transport Canada's *Transportation of Dangerous Goods Regulations*, and/or the IAEA's *Regulations for the Safe Transport of Radioactive Material (TS-R-1)* for domestic segments of international transportation by air, vessel, rail, or highway, the contractor must also meet the requirements of 49 CFR Part 171.
 8. The contractor must act in accordance with Federal Motor Carrier Safety Regulations (49 CFR Parts 350-399) for transporting hazardous materials by motor carrier; in accordance with applicable regulations of the Federal Railroad Administration

(49 CFR Parts 200-268) for rail operations; and in accordance with 49 CFR Parts 190 193, 195, and 199 for transportation of hazardous materials by pipeline.

9. If the contractor is subject to the HMR and wishes to prepare and/or conduct an offsite shipment that is not in accordance with the HMR, then the contractor must apply for a DOT Special Permit. Applications must be submitted to the responsible Head of Operations Office or the Field Office/Site Office Manager for processing through the HCO or NNSA CO to DOT. Applications must follow the directions in 49 CFR 107.105.
10. If the contractor is not otherwise subject to the HMR and wishes to conduct activities that are not in accordance with the requirements of this CRD, then the contractor must apply to the responsible Head of Operations Office or the Field Office/Site Office Manager for processing through the HCO or NNSA CO for a DOE or NNSA exemption. Applications must be prepared in accordance with the procedures in 49 CFR 107.105(c) and (d).
11. The contractor must implement and/or expand lessons learned programs to include sharing packaging and transportation safety successes, problems, and corrective actions with other DOE and NNSA elements and the field through the use of the Department's lessons-learned program.
12. The contractor, when preparing for and transporting, or transferring hazardous materials, substances and wastes, must ensure that all personnel who support and/or perform packaging, transfer and transportation operations are appropriately trained and qualified; and maintain auditable training records in accordance with site record retention requirements.