

U.S. Department of Energy
Washington, D.C.

ORDER

DOE O 461.1

Approved: 09-29-00
Sunset Review: 09-29-02
Expires: 09-29-04

**SUBJECT: PACKAGING AND TRANSFER OR TRANSPORTATION OF MATERIALS OF
NATIONAL SECURITY INTEREST**

1. **OBJECTIVE.** To establish requirements and responsibilities for the Transportation Safeguards System (TSS) packaging and transportation and onsite transfer of nuclear explosives, nuclear components, Naval nuclear fuel elements, Category I and Category II special nuclear materials, special assemblies, and other materials of national security interest.
2. **CANCELLATIONS.** Cancellation of a directive does not, by itself, modify or otherwise affect any contractual obligation to comply with such a directive. Canceled directives that are incorporated by reference in a contract remain in effect until the contract is modified to delete the reference to the requirements in the canceled directives.
 - a. DOE 5610.12, PACKAGING AND OFF-SITE TRANSPORTATION OF NUCLEAR COMPONENTS, AND SPECIAL ASSEMBLIES ASSOCIATED WITH THE NUCLEAR EXPLOSIVE AND WEAPON SAFETY PROGRAM, dated 7-26-94.
 - b. DOE 5610.14, TRANSPORTATION SAFEGUARDS SYSTEM PROGRAM OPERATIONS, dated 5-12-93.
3. **APPLICABILITY.**
 - a. **General.** Except for the exclusions noted in paragraph 3c below, this Order applies to all DOE elements, including the National Nuclear Security Administration, that have responsibility for packaging of nuclear explosives, nuclear components, and special assemblies and the onsite transfer and offsite transportation of nuclear explosives, nuclear components, Naval nuclear fuel elements, Category I and Category II special nuclear materials, special assemblies, and other materials of national security interest.
 - b. **Contractors.** Except for the exclusions noted in paragraph 3c below, the Contractor Requirements Document (CRD) (see Attachment 1), sets forth requirements that are to be applied to all contractors performing activities subject to this Order. Contractor compliance with the CRD will be required to the extent set forth in the contract. Contractors are directed to continue to comply with the requirements of Orders canceled by this Order until their contracts are modified to delete the reference to the requirements of the canceled Orders.

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All Departmental Elements

INITIATED BY:
Office of Defense Programs

- c. Exclusions. This Order does not apply to the following:
- (1) Requirements of this Order that overlap or duplicate requirements of the Nuclear Regulatory Commission (NRC) related to radiation protection, nuclear safety (including quality assurance), and safeguards and security of nuclear material, do not apply to the design, construction, operation, and decommissioning of Office of Civilian Radioactive Waste Management facilities.
 - (2) Packaging and transportation of hazardous materials subject to DOE O 460.1A, **PACKAGING AND TRANSPORTATION SAFETY**, and DOE O 460.2, **DEPARTMENTAL AND MATERIALS TRANSPORTATION AND PACKAGING MANAGEMENT**.
 - (3) Packaging activities conducted under the authority of the Director, Naval Nuclear Propulsion Program, as described in Public Law 98-525.

4. REQUIREMENTS.

- a. Packaging and Transportation Procedures. Each site must maintain a set of DOE-approved Packaging and Transportation Procedures (sometimes referred to as the Site (or Contractor) Packaging and Transportation Manual), which will provide the regulations, controls, and procedures to be followed for the packaging and transportation of materials, both for transfer within the site boundaries and for transportation from the site.
- b. Offsite Packaging and Transport.
- (1) Packaging and Shipment Authorization.
 - (a) Packages offered for shipment that are compliant with the following Department of Transportation (DOT) and NRC regulations fulfill packaging safety requirements of this Order:
 - Reg Guide 7.9, Proposed Revision 2, dated May 1986;
 - Title 10 CFR Part 71 “Packaging and Transportation of Radioactive Material,” and subpart H, “Quality Assurance”; and
 - Title 49 CFR Parts 100-199; or authorized by DOE O 460.1A.

All other packages to be transported by TSS must use a packaging or shipment method authorized by an Offsite Transportation Certificate (OTC) or an Offsite Transportation Authorization (OTA). The OTC and

OTA will be approved in accordance with DOE Albuquerque Operations Office (AL) Safety Guide 500.

- (b) The request for an OTC or OTA must include supporting documentation.
- 1 For an OTC request, a Safety Analysis Report for Packaging (SARP) must be submitted that demonstrates compliance of the package with the applicable requirements of the following:
 - Reg Guide 7.9, Proposed Revision 2, dated May 1986;
 - Title 10 CFR Part 71, “Packaging and Transportation of Radioactive Material,” and Subpart H, “Quality Assurance”; and
 - applicable portions of Title 49 CFR 100-185.
 - 2 For an OTA request, a Transportation System Risk Assessment (TSRA) must be submitted for radioactive material shipments containing Type B quantities, or a Hazards Analysis Report for less than a Type B quantity or a Type A quantity of fissile radioactive material.
- (c) The OTC must document compliance of a package with the applicable requirements of Title 10 CFR Part 71. The OTA shall document for shipment package and loading configurations, designated routes, and campaign duration.
- (d) A Transportation Safety Review Panel (TSRP), composed of subject matter experts and chaired by a Federal employee, will review the application for an OTC or OTA and document the TSRP’s recommendation for approval/disapproval in a Safety Evaluation Report (SER).
- (e) Each organization involved in a packaging and/or shipment activity authorized by an OTC or OTA must maintain a copy of it and the supporting documentation.
- (2) Transportation.
- (a) As specified in 4b(1) of this Order, each shipment of nuclear components, Naval nuclear fuel elements, Category I and Category II special nuclear materials, special assemblies, and other materials of national security interest will be prepared and transported in accordance with the applicable Hazardous Materials Regulations (49 CFR Parts 100-185) and applicable tribal, state, and local regulations not preempted by DOT.

- (b) All transportation activities performed under the TSS will be conducted according to the AL Office of Transportation Safeguards (OTS) safety and risk envelope determined by the OTS “Transportation Safety Analysis Report - Highway (Vol. 1) and Ross Air Operations (Vol. 2)” and SAND-93-1671, “Defense Programs Transportation Risk Assessment: Probabilities and Consequences of Accidental Dispersal of Radioactive Material Arising from the Off-Site Transportation of Defense Programs Material (U)” (DPTRA) and Safety Guide 500.
 - (c) Any government- or contractor-owned or -leased vehicle offsite must be operated in compliance with applicable Federal Motor Carrier Safety Regulations (FMCSR) (49 CFR Parts 350 - 399) and tribal, state, and local regulations not preempted by DOT.
 - (d) In addition to the Hazardous Materials Regulations for “Carriage by Aircraft” (49 CFR Part 175), all DOE transportation operations by aircraft must follow the requirements of DOE O 440.2, AVIATION.
 - (e) Transportation of nuclear explosives must meet the requirements of DOE O 452.1A, NUCLEAR EXPLOSIVE AND WEAPON SURETY PROGRAM, and DOE O 452.2A, SAFETY OF NUCLEAR EXPLOSIVE OPERATIONS.
- c. Onsite Packaging and Transfer.
- (1) Onsite packaging and transfers of nuclear components and special assemblies must comply with DOE M 461.1-1, PACKAGING AND TRANSFER OF MATERIALS OF NATIONAL SECURITY INTEREST. Such onsite operations must comply with a DOE-approved contractor’s Onsite Packaging and Transfer Procedures that detail site-specific requirements and responsibilities.
 - (2) Onsite operation of motor vehicles must comply with applicable FMCSR.
 - (3) Onsite transfers of nuclear explosives must comply with DOE O 452.2A.
- d. Training.
- (1) Training programs and procedures for the safe packaging, transfer, and transportation of nuclear components, special assemblies, and radioactive material associated with the Nuclear Weapons Program will be developed and implemented.
 - (2) Assurance must be provided that all personnel who support and/or perform packaging, transfer, and transportation operations are appropriately trained and qualified.

- (3) Auditable training records must be maintained.
- e. Quality Assurance Plan and Packaging, Transfer and Transportation Plans.
Packaging, transfer, and transportation activities authorized by this Order must be conducted in accordance with a Quality Assurance Plan to include self-assessment and a Packaging, Transfer, and Transportation Plan for these activities. Any work performed under these plans will conform to DOE P 450.4, SAFETY MANAGEMENT SYSTEM, and the requirements of 10 CFR 71 Subpart H.
 - f. Safeguards and Security.
 - (1) Safeguards and security requirements for offsite transportation are found in the following directives:
 - (a) DOE O 470.1, SAFEGUARDS AND SECURITY PROGRAM,
 - (b) DOE O 471.2A, INFORMATION SECURITY PROGRAM,
 - (c) DOE M 471.2-1B, CLASSIFIED MATTER PROTECTION AND CONTROL MANUAL,
 - (d) DOE O 473.2, PROTECTIVE FORCE PROGRAM,
 - (e) DOE O 474.1, CONTROL AND ACCOUNTABILITY OF NUCLEAR MATERIALS, and
 - (f) DOE M 474.1-1 MANUAL FOR CONTROL AND ACCOUNTABILITY OF NUCLEAR MATERIALS.
 - (2) Safeguards and security requirements for onsite transfers are found in DOE O 470.1, and its implementing Orders and other directives; most specifically in—
 - (a) DOE 5632.1C, PROTECTION AND CONTROL OF SAFEGUARDS AND SECURITY INTERESTS,
 - (b) DOE M 5632.1C-1, MANUAL FOR PROTECTION AND CONTROL OF SAFEGUARDS AND SECURITY INTERESTS,
 - (c) DOE O 473.2,
 - (d) DOE O 474.1,
 - (e) DOE M 474.1-1, and
 - (f) 10 CFR 710, Subpart B.

g. Exemptions.

- (1) An exemption to this Order may be granted, provided that the proposed exemption—
 - (a) is not prohibited by law, and
 - (b) does not present an undue risk to public health and safety, the environment, or workers.
- (2) All exemption decisions will be set forth in writing and must state the reasons for granting or denying the exemption and, if granted, the basis for determining that it does not present an undue risk as discussed above.

5. RESPONSIBILITIES.a. Deputy Administrator for Defense Programs (DP-1).

- (1) Assigns pertinent line management responsibilities.
- (2) Grants or denies exemptions from requirements in this Order.

b. Assistant Deputy Administrator for Military Application and Stockpile Operations (DP-20).

- (1) Provides overall management and policy direction for Stockpile Management packaging activities and conduct of TSS operations.
- (2) Periodically assesses the field elements to confirm compliance with and implementation of this Order.
- (3) Coordinates with appropriate DOE elements, including NNSA, in the development of standards for packaging and TSS operations.
- (4) Informs senior DOE management, including NNSA, regarding TSS operations.

c. Director, Office of Security Affairs.

- (1) Develops DOE directives for safeguards and security of nuclear materials and the security of classified information, work, and materials.
- (2) Conducts safeguards and security technology development for TSS needs.

- d. Chief, Defense Nuclear Security (NNSA).
- (1) Advises DP-1 on the adequacy of DOE and contractor safeguards and security programs.
 - (2) Advises DP-1 on safeguards and security requirements for packaging and transportation of Category I and II special nuclear materials, special assemblies, classified configurations of nuclear weapons systems, and other materials under the programmatic jurisdiction of Defense Programs.
 - (3) Establishes the security programs and requirements for coordinating with the Department of Defense and other Federal agencies in the recapture and recovery of nuclear explosives and nuclear weapons
- e. Managers, DOE Field Elements, including NNSA.
- (1) Ensure the SARP or TSRA is submitted to AL at least 9 months prior to the first required shipment date.
 - (2) Provide subject matter experts to serve as members on a TSRP.
 - (3) Provide support to external organizations conducting safety appraisals at DOE or NNSA operations/field offices, area/site offices, and contractors.
 - (4) Maintain a copy of all OTCs, OTAs, DOT and NRC Certificates of Compliance, and their respective SARPs or TSRAs, for packaging and transfer operations performed at the site(s) and/or by contractors that they manage.
 - (5) Ensure appraisals of packaging and transportation safety programs under their cognizance are conducted at least every 24 months to verify compliance with this Order.
 - (6) Ensure all personnel who support and/or perform packaging and transportation operations are trained and qualified.
 - (7) Ensure each site has DOE or NNSA personnel assigned and trained to oversee compliance with the requirements of this Order and the oversight is performed and documented.
 - (8) Review and approve the contractor's Packaging and Transportation Procedures.
 - (9) Review and approve the contractor's Packaging and Transportation Plan and Quality Assurance Plan.

- (10) Review, assess the adequacy of, and approve tiedown procedures used in contractor-operated conveyances.
 - (11) Ensure the hazard analysis is submitted to AL at least 2 months prior to the first required shipment date.
- f. Manager, Albuquerque Operations Office, in addition to the responsibilities in Paragraph 5e above.
- (1) Manages and operates the TSS, which is used for the safe and secure transportation of nuclear explosives, nuclear components, Naval nuclear fuel elements, Category I and Category II special nuclear materials, special assemblies, and other cargo deemed appropriate by responsible program elements and receiving his/her approval.
 - (2) Reports the following TSS information periodically, and at least annually, to DP-20:
 - (a) status of the TSS operations;
 - (b) findings from inspections, surveys, and self-assessments of all elements of the TSS operations and the status of the resulting corrective actions;
 - (c) status of technology development and engineering efforts to improve operations for both near-term and long-term outlooks.
 - (3) Implements procedures and guidelines for field elements to conduct safety and/or risk analyses of requested transportation configurations and to ensure that the report of that analysis is usable by the TSRP in its review of OTA requests.
 - (4) Convenes the TSRP to review requests for OTCs and OTAs, develops the SERs, and records the documentation of approval for each OTC or OTA.
 - (5) Approves and issues OTCs and OTAs.
 - (6) Maintains a copy of the following:
 - (a) all currently approved OTCs and OTAs, along with SARPS, SERs, TSRAs, and other supporting documentation;
 - (b) all current certificates for NRC and DOE/Environmental Management-approved (under DOE O 460.1A) packages that are used in the TSS.

- (7) Conducts appraisals of the packaging and transportation activities and TSS program activities at other operations/field offices at least every 24 months to verify compliance with this Order, and forwards one copy of each appraisal report to DP-20. Based on the amount of nuclear materials located at a DOE site, that site may be exempted from this requirement.
 - (8) Develops and implements a TSS training program in accordance with DOE O 360.1A, FEDERAL EMPLOYEE TRAINING.
 - (9) Authorizes the use of any vehicle other than those normally used in the TSS when transporting offsite, pursuant to an OTA or OTC.
 - (10) Plans and conducts annual safety and security self-assessments of the TSS.
 - (11) Documents, approves, and implements policies and operating procedures for the TSS through management directives or standard operating procedures. Ensures the operating procedures include procedures for responding to any event, unusual occurrence, or emergency.
 - (12) Every 5 years, updates and approves the Transportation Safety Analysis Report (TSAR) of the TSS operations.
 - (13) Ensures that applicable provisions of the Safeguards and Security Program are implemented within the OTS.
 - (14) Implements the OTS requirements in DOE O 473.2.
- g. Deputy Administrator for Naval Reactors.
- (1) In accordance with the responsibilities and authorities assigned by Executive Order 12344 (statutorily prescribed by 42 U.S.C. 7158, note) and to ensure consistency throughout the joint Navy/DOE organization of the Navy Nuclear Propulsion Program, implements and oversees all policy and practices pertaining to this Order for activities under the cognizance of Naval Reactors.
 - (2) Establishes and implements special arrangements for shipments of Category I and Category II quantities of special nuclear materials (as defined in DOE M 474.1-1) to or from facilities of the Naval Reactors Program, including coordinating with AL, Office of Transportation Safeguards, for appropriate support of shipments.

6. REFERENCES.

- a. SAND-93-1671, DEFENSE PROGRAMS TRANSPORTATION RISK ASSESSMENT: PROBABILITIES AND CONSEQUENCES OF ACCIDENTAL DISPERSAL OF RADIOACTIVE MATERIAL ARISING FROM THE OFF-SITE TRANSPORTATION OF DEFENSE PROGRAMS MATERIAL (U), Clauss, David B. et al., dated 9-94, or latest issue. (Note: This document is known as the "DPTRA.")
- b. DOE O 360.1A, FEDERAL EMPLOYEE TRAINING, dated 9-21-99.
- c. DOE O 440.2, AVIATION, dated 9-25-95.
- d. DOE O 452.1A, NUCLEAR EXPLOSIVE AND WEAPON SURETY PROGRAM, dated 1-17-97.
- e. DOE O 452.2A, SAFETY OF NUCLEAR EXPLOSIVE OPERATIONS, dated 1-17-97.
- f. DOE O 460.1A, PACKAGING AND TRANSPORTATION SAFETY, dated 10-2-96.
- g. DOE O 460.2, DEPARTMENTAL MATERIALS TRANSPORTATION AND PACKAGING MANAGEMENT, dated 9-27-95.
- h. DOE M 461.1-1, PACKAGING AND TRANSFER OF MATERIALS OF NATIONAL SECURITY INTEREST, dated 9-29-00..
- i. DOE O 470.1, SAFEGUARDS AND SECURITY PROGRAM, dated 9-28-95.
- j. DOE O 471.2A, INFORMATION SECURITY PROGRAM, dated 3-27-97.
- k. DOE M 471.2-1B, CLASSIFIED MATTER PROTECTION AND CONTROL MANUAL, dated 1-6-99.
- l. DOE O 473.2, PROTECTIVE FORCE PROGRAM, dated 6-30-00/
- m. DOE O 474.1, CONTROL AND ACCOUNTABILITY OF NUCLEAR MATERIALS, dated 8-11-99.
- n. DOE M 474.1-1, MANUAL FOR CONTROL AND ACCOUNTABILITY OF NUCLEAR MATERIALS, dated 8-11-99.
- o. DOE O 5632.1C, PROTECTION AND CONTROL OF SAFEGUARDS AND SECURITY INTERESTS, dated 7-15-94.
- p. DOE M 5632.1C-1, MANUAL FOR PROTECTION AND CONTROL OF SAFEGUARDS AND SECURITY INTERESTS, dated 7-15-94

- q. Title 10 CFR, ENERGY, Part 71, “Packaging and Transportation of Radioactive Material,” and Subpart H, “Quality Assurance.”
- r. Title 10 CFR 710, Subpart B, “Criteria and Procedures for Establishment of Personnel Security Assurance Program and Determination of an Individual’s Eligibility for Access to Personnel Security Assurance Program Position.”
- s. Title 49 CFR, TRANSPORTATION, Parts 100-185.
- t. DEFENSE PROGRAMS PACKAGING AND TRANSPORTATION GUIDE, DOE/AL Safety Guide 500, current revision.

7. DEFINITIONS.

- a. Campaign. A series of shipments made over a predetermined time period in support of a common objective, which have similar cargo, packaging, tiedown configuration, and conveyance. The approval to conduct a campaign may further increase route restrictions or specify administrative measures to reduce or eliminate risks deemed acceptable in normal operations.
- b. Category. A designation (Category I, II, III, or IV) of special nuclear materials (SNM), determined by both the quantity and type of SNM, or of an SNM location based on the type and form of the SNM and the amount of SNM present. DOE M 474.1-1 provides precise guidance for determining SNM categories.
- d. Defense Programs Packaging and Transportation Guide. This Guide, also referred to as Safety Guide (SG) 500, describes approaches to meeting the requirements of DOE/AL unless otherwise specified by contract with the DOE contractor. SG 500 provisions should not be construed as contractual requirements in any audit or appraisal for compliance with DOE O 461.1 unless such provisions are specified by laws, Federal regulations (10 CFR 71 and 49 CFR 100-199), or other “requirements” documents, such as DOE Orders.
- e. Event. A condition requiring a Transportation Safeguards System response that could occur at a remote location (e.g., hazardous weather or impassable road).
- f. Hazardous Components. Those parts of nuclear explosives or special assemblies that contain hazardous (other than radioactive) materials, as defined in 49 CFR.
- g. Nuclear Components. Those parts of a nuclear explosive or special assembly, or test parts or subassembly, that contain fissile and/or radioactive and other materials.

- h. Nuclear Explosive. An assembly containing fissionable and/or fusionable materials and main charge high-explosive parts or propellants capable of producing a nuclear detonation (e.g., a nuclear warhead or test device).
- i. Offsite. Any area within or outside the boundaries and jurisdiction of a DOE facility to which the general public has free and uncontrolled access.
- j. Offsite Transportation Authorization (OTA). A DOE document, approved and issued by the Manager, AL, authorizing a nuclear weapons-related shipping campaign on a limited basis (i.e., for a specific package and loading configuration, designated routes, and campaign duration).
- k. Offsite Transportation Certificate (OTC). A DOE document, approved and issued by the Manager, AL, authorizing a specific packaging for nuclear weapons-related transportation activities involving quantities of radioactive and other hazardous materials, for use either on a one-time basis or up to 5 years.
- l. Onsite. Any area within the boundaries of a DOE site or facility to which access is controlled.
- m. Other Materials of National Security Interest. Miscellaneous materials that are recommended for transportation by TSS by responsible program elements and approved for such transportation by the Manager, AL.
- n. Package. The packaging, together with its contents, as presented for transport and/or transfer.
- o. Packaging. The assembly of components that may consist of one or more receptacles, absorbent materials, spacing structures, thermal insulation, radiation shielding, and devices for cooling or absorbing mechanical shocks. The conveyance, tiedown system, and auxiliary equipment may sometimes be designated as part of the packaging.
- p. Safety Analysis Report for Packaging (SARP). A document that provides a comprehensive technical evaluation of packaging. The report identifies design, testing, operational procedures, maintenance procedures, and a Quality Assurance Program to demonstrate compliance with NRC safety standards (10 CFR 71) or equivalent standards established by DOE for approving packaging and issuing OTCs.
- q. Safety Evaluation Report (SER). A document that provides the final results of the TSRP's safety evaluation, including its independent review of the Safety Analysis Report for Packaging and/or Transportation System Risk Assessment.

- r. Shipment. An operational or logistical action involving offsite movement of nuclear explosives, nuclear components, special assemblies, or related radioactive and hazardous materials by DOE via the Transportation Safeguards System, or any Albuquerque Operations Office-approved conveyance made under the supervision of the Transportation Safeguards Division.
- s. Special Assembly. A major assembly of nuclear components that does not compose a complete nuclear explosive and is not capable of producing a nuclear detonation. Special assemblies include joint test assemblies, laboratory test units, nuclear explosive-like assemblies, and trainers.
- t. Special Nuclear Material (SNM).
 - (1) Plutonium, uranium enriched in the isotope 233 or in the isotope 235, and any other material that the Commission, pursuant to Section 51 of the Atomic Energy Act, as amended, determines to be special nuclear material, but does not include source material; or
 - (2) any material artificially enriched by any of the foregoing, but that does not include source material.
- u. Subject Matter Expert. An individual recognized as having education, knowledge, skills, and experience in a technical specialty field. (For this Order, a subject matter expert in hazardous materials regulations in the packaging field is an individual skilled in one or more of the areas of nuclear criticality safety, containment, radiation shielding, thermal characterization, structural and materials analysis, quality assurance, or transportation risk analysis.)
- v. Transfer. Any onsite transport of nuclear explosives, nuclear components, special assemblies, or associated hazardous materials other than those authorized by applicable Basis for Interim Operations and Operational Safety Requirements or Safety Analysis Reports and Technical Safety Requirements.
- w. Transportation Safeguards System (TSS). A DOE system managed and operated by the Albuquerque Operations Office, and administered by the Office of Transportation Safeguards, under the programmatic direction of the Assistant Deputy Administrator for Military Application and Stockpile Operations. It is employed for the safe and secure movement of nuclear explosives, nuclear components, special assemblies, special nuclear materials, and other cargo deemed appropriate by responsible program elements and approved by the Albuquerque Operations Office. Such operations are authorized under the Atomic Energy Act and its amendments.

- x. Transportation Safety Analysis Report (TSAR). A formal Safety Analysis Report for a transportation system. It describes the design, operation, and maintenance of the system and assesses accident response.
 - y. Transportation Safety Review Panel (TSRP). A committee, chaired by a Federal employee and comprised of persons with appropriate expertise, which performs technical reviews to verify compliance with this Order and makes recommendations for offsite transportation certification or authorization.
 - z. Transportation System Risk Assessment (TSRA). Formal documentation to systematically describe a transportation system and identify and assess hazards and risks associated with the planned operation.
8. CONTACT. Office of Defense Programs (DP-22) at (301) 903-2402.

BY ORDER OF THE SECRETARY OF ENERGY:



T.J. GLAUTHIER
Deputy Secretary

CONTRACTOR REQUIREMENTS DOCUMENT

DOE O 461.1, TRANSPORTATION SAFEGUARDS SYSTEM PACKAGING, TRANSFER AND TRANSPORTATION

1. Each Department of Energy (DOE) contractor must package, prepare for transfer or transport, transfer, and when required, transport shipments of nuclear components, Naval nuclear fuel elements, Category I and Category II special nuclear materials, special assemblies, and other materials of national security interest, in accordance with either the applicable hazardous materials regulations as found in Title 49, Code of Federal Regulation (CFR) Parts 100-185, and applicable tribal, state, and local regulations not preempted by the Department of Transportation (DOT) or an offsite transportation certificate or authorization approved by the Manager, Albuquerque Operations Office.
2. Unless specifically directed by DOE or the National Nuclear Security Administration (NNSA), each contractor who prepares shipments of nuclear explosives, nuclear components, Naval nuclear fuel elements, Category I and Category II special nuclear materials (SNM), and special assemblies for the Transportation Safeguards System (TSS), need not comply with the placarding requirements of Title 49 CFR Part 172, Subpart F.
3. The transfer of nuclear explosives must comply with applicable DOE directives in the 452 series.
4. Each employee of a contractor that is a state agency (not otherwise subject to DOT jurisdiction) and any other DOE or NNSA contractor who operates a Government-owned or leased, or contractor-owned or leased vehicle offsite must comply with applicable Federal Motor Carrier Safety Regulations (Title 49 CFR Parts 350 - 399) and applicable tribal, state, and local regulations not preempted by DOT.
5. For all transportation operations by aircraft, each contractor must follow the hazardous materials regulations for "Carriage by Aircraft," Title 49 CFR Part 175, and the requirements of DOE O 440.2, AVIATION.
6. Each contractor must conduct offsite transportation activities made under the TSS within the safety and risk operating envelope determined by the OTS "Transportation Safety Analysis Report, Highway Operations (Vol. 1) and Ross Operations (Vol. 2)" and SAND-93-1671, "Defense Programs Transportation Risk Assessment: Probabilities and Consequences of Accidental Dispersal of Radioactive Material Arising from the Off-site Transportation of Defense Programs Material (U)" (DPTRA) and according to Albuquerque Operations Office *Defense Programs Packaging and Transportation Guide*, (Safety Guide 500) Revision 2, August 1998.

7. Each contractor who offers a shipment that is noncompliant with DOT Title 49 CFR, TRANSPORTATION, Parts 100-185, for transportation offsite of a nuclear explosive, nuclear component, or special assembly, must use a packaging authorized by an Offsite Transportation Certificate (OTC) or an Offsite Transportation Authorization (OTA) under the conditions specified thereof. Contractors must retain documentation to include OTCs, OTAs, and their supporting documentation.
8. Each contractor who transfers nuclear explosives, nuclear components, and special assemblies onsite must maintain and comply with an approved Onsite Packaging and Transfer Procedure (part of a series of documents referred to as Contractor's Packaging and Transportation Manual) that details site-specific requirements and responsibilities. This contractor's manual will comply with the requirements of DOE M 461.1-1, PACKAGING AND TRANSFER OF MATERIALS OF NATIONAL SECURITY INTEREST, to ensure that all contractor personnel who support and/or perform packaging and transportation operations are trained and qualified to perform their assigned functions.
9. Each contractor must ensure that all of its personnel who support and/or perform packaging, transfer, and transportation operations are trained and qualified to perform their assigned functions.
10. Each contractor who engages in packaging, transfer, and transportation activities authorized by DOE O 461.1 must conduct those activities in accordance with a Quality Assurance Plan and a Packaging and Transportation Plan developed for those activities and approved by the manager of the operations, field, area, or site office.
11. Each contractor will ensure that its organizations develop and implement a formal oversight program and ensure that oversight activities are performed and documented.
12. Each contractor will ensure that its organizations perform annual self-assessments of DOE O 461.1- related activities.
13. Each contractor will develop, analyze, and submit for DOE or NNSA approval tiedown procedures for items proposed for shipment that do not have DOE-approved tiedown procedures.
14. Each contractor must ensure that packages transported in contractor-operated conveyances are secured using DOE-approved tiedown procedures.
15. Each contractor must provide shipping request information in a format defined by the Office of Transportation Safeguards.
16. Each contractor will develop and submit Safety Analysis Reports for Packaging (SARPs) and Transportation System Risk Assessments (TSRAs) to its respective field element.

17. Each contractor will provide subject matter experts as members of Transportation Safety Review Panels (TSRPs), as requested by the Manager of the Albuquerque Operations Office.
18. Each contractor will support DOE, including NNSA, in its appraisals of others, as requested by the respective operations or field office.
19. Each contractor will submit an Implementation Plan. This plan will detail the actions required in order to comply with this Contractor Requirements Document and the expected schedule for performance of those actions, with an estimated time for achievement of compliance. A cost estimate for implementing the plan must be included in the plan. The plan should be submitted within 6 months of inclusion of the requirements of DOE O 461.1 in the contract.
20. Any contractor who cannot meet the requirements of this Contractor Requirements Document may apply for an exemption to the Deputy Administrator for Defense Programs (NNSA), through its operations office or field office.

CANCELLED