- 173.426 Excepted packages for articles containing natural uranium or thorium.
- 173.427 Transport requirements for low specific activity (LSA) Class 7 (radioactive) materials and surface contaminated objects (SCO).
- 173.428 Empty Class 7 (radioactive) materials packaging.
- 173.431 Activity limits for Type A and Type B packages.
- 173.433 Requirements for determining A_1 and A_2 values for radionuclides and for the listing of radionuclides on shipping papers and labels.
- 173.434 Activity-mass relationships for uranium and natural thorium.
- 173.435 Table of A_1 and A_2 values for radionuclides.
- 173.441 Radiation level limitations.
- 173.442 Thermal limitations.
- 173.443 Contamination control.
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- 173.447 Storage incident to transportation general requirements.
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- 173.451 Fissile materials—general requirements.
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- 173.457 Transportation of fissile material, controlled shipments—specific requirements.
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- tests. 173.462 Preparation of specimens for testing.
- 173.462 Preparation of specimens for testing.173.463 Packaging and shielding—testing for integrity.
- 173.465 Type A packaging tests.
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- 173.469 Tests for special form Class 7 (radioactive) materials.
- 173.471 Requirements for U.S. Nuclear Regulatory Commission approved packages.
- 173.472 Requirements for exporting DOT Specification Type B and fissile packages.
- 173.473 Requirements for foreign-made packages.
- 173.474 Quality control for construction of packaging.
- 173.475 Quality control requirements prior to each shipment of Class 7 (radioactive) materials.
- 173.476 Approval of special form Class 7 (radioactive) materials.
- 173.477 Approval for export shipments.
- 173.478 Notification to competent authorities for export shipments.

Subpart I—Class 7 (Radioactive) Materials

§173.401 Scope.

(a) This subpart sets forth requirements for the packaging and transportation of Class 7 (radioactive) materials by offerors and carriers subject to this subchapter. The requirements prescribed in this subpart are in addition to, not in place of, other requirements set forth in this subchapter for Class 7 (radioactive) materials and those of the Nuclear Regulatory Commission in 10 CFR Part 71.

(b) This subpart does not apply to:

(1) Class 7 (radioactive) materials produced, used, transported, or stored within an establishment other than during the course of transportation, including storage in transportation.

(2) Class 7 (radioactive) materials contained in a medical device, such as a heart pacemaker, which is implanted in a human being or live animal.

(3) Class 7 (radioactive) materials that have been injected into, ingested by, or are otherwise placed into, and are still in, human beings or live animals.

§173.403 Definitions.

For purposes of this subpart-

A₁ means the maximum activity of special form Class 7 (radioactive) material permitted in a Type A package.

A₂ means the maximum activity of Class 7 (radioactive) material, other than special form, LSA or SCO, permitted in a Type A package. These values are either listed in § 173.435 or derived in accordance with the procedure prescribed in § 173.433.

Class 7 (radioactive) material. See the definition of *Radioactive material* in this section.

Closed transport vehicle means a transport vehicle or conveyance equipped with a securely attached exterior enclosure that during normal transportation restricts the access of unauthorized persons to the cargo space containing the Class 7 (radioactive) materials. The enclosure may be either temporary or permanent, and in the case of packaged materials may be of the "see-through" type, and must limit access from top, sides, and bottom.

Containment system means the assembly of components of the packaging intended to retain the radioactive contents during transportation.

Conveyance means:

(1) For transport by public highway or rail: any transport vehicle or large freight container;

(2) For transport by water: any vessel, or any hold, compartment, or defined deck area of a vessel including any transport vehicle on board the vessel; and

(3) For transport by aircraft, any aircraft.

Design means the description of a special form Class 7 (radioactive) material, a package, packaging, or LSA–

III, that enables those items to be fully identified. The description may include specifications, engineering drawings, reports showing compliance with regulatory requirements, and other relevant documentation.

Exclusive use (also referred to in other regulations as "sole use" or "full load") means sole use by a single consignor of a conveyance for which all initial, intermediate, and final loading and unloading are carried out in accordance with the direction of the consignor or consignee. The consignor and the carrier must ensure that any loading or unloading is performed by personnel having radiological training and resources appropriate for safe handling of the consignment. The consignor must issue specific instructions in writing, for maintenance of exclusive use shipment controls, and include them with the shipping paper information provided to the carrier by the consignor.

Fissile material means plutonium-238, plutonium-239, plutonium-241, uranium-233, uranium-235, or any combination of these radionuclides. The definition does not apply to unirradiated natural uranium and depleted uranium, and natural uranium or depleted uranium that has been irradiated in a thermal reactor. Certain additional exceptions are provided in § 173.453.

Fissile material, controlled shipment means any shipment that contains one or more packages that have been assigned, in accordance with § 173.457, nuclear criticality control transport indices greater than 10.

Freight container means a reusable container having a volume of 1.81 cubic meters (64 cubic feet) or more, designed and constructed to permit its being lifted with its contents intact and intended primarily for containment of packages in unit form during transportation. A "small freight container" is one which has either one outer dimension less than 1.5 meters (4.9 feet) or an internal volume of not more than 3.0 cubic meters (106 cubic feet). All other freight containers are designated as "large freight containers."

Highway route controlled quantity means a quantity within a single package which exceeds:

(1) 3,000 times the A_1 value of the radionuclides as specified in § 173.435 for special form Class 7 (radioactive) material;

(2) 3,000 times the A_2 value of the radionuclides as specified in § 173.435 for normal form Class 7 (radioactive) material; or

(3) 1,000 TBq (27,000 Ci), whichever is least.