

# RPR 55A. COMMON CARRIER SHIPMENT OF TYPE A RADIOACTIVE MATERIAL

**Instructions:** Use this check list for any radioactive materials exceeding the limited quantity other than wastes. (Use RPR 14LQ for limited quantities; Use RPR 55RW for radwastes.) Unless otherwise indicated, all references are to DOT regulations (49 CFR). Initial each item upon completion or verification. The person responsible for the shipment shall sign and date the check list after all items have been completed. The completed check list shall be submitted to, approved and retained by the RSO.

## Initials

## Container

- \_\_\_\_\_ DOT specification 7A, Type A package (or Type B if A<sub>2</sub> quantity is exceeded). Complete documentation of tests and an engineering evaluation or comparative data showing that the construction methods, packaging design and materials of construction comply with Specification 7A. [173.415(a), 173.427(b)(2), 178.350]
- \_\_\_\_\_ Containers shall be in good physical condition with no evidence of damage, corrosion or leakage. [173.24, 173.475]
- \_\_\_\_\_ All drum lids are provided with gaskets and fit securely. [173.475 (c)]
- \_\_\_\_\_ On each reconditioned drum, the reconditioner's name and address or ID number, the letter "R" and letter "L", country in which reconditioning was performed, and last two digits of year in which test was performed have all been marked such that its legible and placed in a location and of such a size relative to the packaging that its readily visible. [173.28, 178.503C]
- \_\_\_\_\_ All metal drums with a capacity of 55 gallons or greater shall have a 5/8 inch or larger bolt for securing the closure ring. Bolt should be torqued to approximately 65 foot-pounds. [Meets intent of 173.412 (d)]
- \_\_\_\_\_ Each container shall be secured with a seal that is not readily breakable as evidence that the package has not been opened. [173.412(a)]

## Labels and Markings

- \_\_\_\_\_ The names and address of either the shipper or the receiver are legibly affixed to each container that is subject to vehicle transfer en route unless, transported by highway only and will not be transferred from one motor carrier to another or Part of a carload lot, truckload lot or freight container load, and the entire contents of the rail car, truck or freight container are shipped from one consignor to one consignee. [172.301(d)]
- \_\_\_\_\_ Two radioactive material labels, of the type currently authorized, and marked with the quantity and units of activity, are to be affixed to opposite sides of the package; the quantities, units and transport index shall agree with the entries on the shipping papers.
- TI > 10 and > 2 mSv/h (200 mrem/h) but ≤ 10 mSv/h (1,000 mrem/h) at surface requires Yellow III label and must be shipped under exclusive use provisions [173.441(b)].
- TI > 1 but ≤ 10 and >0.05 mSv/h (50 mrem/h) ≤ 2 mSv/h (200 mrem/hr) at surface requires Yellow III label.
- TI ≤ 1.0 and > 0.005 mSv/h (0.5 mrem/h) but ≤ 0.5 mSv/h (50 mrem/h) at surface requires Yellow II label.
- ≤ 0.005 mSv/h (0.5 mrem/h) at surface (TI not applicable) requires White I label. [172.403]

\_\_\_\_\_ All markings shall be durable, in English, legible, displayed on a background of sharply contrasting color, unobscured and located away from any other marking (e.g., advertising). [172.304]

\_\_\_\_\_ Each container shall be marked with lettering at least ½-inch high with the appropriate shipping name and identification number. For example, for a Type A Package "RADIOACTIVE MATERIAL, Type A Package, UN2915"; this marking should be near and on the same side of the package as one of the radioactive material labels. [172.101, 172.301(a), 172.406(a)(ii)]

\_\_\_\_\_ Each container shall be marked with lettering at least ½-inch high: "USA DOT 7A, TYPE A" and with the name and address (or registered symbol) of the person making the specification marking. [178.2, 178.350]

\_\_\_\_\_ For each container weighing more than 50 kg (110 pounds), the weight and unit of measurement shall be marked on the container. [172.310(a)]

\_\_\_\_\_ If the contents include flammable liquids in containers of more than 1 pint capacity, each package shall be marked with the following: "THIS END UP" and an arrow pointing up, and a "FLAMMABLE LIQUID" label. [172.312]

**Radiation Survey**

**Exposure rates** measured with survey instrument: \_\_\_\_\_

Ser. No.: \_\_\_\_\_ Calibration date: \_\_\_\_\_

Maximum at surface = \_\_\_\_\_ mR/hr; at 1 meter = \_\_\_\_\_ mR/hr

\_\_\_\_\_ Less than 2 mSv/h ( 200 mR/h) at all points on the surface of the container. Transport index does not exceed 10, i.e. less than 0.1 mSv/h (10 mR/h) at 1 meter. [173.441(a)]

**Contamination** measured with survey instrument: \_\_\_\_\_

Ser. No.: \_\_\_\_\_ Efficiency: \_\_\_\_\_ Calibration date: \_\_\_\_\_

Count rates (cpm or cps): Gross: \_\_\_\_\_ Background: \_\_\_\_\_ Net: \_\_\_\_\_

\_\_\_\_\_ Less than 110 Bq (3 nCi) or 6600 dpm alpha and less than 1100 Bq (30 nCi) or 66000 dpm beta-gamma removable contamination **per wipe of 300 cm<sup>2</sup>**. [173.443(a)]

Surveyed by: \_\_\_\_\_

## Shipping Papers

In the Nature & Quantity of Dangerous Goods Box there should be the following columns: Proper Shipping Name, Class or Division, UN or ID no, Packing Group, Subsidiary Risk, Quantity and Type of Packaging, Packing Instructions and Authorization

\_\_\_\_\_ In Proper Shipping Name column enter one of the following:

“Radioactive material, Type A Package”

"Radioactive material, excepted package – instruments"

"Radioactive material, excepted package – articles"

Note for a more extensive list of Proper shipping names please refer to IATA Appendix G or [172.101]

\_\_\_\_\_ In the Class or Division Column enter “7”. (All radioactive material is Class 7 regardless of quantity.)

\_\_\_\_\_ In the UN or ID no. column enter one of the following:

UN 2915 for “Radioactive material, Type A Package”

UN 2911 for "Radioactive material, excepted package – instruments”

UN 2911 for “Radioactive material, excepted package - articles”

Note: For a more extensive list of UN numbers please refer to IATA Appendix G or [172.101]

\_\_\_\_\_ In the Packing Group column place NA. (Radioactive material does not have an associated packing group.)

\_\_\_\_\_ In the Subsidiary Risk column place NA. (Radioactive material does not have an associated subsidiary risk.)

\_\_\_\_\_ In the Quantity and Type of Packaging column state the number of items, name of the nuclide, the form (solid, liquid or special) and the activity.

\_\_\_\_\_ In the Packing Inst. column place the category of label required for the package and the transport index if the package label is a Yellow-II or Yellow-III.

Except for Limited Quantities, one of the following certification shall be printed on the shipping paper and signed by the RSO [172.204]:

\_\_\_\_\_ For surface shipment by common carrier:

**"This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation."**

\_\_\_\_\_ For shipment by cargo aircraft:

**"I hereby certify that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and in proper condition for carriage by air according to applicable national governmental regulations. This shipment is within the limitations prescribed for cargo aircraft only."**

\_\_\_\_\_ For shipment in a passenger-carrying aircraft:

**"I hereby certify that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and in proper condition for carriage by air according to applicable national governmental regulations. This shipment is within the limitations prescribed for**

**passenger aircraft only. The herein-named materials are intended for use in, or incident to, research or medical diagnosis or treatment."**

\_\_\_\_\_ Retain a legible copy of the completed shipping paper for Radiological Health Department files.

**Vehicle Requirements**

\_\_\_\_\_ Verify that packages are blocked and braced so that they cannot change position during conditions normally incident to transportation. [173.427(a)(6)(iii), 177.842(d)]

\_\_\_\_\_ The sum of the transport index numbers on the vehicle does not exceed 50. [177.842]

\_\_\_\_\_ For exclusive use shipments, the radiation dose rate does not exceed 2 mrem per hour in any position normally occupied in the motor vehicle. [177.842 (g)]

Prepared by (signature): \_\_\_\_\_

Date: \_\_\_\_\_

RSO approval (signature): \_\_\_\_\_

Date: \_\_\_\_\_

