

RPR 55RW. COMMON CARRIER SHIPMENT OF RADWASTE

Instructions: Use this check list for LSA or Type A quantities of radioactive wastes to be shipped by common carrier. Unless otherwise indicated, all references are to U. S. Department of Transportation regulations, found in Title 49 of the Code of Federal Regulations (49 CFR). Obtain the contents of the waste containers from the RADSAFE database. 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 **Type A Containers, Markings and Labels**

- _____ DOT specification 7A, Type A package (or Type B if A₂ quantity is exceeded).
- _____ 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 drum lids are provided with gaskets and fit securely. [173.475 (c)]
- _____ 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)]
- _____ 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]
- _____ 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. [172.403]
- _____ Each container shall be marked with lettering at least ½-inch high: "RADIOACTIVE MATERIAL, Type A Package UN2915". [172.101, 172.301]
- _____ For mixed wastes containing flammable liquids in containers of more than 1 pint capacity, each package shall be marked with the following: HAZARDOUS WASTE LABEL, including "THIS END UP" and arrows pointing up [RPR 54B], and a "FLAMMABLE LIQUID" label. [172.312]

LSA Containers, Markings and Labels

- _____ Packages shall meet the intent of 173.24 and 173.425.
- _____ All drum lids are provided with gaskets and fit securely. [173.475]
- _____ Each container shall be marked with lettering at least ½-inch high: "RADIOACTIVE MATERIAL, Low Specific Activity (LSA I, LSA-II, or LSA_III (as appropriate)) UN2912, UN3321, or UN3322 (respectively)". [172.101, 172.301]
- _____ For mixed wastes containing flammable liquids in containers of more than 1 pint capacity, each package shall be marked with the following: HAZARDOUS WASTE LABEL, including "THIS END UP" and arrows pointing up [RPR 54B], and a "FLAMMABLE LIQUID" label. [172.312]

Initials

General for Any Container

Containers shall be in good physical condition with no evidence of damage, corrosion or leakage. [173.24, 173.475]

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.

All metal containers shall have an intact heavy duty closure device when presented for disposal. Wooden boxes shall be banded with metal bands. (US Ecology Washington license)

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 weighing more than 50 kg (110 pounds) shall be clearly marked with the gross weight and unit of measurement ((kilograms (pounds)) [172.310(a)].

For shipments directly to the burial ground operator/broker, the waste class shall be marked on each container in lettering more than 1/2 inch high. Choices: **Class A Unstable** (most likely), Class A Stable, Class B or C. [10 CFR 61.57 and US Ecology Washington license] Shipments to a processing broker need not be marked with waste class.

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 cm²**. [173.443(a)]

Surveyed by: _____

Shipping Papers and Other Paperwork

_____ Verify there is a signed Certification form (RHF-31B for state and local government generators) for the Site Use Permit.

_____ Verify that the listing of the contents of all containers is available from the RADSAFE database.

_____ On the front sheet of the manifest, and on the bill of lading, enter the proper shipping name, hazard class, identification number and number of packages of each class. [172.202 and 172.203(d)]

- "Radioactive material, low specific activity (LSA-I), 7, UN2912"
- "Radioactive material, low specific activity (LSA-II), 7, UN3321"
- "Radioactive material, low specific activity (LSA-III), 7, UN3322"
- "Radioactive material, Type A Package, fissile, 7, UN3327"
- "Radioactive material, Type A Package, special form, 7, UN3332"
- "Radioactive material, excepted package-limited quantity of material 7, UN2910"

_____ Enter the name and activity of each radionuclide contained in the package, and the physical and chemical form if not special form; entries shall agree with information on the package labels.

_____ For Type A quantities, enter the category of label required for the package, and the transport index if the package label is Yellow-II or Yellow-III.

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

"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."

_____ If shipment contains Special Nuclear Material (SNM), or 1 kilogram or more of Source Material [10 CFR 40.64], a DOE/NRC Form 741 has been prepared.

_____ The RSM (manifest) is complete and signed. Retain a legible copy of the completed shipping papers for Radiological Health Department files.

_____ The number of containers listed on the RSM agrees with the physical count of containers loaded.

_____ The consignee has been notified of the expected time of shipment arrival.

Initials **Vehicle Requirements**

_____ Verify that packages are blocked and braced so that they cannot change position during conditions normally incident to transportation. [173.425(a)(6)(iii), 177.842(d)]

_____ The sum of the transport index numbers on the vehicle does not exceed 50. [177.842 (g)]

Prepared by (signature): _____

Date: _____

RSO approval (signature): _____

Date: _____

