
**Oak Ridge National Laboratory
Transportation and Packaging Management
Procedure**

**Receiving Radioactive Materials at Oak Ridge National Laboratory
TPM-R-2, Revision 1**

Page 1 of 6

A hard copy of this document is valid only until the document revision number has changed on the WEB. The hard copy should be dated and signed the day it is printed. If you continue working from the hard copy, you should verify its accuracy periodically on the WEB.

Date Printed:

Verifier:

I. PURPOSE

To provide general instructions for receiving packages at the Oak Ridge National Laboratory (ORNL) containing U.S. Department of Transportation (DOT) regulated radioactive materials from off-site locations.

II. APPLIES TO

This procedure applies to employees in the Laboratory Logistical Services Division.

III. OTHER DOCUMENTS NEEDED

\$ Receiving/Inventory Report (Appendix A)

IV. RESPONSIBILITIES

A. Receiving Radioactive Materials

1. Materials Management

Materials are usually received at the ORNL Receiving Dock in Building 7001. Materials delivered off shift are handled through the Laboratory Shift Superintendent's Office on a case-by-case basis.

- a. When an incoming package is labeled "Radioactive" or if the delivery location on the package is Building 3036, Materials Management personnel notifies Transportation Operations before the package is unloaded from the incoming truck.
- b. Reviews the shipping paperwork and compares the number and type of package received while package is on the truck.
- c. Notifies the Radiation Support Services and requests a contamination survey of the package before it is unloaded from the incoming truck.
- d. Notifies Transportation Operations of damage to a package or paperwork inconsistencies.

FOR INTERNAL USE ONLY

**Oak Ridge National Laboratory
Transportation and Packaging Management
Procedure**

**Receiving Radioactive Materials at Oak Ridge National Laboratory
TPM-R-2, Revision 1**

Page 2 of 6

2. Transportation Operations

- a. Informs the carrier of a leak or suspected contamination as soon as practicable after detection so that the carrier can file a report with DOT.
- b. Requests a copy of the carrier's report for file.

3. Radiological Support Services

A Radiological Control Technician (RCT) will provide services to the 7000 area.

- a. Surveys the package while on the truck for removable alpha and beta/gamma contamination, surface dose rate, and dose rate at 1 meter and attaches the ORNL-236, *Radioactive Material Label* (Rad Tag).
- b. Notifies Transportation Operations or Packaging Operations and takes appropriate measures to contain contamination if a package's contamination levels are above DOT limits. See ORNL-RP-220, ORNL *Contamination Control*.
- c. Surveys the delivering vehicle before release for exclusive use shipments.
- d. Ropes off and posts storage areas as necessary.

A package with contamination levels below DOT limits but above ORNL limits may be directed to its final destination as is but may not be used again until it is within ORNL contamination limits.

4. Materials Management

- a. Places the package in a radioactive materials storage vault or outside in a radiation storage area. The radiation area will be established by the RCT.
- b. Completes the Radiation Work Permit and Inventory Sheet posted on the vault as appropriate. The RCT and Transportation Specialist may also complete this form.
- c. Delivers the package and all accompanying paperwork with the package to the Packaging Operations area at Building 3036 or other designated location as required.
- d. Sends original or copy of paperwork to Packaging Operations personnel, if delivering package to designated location other than 3036.

For larger packages, Receiving personnel will contact Plant & Equipment Division riggers for delivery.

FOR INTERNAL USE ONLY

**Oak Ridge National Laboratory
Transportation and Packaging Management
Procedure**

**Receiving Radioactive Materials at Oak Ridge National Laboratory
TPM-R-2, Revision 1**

Page 3 of 6

Packaging Operations may arrange with Materials Management to have the package delivered directly to the final destination.

The employee who picks up the package has to be a DOT-trained hazardous materials employee to the appropriate level required, (i.e., if a load requires placarding, then the person has to have a Commercial Drivers License).

Materials Management must send original or copy of original paperwork to Packaging Operations.

5. Packaging Operations

- a. Receives the package and/or documentation from the Materials Management personnel.

0

Chemical Operators may pick up packages and documents at vault in lieu of delivery.

- b. Visually inspects the package for damage. If the package is damaged, notifies Materials Management, customers, and RCT if necessary.
- c. Reviews the shipping paperwork comparing the number and type of packages received.
- d. **IF** a numbered seal is attached to the package, **THEN** compares the number on the seal to that listed on the shipping paper and checks the seal's integrity.
- e. Notifies the Nuclear Materials Control and Accountability (NMC&A) Department of any broken seal(s) or of inconsistencies in paperwork to determine course of action for verifying contents of the package.
- f. Notifies the RCT if a radiation area is necessary or suspected to be necessary for package storage.

6. Radiological Support Services

- a. Establishes a radiation area as required for package storage.

B. Recording Package Information on Facility Inventory Form

1. Packaging Operations

- a. Records the package information on the Receiving/Inventory Report (see Appendix A).

FOR INTERNAL USE ONLY

**Oak Ridge National Laboratory
Transportation and Packaging Management
Procedure**

**Receiving Radioactive Materials at Oak Ridge National Laboratory
TPM-R-2, Revision 1**

Page 4 of 6

- b. **IF** the package contains accountable nuclear materials, **THEN** forwards a copy of the Receiving/Inventory Report along with documentation to NMC&A Department. Copies of inventory forms for all quantities of nuclear materials should be sent to NMC&A.

Accountable nuclear materials are depleted uranium, enriched uranium, normal uranium, thorium, deuterium, americium-241, americium 243, curium, enriched lithium, neptunium-237, plutonium-242, uranium-233, plutonium-239/241, plutonium-238, tritium, berkelium, and californium.

- c. Relinquishes control of the accountable nuclear materials package only after NMC&A has given verbal approval.

Official approval comes from NMC&A to the receiver via an internal transfer form per NMC&A procedure ORNL/CF-92/202/R1, NMC&A Manual for Accounting Procedure (September 1, 1994).

- d. Notifies recipient via telephone that the package is ready for pick up.

Packages can be delivered by riggers, materials clerks or Transportation and Packaging Management personnel, if necessary.

- e. **WHEN** the recipient takes ownership of the package, **THEN** documents the date on the Receiving/Inventory Report.

V. RECORDS

Records are generated and maintained in accordance with established company records management practices and approved records inventory and disposition schedules.

Packaging Operations maintains the Receiving/Inventory Report forms for one (1) year in Building 3036.

VI. REFERENCES

1. Title 49, Code of Federal Regulations, Parts 106 – 180, *Hazardous Materials*
2. Title 10, Code of Federal Regulations, Parts 71, *Packaging and Transportation of Radioactive Materials*
3. ORNL-RP-420, “Release of Material”
4. ORNL-PT-001, “ORNL Packaging and Off-Site Transportation of Hazardous/Nonhazardous Materials and Waste Shipments”
5. ORNL Work Smart Standards

FOR INTERNAL USE ONLY

**Oak Ridge National Laboratory
Transportation and Packaging Management
Procedure**

**Receiving Radioactive Materials at Oak Ridge National Laboratory
TPM-R-2, Revision 1**

Page 6 of 6

**Appendix A
Receiving/Inventory Report**

facility
 inventory in
 out
 n/a
 log use only

Receiving/Inventory Report - Bldg 3036

Date rec'd _____ by _____

Isotopes present: _____

Total activity per container (show container # for more than one container):

Container type and serial number(s): _____

Gross weight(s) (show container # for more than one container):
Per 3036 Scale: _____
Per receiving document(s)/marking: _____

Container surface reading(s) in mrem/hr (show container # for more than one container):

TID seal number(s) (show container # for more than one container):

Received from: _____

NMC&A IC #: _____

Purchase No./Identification No.: _____

Freight Bill No.: _____

Charge No.: _____

Disposition/Date: _____

Note: Forward one copy to ORNL NMC&A Bldg 2561, for accountable material received from off-site areas

ReceivingInventory2pc

FOR INTERNAL USE ONLY