



Title: Receiving of radioactive material

1.0 Purpose:

- 1.1. This procedure defines the process for receiving radioactive material

2.0 Scope:

- 2.1. Applies to all sealed radioactive material received by FLIR Radiation, Inc.

3.0 Responsibility:

- 3.1. Person(s) whom receive products which contain radioactive material(s) are responsible for ensuring this procedure is followed through.

4.0 Equipment Required:

- 4.1. Calibrated dose rate meter provided by the RSO

5.0 Definitions:

6.0 Procedure:

- 6.1. The purchasing department is to inform the RSO the date and time when radioactive material will be delivered.
- 6.2. The RSO is responsible for informing the shipping/receiving department the date and time when radioactive material will be delivered.
- 6.3. The recipient (usually shipping/receiving) is to ensure that **NO** unmonitored personnel are in the area when receiving radioactive sources.
- 6.4. Upon receipt of packaging containing radioactive sources, the recipient is to immediately inform the RSO if he/she receives a package which has evidence of potential contamination, such as packages that are crushed, wet, or damaged. **DO NOT receive package from carrier!**
- 6.5. Monitor packaging (recipient is responsible):
 - 6.5.1. Ensure that dose rate meter has been calibrated within the last 12 months.
 - 6.5.2. Ensure that dose rate meter is fully functional.
 - 6.5.3. Monitor 1 meter from the surface of the packaging. If the dose rate exceeds the permitted amount for the type of labeling, then the recipient is to immediately inform the RSO (see table below).
 - 6.5.4. Monitor all external surfaces of a package. If the dose rate exceeds the permitted amount for the type of labeling, then the recipient is to immediately inform the RSO (see table).

Maximum Radiation Levels		
Label	Maximum Dose Rate any point on accessible surface of package	Dose Rate 1 meter from exterior surface of package (mR/hr/T.I.)
Exempt or Excepted Package	0.5 mR/hr	Background
Radioactive - White I	0.5 mR/hr	Background
Radioactive - Yellow II	50.0 mR/hr	>0.0 but ≤1.0
Radioactive - Yellow III	200.0 mR/hr	>1.0 but ≤10.0

6.6. The recipient is to open the package with the following precautionary steps (**Only the RSO is to open packages that contain non-exempt radionuclides**):

6.6.1. **IMPORTANT...When handling sources or immediate container wear gloves!**

6.6.2. Verify contents listed on packing slip agree with purchase order.

6.6.3. Open the outer package following the supplier's instructions when provided.

6.6.4. Open the inner package and verify that the contents agree with the packing slip.

6.6.5. Check the integrity of the final source container. Look for broken seals or vials, loss of liquid, condensation, or discoloration of the packing material.

6.6.6. If anything is other than expected, stop and notify the RSO.

6.6.7. Provide RSO with ORIGINAL copies of Certificate of Compliance(s), wipe test certificate(s), packing lists, shipping documents, and ALL other documentation.

6.7. The RSO will perform a leak test (does not apply to exempt radioactive material):

6.7.1. The RSO is responsible for ensuring that non-exempt isotopes are tested for leakage and/or contamination. See rso-wi-006-leak testing.doc

6.7.2. The RSO is to perform contamination and dose rate survey within 3 hours of receipt during normal working hours or within 3 hours of the beginning of the next working day if received after normal working hours (such as evenings and holidays). This must be performed on each package.

6.7.3. The radioactive sources must NOT be put into service until the RSO has received the test results.

6.7.4. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the RSO shall immediately withdraw the sealed source from use and shall decontaminate and either return to supplier or dispose of in accordance with Department regulations. A report shall be filed within five (5) days of the test with the Division of Radiological Health, Tennessee Department of Environmental and Conservation, 3rd Floor L & C Annex, 401 Church Street, Nashville, Tennessee, 37243-1532, describing the equipment involved, the test results, and the corrective action taken.

6.8. The recipient is to ensure that the radioactive sources are placed expeditiously in the appropriate Isotope storage room (RSO is to confirm which isotope storage facility).

6.9. The recipient is to ensure that all radioactive source(s)/source kit(s) for resale are received into Visual Enterprise (VE).

6.10. The RSO is to record details of all radioactive sources not intended for distribution into the log; rso-log-004-inventory.doc

7.0 Records

Record	Description	Location	Retention
All documents	All documents	RSO	3 years
rso-log-005-inventory	Inventory	RSO	Lifetime + 5 years

8.0 References

- 8.1. FLIR Radiation, Inc. State of Tennessee Radioactive Material License.
- 8.2. FLIR Radiation, Inc. U.S. Nuclear Regulatory Commission Materials License.
- 8.3. FLIR Radiation, Inc. "Radiation Protection Program".
- 8.4. State of Tennessee Regulations "Procedures for Picking up, Receiving, and Opening Packages" 1200-2-5-.16
- 8.5. U.S. Nuclear Regulatory Commission "Procedures for receiving and Opening Packages" 10 CFR 20.1906
- 8.6. U.S. Nuclear Regulatory Commission "Exempt Byproduct Material" 10 CFR 30.71 Schedule B
- 8.7. International Air Transport Association (IATA) Dangerous Goods Regulations.
- 8.8. 49 CFR Regulations for "Shipping and Transporting Hazardous Materials in the United States".
- 8.9. Department of Transportation (DOT) Dangerous Goods Classifications.
- 8.10. rso-wi-006-wipe tests.doc

9.0 Revision History

Rev.	Date	ECN #	Comment
0	08/27/04	NA	Initial Release

10.0 Approvals

RSO: Steven Read	Date: 08/27/04
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