1. **Purpose:** The following procedure describes how to receive a radioactive materials package, either directly from a courier or from Environmental Health & Safety (EHS), and how to deliver radioactive materials packages via ground transportation only and according to DOT regulations. IATA requirements for international shipments are not covered in this procedure.

2. **Scope:** Radiation Workers (RW) who directly receive packages from a courier shall follow this procedure to ensure all DOT and NRC requirements are being fulfilled. When packages are directly received by EHS, EHS assumes responsibility for all stages of package delivery and receipt, relieving non-EHS RWs from the requirements of DOT training outlined in 49 CFR 172.704 for a hazmat employee. Thus, RWs who do not directly receive packages need only comply with instructions for indirect package receipt outlined in this procedure as well as described in the initial and refresher trainings for RWs.

3. **Definitions:**

   3.1 Department of Transportation (DOT) – DOT regulates the transportation of hazardous materials. The NRC has adopted DOT regulations for Class 7 radioactive materials. Specifically, Title 49 of the Code of Federal Regulations applies to DOT regulations for transport of hazardous materials.

   3.2 Hazmat Employee – Per 49 CFR 171.8, a hazmat employee is a person who, as a result of employment, directly affects hazardous materials transportation safety; loads, unloads, or handles hazardous materials; inspects, marks, maintains, reconditions, repairs, or tests a package that is represented as qualified for use in transporting hazardous material in commerce; prepares hazardous materials for transportation; is responsible for safety of transporting hazardous materials; and operates a vehicle used to transport hazardous materials.

   3.3 Labeled Package – Per 10 CFR 20.1906, a labeled package is one that is labeled with a Radioactive White I, Yellow II, or Yellow III label as specified by DOT regulations 49 CFR 172.403 and 172.436-440. Labeled packages are also considered Type A Packages.

   3.4 Transport Index (TI) – the dose rate in mrem/hr at 1 meter from the face of the package with the highest surface reading.

   3.5 Marking – Includes proper shipping name and UN identification numbers, does not include labels such as White-I, Yellow-II, or Yellow-III

   3.6 Emergency response information – information that can be used in the mitigation of an incident involving hazardous materials [49 CFR 172.602].

4. **Procedure Details:**

   4.1 Training Requirements

4.1.1 All individuals who may receive RAM packages, whether directly from a courier or indirectly via EHS delivery, shall have initial radiation safety training from the MU EHS Radiation Safety Staff (RSS) and refresher training at the designated frequency (either annually for medical users or every three years for campus users).

4.1.2 All individuals who handle RAM must be approved as an RW under an Authorized User's RAM permit.

4.1.3 Prior to directly receiving radioactive materials or transporting radioactive materials via ground in a motorized vehicle, DOT-specific training must also be completed and include the following:

4.1.3.1 General awareness and familiarization training designed to provide familiarity with the requirements of 49 CFR Subchapter C (Hazardous materials regulations) and to enable the RW to recognize and identify hazardous materials consistent with the hazard communication standards of 49 CFR Subchapter C [49 CFR 172.704(a)(1)]. This requirement may be fulfilled by taking a DOT Class 7 specific training course and does not have to be provided by EHS as long as a record of completion is on file with EHS RSS.

4.1.3.2 Function-specific training concerning requirements that are specifically applicable to the functions the employee performs [49 CFR 172.704(a)(2)(i)]. This must be provided by an RW at MU depending on the specific DOT functions being performed. Examples include:

4.1.3.2.1 EHS employees will be directly receiving RAM packages and delivering them across campus, so function-specific training will include how to receive packages at the EHS facility, requirements to transport a RAM package in an EHS vehicle, and how to transfer the RAM package to the campus RW.

4.1.3.2.2 Nuclear Medicine Technologists may be directly receiving RAM packages from a local courier to the nuclear medicine hot lab, so function-specific training may include how to receive the package from the courier, how to enter package check-in results into a database, and where to store empty containers.

4.1.3.3 Safety training concerning emergency response information requirements; measures to protect the employee from hazards associated with hazardous materials including specific measures implemented to protect employees from exposure; and methods and procedures for avoiding accidents, such as the proper procedures for handling packages containing hazardous materials [49 CFR 172.704(a)(3)]. This requirement may be fulfilled by taking a DOT Class 7

specific training course as well as receiving function-specific training for transporting RAM.

4.1.3.4 Security awareness training that provides an awareness of security risks associated with hazardous materials transportation and methods designed to enhance transportation security. This training must also include a component covering how to recognize and respond to possible security threats [49 CFR 172.704(a)(4)]. This requirement may be fulfilled by taking a DOT Class 7 specific training course as well as receiving function-specific training for transporting RAM.

4.1.3.5 In-depth security training as outlined in 49 CFR 172.704(a)(5) is not applicable as MU does not have quantities of RAM requiring a security plan.

4.1.3.6 DOT training must be received once every three years and can be received from a previous employer as long as a current record of the training is obtained [49 CFR 172.704(c)]. The refresher training must cover all DOT topics previously listed, including function-specific training. Acceptance of a DOT training certificate by the RSS assumes that function-specific training has also been received.

4.1.4 Records of DOT training as previously described must be kept for as long as the hazmat employee remains with MU and 90 days thereafter. The record must include the following information:

4.1.4.1 The hazmat employee's name;

4.1.4.2 The most recent training completion date;

4.1.4.3 A description, copy, or the location of the training materials used to meet the requirements previously outlined;

4.1.4.4 The name and address of the person providing the training; and

4.1.4.5 Certification that the hazmat employee has been trained and tested.

4.2 Labeling, Exceptions, and UN Classifications of Class 7 Packages

4.2.1 To properly assess RAM packages for transport, basic knowledge in DOT labeling and classification for Class 7 packages is required. In general, packages received at MU can have a UN ID of either UN2910 or UN2915. UN2910 is a limited quantity of radioactive material while UN2915 is a Type A package. Limited quantity packages are excepted from labeling, meaning they do not require labeling, and are not required by regulation to be monitored upon receipt. Conversely, UN2915 Type A packages contain higher quantities of activity and are required to be monitored. As

stated later in this procedure, MU requires all RAM packages, regardless of UN ID, to be monitored.

4.2.2 There are three categories of Type A labels: White-I, Yellow-II, or Yellow-III. Labels are assigned based on dose rates at the surface of the package and at 1 meter (also known as the Transport Index) [49 CFR 172.403(c)].

Label Category	**Max dose rate on any external surface (mrem/hr)**	**Max dose rate at 1 meter (mrem/hr)**
White-I	**≤ 0.5**	**0**
Yellow-II	**0.5 < dose rate ≤ 50**	**0 < TI ≤ 1**
Yellow-III	**50 < dose rate ≤ 200**	**1 < TI ≤ 10**

4.2.3 UN 2910 limited quantity packages are more common at MU. These packages are technically excepted for markings (except the UN number), labeling, shipping papers, and monitoring [49 CFR 173.421, 10 CFR 20.1906]. However, MU requires shipping papers and monitoring of UN 2910 packages to eliminate confusion. Limited quantity packages must meet the dose requirements for a White-I package and have activity limits that are ≤ $10^{-3}A_2$ for normal form packages [49 CFR 173.425 Table 4]. A_2 values for each radionuclide can be found in 49 CFR 173.435. Contact the RSS with any questions regarding packages that are not discussed in this procedure.

4.3 Receiving a Package From a Courier

4.3.1 An RW shall make arrangements to receive the package when the carrier offers it for delivery. If an RW is unavailable to directly receive a package from the carrier, arrangements must be made such that an RW is notified of the arrival of the package at the destination [10 CFR 20.1906(a)]. In the latter scenario, the RW must take possession of the package expeditiously and the package must be delivered to an approved radiation space with appropriate security such that a member of the public cannot gain access.

4.3.2 The RW who receives the package does not need to be DOT trained if they will not be performing DOT functions such as transporting the package. If an RW who is not DOT-trained checks the package in and monitors it for contamination, then a DOT-trained RW must verify that all package check-in and monitoring requirements have been fulfilled within the time requirement prior to re-delivery.

4.3.3 When receiving a package, verify the following before signing acceptance documents from the courier:

4.3.3.1 The package is intended for the appropriate person. Occasionally, packages intended for the MU Research Reactor (MURR) are accidentally delivered to campus. If the package is not intended for the recipient, do not accept the package from the courier and instruct them to deliver the package to the correct recipient.

4.3.3.2 In the event a package is accidentally accepted for the wrong recipient, continue with the package check-in process. Acceptance of any RAM package means an acceptance of DOT responsibilities which must be fulfilled. Once checked in, contact the appropriate person to coordinate transfer.

4.3.3.3 Verify that the labeling on the package is such that EHS can transfer via a motorized vehicle. To transport a Yellow-III via motorized vehicle, placards are required [49 CFR 172.504(e)]. To drive a placarded vehicle, a commercial driver's license (CDL) is required. MU EHS does not have any staff on hand with a CDL to transport a Yellow-III package. Deny any Yellow-III packages and contact the intended campus recipient to discuss new receipt arrangements. The Authorized User is required to notify EHS of a Yellow-III package arrival so that arrangements can be made to directly deliver the package to the Authorized User.

4.3.3.4 When coordinating the delivery of a Yellow-III package directly to a campus recipient, the campus RW must be trained to directly receive RAM packages. If they are not, then EHS must be available to receive the package at the campus location and perform the required package check-in procedures.

4.3.3.5 If a Yellow-III package is received, then the package must be walked to the final location on campus. If this is not possible, then a certified DOT courier must be contracted to transport the source to the final location.

4.3.3.6 During transport, the radionuclide can decay enough that dose rates drop below the requirements for a Yellow-III. If a Yellow-III package is presented for delivery, ask the carrier to wait and immediately conduct a radiation level survey on contact and one meter. If the package now meets the requirements for a Yellow-II or less restrictive label, the package can be accepted.

4.3.4 All packages must be monitored as soon as possible and no later than 3 hours after the package is received at the facility during normal working hours. If the package is received outside of normal working hours, it must be monitored no later than 3 hours from the beginning of the next working day [10 CFR 20.1906(c)].

4.4 Monitoring the Package

4.4.1 Swipe the package on at least three sides using moderate pressure, representative of 300 cm^2 [49 CFR 173.443(a)(1)(i)]. Measurements must be taken in the most appropriate locations to yield a representative assessment of the removable contamination levels.

4.4.2 If the package integrity is in question, gloves shall be worn during monitoring.

4.4.3 Run the swipe in an appropriate radiation detector to determine removable contamination. Verify that radiation detection equipment has been calibrated within the past year and is operating properly.

4.4.4 Confirm that the results are in accordance with the following [49 CFR 173.443 Table 9, 10 CFR 71.87(i)]

Contaminant	**Maximum permissible limits**	
	DPM/cm^2	**Total DPM for 300 cm^2**
Beta and gamma emitters and low toxicity alpha emitters	240	72,000
All other alpha emitting radionuclides	24	7200

4.4.5 To convert from cpm to dpm, an efficiency must be used. If an efficiency is not available, assume 0.1 (or 10% efficiency) [49 CFR 173.443(a)(1)(i)].

4.4.6 Measure the dose rate on all sides of the container with a detector that reads in dose rate and record the highest reading found. Measure the dose rate at 1 meter from the same side with the highest surface reading. Record a background dose rate reading [49 CFR 172.403].

4.4.6.1 An appropriate detector is an ion chamber with a tissue equivalency to convert from exposure rate to dose rate. If an ion chamber is not available, an energy-compensated Geiger-Mueller (GM) detector with an open window will satisfy the requirements. GMs can also have a tissue equivalent filter to convert from exposure rate to dose rate. Whenever a GM is used for measuring dose rate, the meter should be one that has been exposure calibrated, not pulse calibrated.

4.4.6.2 When measuring background, make sure not to stand near other sources which could give a false background reading.

4.4.7 Verify package integrity prior to transferring to campus including [49 CFR 173.475]:

4.4.7.1 Packaging is proper

4.4.7.2 Packaging is in unimpaired condition

4.4.7.3 Instructions for preparing package have been followed

4.4.8 Monitoring of packages after receipt is required by regulation for packages in excess of Type A quantities [20.1906(b)(2)] or if there is evidence of degradation of package integrity [20.1906(b)(3)]. However, to eliminate any uncertainty, MU will require all RAM packages to be monitored upon receipt. Failure to complete monitoring of a package required in 10 CFR 20.1906 may result in either an NRC and/or DOT violation. Failure to complete monitoring of a package containing less than Type A quantities (i.e. limited quantity packages), may result in an MU Radiation Safety Program violation, but not an NRC or DOT violation.

4.4.9 If the results for monitoring a package result in removable surface contamination in excess of 49 CFR 173.443(e) Table 9 or external radiation levels in excess of 10 CFR 71.47:

4.4.9.1 Notify the RSO immediately.

4.4.9.2 MU must notify the courier and the NRC Headquarters Operations Center by telephone at the numbers in appendix A to part 73.

4.4.9.3 Restrict access to the package as soon as possible.

4.4.9.4 Assess the extent of contamination and resultant radiation levels of the package, the adjacent loading and unloading areas, and all other material which has been carried simultaneously. The package must be decontaminated and repaired as necessary before transferring to an AU on campus.

4.4.10 MU does not open packages to monitor for internal contamination.

4.4.11 If packages are being received directly by the AU and they have empty shipping containers, monitor the inside of the empty container to ensure no contamination is present before transferring. Make sure to remove or deface any radiation labels, markings, and stickers as necessary. Removable contamination should be <200 dpm/100 cm^2 per the Radiation Safety Manual's unrestricted release criteria.

4.5 Verifying Labels and Markings Prior to Transfer

4.5.1 The package must be marked with the proper shipping name and UN identification number [49 CFR 172.301(a)]. This information can be found in 49 CFR 172.101.

4.5.1.1 Limited quantities will be marked on one side with "UN 2910".

4.5.1.2 Type A packages will be marked with "USA DOT 7A Type A Package, UN 2915" [49 CFR 172.310(c)].

4.5.1.3 The UN number must be at least 12 mm in height [49 CFR 172.301(a)(1)].

4.5.2 The package must have the recipient's (consignee) name and address [49 CFR 172.301(d)].

4.5.3 The packaging manufacturer must be included on 7A, Type A packages [49 CFR 178.350(c)].

4.5.4 The package must be marked with an "Up" orientation for liquids in non-bulk packages [49 CFR 172.312(c)(7)].

4.5.5 Two labels should be applied on opposite sides of the package (not the bottom) and near the marked proper shipping name [49 CFR 172.403(b)].

4.5.6 Make sure that the labels used for UN 2915 Type A packages are appropriate for the dose rates recorded, and the label is filled out accurately.

4.5.6.1 Radionuclides should be listed [49 CFR 173.403]

4.5.6.2 The activity listed should be in units of Bq with prefixes as needed (i.e. MBq)

4.5.6.3 Verify the TI is correct if applicable [49 CFR 172.403(g)(3)].

4.5.7 EHS does not anticipate a Reportable Quantity will be received at MU. However, refer to 49 CFR 172.101, Table 2 to Appendix A for a list of reportable quantities. Requirements for Reportable Quantities can be found in 49 CFR 172.324(b).

4.5.8 If the requirements in this section have not been met, correct the labels and markings as needed.

4.5.9 If additional hazards are present in the package, EHS accepts the original shipper's certification that the shipment was properly packaged and certified to meet the exception criteria outlined in section 49 CFR 173.4

4.6 Documenting Receipt of the Package

4.6.1 Include the following information in the record of receipt:

4.6.1.1 Date and time the package was received.

4.6.1.2 Package condition and integrity.

4.6.1.3 UN number.

4.6.1.4 Radiation label if applicable (only for Type A UN 2915 packages).

4.6.1.5 Proper shipping name.

4.6.1.6 TI if applicable (only for Yellow-II and Yellow-III).

4.6.1.7 Monitoring results including removable contamination, dose rates, and background dose rate.

4.6.1.8 Make, model number and serial number of detectors used for monitoring.

4.6.1.9 Initials or other identification of individual completing package check in.

4.6.1.10 Date and time package check in was complete.

4.6.1.11 Packing slip, if available.

4.6.1.12 Authorized User and permit number.

4.6.1.13 Radionuclide and activity of package contents.

4.6.2 Additional information may be required depending on the database or record system used, such as physical form, building room and number, and contact person.

4.6.3 If multiple packages are received at once, repeat all steps to check in each package. Each package will need its own record and shipping paperwork.

4.7 Preparing the Shipping Paperwork

4.7.1 Prior to delivery and after data entry, verify that the AU has no compliance issues (past-due training, past-due meter calibrations, etc). If the AU does have compliance issues, consult with the RSO or a Health Physicist before delivering. EHS reserves the right to withhold any RAM packages from delivery if the AU is out of compliance.

4.7.2 Verify the activity of the package is within the current limits of the AU's shipping and possession limits. If the activity in the package will cause the AU to exceed their limits, consult with the RSO or a Health Physicist before delivering. EHS reserves the right to withhold any RAM packages from delivery if the AU will exceed their authorization's possession and/or shipping limits. If the AU needs to increase their limits to receive a package, they must first notify the RSO so special cases can be considered.

4.7.3 Ensure the package has been relabeled and marked if changes have been made.

4.7.4 Prepare EHS DOT shipping papers. These may be produced from a database, if available, and set up to include all necessary information for DOT transportation of Class 7 packages. DOT paperwork is intended as a resource for emergency responders during transportation of hazardous materials. Information on the

paperwork can be filled out by hand as long as it's legible. The following information must be included in the shipping paperwork:

4.7.4.1 Description of "form" of the material must be included. For special form, indicate "special form." For normal form, indicate the physical or chemical form such as solid, liquid, sealed, etc. [49 CFR 172.203(c)(2)]. Make sure that all sealed sources are indicated in the EHS system as such.

4.7.4.2 Name of each radionuclide as listed in 49 CFR 173.435. See 49 CFR 173.433(f) for mixtures of radionuclides [49 CFR 172.203(d)(1)].

4.7.4.3 The maximum activity in SI units (Bq, GBq, MBq) [49 CFR 172.203(d)(3)].

4.7.4.4 Category of label applied to shipment (i.e. White-I) [49 CFR 172.203(d)(4)].

4.7.4.5 TI if applicable [49 CFR 172.203(d)(5)].

4.7.4.6 Shipper's certification: "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." [49 CFR 172.204(a)].

4.7.4.7 Legible signature of hazmat employee [49 CFR 172.204(d)].

4.7.4.8 Shipper and receiver information (the receiver would be the AU and lab location).

4.7.4.9 Emergency response number.

4.7.5 Prepare emergency response information. Generally, the emergency response information will be provided by the vendor. Emergency response requirements described in 49 CFR 172 do not apply to hazardous materials which are excepted from shipping paper requirements [49 CFR 172.600(d)]. The following describes emergency response requirements.

4.7.5.1 Information must be immediately available.

4.7.5.2 Information must include the basic description and technical name of the hazardous material, immediate hazards to health, risks of fire or explosion, immediate precautions to be taken in the event of an accident or incident, initial methods for handling spills or leaks in the absence of fire, and preliminary first aid measures [49 CFR 172.602(a)].

4.7.5.3 Information must be printed legibly in English, available for use away from the package containing hazardous material, and presented either on a shipping

paper, in another document (such as a Safety Data Sheet), or an emergency response guidance document (ERG) [49 CFR 172.602(b)].

4.7.5.4 MU typically uses the ERG for emergency response information. There are two ERGs that are primarily used for Class 7 packages. ERG 161 is used for UN 2910 packages, and ERG 163 is used for UN 2915 packages. These documents are readily available on the internet. When using the ERGs, make sure to use the most recent version. They are typically updated every four years (2016, 2020, etc.).

4.7.5.5 MU must provide a numeric emergency response telephone number, including the area code, for use in an emergency involving hazardous material. This can be found on the paperwork generated by EHS. The number must be monitored at all times the hazardous material is in transportation. The number must also be of a person who is either knowledgeable of the hazardous material being shipped and has comprehensive emergency response and incident mitigation information for that material, or has immediate access to a person who possesses such knowledge. Since EHS only receives and delivers packages during business hours, the main EHS number (573) 882-7018 is listed on the shipping paperwork [49 CFR 172.604(a)].

4.7.5.6 The emergency response number must be easily identified on the shipping paperwork [49 CFR 172.604(a)(3)].

4.7.5.7 Emergency response requirements are not applicable to hazardous materials offered for transportation that are limited quantities or excepted quantities. However, MU uses a standardized form for re-delivery to campus and may still choose to include this information for limited or excepted quantities [49 CFR 172.604(d)(1)].

4.7.6 If the package contains sealed sources, EHS needs copies of the source certificates which are often contained inside the package. This is the only instance in which EHS may open a RAM package. Open the package, collect the sealed source certificates, and make copies for the final record. The inside of the package will not need to be monitored for contamination. Once the certificate has been collected, reclose the package using tape or something similar.

4.7.7 When Type A packages enter commerce, the shipper is required to have copies of the Type A package certification on file. Since transfer to AUs from EHS facilities is not technically considered entering commerce, EHS RWs do not need to verify Type A package certifications are on file prior to transfer. This function will be verified whenever Type A packages are shipped offsite from MU.

4.8 Delivering the Package to Campus

4.8.1 Only DOT trained EHS RWs are allowed to transport RAM packages via vehicle. If campus users need to transfer RAM, they must coordinate with EHS who may perform the actual transportation. Campus users are allowed to walk RAM to new locations but should consult with EHS to confirm if additional restrictions are required.

4.8.2 Place a copy of the signed and completed shipping paperwork, including emergency response information, directly onto the package.

4.8.3 During transit, the emergency response information must be immediately accessible. When transporting RAM at MU, place a copy of the emergency response information and shipping paperwork in the front of the vehicle, either in the passenger seat, on a clip, or another conspicuous location. Do not place the paperwork on the floor of the vehicle as this is not immediately accessible to emergency responders [49 CFR 172.602(c)(1)].

4.8.4 Radioactive packages must be secured to prevent shifting during normal transportation conditions [49 CFR 173.448(a)]. MU has vehicles with appropriate equipment, such as bungee cords, available to secure RAM packages.

4.8.5 Radioactive packages cannot be carried in compartments occupied by passengers except in those compartments exclusively reserved for couriers accompanying those packages [49 CFR 173.449(c)]. Only DOT trained RWs will be transporting RAM packages for EHS and can remain in the same compartment as a RAM package. However, EHS RWs should maintain distance from the RAM package if possible.

4.8.6 When arriving at the final destination, take another swipe survey of the package covering 300 cm^2 to ensure no contamination is present. Monitor the swipe with a handheld radiation detector, most likely a GM. If the GM does not indicate contamination on the package over the regulatory limits, indicate such on all copies of the shipping paperwork, save the swipe for analysis on benchtop analytical equipment, and proceed to deliver the package to the final recipient.

4.8.6.1 Assume the efficiency of the GM is 10%, the GM count rate should read < 7200 cpm for beta and gamma emitters and 720 cpm for alpha emitters following [49 CFR 173.443 Table 9, 10 CFR 71.87(i), 49 CFR 173.443(a)(1)(i)].

4.8.7 Obtain a signature from a Radiation Worker on all copies of the shipping paperwork. Verify that the individual is an approved RW prior to transferring the package. Save one signed copy for EHS records.

4.8.7.1 There are few instances where EHS may need to also "receive" the package at the destination. When this is necessary, the EHS RW will sign as the receiver on all copies of the shipping paperwork and leave a signed copy with the RAM package in the designated secure location.

4.8.8 Once back at EHS, run the swipe on an appropriate analytical radiation detector such as an LSC or NaI. If the swipe indicates significant contamination, notify the RSO or a Health Physicist.

4.8.9 Save the signed and completed shipping paperwork, vendor-provided packing slip, swipe printout results, and any other appropriate paperwork collected during the receipt process into the official record. If the shipment included sealed sources, provide copies of the certificates to the RSO or a Health Physicist.

4.9 Notifying the DOT in the Event of an Incident

4.9.1 EHS must notify the DOT via phone after any incident occurs during the course of transportation in commerce (including loading, unloading, and temporary storage). The following are reportable incidents [49 CFR 171.15(b)]:

4.9.1.1 A person is killed, a person receives an injury requiring admittance to a hospital, the general public is evacuated for one hour or more, or a major transportation artery or facility is closed or shut down for one hour or more;

4.9.1.2 Fire, breakage, spillage, or suspected radioactive contamination occurs involving a radioactive material;

4.9.1.3 A situation exists of such a nature (e.g., a continuing danger to life exists at the scene of the incident) that, in the judgement of the person in possession of the hazardous material, it should be reported even though it does not meet the criteria;

4.9.2 If an incident occurs as previously defined, EHS must notify the DOT within 12 hours of the occurrence by calling the National Response Center on (800) 424-8802 or (202) 267-2675. The report must include the following information [49 CFR 171.15(a)]:

4.9.2.1 Name of reporter;

4.9.2.2 Name and address of person represented by reporter;

4.9.2.3 Phone number where reporter can be contacted;

4.9.2.4 Date, time, and location of incident;

4.9.2.5 Extent of injury, if any;

4.9.2.6 Class 7 radioactive materials, proper shipping name, and quantity of hazardous materials involved; and

4.9.2.7 Type of incident and nature of hazardous material involved and whether a continuing danger to life exists at the scene.

4.9.3 In the event an incident occurs, MU must make a written report within 30 days of the incident as outlined in 49 CFR 171.16.

4.10 Non-direct Package Receipt

4.10.1 Notify EHS of package arrival, making sure to follow current EHS procedures outlined in the Radiation Safety Manual. Failure to submit a notification to EHS may result in violations or additional actions.

4.10.2 If the arrival date changes, the AU or delegate must notify EHS at any of the appropriate email addresses including rad@missouri.edu, hazmat@missouri.edu, or ehs@missouri.edu.

4.10.3 An RW must be available in the AU's lab to receive the package; ancillary workers cannot sign for a RAM package.

4.10.4 Open the package safely and monitor for contamination inside the container [10 CFR 20.1906(e)(1)].

5. References:

5.1 10 CFR 20.1906

5.2 10 CFR 71

5.3 49 CFR 171

5.4 49 CFR 172

5.5 49 CFR 173

5.6 Radiation Safety Manual

5.7 MU NRC RML and tie downs

6. Revisions

6.1 Rev 01 – 2023-8-24 – New SOP.