

Procurement and Use of Radioactive Material

Order, Receipt and Transfer of Radioactive Material

For Nuclear Medicine orders, see pg. 3-3.

Ordering

All requisitions for radioactive material must be approved by Radiation Protection prior to their order.

Radioactive Material orders are placed through the USC Purchasing System, *Paperless Requisition* in the USC Budget Administration System (AIS-B). Menu item #9 is used only for ordering radioactive material. All five pages must be completed to process the order.

Receipt of Radioactive Packages

When radioactive material is received in Radiation Protection, the following action will be taken:

- ❖ Radiation Protection will check the package for damage or contamination.
- ❖ A Radioactive Material Control (RMC) number will be placed on each final source container.
- ❖ A Radioactive Material Usage Record will be prepared for each RMC number assigned.
- ❖ Radiation Protection will notify the Authorized User that the shipment has arrived.
- ❖ A copy of the Packing Slip will accompany the package.
- ❖ The Radioactive Material labels on shipping containers will be defaced as appropriate.

When radioactive material is picked up by the Authorized User, he/she should verify the type and quantity of radioactive material and the receipt of the proper forms.

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Radioactive Material Usage Record

The Radioactive Material Usage Record is an electronic document and is available through the Radiation Protection OnLine System. It should be completed according to these guidelines:

The Authorized User or Technical Staff representative will:

- ❖ Enter the volume used on a regular basis for each RMC # and indicate the type of use.
- ❖ Once all the information is entered, click the “Rec Usage” button.
- ❖ When all the material has been completely used, the user must verify that the volume indicates a zero balance. Then the item is removed from the active inventory by clicking on the “Closeout” button.

Transferring Radioactive Material

Do not transfer radioactive material, either on campus or to another institution, without prior approval by Radiation Protection.

If Radioactive Materials are inadvertently delivered to another location, please notify Radiation Protection immediately.

Transfers to Another USC Permit

Transfer of radioactive material from one USC Radioactive Materials Use Permit to another USC Radioactive Materials Use Permit shall be approved by Radiation Protection prior to the transfer. This request must be made in writing or by telephone. The Authorized User must complete the “Transfer of Radioactive Material” form and must submit the form to Radiation Protection for review and approval. The RSO may give approval for a series of periodic transfers. Records of each transfer must be kept on the Radioactive Material Usage Records.

Transfer or Shipment to Another License

All shipments or transfers of radioactive material to another license (e.g. LAC/USC Medical Center, or other academic institutions) must be executed through Radiation Protection in advance of the date of transfer, because Radiation Protection must have certain documentation regarding the receiver’s license before authorizing the transfer.

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The Authorized User is responsible for furnishing the necessary packing materials for transfer/shipment of the material. Radiation Protection will provide information concerning acceptable packages and packing materials on request.

Transfer/shipment of radioactive materials will be performed by Radiation Protection during normal working hours. Special arrangements may be made with Radiation Protection if transfer/shipment during normal working hours is impossible.

Records of each transfer/shipment shall be maintained by Radiation Protection. The Authorized User is required to maintain records of the transfer and to adjust the inventory records accordingly.

Orders of Radioactive Material for the Department of Nuclear Medicine

The Department of Nuclear Medicine is authorized to receive radiopharmaceutical directly from outside vendors.

Radiopharmaceutical deliveries are ordered and arrive on an “as needed” basis. Deliveries of radioactive materials will be contained in appropriately shielded containers.

All deliveries from outside vendors will be directed to the first floor security desk. Security personnel will escort the driver to the Nuclear Medicine Department where the package(s) will be placed in the designated receiving area.

Any Nuclear Medicine or Radiation Oncology procedure requiring the ordering of radioactive material appropriate to that procedure after or before the hours of 7:00 AM to 4:00 PM weekdays, Saturdays and Sundays or holidays may be ordered on an emergency basis.

Nuclear Medicine Physicians, Nuclear Medicine Technologists with physician authorization, or Medical Physicists may order radioactive material on an as needed basis.

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Routine Laboratory Procedures

Introduction

A set of written procedures is required for each laboratory or area where radioactive materials are used. These procedures must describe specific rules applicable to that area. Make certain that persons working in these areas know these rules and can locate them.

The following general rules apply to all personnel who use radioactive material and should be incorporated into each laboratory's written procedures.

Signs and Notices

In all areas where radioactive materials are used, post the following signs and replace if defaced.



- ❖ “Caution - Radioactive Materials” signs on all doors to laboratories and storage areas
- ❖ “Notice to Employees” RH-2364 CRCR
- ❖ Regulation Card (indicating where copies of CRCR and other documents are located)
- ❖ “Emergency Procedures”

Personnel Protection

For your health and safety it is imperative that the rules concerning radioactive materials are followed. If you have any questions about the following procedures, ask your supervisor or call Radiation Protection.

- ❖ When required by Radiation Protection, wear personal whole body and finger ring dosimeters.
- ❖ Wear lab coats or other protective clothing as an outer garment at all times while working with radioactive material. Wear proper footwear that will protect feet from spills (sandals or open toed shoes are not permitted.)

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- ❖ Maintain good hygiene by:
 - keeping fingernails short and clean
 - washing hands and arms thoroughly before handling any object that goes into the mouth, nose or eyes
 - not handling radioactive material if there is a break in the skin below the wrist or by wearing two pairs of gloves when handling the material



- ❖ Keep the laboratory neat and clean
- ❖ Do not smoke, eat, drink or apply cosmetics in work areas where radioactive material is used. Do not leave food related items (e.g., empty containers) in these areas

Note 1: a “clean” area may be designated in the laboratory, if there is a clear separation from work area and it is approved by Radiation Protection in writing. Clean areas must be clearly posted with signs indicating that radioactivity is not permitted and that food and beverages are permitted.

Note 2: It is permissible to carry food or beverages through those areas to a designated “clean area” if covered and no radioactive procedures are being performed.

Storage of Radioactive Materials

- ❖ Label refrigerators or freezers with a “Caution Radioactive Material” sign and do not store food or beverages for human consumption in them.
- ❖ Keep radioactive material in a leak proof container.
- ❖ Label all radioactive material containers with an appropriate label stating the:
 - Radionuclide
 - Amount of activity
 - Date
 - RMC #
- ❖ Secure and lock laboratory doors or storage areas when materials are left unattended.



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Handling of Radioactive Materials



- ❖ Wear disposable gloves when handling unsealed containers of radioactive material. Use remote handling devices if required by Radiation Protection.
- ❖ Never pipette radioactive materials by mouth.
- ❖ Use absorbent padding or other material in areas where radioactive material is handled.
- ❖ Perform iodinations and use volatile radioactive material only in a fumehood specifically approved for such use by Radiation Protection. If you do not have an approved fumehood, contact Radiation Protection to arrange for the use of a suitable fumehood.

Surveys

It is important to routinely survey the laboratory for contamination. See section entitled “Guidelines for Radiation Surveys,” pp 3-10.

Bioassays

Be familiar with and comply with policies of Radiation Protection and RSC for bioassays or other personnel surveillance operations. See “Guidelines for Bioassay,” pp 4-9 through 4-10.

Radioactive Waste



- ❖ Place radioactive waste only in appropriately marked receptacles provided by Radiation Protection.
- ❖ You may dispose of limited quantities of radioactive liquid waste into specifically designated sinks, but only if approved by Radiation Protection.

For further information on disposal, refer to “Disposal of Radioactive Materials,” pp 3-16.

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Incident Reporting

Notify Radiation Protection immediately by telephone of all incidents involving:

- ❖ Radioactive contamination of personnel (external or internal)
- ❖ Radioactive contamination of a large area or that you are unable to manage with the resources readily available to you
- ❖ Release to the environment of radioactive material
- ❖ Loss of radioactive material (including radioactive waste)
- ❖ Known or suspected excess radiation exposure to the general public or lab personnel
- ❖ Loss or damage to personnel dosimeters (Film Badges, etc.)

Notify Radiation Protection within one week of incidents involving radioactive material or other sources or radiation that are less severe than those listed above.

Equipment Repair and Disposal

Notify Radiation Protection prior to the repair or removal or disposal of any equipment that may be contaminated with radioactive material or that contains a source of radiation.

Emergency Procedures

Introduction

During the course of routine operation, radioactive material may be spilled, causing contamination of lab areas, personnel, or equipment. Correct action taken during such an emergency can prevent further spread of the contamination.

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Written Instructions

A set of written procedures describing the specific steps to be taken in the event of a spill of radioactive material must be posted in a prominent location in each laboratory or area where radioactive materials are stored or used. These procedures must be established on an individual basis applicable to the particular area, according to the type and quantity of material used.

Minor Spills

MINOR SPILLS can be generally considered as those that contaminate small areas or equipment, but do not result in:



- ❖ External or internal contamination of personnel
- ❖ Excessive external radiation exposure to personnel
- ❖ Serious delay in work procedures

How to Respond

The following steps should be taken in case of minor spills:

Step	Procedure
1	Notify all personnel in the area that a spill has occurred
2	Cover the spill with absorbent paper or pad
3	Wearing disposable gloves, carefully fold the disposable paper or pad, insert it in a plastic bag and dispose of it in a radioactive waste container. Dispose of all other contaminated materials in a similar manner (such as disposable gloves)
4	With an appropriate survey instrument, check the area around the spill and your hands, shoes and clothing for contamination. Perform follow-up wipe tests and decontaminate as necessary.
5	Report the incident in writing to Radiation Protection within 24 hours

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Major Spills

Major Spills may result in any or all of the following:



- ❖ Contamination of large surface areas
- ❖ Internal or external contamination of personnel
- ❖ Excessive external radiation exposure to personnel
- ❖ Serious delay in work procedure

How to Respond

The following steps should be taken in case of major spills:

Step	Procedure
1	Instruct all persons not involved in the spill to vacate the room
2	Cover the spill with absorbent paper, but do not attempt to clean it up. Confine the movements of all potentially contaminated personnel to prevent the spread of contamination. Prevent personnel from entering the contaminated area.
3	If possible, return stock vials to their shielded containers, but only if it can be done without further contamination or without significantly increasing your radiation exposure.
4	Notify Radiation Protection and your laboratory supervisor immediately
5	Remove and store contaminated clothing for further evaluation by Radiation Protection. If the spill is on the skin, flush thoroughly and wash with mild soap and lukewarm water.

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Guidelines For Radiation Surveys

Frequency of Surveys



Quantity Used Per Day	Frequency of Survey
Less than 1 mCi	Quarterly
1-10 mCi	Weekly
Greater than 10 mCi	Daily

If quarterly surveys are done by Radiation Protection, you are not required to do additional surveys. Records of quarterly wipe tests performed by Radiation Protection will be maintained in Radiation Protection.

NOTE 1: The Radiation Safety Officer may require more frequent surveys if a chronic contamination pattern is observed.

NOTE 2: Facilities (such as patient rooms) or equipment (such as animal cages) must be surveyed for contamination prior to release.

NOTE 3: Surveys for the Departments of Nuclear Medicine and PET shall consist of daily instrument surveys and weekly wipe surveys.

Survey Methods

Direct Surveys

Labs with appropriate portable survey instruments (see below) may perform direct contamination surveys to assess surface contamination. Wipe tests must be used to distinguish between fixed and removable contamination.

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Indirect Surveys

Do wipe tests in all areas where radioactive materials are used when:

- ❖ Appropriate portable survey instruments are not available
- ❖ Assessing removable contamination
- ❖ Low energy beta emitters are being handled

Survey Procedures

Instructions For Conducting Area Wipe Tests

Area wipe tests should be conducted in the following manner:

Step	Procedure
1	Put on disposable gloves if you are handling potentially contaminated items or if you are directly handling the wipe test medium (gloves are not required if you use hemostats or tongs to hold the wipe test medium). NOTE: wear shoe covers if you suspect contamination on the floor.
2	Using filter paper, cotton swabs or other suitable wipe medium, wipe an area of 100 cm ² of a large surface. Wipe an entire surface only if a small item is being tested.
Note:	For routine wipe surveys, it is acceptable to wipe a much larger area and then wipe smaller areas if contamination is found.
3	Code the wipes or the counting vials and survey map for identification of the area wiped.
4	Count the wipes for one minute each. If the same wipe is to be counted for both gamma and beta radiation, be sure to do the gamma count before adding the liquid scintillation cocktail for the beta analysis.
5	Convert counts per minute (cpm) to uCi or dpm.
6	Record this information and retain it for inspection for three years.

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Contamination Action Levels

If wipes indicate more than 200 dpm/100 cm² above background, the area wiped shall be considered contaminated. Decontaminate, re-wipe and determine the new contamination level. Record the data. Repeat this cycle until wipes indicate less than 200 dpm/100 cm² (100 pCi/100 cm²).

Using Survey Instruments

The purpose of survey instruments is to:

- ❖ Reveal the presence of unsuspected loose or fixed contamination
- ❖ Measure general area radiation levels to ensure that they are not excessive

The use of a survey instrument for contamination surveys does not eliminate the requirement to perform scheduled wipe tests, but should be done to ensure that contamination is not present in other areas of the laboratory, on personnel, or equipment.

An appropriate survey instrument will be required to be available for monitoring whenever the usage (not possession limit) of radioactive materials meets the criteria shown in the following table:

Requirement

Radionuclide	Usage*	Requirement
Any gamma emitter OR any beta emitter with max energies > 600 keV	1 mCi or more at any one time OR 10 mCi one time in any one month	Appropriate portable survey meter
Any soft beta emitter with max energies < 600 keV	Any	None**

* removal from the stock vial

** not required, but highly recommended for ³⁵S

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Instrument Calibration

Portable radiation survey instruments must be calibrated annually. Radiation Protection provides this service.

Instrument Selection

Survey instruments are usually purchased by the Permit Holder. Selection should be based on the following criteria:



- ❖ An instrument must have sufficient sensitivity to show a response to normal radiation background. It should be capable of rapid response and have an audible response in addition to a visible meter reading.
- ❖ Survey instruments should be lightweight, readily portable, simple to operate, and easily handled by laboratory personnel.
- ❖ Geiger-Mueller detectors should be a thin-window type to permit detection of surface contamination by such low-energy emitters as ^{14}C and ^{35}S .
- ❖ An appropriate standard should be available at all times for instrument function checks.
- ❖ Instruments should be easy to calibrate.
- ❖ Instruments should only be used in accordance with the calibration method. In other words, measurements with an instrument which has been pulse calibrated should only be made using the count rate (cpm) scale.
- ❖ The meter must have a detector capable of detecting the radiation from the material or source being used. The sensitivity must allow for detection of the presence of 200 dpm/100 cm² for every radioisotope to be detected with that instrument.
- ❖ Even though a laboratory may be working with only one radionuclide, a nuclide-specific instrument should not be obtained unless the principal investigator knows with certainty that no other nuclides will be added at a later date. This consideration is important in order to reduce subsequent costs for purchase of new equipment.
- ❖ Instruments should be accurate to within 10% of the actual calibration source reading on all scales used during routine operations.

Conducting Contamination Surveys Using G-M Survey Meters

Surveys for contamination using a G-M Survey meter should be conducted in the following manner. (This procedure is applicable for thin-window detectors only, and only for gross amounts of contamination.)

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Step	Procedure
1	Turn the survey meter on and check for proper operation
2	Select several work areas where radioactive materials are not used, but where contamination might spread.
3	<p>Low-background Radiation Areas: Move the probe very slowly over the surfaces to be checked. The probe should be placed so that the "window" is parallel to within 1 cm of the surface.</p> <p>High-background Radiation Areas: Take wipe tests of selected areas and count by holding the wipes within 1 cm of the window, in a low-background area.</p> <p>Note: Low-background radiation area means that, in general, the average meter reading due to ambient background radiation does not exceed 200 cpm (about 0.05 mR/h).</p>
4	If the instrument reading is 100 cpm above background, contamination is present.
5	Decontaminate and perform follow-up wipe tests until the contamination is removed.
6	After performing wipe tests, go over these areas with the survey instrument.

Important

Significant meter readings after decontamination and negative wipe tests may indicate fixed contamination.

Immediately Contact Radiation Protection For Assistance!

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Use of Radioactive Materials in Animals

Note

All use of radioactive material in animals must be specifically authorized by the Radiation Safety Committee and the Institutional Animal Care and Use Committee.

Authorization to Use Radioactive Materials in Animals



Individuals desiring to use radioactive materials in animals must, as part of their application for or amendment to a Radioactive Material Use Permit, describe the precautions and procedures to be used in handling and care of animals. The information provided should address the following areas:

Topic	Information Needed
Facilities for injecting radioactive material into live animals	Describe procedures for restraining animals during injection and the method for containing any radioactive material lost during injection. For small animals, a tray lined with absorbent material should be used. For large animals, some other method may be required.
Labeling of cages for the injected animals	The label should include type of radionuclide, quantity of material injected per animal, date of injection, and the Authorized User. (Cage labeling is especially important for animals that are not sacrificed within a short period of time, post injection.)
Type of cage used to contain the animals	What type of cage will be used? If contamination is likely to be a problem, a metabolic cage should be considered.
Monitoring and decontaminating cages	Records of radiation levels and wipe tests should be maintained for all cages used to house radioactive animals.
Segregation of the injected animals from other animals	Are long-term retention studies being conducted? If so, this information is especially important.
Disposal of animal excreta	Describe the methods to be used for disposal, e.g., through sewage as liquid waste or segregated for pick-up by the Safety Office.

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Ventilation	Will the radioactive material administered, be volatile? Will it be excreted in respiratory air in a volatile form? If so, special consideration must be given to ventilation. If it is excreted in the urine or feces, dust free bedding must be used.
Instruction of animal handlers	Describe the indoctrination of animal handlers that you will provide. This should include dose levels, time limitations and special handling requirements that you specify for your animals and/or their excreta. In general, once injected with radioactive material, animals should be housed in the laboratory. They are not to be returned to the Vivaria central animal care facilities without specific approval of Radiation Protection and the Director of the Vivarium.

Disposal of Radioactive Materials

Introduction

Each Authorized User is responsible for ensuring that all radioactive material is disposed of properly. Dispose of radioactive materials only in the following ways:

- ❖ Administration to a patient
- ❖ Release into the sanitary sewage system (by special approval only)
- ❖ Segregation for disposal (liquid waste container, solid waste disposal drum, etc.)

Administration to a Patient

According to the CRCR, once radioactive material is administered to a patient, no further account of its disposal is required. However, if excreta or body fluids are collected from a patient receiving a large therapeutic dose of radioactive material, the excreta or body fluids must be stored for decay prior to actual disposal.

Release Into the Sanitary Sewage

Radioactive material may be disposed of into the sanitary sewage system, only if approved in advance by the RSO and the following criteria must be observed:

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- ❖ Information about the maximum activity of radionuclide that may be disposed of per day may be obtained from Radiation Protection.
- ❖ Only material that is soluble or dispersible in water and is not prohibited from sewage disposal because of its chemical or biological nature will be disposed of in this manner.
- ❖ The Radioactive Material Usage Record must reflect the activity that is disposed.
- ❖ Disposal may be made only via sinks specifically approved for that purpose by Radiation Protection. The sinks must be labeled to indicate possible radioactive contamination.
- ❖ Material being disposed must be flushed with copious amounts of water to ensure proper dilution.
- ❖ Organic, liquid scintillation cocktail (LSC) may not be disposed of via the sanitary sewerage system.

Segregation and Disposal

All radioactive materials that are not administered to a patient or released into the sanitary sewage system must be segregated in the laboratory according to the following categories (they cannot be mixed within a waste container):



Category	Description
Dry Solid	Glass tubes, paper, rubber, empty stock vials, pipettes, etc. NOTE: no free-standing liquid is acceptable. If it can be poured out of its container, it does not belong in this waste stream
Aqueous Liquid	Aqueous liquids must be in nonbreakable containers that are approved and provided by the Safety Office
Organic Liquid	Organic liquids must be in nonbreakable containers that are approved and provided by the Safety Office
Liquid Scintillation Vials (LSV)	Liquid scintillation cocktail in glass or plastic vials only
Aqueous Vials	Aqueous vials containing liquids, segregate in non-breakable containers that are approved and provided by the Safety Office

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Dry Sharps	Needles, Pasteur pipettes and razors must be packaged separately from other solid waste in sharps containers provided by the Safety Office
Waste Containing Biological, Pathogenic or Infectious Material or Equipment	Urine, blood or blood cells segregated and frozen in containers approved and provided by the Safety Office
Animal Carcasses or Tissues	Frozen animal carcasses or frozen tissues from animals which were fed, injected or infused with radioactive material
Animal Wastes and Bedding	Waste from cages where animals containing radioactive material are housed

Radionuclide Segregation

All waste streams should be segregated by half-life according to the following categories:

Category	Description
Short half-life	Less than 15 days, e.g.. ^{131}I and ^{32}P
Medium half-life	15 days to 90 days, e.g.. ^{125}I and ^{35}S
Long half-life	greater than 90 days, e.g.. ^3H and ^{14}C

Waste Containers

Radioactive waste containers for proper segregation of waste will be provided to each laboratory by the Safety Office.

Documentation of Disposal

Proper documentation of the use and disposal of radioactive material is the responsibility of the Authorized User. Forms for this will be supplied by Radiation Protection.

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Completing the Waste Disposal Record

The "Radioactive Waste Disposal Record" is used to identify the contents of each waste container. The completed record must accompany each container to be removed from the laboratory. Below are instructions for filling out each section properly.

Section	Information Needed
Radionuclide	Chemical element and mass number (e.g., ^{125}I) that corresponds to the RMC#
Physical or Chemical Form	Must be an actual description of the contents (e.g., LS vials, glass test tubes, gloves, biological waste, diapers, etc.) The words "Trash" or "Garbage" will not suffice. For bulk liquids, list the chemical names, chemical concentrations and total volume in each container.
Control #	The Radioactive Material Control number that corresponds to the source of activity, must be listed for each entry.
Activity	Use millicurie (mCi) units only.
Contamination Check	A wipe test must be performed on the exterior of every waste container before it is picked-up by the Safety Office. The results of this wipe test must be recorded on the Radioactive Waste Disposal Record
Certification	The form must be signed by an Authorized User or someone designated in writing to Radiation Protection by the Permit Holder. Due to legal requirements, there can be no exceptions.

NOTE: If one form is not enough to list container contents, attach additional forms numbered consecutively. Each form must be signed. If you have questions, call Radiation Protection.

Waste Pick-Up Schedule

Radioactive waste will be picked up according to the building-by-building schedule shown below:

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Building	Pick-Up Day
BMT	Monday when called
CRL	Tuesday
CSA	On-Call
DVRC	Friday when called
EDM	On-Call
GLB	On-Call
GSH	Friday when called
HMR	Monday
LIV	Tuesday
MCH	Monday
MMR	Monday
NOR	Wednesday
ORT	On-Call
PSC	Tuesday
RMR	Monday
UNIT 1	Wednesday
UPC Buildings	On-Call
WOH	On-Call

NOTE: Each building is scheduled to be serviced at least once each week. The schedule will be adjusted to accommodate holidays by picking up the waste on the following working day.

Please have all radioactive waste properly segregated and packaged, and have accompanying paperwork completed. Radiation Protection will provide you with replacement radioactive waste containers for each container collected. If you need more containers, please call Radiation Protection the day before the scheduled visit to your building.

Improperly documented or segregated waste will not be accepted by Radiation Protection. If evidence of improper segregation or documentation is discovered by Radiation Protection after waste has been removed from the lab, the waste container and its contents will be held by Radiation Protection for proper segregation and documentation by the Authorized User's personnel, as necessary.

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Signs and Labels

Introduction

Rooms, areas, and equipment where radioactive materials are used or stored must be clearly marked with labels bearing the universal radiation symbol.



Location	Sign or Label
Rooms or areas where radioactive materials are used or stored	CAUTION RADIOACTIVE MATERIAL, with standard radiation symbol
Containers in which radioactive material is used, stored or transported	CAUTION RADIOACTIVE MATERIAL, with standard radiation symbol. The label must state: radionuclide quantity (in mCi) date of measurement control number
Note: This does not apply to small quantities that are in sample containers for less than one day.	
Sinks for disposal of radioactive material	CAUTION RADIOACTIVE MATERIAL, with standard radiation symbol
Fume hoods, refrigerators and freezers where radioactive material is used or stored	CAUTION RADIOACTIVE MATERIAL, with standard radiation symbol
Contaminated equipment	CAUTION RADIOACTIVE MATERIAL, with standard radiation symbol

Exceptions

Radiation Protection may approve exceptions to the above guidelines, but only in accordance with CRCR.

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Clean Areas

“Clean areas” may exist in laboratories or rooms where radioactive materials are stored or used if they:

- ❖ Have been approved by the Radiation Safety Officer
- ❖ Have the boundaries clearly delineated
- ❖ Are labeled to exclude the use or storage of radioactive materials
- ❖ Are not in an area where there is any possibility of airborne radioactivity

Records

The following records must be maintained by the Permit Holders:



- ❖ In-service training of laboratory personnel (3 years)
- ❖ Radioactive Material Usage Records (3 years from date of final disposal of material)
- ❖ Radioactive Waste Disposal Forms (3 years)
- ❖ Wipe tests and Instrument surveys (3 years)
- ❖ Transfer Records (3 years)
- ❖ Calibration of dose calibrators and radiation detection instruments (3 years)
- ❖ Most recent Permit Application, the approved Permit, and all correspondence relating to that Permit