

## Radioactive Materials Authorization

### POLICY

The use of radioactive materials at the University is allowed for the purposes of research, teaching, and service by authorized users. The Radiation Safety Committee grants authorized user status through an application and review process. (See the Radiation Protection Program Manual (*RPPM*).)

The procedures and available resources for authorized use must be adequate to maintain:

- Safety of all students, staff, members of the general public, University facilities, and the environment.
- Compliance to all applicable regulations and license conditions.

The University's licenses do not allow any use of radiation in or on human subjects.

### PURPOSE

Unlike a radiation machine that can be turned off to eliminate the risk of exposure to the radiation it produces, radioactive materials present two ongoing risks, the risk due to any ambient radiation field created near their area of use and the risk of contamination of facilities, people, and the atmosphere.

The procedures in this section (*SPPM* 9.50) assist authorized users involved in research, teaching, and/or service by providing:

- The procedures for applying for an authorization to use radioactive materials.
- Standard guidance regarding the acquisition, control, security, and disposal of radioactive materials.

### Requirements and Standard Guidelines

The policy and procedures in this section are applicable for all authorized users and radiation workers involved in the acquisition, storage, use, and disposal of:

- Specifically-licensed radioactive materials, as listed in the University's broad scope license.
- Generally-licensed radioactive materials. (The commercial providers are licensed to distribute such products.)

Specifically-licensed radioactive materials and generally-licensed radioactive materials that may be purchased without a license but are held under the University's license must be listed in the Radiation Safety Office (RSO) tracking inventory.

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### **Requirements and Standard Guidelines (cont.)**

Additional policies and procedures that pertain specifically to radioactive materials possession and use include:

- Radiation facility contamination prevention and control.
- Radiation protection equipment management.
- Shipping and transport of packages containing radioactive material.
- Acquisition and radioactive materials inventory tracking, control, and security;
- Disposal of radioactive materials procured and held under the authority of the University's broad scope license; and
- Records management.

### **RESPONSIBILITIES**

See *SPPM* 9.10 and 9.20 regarding Radiation Protection Program administration and implementation responsibilities.

### **PROCEDURES**

The following procedures are designed to ensure the proper maintenance of this policy for the possession, use, and disposal of radioactive materials.

#### **Authorization to Use Radioactive Materials**

Permanent faculty and staff who acquire and possess radioactive materials must have an approved, active authorization in place.

The authorized user must submit a completed application form and all required supporting documents to the RSO. See RSO Forms.

The Radiation Safety Committee must review and approve the application before any work involving the use of sources of radiation may be initiated.

#### **Renewal**

Every authorized user of radioactive material must submit a renewal application at regular intervals specified by the Radiation Safety Committee and as listed in the *RPPM*.

#### **Changes**

If an authorized user requires or plans to change the described use under an authorization, he or she must submit an application for amendment to the RSO. The Radiation Safety Committee must review and approve the amendment prior to implementation of the changes.

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### Changes (cont.)

Applicable changes to factors listed on the authorization include:

- Type or quantity of radioactive materials authorized.
- Proposed radiation use areas (facilities).
- Type of use (e.g., experiments *in vitro* to *in vivo*, or use of a new protocol).

If an amendment of an authorization is being considered, consultation with the RSO is encouraged.

### RSO Notification Required

**IMPORTANT:** The department and/or authorized user must notify the RSO of the following:

- Receipt of contaminated or damaged radioactive material shipments.
- Radioactive contamination outside a posted radiation use area.
- Deliberate misuse, unauthorized transfer, or illegal transport of radioactive materials.
- Known or suspected personnel contamination, inhalation, injection, or ingestion of radioactive materials.
- Any accident resulting in direct exposure to an individual, whether occupational or nonoccupational. (No use of radiation on or in humans is allowed or approved under current University licenses.)
- Known or suspected loss of radioactive material, including accidental discharge or loss to the air or sewer.

## Authorized User Actions

### Personnel Management

Each authorized user must adhere to all of the following:

- Allow only the radiation workers listed on his or her authorization to access and handle the radioactive materials held under the authorization.
- Ensure that all radiation workers (including the authorized user) complete and document the required RSO-provided basic radiation safety training and required refresher training. See *SPPM* 9.30 and the RSO website.

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- Personnel Management (cont.)
- Ensure that all ancillary support personnel and students frequenting the radiation use areas complete appropriate hazard awareness training (see *SPPM* 9.30).
  - Maintain records of appropriate training for all applicable individuals and make such records available for inspection. Appropriate training includes:
    - Function-specific safety training.
    - Task-specific safety training.
    - Radionuclide-specific safety training.
    - Job/duty performance-specific training.
  - Ensure that each radiation worker under his or her authorization completes the process to be an RSO-approved radiation worker (see *SPPM* 9.30).
  - Ensure that each approved radiation worker wears his or her RSO-assigned dosimetry or radiation worker ID tag whenever within a radiation use area.
  - Ensure that all radiation workers cooperate with the requirements for bioassays (thyroid scans and urine assays) in a timely manner.
  - Ensure that any worker who loses her or his approval to be a radiation worker ceases radiation use under the authorization immediately upon notice from the RSO.

### **Management of Radioactive Material Use Areas**

Each authorized user must ensure that:

- All required hazard postings, including a copy of the *Notice to Employees*, WA DOH form RHF-3, are posted and maintained in all areas under his or her radiation use authorization, as specified in the *RPPM*.

The RHF-3 form is available at RSO Forms.

- All areas under his or her control where radioactive materials are stored and/or used are secured from unauthorized entry, in accordance with state and federal regulations and *RPPM* requirements.

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### Procurement and Management of Radioactive Materials

Each authorized user must ensure that:

- All stock radioactive materials and radioactive material wastes are securely held and accessible to only the authorized radiation workers listed on the authorization.
- Only the specific types and quantities of radionuclides list on the current, active authorization are procured and held in the radiation use areas listed on the authorization.
- Radiation levels and contamination levels in the laboratories under his or her control do not exceed prescribed limits. (See the *RPPM*.)
- Movement of radioactive materials from stock inventory to radioactive material waste is accurately tracked and recorded in radioactive material waste documentation.
- Radioactive material waste is stored safely and securely and managed as specified in the *RPPM*.

### Termination of Authorization and/or Departure from the University

Each authorized user must:

- Prenotify the RSO by e-mail if he or she plans any of the following absences:
  - Departure from the University (i.e., resignation or retirement)
  - Sabbatical leave
  - Physical absence from her or his radiation use area for a period more than 90 days

NOTE: None of the following may be left unsupervised by an appropriately trained supervisor without immediate notification to the RSO:

- Radioactive material inventory stocks
- Radiation workers
- Radiation use areas
- Provide timely notice to the RSO of future termination of an authorization or permanent departure from the University (e.g., resignation; retirement; medical leave). See *BPPM* 60.38.

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- Termination/Departure (cont.) •** Properly decommission all facilities and equipment that have been used with dispersible forms of radioactive materials under her or his authorization. The authorized user is to control the facilities and equipment until the RSO verifies the decommissioning and prepares free-release documentation, releasing them for alternate use (see the *RPPM*).