

## **APPLICATION TO USE SEALED RADIOACTIVE SOURCES AT THE UNIVERSITY OF WYOMING**

**DIRECTIONS:** This application is for sealed sources of radioactive materials covered by UW's NRC byproduct materials license. You must have Radiation Safety Committee approval before acquiring ionizing radiation sources. You must also have the prior approval of the Institutional Review Board (IRB) for projects involving human subjects.

This form is divided into 7 sections. Please print, type, or provide legible copies of printed material in response to the questions.

Sections A-E Complete by filling in the blanks to the best of your ability. Additional information can be supplied from the Radiation Safety Office or by Risk Management and Safety. If you require more space, use the back page or attach a separate sheet. Do not leave any answers blank. If a question is not applicable to your situation, say so.

Section F This section consists of four forms: two of which are to be completed and posted in a conspicuous location in your workplace; and two forms for Radiation Safety records. A copy of each form must accompany the application. Attach a detailed description of the proposed use(s) of the radiation device, followed by a more detailed description of the procedures or any other information that would aid in the evaluation of the application.

Section G This space is reserved for any additional remarks by the applicant, Radiation Safety Officer or Radiation Safety Committee. The application is signed and dated at the bottom by the applicant and the RSO granting temporary approval if necessary.

A separate application form is required for each source. On completion, detach these directions and return the application to the Risk Management and Safety Office, Room 102, Wyoming Hall. Keep a copy of your application for your office or workplace.

Radioactive Materials Safety Plan and other radiation safety information will be supplied by the Risk Management and Safety Office, Wyoming Hall (766-3277).

The applicant is invited to attend the Radiation Safety Committee meeting at which this application will be reviewed. The applicant will be notified of the committee's final decision.

### Attachments:

1. Safety Regulations Related to Sealed Sources
2. Radiation Survey Guidelines
3. Training in Use of Radioactive Materials
4. Occupational External Radiation Exposure History (NRC Form 4)
5. University of Wyoming Radioactive Materials Safety Plan

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**A. Principal User (Applicant) Information**

1. Name and mailing address of Principal User: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. Principal User's e-mail address \_\_\_\_\_
3. Principal User's Department: \_\_\_\_\_
4. Principal User's work phone number(s) \_\_\_\_\_
5. Principal User's home phone number \_\_\_\_\_
6. Building(s) and room(s) where sealed source(s) will be used \_\_\_\_\_  
\_\_\_\_\_

**B. Information on Sealed Source Device**

1. Give a brief description (type, make, model) of the sealed source device and how it will be used. **Attach a full description of the proposed use to this application.**
  
2. Will the sealed source device be used on human subjects?  
\_\_\_\_\_ No (if No, skip to question B.3.) \_\_\_\_\_ Yes
  - a. **Attach proof of approval from the Institutional Review Board (IRB)**
  - b. **Attach an example of the informed consent form and questionnaire.**
  - c. Provide the skin entrance dose and effective dose from each procedure:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  - b. Will women of childbearing potential be included in this protocol?  
\_\_\_\_\_ No (if No, skip to question B.3.) \_\_\_\_\_ Yes  
If yes, describe how you will determine if the subjects are not pregnant.
  
3. Maximum frequency of equipment use: \_\_\_\_\_  
(number/unit of time)
4. Duration of time permit is requested: \_\_\_\_\_  
(maximum 3 years)

**C. Radiation Hazard Information**

1. What radioactive isotope(s) and activities (in millicuries, or mCi) will be used? \_\_\_\_\_  
\_\_\_\_\_
2. List the type(s) and energy(ies) of radiation emitted by the isotopes \_\_\_\_\_  
\_\_\_\_\_
3. Half-life of radionuclide \_\_\_\_\_
4. Occupational Exposure estimates. For the operator and other personnel who occupy the controlled radiation area, answer the following questions:
  - a. Body part(s) exposed to external radiation during procedures using sealed source \_\_\_\_\_
  - b. Maximum exposure rate (mR/hr) from source \_\_\_\_\_
5. Overall hazard rank of workplace, based on toxicity of and proposed usage amounts of radionuclide (refer to Radiation Safety Manual, section II-E) (circle one)

Type C  
low

Type B  
medium

Type A  
high

**D. Exposure Control and Monitoring**

1. List the monitoring method(s) required for external exposures, and what frequency \_\_\_\_\_  
\_\_\_\_\_
2. Are written instructions for all procedures involving the radiation device available to the operator during the procedure? Elaborate: Yes \_\_\_\_\_ No \_\_\_\_\_
3. Will radiation shielding be used for the operator or room? Elaborate: Yes \_\_\_\_\_ No \_\_\_\_\_
4. List the monitoring instrumentation available to you. If you are using someone else's instrumentation, submit a letter signed by the person responsible for the instrument.

Instrument/ Detector	Make	Model	Serial Number	Radiation Detected	Location (Bldg, rm)	Person in Charge

**E. University Policies and Procedures**

1. Have you read the University of Wyoming Radiation Safety Manual? Yes \_\_\_\_\_ No \_\_\_\_\_
2. Are you aware that all orders, shipments, and transfers of radiation sources must be approved and processed through Radiation Safety and Safety? Yes \_\_\_\_\_ No \_\_\_\_\_
3. Describe the security of sealed sources and how you will prevent unauthorized access.
  
4. Will ionizing radiation be used on animals? Yes \_\_\_\_\_ No \_\_\_\_\_  
If Yes, attach a) The letter of approval from the UW Animal Care Committee.  
b) A description of the handling precautions and training for personnel.

**F. Forms (check with Risk Management & Safety)**

Complete the following forms (attached). If these have been completed on a previous application and no changes are involved, refer to the existing form.

- a) Safety Regulations Related to Sealed Sources (a copy of this form must be posted in each lab).
- b) Radiation Survey Guidelines (a copy of this form must be posted in each lab).
- c) Training in Use of Ionizing Radiation (for each person who will operate the device). Attach any additional proof or description of training you have received.
- d) Occupational External Radiation Exposure History (NRC Form 4) (for each authorized device operator or student operator)

**G. Remarks:** by the applicant, Radiation Safety Officer or Radiation Safety Committee

Applicant signature \_\_\_\_\_ Date \_\_\_\_\_  
Signed temporary approval by RSO \_\_\_\_\_ Date \_\_\_\_\_

Final approval in Radiation Safety Committee Minutes dated \_\_\_\_\_



## RADIATION SURVEY GUIDELINES

USER \_\_\_\_\_ BLDG \_\_\_\_\_ ROOM # \_\_\_\_\_

Workplace surveys required every (circle one): month   week   day   other

**Instructions:** Sketch the workplace in the space below and number the areas to be surveyed. Show all exits and permanent room fixtures. Indicate all radiation usage areas, operator stations and shielding. Show the location of the UW Radiation Safety Manual, OSHA regulations (29CFR1910.1096), and the radiation device operator's manual or other instructions.

Complete the table below for each survey location identified in the workplace sketch.

Instrument Used:			
Location #	Description	Location #	Description

Person responsible for: surveys \_\_\_\_\_ records \_\_\_\_\_