

RSF-01-1

UNM RADIATION SAFETY OFFICE
PERMIT APPLICATION FOR USE OF
RADIOACTIVE MATERIALS AND/OR
RADIATION-PRODUCING MACHINES

Instructions: Address **ALL** items listed below. Reference each response to the exact bullet and sub-bullet numbering system shown below. Enter NA if the item does not apply. If you have questions, please contact the UNM RSO at 272-5500 or 925-0743.

1. Personnel:

- a. Provide the applicant name who will be the Permit Holder and who will use or supervise the use of the radioactive material (RAM) or radiation machine. Include full name, department, building, office #, office phone #, email, date of application, and any other pertinent information.
- b. Identify an alternate faculty member who will be familiar with your operations, has knowledge of radiation safety, and who agrees to be responsible for RAM sources in your lab during times of your absence.
- c. Identify any employees who will be performing work with radiation sources under your supervision, and their titles (see Section 2 below).

2. Training and Experience:

- a. Complete a "Training & Experience Form" for each individual who will work with radiation under your supervision. Indicate type of training, where trained, duration of training, and type of training (i.e. formal or on-the-job).
- b. The Permit Applicant must document training and experience (T&E) in detail. Include the name(s) of previous RSO's (name, phone number, address) and previous employment contacts (names, phone numbers, addresses) where experience with radiation sources occurred. Submit a copy of printed publications as applicable to verify T&E. Submit a copy of any radioactive materials license on which you were named as an Authorized User, or, a copy of any Radiation Permit which you held within the past 7 years.
- c. Written documentation that all permit holders and supervisors have read and understood the applicable UNM and State Regulations regarding the safe use of radiation and radioactive materials is required. Anyone who has not read the appropriate rules and regulations can find them in the current UNM Radiation Safety Manual located on the HSC web-site (http://hsc.unm.edu/som/research/radiation_safety) and accessing the Radiation Safety links.

3. Radionuclide or Radiation-Producing Machine:

- a. Identify the radionuclide(s) being requested by element and mass number (ex. P-32).

- b. Indicate the chemical and physical forms to be used, and names of labeled compounds.
- c. List the maximum possession limit (uCi or mCi) in the lab for each radionuclide requested, including waste.
- d. List the maximum activity (uCi or mCi) to be ordered in a single shipment for each radionuclide.
- e. For each individual sealed source, list the manufacturer, model #, activity, and a description of the source including purpose. Provide the vendor data sheet if available.
- f. For radiation-producing machines list the manufacturer, model #, maximum kVp and mA, output (normal and maximum) and a description of the unit with vendor data sheet as available.
- g. Describe the purpose for which the above items will be used.
- h. Provide a copy of the protocols to be used that require the use of radiation sources.

4. Facilities and Equipment:

- a. Describe laboratory facilities, handling and processing equipment, and storage facilities (e.g. building, room #, type of shielding, fume hoods, etc.). Identify by text and maps the specific areas within the lab to be used for RAM work.
- b. Describe the portable active and passive instruments to be used to detect, measure, and count radiation levels on surfaces, in your samples, and to measure dose to workers in the lab. Provide make, model, serial #, and detection type (GM, Ion chamber, NaI, LSC etc.).
- c. The need for radiation badges for workers will be determined by Radiation Safety based on radionuclides in use and uCi/mCi amounts in use at any one time. Please provide the information needed for us to assess this need.
- d. Identify any structural and personal shielding that will be in place in the lab to minimize exposure to workers and visitors.
- e. If any of the work with radionuclides involves a risk of airborne contamination, provide the controls in place to monitor and protect breathing zones and control emissions to the environment.
- f. Identify all adjacent areas to your lab space, including name of lab and occupancy.

- g. Will other personnel not involved with radiation source use be sharing your lab? Describe the methods you will use to ensure they are protected from exposure, contamination, and the methods used to protect radiation sources from removal.
- h. Describe the radiation cautionary posting and labeling you will use.
- i. If any field work is being requested, provide all details.

5. Radiation Protection:

- a. Describe how the RAM or machine will be maintained secure from unauthorized use at all times, the administrative and engineering controls to be used to ensure radiation safety, and any other applicable policy or procedure to be used to prevent loss, theft, or misuse.
- b. Describe the potential for radioactive contamination in the laboratory and in uncontrolled areas. Describe precautionary methods which will be employed to prevent contamination of personnel and uncontrolled areas.
- c. Describe potential for “abnormally high” doses to personnel or workers in adjacent areas, and the methods to be employed to prevent it.
- d. Commit to enforcing and documenting radiation safety training specific to your functional area, both before workers are permitted to work with radiation sources and annually thereafter. Commit to providing operational training in the specific protocols in use in the lab to all workers before they are allowed to independently work in the lab.

6. Waste Disposal:

- a. Identify all radioactive waste forms that will be generated.
- b. Identify the approximate waste volumes to be generated and the frequency of generation.
- c. After reading the Radioactive Waste Management section of the “UNM Radiation Safety Manual”, confirm in writing that all procedures therein will be followed, or offer an alternate plan for consideration. Your submission should include your procedures for storing, labeling, inventory, and security and control of radioactive waste.
- d. Describe all chemicals that will be mixed in the radioactive waste. Please note that mixing hazardous chemical material with radioactive waste (MIXED WASTE) is not permitted. Confirm in your application that you will not generate mixed waste.

- e. Identify the liquid scintillation fluor that you will be using (if applicable). The use of environmentally-safe fluids are strongly encouraged.

7. Procurement:

- a. Provide the vendor name(s) or supplier(s) of radioactive material or radiation-producing machines, as well as contact information.
- b. Confirm that the procedures for procuring radiation sources through the Radiation Safety Office will be strictly followed. Identify who in the lab will be responsible for placing orders for radiation sources.

8. Submit any other information pertaining to the operation which will assure that the program will be conducted in a safe manner and within applicable rules and regulations.

9. Sign and Date the Permit Application cover page. Submit to:

RCC (Radiation Control Committee)
Attn: Salmen Loksen, RSO
Campus Mail: MSC08 4560

USPS:
UNM Health Science Center
Office of Research - Radiation Safety Office
MSC 08 4560
1 University of New Mexico
Albuquerque, NM 87131-0001