ENVIRONMENTAL HEALTH & SAFETY | RADIATION SAFETY

and

COMMITTEE ON IONIZING RADIATION

OFFICE OF THE ASSISTANT VICE CHANCELLOR FOR REGULATORY COMPLIANCE

Guidance for Completing the RAM Application for Non-Human Use

Important: All EHS forms are posted to the Web as fillable PDFs. The Chrome browser is the only program which successfully enables opening, editing, and saving of these documents. It is essential that the Chrome browser be used to access all EHS forms.

This guidance pertains to the RAM Application for Non-Human Use (RSF-012) only.

Save a copy of the form using a new file name. Complete all fields by tabbing through the entire document. If a field is not applicable, enter NA. Refer to the Radiation Safety Manual and the Radioactive Waste Disposal Manual for additional guidance.

Submit the completed application to radappnh@ucdenver.edu.

Item IV. Radioactive Material and Amounts

Accurate data is essential in order to demonstrate an acceptable level of knowledge of the isotope properties. Contact Riad Safadi, 4-0234, for assistance securing this information.

*The requested possession limit should show a reasonable and logical progression from the activity per research subject to the possession and yearly limits. The relationship should be reasonable in light of the proposed number of subjects per month. A **possession limit** request exceeding twice the amount anticipated to be used in one year will require some explanation. (e.g., minimum amount of radioactivity available, half-life, or purchase economy).*

Item VI, Section E. Description of Experiment

Provide a brief analogue to the methods section of a journal article, specifying the physical and chemical phases and conditions through with the radioisotope passes during the experiment. Include all manipulations to be performed, including reaction times/temperatures/volumes, use of laboratory appliances, and so on.

Photocopies of materials not written by the applicant for this purpose (e.g., lab notes, published standard protocols, manufacturer's instructions) are unlikely to be found acceptable by committee reviewers, unless they are annotated in a way that reflects careful consideration.

Details must be provided for:

- uses in animals,
- uses that are subject to concern about radioactivity in volatile forms (notably tritiated water and acetate, radioiodines not commercially pre-labeled onto proteins or other nonvolatile macromolecules, and sulfur-labeled amino acids),
- any handling step that may cause dispersal into air as an aerosol, including procedures such as centrifugation, sonication, homogenization, and opening sealed vessels of radioactive liquids, and
- any step involving the heating of radioactive materials,
- any step involving infectious material used in BSL3.

Define the unit "experiment" as it relates to "activity per experiment" in Item IV, and provide a quantitative basis for the requested on-hand and annual limits stated in terms of projected numbers of experiments. If the quantities in which the radioactive material must be purchased will affect the required limit, include this information.

Item VII. Exposure Control and Monitoring

Personal dosimetry service is available through Environmental Health & Safety. Conditions requiring the use of personal dosimetry devices are found in section 3.4.4.4 of the Radiation Safety Manual.

All requirements found in sections 3.4.3, 3.4.4, and 3.4.5 of the Radiation Safety Manual must be addressed, if applicable. Avoid clearly inappropriate references, such as specifying shielding for tritium, etc. Consult Riad Safadi, 303-724-0234, for guidance regarding appropriate precautions for a given application.

Provide details for controlling exposure from the following special situations:

- radioiodinations
- use of volatile compounds
- sulfur-labelled methionine

Item VIII. Radiation Monitoring

A. Portable survey instrument

Applicant must possess an appropriate portable survey instrument if any radionuclide other than H-3 will be used. Refer to the Radiation Safety Manual, section 3.4.3.1.

D. Frequency of contamination surveys

Surveys must include wipe testing for removable radioactive contamination. Documented surveys must be performed as noted in Appendix XV of the Radiation Safety Manual.

Item IX. Radioactive Waste Handling and Disposal

Radioactive waste disposal service is provided free of charge by EHS to all investigators whose grants are funded at the on-campus ICR rate.

- For liquid scintillation wastes, the scintillation cocktail to be used must be identified by manufacturer and product name. Estimates of radioactivity content are particularly important, as ANY scintillation fluid containing more than 0.05 mCi/ml OF ANY RADIONUCLIDE is likely to present disposal concerns.

- For any RAM-contaminated organic solvent wastes or other mixed (radioactive and hazardous) wastes, the chemical nature of the waste must be clearly stated.

- For any experiment involving human tissue or bodily fluids including blood, serum or plasma, or pathogenic microorganisms, all wastes containing such materials *or having been in contact with such materials* must be disinfected, as stated in the Radioactive Waste Disposal Manual. These considerations also apply to any use of human cells which are not proven free of human pathogens. Contact the Biosafety Officer at 303-724-0235 for additional details.