

Appendix 3

A GUIDE FOR FILLING PROJECT APPLICATIONS FOR RADIOACTIVE MATERIAL

The Radiation Safety Committee has as its major responsibility the assurance of safe use of ionizing radiation in all forms on Ohio University campus. In order that this Committee can most effectively carry out its responsibilities each individual project use of radioisotopes and/or radiation sources is reviewed by means of the information supplied on a project application form. This form requests specific identifying information and description of the activity to be undertaken. From these, and particularly the latter, the Committee evaluates the radiation hazard potential and acts to expedite the project from the standpoint of radiation safety. Special attention is called to the fact that the Committee acts only on the radiation safety aspects of the project. It is interested in the scientific background of the project only in so far as this aids in determining the scope of the undertaking in terms of radiation hazard. Because of the importance of the descriptive material to the proper evaluation of the safety and health aspects of the project and because these applications are placed in the permanent record of the college's activities in the radiation area, the Committee asks that special care be taken to provide all the information relevant to the Committee's interests.

The applicant should provide information on handling procedures, quantities of radioactive materials involved in various steps, and the safety precautions which will be used throughout all phases of the experiment.

To aid applicants in preparing their project applications for Committee action the following type of information may serve as a guide:

- I. Please review the "Application for Permission to Obtain and Use Radioactive Isotopes" (Radiation Safety Handbook (RSH), Appendix 2). The following guidelines should be helpful in completing the form (most of the categories/headings are self explanatory):
 1. "Room" - Please list all rooms where radioactive material will be used/stored.
 2. "Training" - You must take and document the Ohio University Radiation Safety Orientation here. Training elsewhere should also be indicated.
 3. "Experience of Staff Member in Charge" - See Appendix 9 of Radiation Safety Handbook.
 4. "Personnel" - List all individuals that will be under your supervision using radioisotopes.
 5. "Isotope(s) You Will Use For This Procedure" - Radiations, energies, and physical half-life ($T_{1/2}$) data can be found in Appendix 4 of the Radiation Safety Handbook. The μCi column should indicate the total amount of that isotope you want to be authorized for as a maximum possession limit in all forms.
 6. "External Hazard Evaluation" - Please refer to Appendix 5. If data is not present, call EHS (593-1666).

7. "Facility Selection Criteria" - See Appendix 7 of the RSH.
- II. Please refer to the back page of the application and read the paragraph below Facility Selection Criteria (description of the use ...). Sections II. 1. thru II. 6. below should summarize necessary information to be included in the Description of Use:
1. The quantity of material to be received as a stock solution or compound should be listed and the place and method of storage of radioactive materials described.
 2. In most cases the stock solution or compound is diluted to a working solution. This process should be described giving method of transfer, quantities, and dilution factors and protective equipment to be used. The dose rates and exposures expected during this operation should be estimated prior to use. (They should again be estimated using a radiation survey instrument during the actual transfer.)
 3. In the event gaseous or volatile effluents are expected during use of the radioactive material, the quantities and dilution factor of the hood should be evaluated and compared to the values in OAC 3701:1-38.
 4. An estimate of the amount and form of radioactive waste should be included. Where animals are used in experiments it is important to know the number of animals involved so that we may keep our waste disposal program in line with our needs.
 5. Any special handling procedures which might pose a problem should be described. When handling procedures have been discussed with the Radiation Safety Officer and approved by him/her, the write-up should include this information also.
 6. Authorized user, project supervisor and working personnel should be **familiar with the Radiation Safety Handbook** especially as it relates to:
 - (1) handling procedures
 - (2) disposal of radioactive materials (solid and liquid)
 - (3) Ohio University purchasing policy of radioactive isotopes
 - (4) emergency procedures
 - (5) training requirements.
 7. Please refer to the RSH (Section II A. & B.) for additional information regarding completion of the application.

If you have any questions about the application, please do not hesitate to call RMS.