



## 1. Purpose and Scope

A researcher or faculty member who would like to conduct research or work activities that involve the use of radioisotopes must first become an authorized user under the Kennesaw State University (KSU) Radioactive Materials License. A prospective authorized user must submit a completed [Radioactive Materials Permit Application](#) and obtain approval through the KSU Radiation Safety Committee (RSC).

## 2. Applicable Rules and Regulations

Rule [391-3-17](#), State of Georgia Rules and Regulations for Radioactive Materials, requires that KSU establish administrative procedures to assure the following:

- Safe procurement, handling, use, and disposal of radioactive material.
- Assessment of the proposed uses of radioactive materials to ensure that all required controls are in place, including adequate facilities and equipment, training, and safe operating procedures.
- Review and approval of the assessments by the RSC.

The [KSU Radiation Safety Program](#) was written in accordance with Rule [391-3-17](#). It highlights the requirements and provides guidance on the safe procurement, handling, use, and disposal of radioactive materials at KSU.

Both documents should be reviewed and understood by prospective authorized users prior to applying for a radioactive materials permit.

## 3. Application Instructions

The RSC provides oversight for the KSU Radiation Safety Program, and all uses of radioactive materials that take place in facilities owned, operated, or controlled by KSU. Prospective authorized users must apply for a radioactive materials permit by submitting a [Radioactive Materials Permit Application](#). Each proposed use of radioactive materials must be included in the application and submitted to the Radiation Safety Officer (RSO) and the RSC for review and approval before implementation. The application must be completed with the following information with as much detail as possible.

1. Application type (e.g., new application, renewal, amendment, etc.).
2. Application date.
3. The applicant's name, academic degree, department, office building and room number, and contact information (i.e., phone, email, etc.).
4. A list of all proposed authorized users and radiation workers, their job title, applicable training, and the number of years of relevant experience.
5. The applicant's formal training (including radiation safety training) and location of training.

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*NOTE: Everyone who plans to use radiation needs to take the radiation safety training regardless of prior experience or completion of radiation safety training at another institution or establishment.*

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6. A list of all rooms where radioactive materials will be used or stored.
7. Licensed (radioactive) materials must be under the constant surveillance and immediate control of a radiation worker or secured to prevent unauthorized access, use, or removal. A description of the measures that will be taken to meet these requirements must be provided.
8. A list of each isotope for which possession authorization is requested with the following information:
  - Isotope half-life.
  - Maximum activity to be possessed.
  - Chemical form or class of compound.
  - Physical form (e.g., liquid, gas, powder, sealed source).
  - Estimated frequency of use.
  - An approximate amount of isotope activity in each procedure.
9. An explanation/summary for each experimental procedure to be performed. Include published studies highlighting the procedure, if available. Also, identify the following:
  - If the procedure involves the use of animals. If so, include the Institutional Animal Care and Use Committee (IACUC) protocol number.
  - If radioactive materials will be combined with biohazards. If so, identify the biohazard(s) and/or include the Institutional Biosafety Committee (IBC) protocol number.
  - If the radioactive materials will be combined with chemical hazards. Identify the chemical hazards and include the safety data sheet(s) (SDS) if available.
10. A list of radioactive sealed sources, if applicable.
11. A list of radiation producing equipment, if applicable.
12. List the detection equipment, such as Geiger meters, liquid scintillation counters, gamma counters, etc. to be used. Include the manufacturer, model and serial numbers, last date of calibration, and probe type.
13. Describe the radiation safety measures that will be implemented to protect authorized users and laboratory staff from excess exposures and contamination.
14. Describe procedures for properly collecting and disposing of radioactive waste.

## **A. Approval Process**

After the candidate has completed and submitted his/her application to become an authorized user, a preliminary review will be conducted by the RSO. The RSO will:

- Review the application submitted by the candidate.
- Conduct a walkthrough and inspection of the laboratory and laboratory support areas where the researcher plans to work with radioisotopes to ensure that radioactive materials storage, use, and disposal is feasible in those areas as prescribed by the Georgia Department of Natural Resources (DNR) and the KSU radioactive materials license.
- Ensure that the candidate and all employees who will work with radioisotopes have completed radiation safety training.
- Ensure that any researchers and/or other personnel who share the proposed laboratory spaces are aware of the use of radioactive materials in the lab and ensure that they have completed radiation safety awareness training.

When the RSO has completed the preliminary review, the application will be reviewed the RSC at the next committee meeting.

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*NOTE: Please allow 2-4 weeks after RSC review for notification of the RSCs final decision.*

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The candidate will be notified of the RSC's decision in writing to either approve or decline the application. Approvals will grant the authorized user a permit for a period not to exceed five (5) years, and will include the following (not limited to):

- Authorization number
- Approval date and renewal date
- Approved radioisotopes and activity limits
- Approved radiation workers under the permit
- Approved locations for working with radioisotopes
- The terms and conditions of the permit under the KSU Radioactive Materials License

When a permit is obtained, the authorized user may then begin procurement and use of radioactive materials in accordance with the terms and conditions of the permit under the KSU radioactive materials license, the [Radiation Safety Program](#), and the [Georgia Rules and Regulations for Radioactive Materials](#).

If an application is declined, the candidate will be informed of what corrective steps need to be taken to obtain approval.

#### **4. Revisions to Permits**

Revisions to a radioactive materials permit may be made at any time during the approved period. Revisions to the permit must be requested by submitting a Radioactive Materials Permit Amendment form. The amendment form will be reviewed by the RSO. If the RSO determines that the proposed revision does not involve any significant changes from the initial safety assessment and is within the scope of the initial authorization, the amendment form will be forwarded to the RSC for review with recommendation for approval.

However, if a proposed revision involves significant changes in radiation source(s), experimental procedure, or conditions of use from those specified in the initial permit, the authorized user may be required to resubmit a full application to include the proposed changes followed by full RSC review.

#### **5. Renewal of Permits**

Radioactive materials permits must be renewed every five (5) years from their initial authorization dates to ensure that all approved experimental procedures and protocols remain current. For the renewal process, authorized users should review their initial application to identify any planned significant changes in radioactive sources or experimental protocol. If no major changes in radioactive source or experimental protocol is anticipated, renewal may only require resubmitting the previous application with minor changes (e.g., staff changes, training completion dates, etc.). However, in cases where significant changes in experimental protocol is anticipated, a new application must be submitted.

Authorized users will be sent a written reminder to renew their permit 90 days prior to its expiration. The RSO will review the renewal application and submit comments, concerns, and records of any violations that were identified under the previous permit to the RSC. The RSC will review the application, identify any safety concerns, and approve or decline the renewal based on the review.