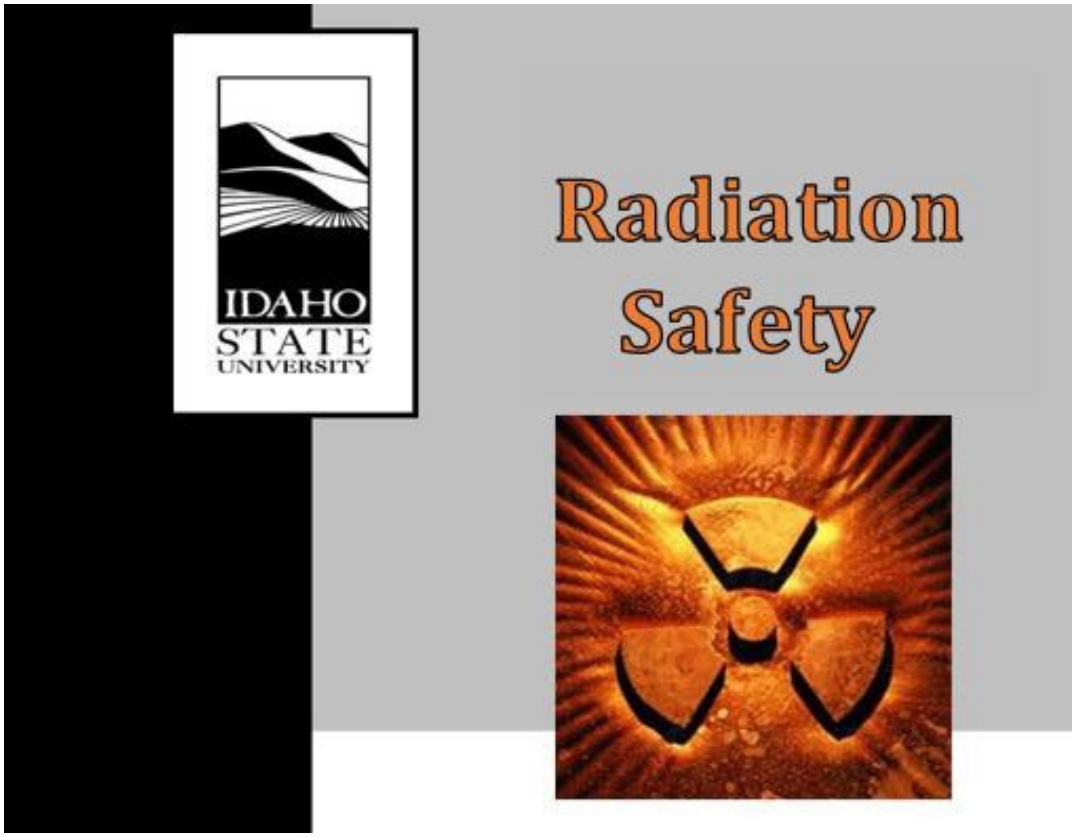

RADIATION PROCEDURES MANUAL

Procedure Cover Sheet

Procedure Title:	Radioactive Material Sign Out
Procedure Number:	RS-23 Rev.1
Effective Date:	07/31/2022

Approved By: Radiation Safety Committee Date: 07/06/2022

Revision History

Revision Number	Author Name	Date	Approved by/date
RS 23.0	Mason Jaussi & John Longley	06/22/20	RSO-06/22/20
RS 23.1	Mason Jaussi	06/20/22	RSC-07/06/22
RS 23.1	Miranda Kriner	06/26/24	RSC-07/06/22
RS 23.1	Mason Jaussi	06/03/26	RSC-07/06/22

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1. INTRODUCTION

10 CFR 20.1801 and 1802 state all licensed radioactive material must be maintained secure from unauthorized users. This procedure is designed to maintain compliance with federal regulatory requirements and Section 9.4 of the Idaho State University Radiation Safety Manual (RSM). Single and double-barrier requirements are in place to ensure the secure use and storage of all licensed radioactive material. Source categories are defined in Section 9.4 of the Radiation Safety Manual.

2. PURPOSE

This procedure will ensure accountability of all licensed radioactive material by identifying the steps required to document the usage of radioactive material.

3. SCOPE

This procedure outlines the requirements for trained and authorized Radiation Workers to use and properly store licensed radioactive material at Idaho State University. Steps for sign-out of radioactive material are clearly outlined herein. It is expected that any questions with this process be brought to the Radiation Safety Office (208) 282-5652.

4. ROLES AND RESPONSIBILITIES

Radiation Safety Officer (RSO)

- Maintain this procedure and applicable sections of the Radiation Safety Manual.

Authorized User (AU)

- Train Radiation Workers under their program regarding radioactive material security and sign out requirements under this procedure.
- Oversee the usage of radioactive material by Radiation Workers under their program.
- Maintain security and accountability of all licensed radioactive material under their program.
- Assign Radiation Workers to serve as material custodians and provide them with keys and/or combinations.

Radiation Worker (RW)

- Maintain current annual Radiation Safety Training.
- Read and understand this procedure.
- Use proper PPE while handling radioactive material and sources.
- Properly follow this procedure to fill out all sign-out sheets fully and legibly.

5. ACRONYMS/DEFINITIONS

ARSO:	Assistant Radiation Safety Officer
AU:	Authorized User
EHSS:	Environmental Health Safety and Sustainability
ISU:	Idaho State University
NRC:	Nuclear Regulatory Commission
RAM:	Radioactive material
RS:	Radiation Safety
RSD:	Radiation Safety Department
RSM:	Radiation Safety Manual
RSO:	Radiation Safety Officer
Barrier:	A radioactive material locker is considered a barrier as well as a locked laboratory door, room, or closet.
Radioactive material:	Byproduct, source, and special nuclear material that must be appropriately secured.
Radioactive Material Locker:	Cabinet, refrigerator, freezer, or any other storage device that can be locked for storage of radioactive material.
Custodian:	A Radiation Worker who controls the keys or combinations to the radioactive material locker or room

6. REQUIRED MATERIAL(S)

- RPR-25 – Single Barrier Sign Out Form (or approved equivalent, see Section 8.4)
- RPR-26 – Double Barrier Sign Out Form
- Pen (Black or Blue) ink.
- Key or access to source lockers and/or laboratories.

7. REQUIRED TRAINING(S)

- ISU Radiation Safety Training

8. PROCEDURE

8.1. Radioactive Material Custody

8.1.1. Exempt radioactive materials do not require sign-out; however, they should be kept in a locked laboratory as a best management practice.

8.1.2. Single-Barrier radioactive materials are defined in the RSM as "materials that exceed the limits for exempt quantity materials but are less than the thresholds for double barrier materials". Single-barrier radioactive materials are required to be signed-out and must be stored in a locked radioactive material locker or locked laboratory.

8.1.3. Double-barrier radioactive materials are defined in the RSM as "materials that meet the definition of the IAEA Category 4 (A/D ratio greater than 0.01) as specified in IAEA Safety Guide RS-G-1.9." Double-barrier radioactive materials are required to be signed-out by two RWs and must be stored in a locked Radioactive Material Locker, and a second barrier must be in place that is also locked creating a second barrier for the material.

8.1.4. Category 1 and 2 radioactive material as defined in 10 CFR 37 may only be used by personnel who have been granted Trustworthy and Reliable status in accordance with the applicable security plan. See Section 9.4 of the RSM.

8.2. Signing Radioactive Material Out

8.2.1. Locate the proper form(s) for the radioactive material that you will check out. (RPR-25) or (RPR-26) are normally kept in a bound log in the source storage area.

8.2.2. Obtain the required key(s) from the custodian or have the custodian open the cabinet.

8.2.3. All sections of the form must be completed and should be written in black or blue pen.

8.2.4. Copy the Serial Number or the HPAssist number from the radioactive material, double check for accuracy.

8.2.5. Specify the Radioactive material by indicating the radionuclide and the activity with unit. Be clear and detailed. (e.g., Am-241 3.0 mCi).

8.2.6. For general radioactive material such as depleted uranium plates or thorium materials enter DU or Thnat.

8.2.7. Print your name in the name section.

8.2.8. For double-barrier radioactive material, the custodian also must initial the sign-out form (RPR-26).

8.2.9. Enter the date on the day that you checked out the radioactive material in the proper format (mm/dd/yy).

8.2.10. Enter the time out preferably in standard 24-hour time. (i.e. 1753)

8.2.11. If you will be taking the radioactive material to another location or for over-night use, appropriate barriers must be maintained during use or the material must remain under the control of a radiation worker.

8.3. Signing Radioactive Material In

8.3.1. When finished with the radioactive material, properly store the radioactive material back in the appropriate radioactive material locker and with the proper level of barriers.

8.3.2. Indicate the time and date the radioactive material was returned on the form in standard 24-hour time.

8.3.3. Sign the form.

8.3.4. For double barrier material, the custodian also must initial the sign-out form (RPR-26).

8.4. Exceptions

Certain circumstances may require the use of an alternative to the RPR-25 single barrier source sign-out form. The use of an alternative source sign-out form (e.g., laboratory notebook) will be reviewed and approved by the Radiation Safety Officer on a case-by-case basis. All information required by section 8.2 must be included in the log-book entry.

9. LIST OF FORMS

RPR-25 Single Barrier Sign out

RPR-26 Double Barrier Sign out

10. REFERENCES

IAEA Safety Guide RS-G-1.9, Categorization of Radioactive Sources.

U. S. Nuclear Regulatory Commission, Standards for Protection Against Radiation, Security of stored material, 10 CFR 20.1801.

U. S. Nuclear Regulatory Commission, Standards for Protection Against Radiation, Control of material not in storage, 10 CFR 20.1802.

U. S. Nuclear Regulatory Commission, Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material, 10 CFR 37.

11. CHANGE HISTORY

Revision 1: Included the addition of Section 8.4, Exceptions along with minor grammatical changes.

Revision (2026): Minor grammatical and formatting changes

12. APPENDICES

None.