
PREPARATION AND MAINTENANCE OF RADIATION WORK PERMITS (RWP)

1 PURPOSE

- 1.1 To establish the requirements and responsibilities for the preparation, approval, use, termination, and maintenance of records for Radiation Work Permits (RWPs) at Georgia Tech.

2 SCOPE

- 2.1 This procedure is applicable to all work which has the potential for serious radiological consequences or situations as identified by the Radiation Safety Officer (RSO) or Authorized User (AU). The RSO may evaluate a procedure and choose to not require an RWP.
- 2.2 Specific criteria and examples are detailed in section 4.4.

3 RESPONSIBILITIES

- 3.1 The AU shall instruct their Radiation Workers to obtain an RWP when necessary and shall review the RWP in a timely manner.
- 3.2 The Radiation Worker shall comply with the requirements of this procedure when performing work under an RWP. The requirements set forth by the RWP for conduct of work shall be strictly followed.
- 3.3 The Director of the Radiological Science and Engineering Laboratory (RSEL) (Director) or designee shall review the RWP in a timely manner if work will take place in the RSEL.
- 3.4 The RSO or designee shall review the RWP in a timely manner.
- 3.5 All personnel working under an RWP shall read the RWP prior to commencing work. Writing one's name on the time sheet of an RWP shall signify understanding of the RWP.

4 REFERENCES

4.1 Specifications and Requirements

- 4.1.1 State of Georgia, Rules and Regulations for Radioactive Materials, Chapter 391-3-17
- 4.1.2 State of Georgia, Rules and Regulations for X-Ray Machines, Chapter 290-5-22

4.2 Related Procedures

PREPARATION AND MAINTENANCE OF RADIATION WORK PERMITS (RWP)

- 4.2.1 Procedure 9038, Bioassay Program
- 4.2.2 Procedure 9302, Protective Clothing Requirements
- 4.2.3 Procedure 9308, Airborne Radioactivity Surveys
- 4.2.4 Procedure 9310, Posting and Labeling for Radioactive Materials and Radiation Machines
- 4.2.5 Procedure 9317, Routine Contamination Surveys for Open Source Radioactive Material Labs

4.3 Equipment/Materials Required

- 4.3.1 RWP (Form RS-23)
- 4.3.2 Detailed procedure of work to be performed
- 4.3.3 RWP Time Sheet (Form RS-24a)
- 4.3.4 Survey maps, if applicable

4.4 Applicability of RWPs

- 4.4.1 An RWP is issued for a specific procedure.
- 4.4.2 Work controlled by the use of an RWP includes:

NOTE: This list is not intended to be exhaustive but to serve as examples of work controlled via the RWP mechanism.

- 4.4.2.1 Any radiological work performed in the RSEL, except work only involving check sources
- 4.4.2.2 Entry into a High Radiation Area
- 4.4.2.3 Entry into an Airborne Radioactivity Area
- 4.4.2.4 Work with a potential for internal intake of radioactive material
- 4.4.2.5 Work with contamination exceeding Action Level 2 in the tables of Appendix A of Procedure 9317
- 4.4.2.6 Temporary borrowing of a source by an AU

PREPARATION AND MAINTENANCE OF RADIATION WORK PERMITS (RWP)

- 4.4.3 Work is not controlled by the use of an RWP when:
 - 4.4.3.1 An area/item is contaminated due to a spill or emergency situation
 - 4.4.3.2 ORS is performing routine work according to established Procedures

5 PROCEDURAL STEPS

5.1 RWP Preparation

- 5.1.1 Record the following information on the RWP form:
 - 5.1.1.1 RWP requestor's name
 - 5.1.1.2 Location where work is to be performed (building and room)
 - 5.1.1.3 Brief job description
 - 5.1.1.4 Expiration date, no later than the end of the calendar year
 - 5.1.1.5 Protective clothing requirements
 - 5.1.1.6 Dosimetry and/or bioassay requirements
- 5.1.2 Record any special instructions applicable to RWP users, such as authorized or unauthorized work activities, radiological engineering controls to be implemented, special considerations on containing radioactive material, bioassay details, etc.
- 5.1.3 Attach detailed procedure with setup, setup diagram, and stepwise instructions

5.2 RWP Approval

- 5.2.1 Signature of the following individuals with the date:
 - 5.2.1.1 Individual requesting the RWP
 - 5.2.1.2 AU(s) of the source(s) to be used
 - 5.2.1.3 Director (if the work is to be performed in the RSEL or the source is stored in the RSEL) or designee
 - 5.2.1.4 RSO or designee

PREPARATION AND MAINTENANCE OF RADIATION WORK PERMITS (RWP)

- 5.2.2 An RWP requires the signature of either the Director or the RSO (i. e., two designees may not sign for approval).
- 5.2.3 Any of the individuals signing the RWP may add written requirements (protective clothing, dosimetry, special instructions, etc.)
- 5.2.4 The RSO shall add the RWP number and the issue date (date of last signature) to the RWP.
- 5.2.4.1 An RWP log shall be maintained by ORS which provides a chronological sequence of RWPs for the current year that have been issued and terminated.
- 5.2.4.2 To assign an RWP number, examine the RWP log to determine the next available RWP number. Record the applicable information in the RWP log.
- 5.3 RWP Time Sheet**
- 5.3.1 Prior to commencing work each day or work period on a specific RWP, each worker shall sign into the RWP on the time sheet with their name, date, time in, EPD serial number (or N/A if not required or not available), and starting gamma and neutron dose readings from the EPD (if applicable).
- 5.3.1.1 Priority for EPD assignment shall be given to members of the public and those Radiation Workers expected to have the highest dose.
- 5.3.1.2 A worker writing their name on the time sheet signifies that the worker has read and understands the RWP and is aware of any hazards and/or restrictions.
- 5.3.2 Upon completion of work for the day or work period on a specific RWP, each worker shall sign out of the time sheet with their time out and final gamma and neutron dose readings from the EPD (if applicable).
- 5.3.3 In addition to the doses accrued by individuals working on a RWP, the duration of the estimated dose shall be noted on the time sheet in minutes. This shall be accomplished by recording the starting and finishing times for the work. Workers should subtract the starting time from the finishing time to obtain the actual time spent performing the job.
- 5.4 Working Under an RWP**
- 5.4.1 Radiation surveys, time sheets, and other documents generated while working under an RWP shall be maintained with the original RWP.

PREPARATION AND MAINTENANCE OF RADIATION WORK PERMITS (RWP)

5.4.2 All personnel working under an RWP shall comply with the requirements of that RWP.

5.5 Radiation Dose Rate Surveys

5.5.1 If required, worker shall perform survey using appropriate radiation survey instrument(s).

5.5.2 Locations to be measured include:

5.5.2.1 1 foot (30 cm) from the closest accessible surface to a source

5.5.2.2 Entrance to the room

5.5.2.3 Back hallway (if source used in RSEL High Bay)

5.5.2.4 2 mrem/hour line (if members of the public may be present)

5.5.3 These measurements shall be documented on a survey map. The room shall be posted with the survey map and also according to Procedure 9310 during source use.

5.5.4 Surveys shall be stored with the RWP once the source is no longer in use or a new survey map has been generated.

5.6 Terminating an RWP

5.6.1 An RWP shall be terminated if:

5.6.1.1 The RWP is no longer considered appropriate for the work being performed

5.6.1.2 The RWP has expired

5.6.2 ORS shall terminate the RWP by the signature of a Health Physicist and the RSO and the date on the appropriate area of the RWP.

5.6.3 ORS shall update the RWP log sheet to indicate that the RWP has been terminated.

6 RECORDS

6.1 The RWP with its accompanying procedure, time sheets, and applicable surveys shall be given to ORS for filing.

6.2 Any records generated as a result of implementation of this procedures shall be maintained as permanent records of Georgia Tech.