

Minor Change Number: By: Date: / /	NEELY NUCLEAR RESEARCH CENTER	Procedure 9302 Revision 01 Approved 06/28/90 Page 1 of 4
	<u>PROTECTIVE CLOTHING REQUIREMENTS</u>	

1.0 **PURPOSE**

To establish the requirements for use of protective clothing in contaminated areas.

2.0 **SCOPE**

These requirements are applicable to the Neely Nuclear Research Center and to the laboratories on the Georgia Tech campus using radioactive material.

3.0 **RESPONSIBILITIES**

3.1 It is the responsibility of all individuals who use radioactive materials to be aware of the requirements of this procedure and to adhere to these requirements should a radioactive material spill occur.

3.2 If part of a facility is normally maintained as contaminated, when making entry into this area, it is the responsibility of all individuals to ensure that the requirements of this procedure are met.

3.3 It is the responsibility of the Principal Investigator to routinely check his/her laboratory for removable contamination. Should removable contamination be found, the guidelines in this procedure shall be used during facility cleaning and decontamination.

4.0 **REFERENCES**

4.1 **Requirements and Specifications**

4.1.1 10 CFR 20, Standards for Protection Against Radiation

4.1.2 State of Georgia, Rules and Regulations for Radioactive Material, Chapter 290-5-23

4.2 **Related Procedures**

4.2.1 Procedure 9250, Facilities Contamination Surveys

4.2.2 Procedure 9303, Guidelines for Handling Radioactive Spills

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4.2.3 Procedure 9306, Preparation and Maintenance of RWPs

4.3 Others

4.3.1 None

5.0 PROCEDURES/REQUIREMENTS

5.1 **Equipment/Materials Required**

5.1.1 Protective Clothing to include shoe covers, gloves, lab coats, coveralls, caps, hoods, etc.

5.1.2 Protective Equipment such as step off pads and tape.

5.2 **Procedure**

5.2.1 **Precautions and Limitations**

5.2.1.1 The requirements of this procedure may not be downgraded without written consent of the Manager, Office of Radiation Safety (MORS), or designee, but may be upgraded by the health physics staff as circumstances dictate.

5.2.1.2 Step Off pads will be used at contaminated area boundaries.

5.2.1.3 An RWP is required for entrance into a contaminated area where activity is present in excess of 50,000 cpm/100 cm² beta/gamma or 2000 dpm/100 cm² alpha

5.2.2 **Practices for Contaminated Areas**

5.2.2.1 Appendix A specifies the protective clothing that shall be worn by personnel when accessing contaminated areas of various degrees of removable radioactivity.

5.2.2.2 When present, Health Physics shall be responsible for specifying the level of protective clothing that will be worn by personnel accessing a contaminated area.

5.2.2.3 Step off pads will be used as entry/exit points to contaminated areas.

5.2.2.4 Personnel will normally remove protective clothing at the step off pad (SOP) exit. Self monitoring will be performed at the SOP using a GM survey meter with a pancake probe.

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5.2.2.5 All materials leaving contaminated areas will be normally surveyed (both smears and direct radiation surveys) by Health Physics. No material, equipment or other items may leave a contaminated area or potentially contaminated area (e.g., Reactor Control Zone), that has not been surveyed to ensure that the limits specified in Procedure 9250 have been met prior to release.

5.2.2.6 Coveralls and lab coats may be surveyed for later reuse.

6.0 RECORDS

6.1 There will be no specific records generated from implementation of this procedure other than those that can be found on Radiation Work Permit forms.

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APPENDIX A

<u>Contamination</u> (dpm/100 cm ²)	<u>Protective Clothing Required</u>
< 1000 dpm beta/gamma < 20 dpm TRU*alpha < 1000 dpm - Nat. U, U-235, U-238	None
1000-20,000 dpm beta/gamma 1000-20,000 dpm - Nat. U, U-235, U-238 20-200 dpm TRU	Rubber Shoe Covers, Latex or Plastic gloves
20,000-50,000 dpm beta/gamma 20,000-50,000 dpm - Nat. U, U-235, U-238 200-2000 dpm TRU*	<u>INSPECTION ONLY</u> Rubber Shoe Covers, Latex or Plastic gloves
20,000-50,000 dpm beta/gamma 20,000-50,000 dpm - Nat. U, U-235, U-238 200-2000 dpm TRU	<u>MANUAL LABOR</u> Rubber Shoe Covers, Latex or Plastic gloves, Lab Coats
50,000-200,000 dpm beta/gamma	Rubber Shoe Covers, Latex or Gloves, Coveralls, Cap
> 200,000 dpm beta/gamma > 2000,000 dpm - Nat. U, U-235, U-238 > 2000 dpm TRU	Plastic Shoe Covers, Rubber Shoe Covers, Double Latex or Gloves, Coveralls, Hoods, Tape at Wrist & Ankles <u>DOUBLE STEP OFF PADS ARE REQUIRED</u>

*TRU = Transuranic Elements