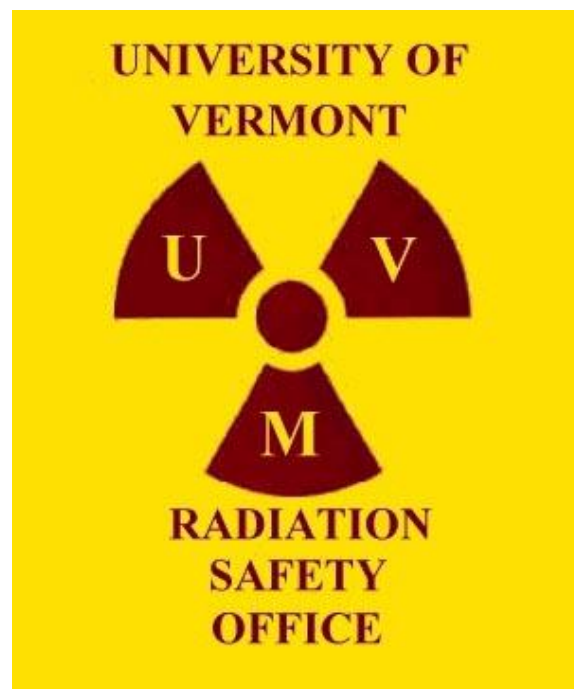


RADIATION SAFETY MANUAL FOR CUSTODIAL SERVICES



Last updated: May 7, 2013

INTRODUCTION

The Nuclear Regulatory Commission (NRC) has issued a license to the University of Vermont (UVM) to use radioactive materials. This license requires that UVM follow strict safety regulations at all times to protect workers and the environment. The Radiation Safety Office (RSO) at UVM provides training and tests all persons who use radioactive materials. The RSO and makes sure all the rules and regulations are followed by the radiation users.

This manual explains the policies for custodians whose job requires them to enter radiation handling laboratories. It is the goal of the RSO to have them feel confident when they enter these kinds of labs. They should also be aware of safety procedures to reduce the chances of incidents and violations. Major violations or accidents could cause UVM's license to use radioactive materials to be taken away.

WHAT IS A RADIATION HANDLING LAB?

A radiation handling lab is any lab at UVM with the "Caution Radioactive Material" sign on the door. In these labs small amounts of radiation are used in research projects.

There are approximately 75 radiation handling and storage labs at UVM. When a lab stops using radioactive materials, the RSO makes sure the lab has no radiation present in it before a new occupant can use that lab.



Buildings containing radiation handling labs at UVM:

Colchester Research Facility (CRF), Cook, Delehanty, Dewey, Given, Health Science Research Facility (HSRF), Hills, Jeffords, Large Animal, Facility, Marsh Life Science, Rowell, Stafford, Terrill and Votey.

RADIATION USE ON CAMPUS

Most of the radioactive materials used on campus are in a liquid form. Plastic, plexiglass or lead will shield the radiation. Some types of radiations are very weak and cannot escape the bottle they are stored in.



The major concern in a radiation handling lab is for lab personnel not to know that liquid radiation has spread around the lab outside its storage container. We call this "radiation contamination". Contamination means that radioactive materials in the form of gases, liquids, or solids are released into the environment and can come into contact with people. This contamination can get onto skin and be absorbed into the body. To prevent this from happening, lab personnel are required to make sure the lab floors, benches, equipment, door knobs, and water faucets have no radiation contamination. They must do routine contamination checks and send a report to the RSO. If any contamination is found it must be cleaned

immediately by the lab personnel and then re-checked for contamination.

ARE RADIATION LABS SAFE?

Our history shows that UVM radiation handling labs are safe places to enter and work. The NRC inspects UVM every two to three years. UVM's RSO does a safety check in all radiation handling labs at least once per year. These inspections have consistently shown that lab areas are safe and the radiation workers are using radiation safely and responsibly.

In addition, the Radiation Safety Office monitors the radiation exposures for several hundred radiation lab workers. Most of these persons work in labs which use radiation nearly every day. The average whole body personnel exposure is 1 millirem (mrem) per person per year. This is less than the amount of radiation you would receive from a single chest x-ray in the hospital. This amount is also much lower than the radiation worker dose limit of 5,000 mrem per year per person. Certainly, custodians and maintenance workers who spend far less time in a radiation lab can expect to receive virtually no radiation exposure.

You do not have to wear a special device that measures radiation exposure because the chance of you getting a radiation exposure is very, very small.

DO's and DON'Ts FOR CUSTODIANS RADIATION HANDLING LABS

DO

1. Do go about your normal work responsibilities in a radiation handling lab as you would any other classroom, office, and lab, such as;

- Emptying normal trash holders;
- Sweeping and mopping floors;
- Re-supplying paper towels;

DON'T

1. Do not empty trash from any yellow waste buckets, especially those which have a "Caution Radioactive Waste Do Not Empty" sign on them:

2. Do not move any yellow buckets, glass bottles, jars, pails, or boxes with a "Caution Radioactive Material" label.

If they need to be moved to do your work during the day, ask someone from



the lab to do it.

3. Do not bring any soda cans, coffee cups, or food into a radiation handling lab where a "No smoking, Eating, or Drinking" sign is on the outside door.

4. Do not clean up any radioactive spills. This is the responsibility of the lab technicians and the Radiation Safety Office.

EMERGENCY SITUATIONS

1. If you see liquid on the floor in a radiation handling lab and no lab workers are in the lab:

- a. avoid stepping in the liquid,
- b. lock the door to the lab,
- c. call your immediate supervisor.
- d. stay outside the lab door and do not let anyone enter until your supervisor arrives.

2. If smoke or fire is present in a radiation handling lab, call your immediate supervisor.

RESPONSIBILITIES OF CUSTODIAL SERVICES

1. Make sure that all custodians are trained and understand radiation safety information provided in this document.

2. Provide all new custodians with on-the-job training by a Custodial Services' supervisor before entering and working unsupervised in a radiation handling lab.

3. Recommend changes in policies and the training program to the Radiation Safety Office.

FOR MORE INFORMATION

Contact Information:

Radiation Safety Office

Room 004 Rowell Building

Telephone: 656-2570

Email: radsafe@uvm.edu

Website: <http://www.uvm.edu/~radsafe>

RSO Personnel:

Keddy Bharathan, Director

Tom Kellogg, Assoc. Radiation Safety Officer

Ron Kimball, Assist. Radiation Safety Officer

Donna Durick, Administrative Support