

Radioactive Spill

Emergencies typically will be in the form of spills, fires or explosions. As a result, radioactive materials may be spread around a facility. Radioactive contamination can be spread beyond the immediate spill area by the movement of personnel involved in the actual spill or cleanup effort. Prevent the spread of contamination by confining the movement of personnel until a qualified person has monitored them and found them to be free of radioactive contamination.

Employees who intend to use radioisotopes or radiation producing equipment in the course of their work or research must meet specific health and safety requirements. These requirements are imposed upon the University by the Nuclear Regulatory Commission and the State of Michigan, depending on the specific source of radiation.

U-M Radiation Safety Service (RSS) at (734) 764-6200 provides radiological safety training, professional guidance, and technical support necessary to establish and implement an effective radiation safety program at the University. Technical support includes safety evaluations, radiation monitoring, environmental and personnel dose assessments, radiological emergency and radioactive spill response, and radon monitoring. Professional guidance consists of evaluation of facilities, written guidelines, radiation monitoring equipment recommendations, confirmatory laboratory surveys and program assessments, regulations interpretation, regulatory licensing and registration, and regulatory compliance and intervention. Safety training includes exposure and contamination control, risk assessment, and radiation monitoring instrumentation use.

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Source

More Information

Prevention / Mitigation / Preparedness – Radioactive Spill

Keep updated emergency response procedures for your area.

Post a list of contacts in case of a spill.

Post an evacuation route.

List the location of spill response materials.

Train employees in advance on when and how to properly use spill response materials. Contact RSS at (734) 764-6200 for assistance.

Assign a person to periodically test clean-up equipment and maintain its inventory

Response – Radioactive Spill

Remain calm.

Do not spread contamination beyond the immediate area. Leave contaminated shoes in the affected area.

Do not allow others into the contaminated area.

Attend to injuries or emergencies first.

Warn others and request radiological assistance from others.

Direct potentially contaminated personnel to stay in a controlled area of the laboratory until they have been monitored and shown to be free of contamination.

Isolate and contain the spill to a localized area of the laboratory. Post or tape off the affected area and establish an entry “control point” into the area.

Call DPSS at 911 and provide the following information:

- The building name
- Room number
- Radionuclide involved
- Brief description of radiological incident
- Contact person’s name and phone number at spill site
- Any injuries and to what extent

Monitor yourself and the affected area to identify the extent of the contamination. Use smears/swipes or an appropriate radiation survey meter. [REMEMBER: Radiation survey meters cannot detect tritium (H-3)!]

Initiate decontamination of any contaminated skin (soap & warm water).

Wear appropriate protective clothing: long-sleeve lab coat, disposable gloves, shoe covers or booties, and safety goggles.

Cover WET SPILLS with paper towels or absorbent pads. Discard contaminated absorbent materials into a solid radioactive waste drum or plastic bag.

Cover DRY SPILLS with slightly dampened paper towels or absorbent pads.

Assist Radiation Safety Service personnel with decontamination or smear/swipe counting.

Recovery – Radioactive Spill

Continue to train and familiarize laboratory users with materials they work with.