Information
Reporting a Radioactive Spill

Effective
Unknown

Applicability
This procedure applies to the University Community (administrators, faculty, staff, and students).

Administrative Authority
Senior Associate Vice President for Operations

Responsible Unit
Environmental Health & Safety
University of Louisville
Louisville, KY 40292
502-852-6670
dehsubm@louisville.edu

History
Revision Date(s):
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Categories

Statement:
To report a radioactive spill, contact the Radiation Safety Office at 502-852-5231. If the Radiation Safety Office is closed or cannot be reached, please contact the Department of Public Safety (DPS) at 502-852-6111. Be prepared to provide the following information:

- Location of the spill.

- Nuclide that was spilled.
- Approximate amount of spilled material.
- On what type of surface did the spill occur.
- Your name and the name of the authorized user.
- Number you are calling from.

Incidents must be reported to the Radiation Safety Office as soon as possible. Call the Radiation Safety Office immediately for the following types of spills:

- Any major spill of radioactive material.
- Contamination of personnel with radioactive material.
- Suspected human intake of radioactive material.
- Potential exposure of individuals to excessive amounts of radiation.
- Theft or loss of radioactive material.
- Accidental releases of radioactive material into the air or water.

Some radiation accidents may be reportable to the Kentucky Radiation Control Board and/or other regulatory agencies. The Radiation Safety Office will determine the reporting responsibilities.

Immediate actions you should take:

Minor Spills

Hazard: Low.

Immediate actions:

- Notify all persons in the room.
- Confine spill immediately.
- Decontaminate (see procedures in Radioactive Material Users Guide).
- Follow-up: Survey personnel, equipment and area.

Major Spill (Usually involving millicurie amounts)

Hazard: Radiation and contamination hazard may be high.

Immediate Actions:

- Notify all persons in the room.
- Confine spill immediately.
- Barricade area of contamination.
- Notify Radiation Safety Office at 502-852-5231 (off hours: Notify DPS at 502-852-6111).

- Decontaminate (see procedures in Radioactive Material Users Guide, Radiation Safety Officer may supervise).
- Follow-up: Further decontamination may be necessary as determined.

Spills Involving External Contamination
Hazard: Potential hazard greatest with wounds.
Immediate Actions:

- Flush wounds and eyes, wash skin with soap and water.
- Prompt action is necessary to minimize radiation dose and uptake.
- Notify Radiation Safety Office at 502-852-5231 (off hours: Notify DPS at 502-852-6111).
- Follow-up: For additional decontamination information, see the Radioactive Material Users Guide.

Accidental intake of radioactivity (swallowing, inhaling)
Hazard: Hazards varies with uptake and toxicity of isotope.
Immediate Actions:

- Contact Radiation Safety Office immediately at 502-852-5231. (off hours: Notify DPS at 502-852-6111).
- Actions vary depending on radioisotope and chemical form.

Fires involving radioactivity
Hazard: Internal hazard from airborne activity. Contamination may be spread by firefighting efforts.
Immediate Actions:

- Notify all persons in the area.
- Activate nearest fire alarm.
- Notify DPS at 502-852-6111.
- Notify Radiation Safety Office at 502-852-5231.
- Follow-up: After fire is extinguished, decontaminate under the supervision of the Radiation Safety Office.

Spills involving airborne radioactivity

Hazard: Uptake of radioactive material is possible, contamination easily spread.
Immediate Actions:

- Shut off source of contamination, if possible.
- Notify others to vacate the area.
- Shut windows and doors.
- Call the Radiation Safety Office at 502-852-5231 (off hours: Notify DPS at 502-852-6111).
- Notify Physical Plant at 502-852-5696 to shut off HVAC system.
- Follow-up: Do not re-enter area. Further decontamination may be necessary.

Radioactive Spill Clean-up

- Maximum permissible contamination levels are: 2000dpm/100cm2. All areas must be cleaned and wipe tested until removable contamination is below this limit. For all nuclides except iodine which is 200 dpm/100cm2.
- The authorized user is responsible for providing personnel to clean up any contamination which results from work conducted under his/her authorization.
- All spills must be cleaned up immediately.
- All spills must be reported to the Radiation Safety Office at 502-852-5231.
- Custodial personnel shall not be used for clean-up of contamination.
- The Radiation Safety Office will monitor and supervise the clean-up of all major spills and accidents.

Related Information:

Pre-planning to Prevent or Minimize Radioactive Spills

Pre-planning is the best way to prevent spills or control them when they do happen. DEHS will assist you in conducting emergency planning for your area. Contact the Environmental Operation & Hazardous Materials Manager for assistance. Assistance in pre-planning for radioactive emergencies in your laboratory can be obtained from DEHS by contacting the Radiation Safety Officer.

Radioactive Spill Response Equipment

Any area that uses radioactive material on a regular basis should consider having the following items readily available for cleaning up spills:

- Absorbent material to control the spread of contamination.

- Shoe covers and gloves.
- Decontaminant solutions for skin and/or surfaces.
- Cleaning supplies: paper towels, soft bristle brush and mild soap or detergent.
- Plastic bags with labels for waste collected during clean-up.
- Tape or signs to mark off contaminated areas.

Radioactive Material Users Guide

Responsibilities:

The Radiation Safety Office will determine the reporting responsibilities.