

MISHAPS & EMERGENCIES

If a radiation emergency occurs, notify EH&S Health Physics **immediately**.

Boulder Campus

EH&S Health Physics (Campus Hours)	(303) 492-6523
Environmental Health & Safety (Campus Hours)	(303) 492-6025
UCB Police Dispatch (After Campus Hours)	911 or (303) 492-6666

Colorado Springs Campus

EH&S Health Physics (Campus Hours)	(303) 492-6523
Public Safety (After Campus Hours)	(719) 262-3111
UCCS Police Department (After Campus Hours)	9-911

1. INTRODUCTION

In the event of an emergency involving radiation, Health Physics should be notified as soon as possible. If the emergency is life threatening, University Police (911) should be contacted. Be sure to indicate that radiation is involved. The police will contact Health Physics personnel if radiation or radioactive materials are involved. Please have the following information available for emergency personnel:

1. **Your name** and the **name of the Principal Investigator** in charge of the laboratory
2. Type of **radiation incident** (i.e., spill, x-ray malfunction, lost sealed source, etc.)
3. The **location** of the incident
 - A. Building
 - B. Room number
 - C. Location of a spill or machine within the laboratory
4. A **phone number** where you can be reached, as well as the **location** where you will meet emergency personnel
5. The **radionuclide** (or **energy** if an x-ray machine)
6. The estimated **activity** involved
7. The **volume** of liquid or solid involved
8. The **chemical form** of the labeled compound

2. UNSEALED RADIONUCLIDE SPILL CLEAN-UP

Contamination in the Laboratory

In the event of a spill involving radioactive materials, immediately notify the other personnel in the immediate area of the spill. All personnel not involved in the spill should vacate the area, avoiding the spill area while leaving. Contact Health Physics at (303) 492-6523 for help cleaning up the spill, especially if it involves mixed radioactive/hazardous materials.

To clean up the spill, use personal protective equipment such as a lab coat, eye protection, disposable gloves, and disposable booties. Be sure to wear appropriate dosimetry and have a survey instrument nearby. See Appendix M For Solid Spill Procedures and Appendix N for Liquid Spill Procedures.

Personnel Contamination

Health Physics should be notified of personal contamination incidents. A dose assessment may need to be performed. The Radiation Safety Officer (RSO) will need to know how much radiation was involved, the radionuclide, and approximately how long the radiation was present on the skin and/or clothing. See Appendix O for Personnel Decontamination Procedures.

Ingestion/Inhalation/Injection of Radioactive Materials

Health Physics should immediately be notified of any ingestion, inhalation, or injection of radioactive materials. Inhalation of radioactive materials may be remedied somewhat by intentional coughing or deep-breathing in a clean area. Injection of radioactive materials may be remedied somewhat by flushing the area thoroughly. In some cases, bioassay tests may need to be performed to determine the amount of radiation ingested, inhaled, or injected. See Exposure Control chapter.

3. LEAKING SEALED SOURCES

Health Physics performs leak tests on sealed sources. If the source is found to be leaking above regulatory levels, it will be taken out of service by Health Physics. Leaking sealed sources can cause contamination hazards, as well as exposure hazards. Please refer to the Sealed Sources chapter for more information.

If a sealed source appears to be leaking, use personal protective equipment and a survey instrument to check the area near the source for evidence of contamination. Contact Health Physics immediately at (303) 492-6523 for help in reducing the contamination hazard.

4. HIGH RADIATION EXPOSURE

Certain x-ray machines or areas on campus could result in possible exposure to high radiation levels. If an exposure to high levels of radiation has occurred or is suspected, contact Health Physics immediately at (303) 492-6523. The RSO may need to perform a dose calculation and will need to know the duration of the exposure, the proximity to the radiation source, and the activity or energy of the source.