



FIRE

In the event of a general fire in the laboratory:

1. Follow the general fire alarm and/or notification procedures for your facility. Be sure to report that radioactive materials are present in the lab.
2. Utilize available fire fighting equipment to control or extinguish small fires that can be safely handled prior to arrival of the fire department, if you have been trained to do so.



MAJOR RADIOACTIVE SPILL

A spill of greater than 100 μCi of any radionuclide or involving the floor or contaminated personnel.

1. Do not leave the immediate area.
2. Immediately notify all persons in the area that you have just had a spill of radioactive material.
3. Prevent the spread of contamination by limiting the movement of all personnel who may be contaminated. Place an absorbent pad or bench paper on the floor near any potentially contaminated persons for them to stand on. If the spill involves significant activity, several sheets of bench paper may be placed on the floor to create a path to allow the person to move several feet away from the spill area without the risk of spreading contamination to other areas of the floor.
4. Immediately survey all individuals who have been in the vicinity of the spill location. Especially important is to survey the soles of the shoes worn by these individuals to assure that the spill has been contained. Also survey hands, lab coats, and other clothing.
5. Decontaminate personnel immediately if individuals are contaminated, following procedures for personnel decontamination on page 2.
6. Notify all persons not involved in the spill to vacate the room. Be sure to survey all individuals as they leave the room. Especially important is to survey the soles of the shoes worn by these individuals to assure that the spill has been contained within the room and is not spread outside of the room. Also survey hands, lab coats, and other clothing.
7. Do not attempt to clean up the spill. To prevent the spread of contamination, limit the movement of all personnel who may be contaminated.
8. Shield the source if possible. This should be done only if it can be done without further spread of contamination or a significant increase in radiation exposure.
9. Prevent unauthorized entry by closing the door and placing a "Caution: Contaminated Area" sign or warning tape across the entrance. If possible, an individual who is not contaminated should be stationed outside of the door to prevent unauthorized entry until the spill team arrives.

EMERGENCY CONTACTS

Quick Reference

-  Spill Team – SLU Buildings 73000
(314) 977-3000 if calling from an outside line or cell phone
-  Spill Team – SSM Health SLU Hospital ... 4444
(314) 257-4444 if calling from an outside line or cell phone
-  Radiation Safety Office..... 78609
(314) 977-8609 if calling from an outside line or cell phone

10. Notify the Radioactive Spill Response Team immediately via the Saint Louis University Public Safety Dispatcher by dialing (314) 977-3000. (If dialing from within SSM Health SLU Hospital, dial the Hospital Operator at ext. 4444). These procedures apply 24 hours a day, 7 days a week.



MINOR RADIOACTIVE SPILL

A spill of 100 μCi or less of any radionuclide confined to a bench top or other laboratory surface, and not involving the floor or contaminated personnel.

1. Immediately notify all persons in the area that a spill has occurred.
2. Prevent the spread of contamination by covering the spill with absorbent paper.
3. Immediately survey individuals who have been in the vicinity of the spill location. Especially important is to survey the soles of the shoes worn by these individuals to assure that the spill has been contained. Also survey hands, lab coats and other clothing. **If personnel are contaminated, including soles of shoes, immediately follow procedures for personnel decontamination on page 2 and procedures for a major spill on this page.**
4. Clean up the spill using disposable gloves and absorbent paper. Carefully fold the absorbent paper with the clean side out and place in a plastic bag for transfer to a radioactive waste container. Also put contaminated gloves and any other contaminated disposable material in the bag.
5. Survey the area with an appropriate radiation detector with a low range survey meter. Check the area around the spill. Also check your hands, clothing, and shoes for contamination.
6. Report the incident to the Radiation Safety Office at (314) 977-8609. If after hours or on a weekend, contact the Radiation Safety Officer through the Saint Louis University Public Safety Dispatcher by dialing (314) 977-3000. (If dialing from within SSM Health SLU Hospital, dial the Hospital Operator at ext. 4444). This applies 24 hours a day, 7 days a week.
7. Document all survey results and cleanup efforts in a written report. Forward a copy of the written report to the Radiation Safety Officer. Keep a copy of the written report on file with the laboratory Radiation Safety Survey Records.



PERSONNEL DECONTAMINATION

Promptly decontaminate personnel by taking the steps listed below, using appropriate containers to collect contaminated liquids generated during the decontamination process.

1. **Remove contaminated clothing** and place in a plastic bag.
2. **Flush** contaminated skin with lukewarm water.
3. **Wash** contaminated skin with a mild soap. Use of a small sponge or soft brush (e.g., complexion brush) may be helpful. Avoid irritating the skin. Repeat steps 2 and 3 as necessary.
4. **Monitor** for contamination after each series of washing and rinsing to determine the effectiveness of the decontamination efforts.
5. If fingernails or fingertips are contaminated, **clip nails** as short as possible and repeat 2, 3, and 4.
6. If contamination persists, **induce perspiration** by covering the area with plastic (e.g., place a latex or vinyl glove over a contaminated hand and tape opening at wrist). After a period of time (e.g., 10 to 15 minutes, remove glove or other covering. Then wash the affected area again to remove any contamination that was released by the perspiration.
7. Terminate decontamination efforts when:
 - a. All radioactive contamination has been removed; or
 - b. The surveys following each of several successive decontamination steps indicate that contamination levels are no longer decreasing; or
 - c. Erythema (reddening of the skin) has occurred.
8. **Notify the Radiation Safety Officer immediately** at (314) 977-8609. If after hours or on a weekend, contact the Radiation Safety Officer through the Saint Louis University Public Safety Dispatcher by dialing (314) 977-3000. *If dialing from within SSM Health SLU Hospital, dial the Hospital Operator at ext. 4444.*

This applies 24 hours a day, 7 days a week.



RELEASES OR LOSSES OF RADIOACTIVE MATERIAL

In the event that radioactive materials are released to the environment or discovered missing, immediately notify the Radiation Safety Officer at (314) 977-8609. If after hours or on a weekend, contact the Radiation Safety Officer through the Saint Louis University Public Safety Dispatcher by dialing (314) 977-3000. *(If dialing from within SSM Health SLU Hospital, dial the Hospital Operator at ext. 4444).*

This applies 24 hours a day, 7 days a week. The Radiation Safety Officer will provide guidance and assistance specific to the situation.

EMERGENCY CONTACTS

Quick Reference

- Spill Team – SLU Buildings** 73000
(314) 977-3000 *if calling from an outside line or cell phone*
- Spill Team – SSM Health SLU Hospital** ... 4444
(314) 257-4444 *if calling from an outside line or cell phone*
- Radiation Safety Office**..... 78609
(314) 977-8609 *if calling from an outside line or cell phone*



MINIMUM CONTENTS for LAB RADIOACTIVE SPILL KIT

It is the responsibility of each permit holder to maintain essential decontamination supplies in his/her laboratory. Lab spill kit contents should include the following:

- a. absorbent pads (disposable)
- b. absorbent towels (disposable)
- c. mild soap (e.g., Joy or hand soap, suitable for skin decontamination)
- d. small soft brush (suitable for skin decontamination, e.g., complexion brush)
- e. small sponge (suitable for skin decontamination)
- f. gloves (disposable latex or vinyl)
- g. shoe covers (disposable)
- h. heavy duty plastic bags for collecting used absorbent materials, etc.
- i. scouring pad
- j. scrub brush
- k. decontaminating solutions (e.g., Radiacwash, Pico-Kleen N, Count Off, Lift-Away, etc.)
- l. tape (“Caution: Radioactive Materials” or “Caution: Contaminated Area”)
- m. signs (“Caution: Contaminated Area”)



SAINT LOUIS UNIVERSITY

— EST. 1818 —

**Office of Environmental Health & Safety
Radiation Safety**
1402 South Grand Blvd. - Caroline Bldg. C305
Saint Louis, MO 63104
Phone: (314) 977-8609
Fax: (314) 977-5560

Updated: March 21, 2023