

Safe Operating Procedure

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Division: All, Building: All, Lab:

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Title: Radioactive Spill Procedure, Major Spill

Important Information

All major radioactive spills must be reported to the University Radiation Protection Adviser (RPA) or Radiation Protection Officer (RPO). A spill is classed as major if one or more of the following applies: the spill involves more than 10MBq of radioactivity; a person or clothing, other than protective clothing, is contaminated; those involved are at risk of significant exposure; the spill is not contained within a small area, e.g. a spill tray, and there is risk of spread. To report the spill and summon the RPA/RPO, call 84104 (main office number) during normal working hours or 07773242018 (RPO's mobile) outwith normal working hours.

Key Points to remember when dealing with Radioactive Spills

1. Don full PPE, i.e. lab coat, double gloves, safety glasses, overshoes, and personal monitors.
2. Use bench-coat, shiny side up, to create a safe walkway.
3. Deal with personal contamination and injuries first.
4. Minimise your exposure time, without rushing.
5. Maximise the distance between you and the source.
6. Use shielding as much as possible.

Procedure for Major Spills

1. Do not panic.
2. Alert all those in the vicinity and minimise movement in to, out of and around the spill zone.
3. Get a coworker to summon the RPS and, if required, the nearest First Aider.
Note: If it is outwith normal working hours and no coworkers are available call the University Emergency Number - 4141 - and ask for immediate assistance. Get the person who responds to call for additional help as required. If you require the Ambulance Service to deal with a medical emergency, make this clear. Remember: persons who have to enter the spill zone, e.g. First Aider/Paramedics, must be issued with full PPE before they enter and monitored before they leave.
4. If someone is contaminated and/or injured they must be treated as a matter of priority and before the full Clean Up commences. To minimise exposure while decontamination and/or First Aid is progressing use bench-coat, shiny side up, to cover contaminated flooring and shield hot spots as much as possible.
5. When dealing with contaminated persons:
 - i. Try to keep them calm and do not rush.
 - ii. Remove contaminated clothing, bag and shield, and give the person clean PPE to wear.
 - ii. If areas of skin have become contaminated gently wash with soap & lukewarm water.
 - iii. Monitor to check contamination has been removed.
 - iv. If necessary, take person to one of the WTB shower cubicles to continue decontamination.
6. Once decontaminated persons and casualties have left the scene cordon off the area with warning tape and post warning signs. The cordon must remain in place until clean up is complete and any remaining contamination is adequately shielded.
7. Assess the situation and determine likely dose rate. If there is cause for concern seal off the area, summon the RPA/RPO and wait for them to arrive. If acceptable, carry out the Clean Up - see SOP 113.
8. Label all items that remain contaminated, e.g. clothing, with the date, radionuclide and cps. Shield as required.
9. Ensure all individuals leaving the spill zone are thoroughly monitored before exiting.
10. Body/finger badges of those involved should be monitored then sent to the RPA for immediate processing.
11. Complete an incident report via Safety Services' on-line reporting system.