

LA TROBE UNIVERSITY

GUIDELINES FOR ACTION

IN THE EVENT OF AN INCIDENT OR EMERGENCY INVOLVING IONISING RADIATION

EMERGENCY CONTACTS

University Radiation Safety Officer: 9479 2186

OH&S Adviser: 9479 1186

All hours:

Emergency Services (University): 9479 2222

LTU Medical Centre (Bundoora): 9473 8888

1. REPORTABLE INCIDENTS

A reportable incident is defined as any one of the following:

- a) Any incident whereby a person may have been exposed too greater than 5 mSv in one week or less.
- b) Any incident whereby a person or his clothing may have been contaminated
- c) Any incident causing a suspected intake of radioactive material (e.g. through a cut or open wound, by breathing, or through the mouth)
- d) Any fire or explosion causing damage to a room (or its contents) in which any radioactive material is located
- e) Any loss of/or damage to a sealed source or the loss of any significant amount of an unsealed radioactive substance.

All reportable incidents shall be reported immediately through the Radiation Supervisor or the Laboratory Manager to the University Radiation Safety Officer (URSO) to enable an appropriate emergency response.

A written incident report shall be submitted by the department to the URSO as soon as possible after the incident.

The URSO shall notify the Department of Health & Community Services Victoria in accordance with the Victorian Health (Radiation Safety) Regulations 1994.

Where an incident does not constitute a reportable incident, but there is some doubt or concern about exposure to radiation, the URSO should be contacted to determine if further action is justified.

2. **ACTION**

If the incident involves personal injury the University Health Service should be contacted immediately. For severe injury, the treatment of serious injuries must take precedence over decontamination and containment of contamination, and immediate medical assistance should be sought. For minor injury, render first aid, thoroughly washing any contaminated sites using gloves on hands and monitor for residual contamination.

If the incident involves fire, the University Emergency Evacuation Procedures also apply. Fire-fighting clearly takes precedence over contamination control, but all reasonable efforts should be made to minimise the spread of contamination, particularly at the clean-up stage.

3. **MAJOR SPILLS OF RADIOACTIVE MATERIAL**

Major spills should be dealt with as follows:

- a) Evacuate personnel from the immediate vicinity (*but restrict location of personnel if contamination is suspected*).
- b) Isolate the area using suitable barriers.
- c) Notify the Radiation Supervisor or URSO immediately.
- d) Decontaminate personnel.
- e) Turn off all laboratory services including ventilation, leaving lights on.
- f) Close all doors and windows.
- g) Under the supervision of the Radiation Supervisor or URSO, decontaminate affected areas and equipment.

4. **MINOR SPILLS OF RADIOACTIVE MATERIAL**

Minor spills that present little or no radiological hazard should be dealt with by the operator (wearing suitable gloves). The incident should be reported to the Radiation Supervisor or the URSO immediately. Minor spills should be dealt with as follows:

- a) Spills of liquids should be absorbed with blotting paper, paper towels or tissues

- b) Dry materials should be carefully wiped up with absorbent tissues moistened with water
- c) The affected area should be monitored when no visible signs of the spilled material remain. Decontamination should be continued as necessary, until no further reduction can be achieved, provided that the contamination is below the derived working level

5. PERSONAL DECONTAMINATION

Personal contamination should be removed as follows:

- a) Remove contaminated clothing.
- b) Eyes should be irrigated with saline solution (1.0 percent common salt solution) or distilled or tap water. A standard plastics wash bottle is a convenient applicator if used with care.
- c) Hands should be washed with soap and water, scrubbing lightly with a soft nailbrush. If this fails to remove the contamination, repeat with a detergent.
- d) Skin other than hands should be rubbed gently with a cotton wool pad soaked in a complexing agent. Do not scrub the skin sufficiently to produce abrasions.
- e) Mouth should be washed out several times with water, followed by a suitable mouthwash if available.
- f) Contaminated wounds should be washed under a fast-running tap and bleeding encouraged; if on the face, take care not to contaminate the eyes, mouth or nostrils. Finally, wash the wound with water, apply a gentle antiseptic and then a first-aid dressing.
- g) Decontamination should be continued until monitoring shows that contamination has been reduced to an acceptable level, unless there is a risk of contamination entering the blood stream through roughening or breaking of the skin.

6. OVER-EXPOSURE TO EXTERNAL RADIATION

Persons suspected of having received any appreciable external radiation dose should be removed from the area containing the source of the radiation, and if necessary treated as suffering from shock. The incident must be reported immediately to the Radiation Supervisor or University Radiation Safety Officer.

Revised by the Occupational Health and Safety Section
30 May 2001