Chemical Spill procedure

1. Purpose
This procedure outlines the steps to manage a chemical spill in order to minimise the potential for injury and damage to the environment.

2. Scope
The procedure applies to any event that results in the uncontained spill of a hazardous substance within the School of Chemistry.

3. References
   - Hazard and Incident Reporting Guidelines OHS132
   - Emergency Management Procedures OHS 80
   - Working with Hazardous Substances Guidelines OHS114

4. Definitions
   Major Spill, Minor Spill: The nature of the spill is determined by the risk from the hazardous substance and the level of containment of the spill. An example of a minor spill is 5ml of concentrated Sulphuric Acid in a fume cupboard. Although the risk of concentrated acid is high it is only a small volume that can easily be neutralised and removed. An example of a major spill is the uncontrolled release of ammonia from a gas cylinder in an unventilated enclosed area. The volume is large and may represent a high risk to persons in the area.

5. Procedure
   Chemical Spill Management

   **Major Spill**
   - Emergency Procedures should consider the immediate danger to persons and ensure effective containment and clean up, appropriate disposal of waste material and notification to all relevant authorities.
   - Do not touch any harmful substance. Take precautions to protect yourself if necessary.
   - Raise the alarm – evacuate persons not involved in contamination from the area. Isolate contaminated individuals and treat as per MSDS. Isolate affected persons and keep on site. If required, summon a UOW First Aid Officer.
   - Contact Lab Manager (John Korth, ext 3513) or School Safety Coordinator (Ellen Manning, ext 3528) or nearest building warden. Advise security (ext 4900) to notify Emergency Services if necessary.
   - Close doors to prevent further contamination. Secure the area to keep non-emergency response personnel away from danger.
   - Assist the emergency response personnel and supply the Material Safety Data Sheet/s if the chemical/s are known.
   - In conjunction with expert assistance, minimise the spread of contamination and commence decontamination/clean up procedures.

   **Minor Spill**
   - Containment - spills must be cleaned up promptly and thoroughly.
   - Approach with care - many harmful chemicals lack colour or offensive odours. Never assume that they are harmless.
   - Identify the chemical/s and hazards involved – check Material Safety Data sheet.
   - Use the information on the physical and chemical properties of the material to judge response and/or evacuation procedures.
   - Decontaminate equipment, clothing and personnel, including any victims, on site if necessary.
   - Dispose of contaminated equipment and materials only after receiving specialist advice.
   - Ensure emergency procedures are in place and practiced.
A chemical spill in the laboratory can range from a minor incident, which can easily be contained and cleaned up, to a major spill which requires expert assistance and has the potential to pose a danger to laboratory workers and the environment. Spill management and response strategies should be included during laboratory emergency planning with personnel trained in the procedures. A quick response by laboratory personnel to a chemical spill is likely to limit the consequences, whether it be a minor or major spill. Persons using, storing and transporting chemicals should always refer to the Material Safety Data Sheet and have controls in place to minimise the effects of a chemical spill such as double containment, bunding, drip trays or raised edges around work areas.

5.1. Specific Chemical Spills

Consult the Material Safety Data Sheet, but generally the following applies:-

- **Organic Material** use vermiculate to absorb and place spent vermiculite in labelled container for waste disposal.
- **Acid** spills should be neutralised with sodium bicarbonate. Laboratory Spill Kits usually contain soda ash (sodium bicarbonate) to sprinkle liberally over the spill. Avoid breathing soda ash dust.
- **Alkali** spills can be neutralised with boric acid.
- **Mercury spills**, which are small, should be removed with a mercury sponge (available from First Year teaching laboratories), vacuumed up with a suction flask or dusted with sulphur powder. Clean up the mercury thoroughly. Once the Mercury is contained it should be clearly labelled and submitted for waste disposal. Note: mercury vapours are highly toxic.

5.2. Laboratory Spills Kit

All laboratories have a spill kit available to deal with spills. The kit may include:

- A barrier to contain a spill such as clean, dry sand or a commercial product.
- Vermiculite to absorb a spill
- Reagents necessary for decontamination procedures e.g. Calcium carbonate
- Personal protection equipment including protective clothing
- Chemically resistant gloves
- Safety glasses
- Appropriate containers in which to store waste and contaminated materials e.g. plastic bags and buckets.
- Warning signs and barriers.

Note: face shields are available from the School Safety Coordinator.

5.3. Incident reporting

Incidents involving hazardous materials must be reported by completing the Hazard and Incident report online using **SafetyNet**.

In the event of a building evacuation the OHS unit may need to carry out an investigation. An Emergency **Evacuation Debrief form** will be completed by the Chief Building Warden.

Incidents defined as ‘notifiable’ by WorkCover must not be disturbed until any investigation is complete.

6. Reference Personnel

All changes to this document shall be referred to the School Safety Committee prior to implementation.

7. Documentation

[Hazard and Incident Report form](#) on **SafetyNet**

[Evacuation Debrief Form (OHS157)](#)