



SPILL RESPONSE PROCEDURE



**Environmental
Health & Safety**

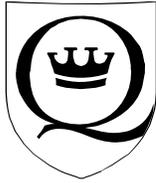
Queen's University Spill Response Procedure

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Section: 1.0	Subject: Preamble	

This document outlines emergency spill response procedures as part of the overall Queen's University Emergency Plan. The procedures have been prepared in accordance with the National Fire Prevention Association (NFPA) Guidelines, the Canadian Nuclear Safety Commission, Ministry of Labour and the Ministry of the Environment statutes and regulations.

The Joint Health & Safety Committees (JHSC) endorse the spill response program. Queen's Senior Administration requires students, staff, faculty and visitors to comply with this program.

The Department of Environmental Health and Safety will supply expertise and equipment to the University community to minimize the effect of spills. A HazMat Team works under the coordination of the Department of Environmental Health and Safety and in conjunction with Queen's Campus Security, Physical Plant Services and off campus authorities. The HazMat Team is contacted through the Department of Environmental Health and Safety.



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The range and quantity of hazardous substances used in laboratories and the work site requires preplanning to prevent accidental spills and to respond safely to a spill, should it occur. Under Queen's University policy and procedures, the responsibility for the safe handling, use, storage and disposal of hazardous materials rests with the user of the materials. Queen's supervisors are responsible for implementing these procedures. Furthermore each laboratory or work site must have in place emergency procedures to address accidental releases of hazardous materials. Spill response information is also included in Laboratory Safety Manuals and on instructional posters in laboratories and work sites on campus.

Employees are qualified to clean up spills that are "incidental and/or minor", since they are expected to be familiar with the hazards of the materials they normally work with. The employee's supervisor must ensure that the proper training occurs. An "incidental and/or minor" spill is defined as a spill that does not pose a significant safety or health hazard to employees or students in the immediate vicinity, does not pose a significant threat to the environment and does not have the potential to become an emergency within a short time frame. If the spill exceeds the scope of the employee's experience, training, equipment or willingness to respond, the employee must follow the appropriate procedures to obtain assistance.

Emergency assistance for large spills and spills that pose an immediate threat to health, safety or the environment is provided by the Queen's HazMat Team or an outside agency. Large spills or spills that pose an immediate threat to health, safety and environment are defined as those that have become an emergency situation. In these cases, the employee is subjected to conditions exceeding the "normal" exposure to a chemical or material, or the employee is overwhelmed above their level of experience, training or equipment.

In general, prevention is the best method for dealing with spills in the laboratory or at the work site. These spill procedures and the presence of a HazMat Team on the Queen's campus should not replace the establishment of, and adherence to, safe work practices.



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3.1 Responsibilities of Principal Investigators and Supervisors

Obtain, review and make available Material Safety Data Sheets (MSDS) for the materials present in the laboratory or at the work site.

Ensure that sufficient quantities and appropriate types of spill control materials, as prescribed in the MSDS, are available to contain and clean up a minor spill. Call the Department of Environmental Health and Safety (Ext. 32999) for advice and recommendations.

Ensure that any required personal protective equipment (e.g. eyewear or gloves) is available.

Ensure that spill control materials are located in a readily accessible location, close to the area where chemicals are stored and used.

Ensure that students and employees are familiar with the materials used and stored in the laboratory or work site and the spill procedures to be used in the event of an incident.

Record information regarding any spills using the Spill Report Form available from the Departmental Safety Officer. Completed forms must be submitted to the Department of Environmental, Health & Safety and the appropriate JHSC within 3 days of the spill.

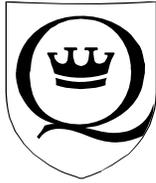
Investigate the causes of minor spills and ensure appropriate follow-up is conducted.

3.2 Responsibilities of University Employees and Students

Review the Department Safety Manual. Always be aware of emergency contact numbers, eye wash fountains and emergency showers, as well as emergency exits and evacuation routes and procedures.

Be familiar with the properties and hazards of the materials in the laboratory and work site. This involves reviewing the MSDS and being familiar with the MSDS location.

Before beginning work with a chemical, be aware of its hazards and the use of the appropriate personal protective equipment. Ensure that a spill procedure is in place and that appropriate spill control material is available in the laboratory or work site.



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Ensure proper reporting procedures are followed in the event of a spill.

3.3 Responsibilities of Safety Officers

Ensure spill procedures have been established in each laboratory and work site.

Inspect laboratories and work sites to ensure appropriate spill control materials are available, based on the nature of the chemical or material being used or stored.

Ensure that staff, faculty and students are aware of the proper reporting procedures and that they are followed for each spill.

3.4 Responsibilities of the Department of Environmental, Health & Safety

Provide appropriate advice and guidance to ensure compliance with legal requirements under health, safety and environmental legislation.

Provide advice to Principal Investigators to assist them in setting up proper emergency response protocols.

Provide in-house training on required spill response procedures to the Queen's community.

Provide an efficient and effective response to hazardous spills when needed.

Maintain and lead the HazMat Team and establish, coordinate and elicit emergency response from outside agencies when required.

3.5 Responsibilities of the Emergency Response Centre

Record and communicate appropriate and accurate reported incident information to the Department of Environmental, Health and Safety and, if necessary, to the Kingston Fire Department.

3.6 Responsibilities of Joint Health & Safety Committees

Aid in the investigation of a spill in their area of jurisdiction, when required.



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Review Spill Report Forms and recommend appropriate follow-up actions based on developing trends and root cause determinations.

The notification, building evacuation and spill reporting procedures outlined below apply to chemical, biological and radioactive spills on campus.

Specific clean-up procedures for small biological and radioactive spills are outlined in the "Biohazards Safety Manual" and the "Radiation Safety Policy and Procedures Manual" available from the Department of Environmental Health and Safety.

4.1 Minor spills that pose no immediate threat to health, safety or the environment:

Work Site Employees:

Notify occupants in the immediate area of the spill.

Attend to any persons that may have been contaminated. Contaminated clothing must be removed immediately and appropriate first aid applied.

If a volatile flammable material is spilled, control any possible sources of ignition and ventilate the area.

Wear appropriate personal protective equipment for the material spilled and avoid breathing any vapour from the spill. **Be aware that the use of a respirator requires specialized training.** Never enter a contaminated atmosphere without respiratory protection or use a respirator without training. If respirator protection is required and no trained personnel are available, call the Department of Environmental Health and Safety (Ext. 32999).

Use appropriate spill control material to first contain and absorb the spill according to procedures previously obtained from the MSDS. Generally, loose spill control material should be distributed over the entire spill area, working from the outside, circling to the centre. This reduces the chance of splashing or spreading of the spill. Attention should be given to preventing the spilled material from entering drains (floor and sink).

For spills of acids and bases, use appropriate procedures (as obtained from MSDS) and material to contain, neutralize and absorb the material.



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When the spilled materials have been absorbed, use a brush and scoop (spark-resistant if flammable material is involved) to place materials in an appropriate container. Store the container in a secure ventilated area.

Contact the Department of Environmental Health and Safety (Ext. 32999) for disposal instructions.

Decontaminate the surface where the spill occurred before allowing normal work activities to resume in the area.

Notify your immediate Supervisor or Principal Investigator.

Complete a Spills Report Form (available from the Departmental Safety Officer) and submit it to your Departmental Safety Officer and the Department of Environmental Health and Safety within 3 Days.

4.2 Large Spills or Spill of Unknown Material

Work Site Employees:

Alert people in the immediate area

Leave the container in place to aid identification by the HazMat Team.

Control sources of ignition (if it is safe to do so)

Evacuate the immediate area, closing doors to the affected area on the way out.

Activate the Fire Alarm

Call Queen's ERC at Ext. 36111. ERC will contact Environmental Health and Safety to obtain assistance.

Notify the Principal Investigator and/or the Departmental Safety Officer and report with them to the HazMat Team near the main or designated entrance of the building.



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Environmental Health and Safety will notify the Chair of the appropriate Joint Health and Safety Committee to request their involvement in an investigation of the incident.

4.3 Spills that Pose an Immediate Threat to Health

Work Site Employees

Evacuate the immediate area, leaving everything in place and closing doors to isolate the spill area.

Activate the Fire Alarm.

Call Queen's ERC at Ext. 36111. ERC will contact Environmental Health and Safety to obtain assistance.

Notify the Principal Investigator and/or the Departmental Safety Officer and report with them to the HazMat Team near the main or designated entrance to the building.

Environmental Health and Safety will notify the Chair of the appropriate Joint Health and Safety Committee to request their involvement in an investigation of the incident.

The following is a brief outline of the response that will be initiated by the Department of Environmental Health and Safety, in conjunction with the ERC, in a spill situation.

Call received by ERC (Ext. 36111).

Information recorded.

ERC contacts EH&S. Staff from EH&S will assess the magnitude of the spill at the scene. In most cases the Environmental, Safety & Hygiene Officer will be able to assist in providing appropriate information and will assist in the clean up of the spill.

Once EH&S has determined that the spill is of such a nature that a team approach is required, the HazMat Team will be contacted and will be provided with the information recorded.



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The HazMat Team members will respond to the HazMat Team Leader. The HazMat Team Leader will communicate with the Security Duty Supervisor and provide them with a time of arrival, rendezvous location, and any special instructions.

The Queen's Security will meet the HazMat Team Leader at the prearranged location. Queen's Security will provide assistance in communications, security and access to rooms (when deemed safe to enter by HazMat Team members).

If the HazMat Team Leader requests assistance from any off campus authority, this authority may take primary control over the situation and the HazMat Team may play a supportive role.

Media liaison will be handled by the Director, Environmental Health and Safety with the assistance of Queen's Communications. The Queen's HazMat Team or any other Queen's employee or student shall not communicate with the media directly.