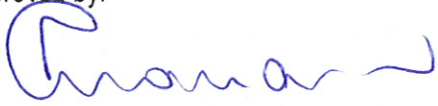
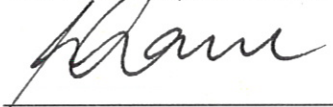


Complete Program Title: Spills to the Environment - Emergency Response & Reporting Program	Risk Management Manual (RMM) Number: 1202
Approved by:  Vice-President, Administration  President and Vice-Chancellor	Date of Most Recent Approval: August 2013
Date of Original Approval: May 2004	Supersedes/Amends Program dated: July 2009
Responsible Executive: Vice-President, Administration	Enquiries: Environmental and Occupational Health Support Services (EOHSS) eoHSS@mcmaster.ca
DISCLAIMER: <i>If there is a discrepancy between this electronic program and the written copy held by the program owner, the written copy prevails.</i>	

1 Purpose

- 1.1 To ensure compliance with environment protection legislation and best practices related to the prevention, mitigation and control of spills of pollutants to the environment.

2 Scope

- 2.1 All individuals (faculty, staff, contractors, students, visitors and volunteers) who handle, store or dispense material that if spilled could pollute the natural environment, or be a danger to life and health.

3 Related Document

- 3.1 Environmental Protection Act, Reg 360 Spills Regulation
 3.2 O. Reg. 675/98 Classification and Exemption of Spills (See Appendix A)
 3.3 The City of Hamilton – Wentworth By – Law No. 04-150 – Sewer Use By-Law
 3.4 McMaster University Emergency Guidebook
 (http://www.mcmaster.ca/security/campus_emergencies.htm)
 3.5 McMaster University Environmental Protection Act of Ontario & Other Federal, Provincial and Municipal Environmental Statutes Policy.

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- 3.6 McMaster University Risk Management Manual #100 Environmental Health and Safety Policy
 - 3.7 McMaster University Risk Management Manual #300 Safety Orientation and Training Program
 - 3.8 McMaster University Risk Management Manual #309 Laboratory Safety Manual
 - 3.9 McMaster University Risk Management Manual #309-Appendix 1 HF Emergency Protocol
 - 3.10 McMaster University Risk Management Manual #401 Asbestos Management Control Policy
 - 3.11 McMaster University Risk Management Manual #500 Designated Substances Control Program
 - 3.12 McMaster University Risk Management Manual #501 WHMIS and Management of Hazardous Materials Program
 - 3.13 McMaster University Risk Management Manual #502 Hazardous Waste Management Program
 - 3.14 McMaster University Risk Management Manual #503 Chemical Weapons Convention Program
 - 3.15 McMaster University Risk Management Manual #504 Compressed and Liquefied Gases Program
 - 3.16 McMaster University Risk Management Manual #505 Transportation of Dangerous Goods Program
 - 3.17 McMaster University Risk Management Manual #600 Biosafety Program
 - 3.18 McMaster University Risk Management Manual #700 Radiation Safety Program
 - 3.19 McMaster University Risk Management Manual #801 Field Trips & Electives Planning & Approval Program
 - 3.20 McMaster University Risk Management Manual #1200 Crisis Management Response Plan
 - 3.21 Ontario Water Resources Act (OWRA)

4 Definitions

- 4.1 **Authorized Individuals** – individuals who have been trained in the safe storage, dispensing, use and reporting of spills involving all potential environmental pollutants used on the workplace.
- 4.2 **Contractor** – A person or company that undertakes a contract with the University to supply and provide materials or labour to perform a service in University facilities. The definition of contractor includes vendors that supply goods to the University.
- 4.3 **Ensure** – take every precaution reasonable to achieve the stated objective.

4.4 **McMaster University Project Manager** – a person appointed by the University to implement and coordinate a project, or an authorized representative of the University who orders any Vendor to supply and deliver a pollutant to a University facility.

4.5 **Pollutant** – any solid, liquid, gas and/or odour resulting directly or indirectly from activities that:

- impair the quality of the natural environment for any use made of it;
- injure or damage property, plant or animal life;
- harm or materially discomfort any person;
- adversely affect the health or impair the safety of any person;
- cause the loss of enjoyment of the normal use of property; and /or
- interfere with the normal conduct of business

4.6 **Spill** – a direct or indirect discharge of a pollutant into the natural environment, which is the land, air or water of Ontario, from out of a structure, vehicle or other container, that is abnormal in quality or quantity in light of all the circumstance of the discharge.

4.7 **Natural environment** – an environment that encompasses the interaction of all living species.

4.8 **Acronyms**

CJHSC – Central Joint Health and Safety Committee.

EOHSS – Environmental & Occupational Health Support Services.

EPA – Environmental Protection Act.

FHSc safety office – Faculty of Health Sciences Safety Office.

HPAC – Health Physics Advisory Committee.

JHSC – Joint Health and Safety Committee.

MOE – Ministry of the Environment.

PBAC – Presidential Biosafety Advisory Committee

RMSG – Risk Management Support Group.

SOP – Standard Operating Procedure.

WHMIS – Workplace Hazardous Materials Information System.

5 RESPONSIBILITIES

5.1 Role of Senior Managers (Directors / Deans / Chairs / Department Managers):

Senior Managers shall:

- provide the resources and direction necessary to support and maintain an effective system for the mitigation and reporting of spills of pollutants into the natural environment.

5.2 Role of Supervisors:

Supervisors shall:

- ensure that all potential environmental pollutants are safely stored and identified (e.g. WHMIS labels);
- develop and implement an SOP that provides for the safe use and storage of hazardous materials;
- develop and implement an SOP for the containment, mitigation and reporting of spills to the natural environment (See Section 6 Procedural Guidelines – Emergency Response);
- provide site specific SOP's for all hazardous material bulk storage facilities;
- provide and maintain spill kits for the containment of small spills to the environment;
- provide workplace specific training for all persons required to store, dispense or use hazardous materials that includes the requirements of work site specific SOP's and the emergency response to spills priorities outlined in Section 6 Procedural Guidelines - Emergency Response;
- consult with the appropriate RMSG office as required when developing SOP's and training initiatives, as needed;
- report to EOHSS or FHSc safety office immediately all spills of pollutants to the natural environment (See Section 6); and
- provide investigation and documentation related to spills in their area.

5.3 Role of Contractors:

Contractors shall:

- prior to bringing any hazardous materials to McMaster University property, provide to the McMaster University Project Manager a list of all hazardous materials and their MSDS, that if spilled could pollute the natural environment;
- provide to the McMaster University Project Manager a copy of their procedures to safely control the use and storage of all hazardous materials that if spilled could pollute the natural environment or be a danger to life and health, prior to bringing any hazardous materials to McMaster University property;

- provide to the McMaster University Project Manager a copy of the emergency response procedures for the mitigation and reporting of spills of pollutants to the natural environment N.B. such procedures must include the McMaster University contacts outlined in Section 6 Procedural Guideline;
- provide to the McMaster University Project Manager written confirmation that all persons storing, handling or dispensing potential environmental pollutants have been trained in the safe storage, dispensing, use of and reporting of spills involving all potential environmental pollutants used on the project; and
- shall report all spills involving all potential environmental pollutants to the McMaster University Project Manager and to Security Services at Ext. 88 or Faculty of Health Sciences Emergency number at Ext. 5555 immediately.

5.4 **Role of Authorized Individuals:**

Authorized Individuals shall:

- be trained and practiced in the safe storage, use and dispensing of potential environmental pollutants used in their workplace;
- follow the procedures outlined in work specific SOP's for the storage use and dispensing of potential environmental pollutants used in their work place;
- be trained and practiced in the use of emergency spill kits and or bulk containment spill procedures and reporting procedures for pollutant spills to the natural environment;
- use and maintain in safe working condition personal protective equipment e.g. face shields, goggles, gloves, respirators etc. required for their protection when working with hazardous materials and potential environmental pollutants; and
- report immediately all spills of pollutants to the natural environments (See Section 6).

5.5 **Role of Risk Management Support Group:**

The RMSG shall:

- provide advice regarding the development of SOP's for work involving the use of products and material that if spilled could pollute the natural environment;
- provide advice on the type and location for spill containment kits located used in laboratories and other designated work areas where potential environmental pollutants are used, stored or dispensed;
- approve emergency response plans for the containment, mitigation and reporting of spills in bulk storage areas e.g. bunker fuel tanks, gasoline storage tanks etc.
- provide training based on best practices for the containment and reporting of spills of hazardous materials to the natural environment;
- conduct periodic audits of spill response plans for spills of pollutants to the natural environment; and

- respond to emergencies involving spills of pollutants to the natural environment and assume role as primary contact with regulatory agencies i.e. Ministry of the Environment, the City of Hamilton, Canadian Nuclear Safety Commission, on the following basis:
 - (i) Security Services Ext. 88 all emergencies involving spills to the natural environment. In the Faculty of Health Sciences location, please call ext. 5555. Security Services will notify the appropriate Safety Office to respond. In hospital affiliated sites, (Chedoke, General, Juravinski, St. Joseph's), ensure the appropriate emergency telephone number system is used.
 - (ii) Health Physics Ext. 24226 for all spills involving radioactive material.
 - (iii) Faculty of Health Science Safety Office Ext. 24956 for all spills involving material as well as any spills with the Faculty of Health Science.
 - (iv) EOHSS Ext. 24352 for all other spills of pollutants to the natural environment.

5.6 **Role of Presidential Biosafety Advisory Committee:**

The PBAC shall:

- review and approve procedures for containment of biohazardous material spills to the natural environment; and
- receive and review all incident reports related to spills of biohazardous materials.

5.7 **Role of Health Physics Advisory Committee:**

The HPAC shall:

- review and approve procedures for the mitigation and containment of radioactive materials material spills to the natural environment; and
- receive and review all incident reports related to spills of radioactive materials to the natural environment.

5.8 **Role of Joint Health and Safety Committee:**

The JHSC shall:

- receive and review incident reports related to hazardous material spills to the environment in the area covered by the JHSC; and
- inspect the location and condition of emergency spill kits and personal protective equipment provided for the containment of spills to the natural environment.

5.9 **Role of the Central Joint Health and Safety Committee:**

The CJHSC shall:

- review and make comment on the Spills to the Environment –Emergency Response and Reporting Policy on a regular basis.

6 PROCEDURAL GUIDELINES

6.1 **EPA-Duty to Act:** EOHSS/FHSc safety office shall forthwith (i.e. as soon as reasonably practicable) notify the Ministry of the Environment (voice mail messages are not acceptable) and do everything practicable to prevent, eliminate and mitigate the adverse effects of the spill and restore the natural environment.

6.2 **Emergency Response:**

Recommended content for SOP's where SOP's are required. SOP's shall be prepared to address the following content:

- (i) Contact Security Services Ext. 88 on campus and in the Faculty of Health Science location Ext. 5555. Security Services will contact appropriate RMSG Office and that office will forthwith advise the appropriate regulatory agencies.
- (ii) Rescue.
- (iii) First Aid.
- (iv) Contain and or isolate the area.
- (v) Cleanup.
- (vi) Decontamination.
- (vii) Disposal.
- (viii) Post- incident review, analysis and documentation.

6.3 **Documentation of Incidents:**

McMaster University Injury/Incident reports must be completed concerning spills and should include:

- (i) the date time, location and duration of the release of the pollutant;
- (ii) the identity of the pollutant released and the owners name;
- (iii) the quantity of the pollutant released;
- (iv) the circumstances and cause of the spill;
- (v) details of the containment and clean up initiatives and the names of persons involved in the cleanup;
- (vi) an assessment of the effectiveness of the containment and cleanup efforts;
- (vii) the method used, in accordance with subsection 96.1 of the EPA, to dispose of or use the pollutant or any matter, thing, plant or animal or any part of the natural environment that is affected by the spill and the location of the disposal site; and
- (viii) any adverse effects observed as a result of the spill.

6.4 **Training:** All persons required to handle, use, store or dispense hazardous material that if spilled could contaminate the natural environment shall receive training that includes but is not limited to the following:

- (i) WHMIS Core training (prerequisite).

-
- (ii) Hazardous material management procedures that are related to their area of responsibility as outlined in the Risk Management Manual e.g. Hazardous Materials Management Program (WHMIS Core), Biosafety Program, Radiation Safety Program, Transportation of Dangerous Goods Safety Program, Hazardous Waste Management Program, Designated Substance Control Program, Eye Protection Program, Respiratory Protection Program, Lab Safety Handbook.
 - (iii) Emergency response procedures outlined in the SOP for specific work assignments that utilize hazardous materials that if spilled could contaminate the natural environment.

7 RECORDS

- 7.1 All reports of pollutant spills to the natural environment shall be filed with the appropriate RMSG office and the appropriate regulatory agency. The RMSG office shall maintain a permanent record of all such occurrences.

Appendix A

Spill Reporting Exemptions

The classification and Exemptions of Spills Regulation (O Reg. 675 / 98) identifies classes of spills for which full reporting under Part X of the Environmental Protection Act may not be required. The aim of this regulation is to encourage industry to evaluate the risk of a spill and to deal with it responsibly should one occur.

The following spills are exempted from all requirements of Part X of the Environmental Protection Act:

Class I: Discharges approved under a Certificate of Approval, order, license or permit issued under the Act, the Ontario Water Resources Act, the Pesticides Act or a predecessor or any of them;

Class II: Discharges of water from a reservoir caused by a natural event, and discharges of potable water from water mains; and

Class III: Combustible products from the household fires.

The following spills are exempted from all reporting requirements of Part X of the Environmental Protection Act:

Class IV: Planned spills and pre-authorized discharges. Adverse effects must still be monitored and a report filed within five days; and

Class V: Spills of refrigerants governed by the Refrigerant Regulation (O Reg. 189/94). There must be no adverse effects and the quantity of spill must be less than 100 kilograms. A report must be made and kept.

The following spills are exempted from the requirements to notify the MOE. Other notification requirements continue to apply:

Class VI: Spills of 100 litres or less of fluid, other than cargo from fuel or other operating systems of motor vehicle. The spill does not enter and is not likely to enter any waters. The spill does not cause and is not likely to cause any adverse effects. Arrangements for remediation are to be made and carried out immediately.

The following spills are exempted from the requirements to notify the MOE and the municipality. Other notification requirements continue to apply:

Class VII: Spills of not more than 100 litres of mineral oil of electrical transformers or capacitors excluding a PCB liquid. The spill does not enter and is not likely to enter any waters. The spill does not cause and is not likely to cause any adverse effects. Arrangements for remediation are to be made and carried out immediately. A report must be made and kept.

Class VIII: Spills of not more than 100 litres of gasoline or an associate product at a bulk plant, marina and private or retail outlet if the area is restricted from public access, and 25 litres or less if area is open to the public. The spill must not enter, or be likely to enter any water or water course. The spill does not cause and is not likely to cause any adverse effects. Arrangements for remediation are to be made and carried out immediately. A report must be made and kept.

Class IX: Spills regulated by the federal Transportation of Dangerous Goods Act, 1992 and regulations and the provincial equivalent at a quantity below the reportable threshold stipulated in the federal regulations. The spill does not enter and is unlikely to enter any waters. The spill does not cause and is not likely to cause any adverse effects. Arrangements for remediation are to be made and carried out immediately. A report must be made and kept.

Class X: Spills of materials below reportable quantities specified in the approved contingency plan. A report must be made and kept.

The following spills are exempted from the requirements to notify the MOE immediately, although the MOE retains the right to request additional information. Other reporting requirements continue to apply:

Class XI: Spills reportable to more than one provincial or federal agency. The spill must meet the conditions of an understanding between MOE and the other agency. A report must be made and kept.

The Technical Standards and Safety Authority (TSSA) provides information about bulk storage fuel storage and safety requirements. See their web site www.tssa.org.

Appendix B

General Guidelines for Spill Clean Up

These are general guidelines that should be customized to meet the needs of the individual laboratory/studio or operation. These guidelines shall only be performed by trained and competent individuals with the proper tools to clean up the spill safely.

- Move away from the spill
- Determine spill type: Is it minor or major/complex?

What Defines a Minor Spill:

- An amount that is safe to clean up
- The spill is easily contained from drains, ignition sources, and incompatible chemicals
- The spill is not immediately dangerous to life or health (IDLH)
- There is no likelihood of fire or explosion
- Proper Personal Protective Equipment (PPE) is available and person is fit tested and trained in use
- Appropriate spills kit is available and person has been trained how to use

Procedures for a Minor Spill:

- Alert staff in area; notify Supervisor/Principal Investigator
- Ventilate work area
- Consult Material Safety Data Sheet (MSDS)
- Wear the appropriate PPE before starting clean up
- Open spills kit. Place padded tube around floor drain to prevent spill from entering drain
- Does the chemical require special absorbents assigned by Supervisor/Principal Investigator?
- Sprinkle absorbent or pads onto spill, working from the outside toward the centre of the spill. This helps to eliminate movement and making the spill even bigger.
- Collect and contain the clean-up residues while using tools to reduce contact with spilled material
- Place pads, absorbent and waste into a double poly bag. Label with chemical waste label.
- Decontaminate the surface where the spill occurred and equipment with water and spill pads. Dispose of in same double poly bag
- Decontaminate the areas and affected equipment
- Dispose of gloves and place in same double poly bag
- Wash hands well after glove removal
- Dispose of Chemical Waste following RMM # 502
- Replace spills kit
- Complete McMaster University's Incident/Injury form and fax to EOHSS at 905 540-9085 or, where applicable to FHSc safety office at 905-528-8539. Provide a copy of the Material Safety Data Sheet (MSDS) with the Incident Form

What Defines a Complex or Major Spill

- Any amount that is not safe to clean up
- There is a potential for release to atmosphere, discharge to sewer, leak into soils or surface water
- There is immediate danger to life or health
- There is likelihood of a fire or explosion
- No PPE is available and person has not been fit tested or trained
- Appropriate spills kit is not available

Procedures for a Complex or Major Spill

- Ensure you move to a safe location
- Alert staff in area; contact Supervisor/Principal Investigator
- Provide rescue or first-aid only if you are safe to do so
- Pull fire alarm, or call Security/Emergency Response
- Be prepared to provide details of chemical spill (location, amount, Material Safety Data Sheet (MSDS) and any other potential hazards/chemical mixtures)
- Complete McMaster University's Incident/Injury form as outlined above

Emergency Numbers:

On Campus Emergency, Dial 88

Faculty of Health Science MUMC Site: Dial 5555

For Hospital hosted off campus locations, call Code Brown

For all other non-hospital hosted off site locations, Dial 911