

AVON MAITLAND DISTRICT SCHOOL BOARD

ADMINISTRATIVE PROCEDURE

NO. 545

SUBJECT: Chemical Spill/Hazardous Emission

Related References: *Accidents, Incidents and Occupational Illness; Hazardous Materials, Disposal of, Emergency School Procedures*

1.0 Purpose

To provide guidelines on how to handle a chemical or unknown hazardous material spill or emission.

2.0 Procedure

2.1 Internal Chemical Spill

- 2.1.1 Evacuate the immediate area and prevent re-entry of staff or students (i.e. post signs).
- 2.1.2 Notify the principal/supervisor.
- 2.1.3 Isolate the spill area by closing all doors and turning off general ventilation systems and ignition sources.
- 2.1.4 Check for injured/affected staff or students and treat as necessary.
- 2.1.5 Identify the chemical(s) involved and assess the quantity of the spill, then consult Material Safety Data Sheets (available in the main office) for appropriate action with respect to handling of the material and first aid if required.
- 2.1.6 If safe to approach, open windows and carefully remove other materials, containers, and equipment from the path of the spill.
- 2.1.7 Clean-up spill (see Appendix A for guidelines) only if you have:
 - a) knowledge of the chemical(s)
 - b) appropriate training
 - c) appropriate personal protective equipment
 - d) correct materials to clean-up the spill
 - e) means for proper containment and/or disposal
- 2.1.8 If clean up cannot be undertaken due to the nature or size the spill or if the chemical is unknown, contact the following:
 - a) 9-1-1 – Fire Department
 - b) Environmental Health and Safety Officer – (642-5397 pager)
 - c) Superintendent responsible for emergency measures
- 2.1.9 The following information should be conveyed to the Environmental Health and Safety Officer or the superintendent responsible for Emergency Measures regarding the spill only if it can be obtained without endangering the life of any person:
 - a) Location of spill/emission
 - b) Material spilled (WHMIS label)
 - c) Estimated quantity of discharge
 - d) Assessment of damage
 - e) Time frame of episode (start time, duration etc.)
 - f) Any action taken to contain spill.

2.2 External Hazardous Emission

- 2.2.1 In the event of the possibility of or the actual presence of contaminated air entering the building from an external source the principal will make a decision to initiate a **“button down”** procedure.
- 2.2.2 In a **“button down”** procedure, the principal shall inform all staff and users groups of the need to remain inside until an “All Clear” is called.
- 2.2.3 In a **“button down”** procedure, the principal shall ensure:
 - a) all mechanical air exchange systems including supply and return air fans science exhaust hoods, sanitary and general exhaust fans, air conditioners, and unit ventilators are shut down.
 - b) ensure all windows and external doors are closed.
- 2.2.4 In the contaminated air is a health concern or persists for several hours, the principal will make a decision to evacuate.
- 2.2.5 If a decision to evacuate is made, the principal shall call the superintendent responsible for emergency measurers.

SPILL CLEAN-UP GUIDELINES

ASBESTOS RELEASE

- a) Call the Environmental Health and Safety Officer and Emergency Measures Supervisory Officer to report an asbestos release.
- b) Asbestos release clean-up will be performed by a qualified contractor.

SPILLAGE OF OTHER SOLIDS (*Except Asbestos)

- a) Gather up spilled solid using a dustpan and brush, taking care to avoid raising dust.
- b) Wipe the area with a damp disposable cloth.
- c) Determine appropriate disposal procedures as per Material Safety Data Sheet.

NOTE:

Highly reactive solids, such as the alkali metals, are best gathered using tongs. Tongs should also be used for collecting white phosphorus, which should be dowsed with water during the operation. The affected area should then be treated with copper (II) sulphate solution.

SPILLAGE OF FLAMMABLE OR COMBUSTIBLE LIQUIDS

- a) Cover the spill with mineral absorbent (e.g., cat litter or vermiculite).
- b) Scoop the contaminated absorbent into a heavy gauge polythene bag or plastic bucket and arrange for disposal.
- c) Mop the area of the spill or wipe with a damp disposable cloth.

SPILLAGE OF CORROSIVE LIQUIDS (Acids and Bases)

- a) For acid spills – liberally sprinkle with sodium bicarbonate (baking soda) or sodium carbonate (soda ash) to completely neutralize the acid, test with indicator paper.
- b) For base spills - liberally sprinkle with boric acid or citric acid to completely neutralize the base. Test with indicator paper.
- c) Scrape or sweep up the residue that remains after all reaction has stopped. Discard down the sink with an excess of water.
- d) Wash the spill area with water and wipe dry with paper towels.

NOTE:

Small quantities of acid or base on the skin should be flooded with water. The method chosen to deal with spillage of concentrated sulphuric acid should depend on the quantity of acid spilled. If there is a danger that the heat produced could cause further problems, the spilled acid should be absorbed by a commercially purchased spill control pillow.

SPILLAGE OF MERCURY

- a) Call the Environmental Health and Safety Officer and the superintendent responsible for Emergency Measures to report a mercury spill.
- b) Mercury spills clean-up will be performed by a qualified contractor.

SPILLAGE OF OTHER LIQUIDS (*Except Mercury)

- a) **For water soluble liquids** – dilute and mop up using paper towels or cloths.
- b) **For water immiscible (non-soluble) liquids** – Cover the spill with mineral absorbent (e.g. cat litter) to prevent spreading. Then scrape and mop into a suitable container for disposal. (Only very small bench spills should be treated by swabbing into a sink, and followed by flushing with large volumes of water).
- c) Wash down the spill area with water and wipe dry with paper towels.
- d) Thoroughly wash any contaminated cloths and/or mops or place in a suitable container for disposal.

SPILL CLEAN-UP KIT CONTENTS

A general purpose spill clean-up kit may include:

- Plastic dustpan
- Brush or broom
- Heavy gauge polythene bags
- Plastic scoop
- Plastic bucket
- Protective gloves
- Heavy duty apron
- Full eye protection
- Floor cloths (old rags)
- Paper towels
- Commercial Absorbent
- 5 kg of mineral absorbent (e.g. cat litter or vermiculite)
- 2 kg of sodium bicarbonate (baking soda) or sodium carbonate (soda ash)
- 2 kg of boric acid or citric acid