CATHOLIC DISTRICT SCHOOL BOARD OF EASTERN ONTARIO
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ADMINISTRATIVE PROCEDURE

1. Purpose:

To provide safe and consistent procedures concerning the use, storage and disposal of hazardous materials/waste in compliance with the Environmental Protection Act (General-Waste Management) and the Workplace Hazardous Materials Information System (WHMIS). The Catholic District School Board of Eastern Ontario recognizes that practical activities in facilities may involve the use of chemicals or materials that inevitably generate waste. Hazardous Materials/Waste is defined as any materials that are toxic, reactive, ignitable, corrosive or infectious. These substances are hazardous to human health, other organisms and the environment in general. The Board's administration will implement procedures that meets the requirements of the Environmental Protection Act and The Workplace Hazardous Materials Information System (WHMIS). These procedures will assist educators in the safe handling of materials to ensure that no harm comes to other persons who may be exposed to the hazardous materials/waste materials including students and custodians. The procedures will address:

1) training of employees;
2) waste minimization and volume reduction;
3) handling of materials or chemicals;
4) storage of products and waste;
5) chemical spill control;
6) spill assessment and responses;
7) disposal of hazardous waste;
8) pickup of materials.

2. Procedures:

1) Training:

a) All employees must have WHMIS 2015 training; and any other workplace specific hazardous materials information; and training before using hazardous materials/chemicals generating waste.
b) The training must include the safe use, handling, storage, personal protection and emergency procedures for the specific materials/chemicals utilized in the workplace.

2) Waste Minimization and Volume Reduction

a) Choose topics and materials with an eye to potential disposal problem. One chemical may be useful for a particular educational activity but cause difficulty if disposed of down the drains.
b) Reduce the quantity of chemicals used by adopting micro-scale science techniques for student laboratory activities.
c) Weigh the hazards of the chemical against the educational gain in using it.
d) Collect waste streams in separate containers.

3) Handling of Chemicals

a) Familiarize yourself with the hazards of the chemical used.
b) Make sure that the chemical is suitable for the students' age and level, the facility where it is used, the product safety and the availability of proper disposal.
c) Follow the recommended safety procedures when experimenting with chemicals. Secure equipment containing the chemicals. Surround danger zones with safety shields or strong plastic mesh. Contain harmful gases by using the fume-hood or a properly vented closed system. Use properly designed and assembled apparatus.
d) Follow proper established lab procedures, as well as, disposal techniques.
e) Keep good housekeeping and uncluttered work area.
f) Be ready for accidental spills by having a spill pillow handy. Handle flammables or hazardous chemicals over a container to contain spills.

4) Storage of Chemicals

a) Room must be designated for chemical storage only. A "danger" or "chemical storage" sign must be posted on the door. Door must be secured at all times. The room must be accessible only to qualified persons.
b) The storage room must be properly vented (4-6 air changes/hour). Chemicals must not be exposed to direct sunlight or heat sources. A 2A-10BC fire extinguisher must be installed near each exit.
c) Chemicals must be segregated according to compatibility for laboratory storage. **Do not store materials alphabetically within your inventory**. Carefully read the manufacturer's label and SDS sheet for information on safe storage and incompatibilities. Storage of materials by hazards grouping reduces the risk of fire or explosive reactions should containers fail. Chemicals

must be stored in appropriate storage cabinets.

d) All cabinets are to be clearly and properly labelled. No chemicals are to be stored on the floor, even temporarily.
e) Gas cylinders and portable propane burners must not be stored in chemical storage rooms, or in laboratories. After the last class in the afternoon, the cylinders must be stored in an appropriate exterior location on the school site by a teacher trained in the safe handling of gas cylinders.
f) Designate a space specifically for storage of disposal items.
g) Do not stockpile chemicals. Avoid ordering and storing excessive amounts of chemicals. It is recommended that a one-year supply be kept in stock.
h) An annual inventory/inspection of all chemicals is recommended. Inventories reduce the number of unknown chemicals and the tendency to stockpile materials. Inspect for container integrity and appropriate labels.
i) Keep chemical waste containers closed at all times except when materials are being added or removed. Open containers allow evaporation and invites spills. Inspectors view these containers as an improper means of storage, whether out on a shelf or inside a fume hood.
j) It is not recommended to use chemical storage rooms as prep rooms. A room used as a prep room must have water taps and a sink, electric plugs, an eye wash station, an emergency shower, no teacher desk, ideally, a fume hood, properly vented to the outside away from ventilation air intake and using explosion proof motor and proper ducting. It is recommended to be against an outside wall.
k) Food or drink for human consumption is not permitted in storage rooms or chemistry laboratories.

5) Chemical Spill Control

a) Chemical containers must not be left on floor or in aisles where they could be kicked or knocked over.
b) Store chemicals in compatible containers (i.e., do not place acids in a metal can, or solvents in an incompatible plastic container).
c) Boxes of chemical containers must not be stacked where there would be a danger of toppling, breakage, or spillage of contents.
d) Examine box integrity before moving chemicals. Remove containers if box is damaged and transportation would cause a release.
e) Spill Control Centre must contain spill control pillows, empty bucket with cover, insert broom or brush, strong plastic scoop, acid neutralizer (sodium bicarbonate), base neutralizer (dilute acetic acid), proper gloves, chemical

splash proof goggles and face shield.

6) Clean-up Techniques for Low Hazards Spills

In general, small spills should be absorbed, neutralized, and collected. Proper protective personal equipment must be worn when cleaning up spills. This should include gloves, goggles, and an apron. Consult the Safety Data Sheets (SDS) for specific instructions on spill response. The instructions below are general guidelines only and may need to be modified to safely handle the spill. Decontamination of the spill area with a mild soap solution may also be necessary.

- **Spill Control Pillows**
  The use of "spill control pillows" is highly recommended. These pillows are filled with inert highly absorbent amorphous silicate. They can be used for all types of spills. Cleanup is easy, as the spill is mopped with the pillows. Use the tongs to pick up the pillows and place the pillow in a bucket to neutralize.

- **Flammables Spill**
  Turn off sources of ignition, heat or open flames. Mop the spill using one or more pillows. Place the pillow in the bucket:
  - **water miscible chemicals**: add water and dilute
  - **water immiscible chemicals**: add a dispersant (soap), then water to dilute.

  Cover the bucket tightly and dispose of properly.

- **Corrosives Spill** containing **liquid acids**
  Mop with the pillows, place in bucket that already contains a suitable amount of water and neutralize with sodium bicarbonate.

- **Corrosives Spill** containing **liquid bases**
  Mop with the pillows, place in bucket that already contains a suitable amount of water and neutralize with dilute acetic acid.

- **Corrosives Spill** containing **solid acids or bases**
  Collect with the broom or brush and place in bucket that contains some water. Neutralize as above, cover tightly and dispose.

- **Reactive Elements** – **alkali metals (lithium, sodium or potassium)**
  Cover with dry clean sand or better graphite powder or flakes. Scoop in the bucket, mix with butanol, cover tightly and dispose of properly.

- **Reactive Elements** – **yellow phosphorus**
  Cover with wet sand, scoop in the bucket, cover with water, cover tightly and dispose of properly.

- **Mercury Spills**
  Mercury use and storage is not recommended in schools.

7) Disposal of Hazardous Waste

The Plant & Maintenance Department, with the assistance of qualified personnel, who will be responsible to register the school site generating hazardous waste with the Ministry of the Environment. The school will be provided with a copy of the Generator Registration Number and the appropriate Waste Numbers.

Waste Generators are responsible for the safe and legal disposal of these materials when they are used in class demonstration, experiment, or when unused hazardous materials are no longer required. They have a duty of care to ensure that no harm comes to other persons who may be exposed to the waste materials including students, custodians, garbage collectors, sewage operators and landfill operators. They also must ensure that no harm comes to microorganisms or equipment etc. at the sewage treatment plant in addition to the wider environment.

a) Hazardous materials will not be transported in any **Board or Personal vehicles**.
b) All containers for pick-up must be closed with screw caps. Stoppers, corks, ground glass stopper, etc., are not acceptable. Materials awaiting removal must be in securely closed containers which are well labelled and kept in a place inaccessible to students. Appropriate safety signs and hazard warning labels must be used.
c) Containers must be appropriate for the waste. The waste must be compatible with the container (i.e. no acids in metal containers).

d) Segregate containers according to compatibility.
e) The designated supervisor will organize a pickup for the disposal of hazardous waste at least three times a school year.
f) The Health and Safety Department will provide each site with a Hazardous Materials Waste Disposal Form at least three times a school year.
g) Generators are required to fill out the forms to the best of their knowledge.
h) After the forms are completed, the generators are to send a copy to the Health and Safety Department and keep a copy of the form with the hazardous materials/waste until they are removed.
i) The supervisor of the Plant & Maintenance Department will make the arrangements for a district-wide pick-up by a licensed contractor.
j) Special arrangements will be made for hazardous waste likely to accumulate in some significant quantity during the school year.

8) Pickup of Materials

a) Containers **will be inspected** as follows:
- Proper container and labels
- Labels match description on the Hazardous Materials Disposal Control Form
- Contamination of containers outer surface

b) Materials **may be rejected** for pickup for the following reasons:
- Leaking container or overfill of container
- Improper caps/lids
- Mislabelled containers
- Contaminated containers
- Materials discovered to be grossly misidentified

Cross Reference
University of Toronto Laboratory Hazardous Waste Management and Disposal Manual
High School Chemicals: Their Hazards, Handling and Disposal – STAO Safety Committee
Environmental Protection Act (General-Waste Management) O.Reg. 347.1998
The Workplace Hazardous Materials Information System (WHMIS) O.Reg. 860