Environmental Public Health Division
2 N. Meridian St. 2D
Indianapolis, IN 46204

Chemicals

Chemicals:
Every day you use chemicals at school and on school grounds. Not all chemicals are serious health threats, but some are. Good health is important to our families, the students in our schools, and to us. Therefore, you and your co-workers need to know what dangers are associated with the chemicals you use. The primary focus of this chapter is to protect students and employee health by enabling schools to store products effectively to minimize adverse health and environmental effects. Even more so than adults, children can be vulnerable to, and may be severely affected by, exposure to chemicals, hazardous wastes, and other environmental hazards.

Due to the wide variety of activities that occur in a school building, many different chemicals are used in a variety of ways. From cleaning and maintenance to science labs to art classes to turf management and more, hazardous chemicals are used throughout the facility and stored in various locations. Proper management of these chemicals can sometimes be overlooked and lead to unnecessary hazards. Therefore, it is important school officials know about the chemicals used on site and the regulations affecting them.

Remember, chemical management (or mismanagement) will affect safety, health, indoor air quality, drinking water quality, storm water quality, and you!

To comply with Indiana law, schools must adopt and enforce a policy that minimizes student and staff exposure to chemicals. A sample policy is enclosed.

To be effective, this policy should include the following:

1. A hazardous chemical inventory of what chemicals are used, by who, where those chemicals are used, where they are stored, and what needs to be disposed of.

2. Establish a chemical purchasing policy that requires protocol for how chemicals are approved for purchase and ensures material safety data sheets (MSDS) are maintained and indicates locations where MSDS are stored. Consider centralizing purchasing and inventory. Efforts are taken to reduce over purchasing and stockpiling. Also, ensures that "forbidden" chemicals are not purchased or used at the school (i.e., mercury, or products that contain mercury). Determine which chemicals have risks that outweigh the educational need.

3. Establishes requirements for proper use of hazardous chemicals including installing proper ventilation to limit exposure to staff and students.

4. Establishes requirements for storage including ventilation, compatible storage cabinets (i.e., nonmetal cabinets for storing corrosive chemicals), locking, and labeling.

5. A plan and budget for proper disposal of unused, outdated, or hazardous chemicals.

6. Plan for spills, explosions, and accidental exposure to hazardous chemicals.

A variety of free resources are available to schools to improve chemical management. These resources include:

- EPA's Chemical Management Resource Guide for School Administrators - http://www.epa.gov/oppt/pubs/chemmgmt/resourceguide.pdf
- Indiana's GreenSteps for Schools - https://www.in.gov/idem/health/2335.htm
- IDEM's Website on School Lab Cleanouts - https://www.in.gov/idem/health/2329.htm
- EPA, Healthy School Environments - http://www.epa.gov/schools/
- School Chemistry Laboratory Safety Guide - Consumer Product Safety Commission, www.cpsc.gov,
- Chemical Management in Schools (Michigan DEQ) contains sample checklists, chemicals spreadsheets, lists, etc.- http://www.michigan.gov/documents/deq/deq-oppca-notebook-chemicalmanagement_293287_7.pdf
- Council of State Science Supervisors - Making the Connection Science Safety: It's Elementary – https://portal.ct.gov/-/media/SDE/Science/Safety/scisaf_cal.pdf
- Rehab the Lab, Safe labs that don't pollute - https://www.hazwastehelp.org/educators/rehabthelab.aspx
- EPA's Mercury Web Site -www.epa.gov/mercury
- ATSDR Mercury in Your Schools - https://www.atsdr.cdc.gov/dontmesswithmercury/mercury_school.html

IAC – 33-4-8 States:

Sec. 8. (a) Student exposure to chemicals must be kept to a minimum. When evaluating student exposures, the more stringent of National Institute for Occupational Safety and Health (NIOSH) limits or Occupational Safety & Health Administration (OSHA) limits must be used.

(b) Where chemicals are used during class, such as, but not limited to, chemistry, biology, and shop classes, appropriate ventilation must be used to minimize students' exposure to these chemicals such as a local exhaust system.

(c) The school shall adopt and enforce a policy that minimizes student and staff exposure to chemicals.

The following list covers several of the types of chemicals students may be exposed to in schools. This list is not all inclusive but will provide the school corporations a starting point when developing their policy.

(1) Chemicals used in the classroom such as white board markers and cleaners
(2) Bactericides.
(3) Disinfectants such as bleach.
(4) Germicides.
(5) Sanitizing agents. such as countertop cleaners or hand sanitizers
(6) Swimming pool chemicals.
(7) Water purifying chemicals
(8) Pesticides – See "Pesticide Use at Schools" 357 IAC 1-16

Example Chemical Selection and Use Policy.

Suggested Chemical Management Policy

A. Purpose:
The purpose of this policy is to reduce student and staff exposure to chemical hazards from hazardous chemicals used or kept at the school. By selecting products with lesser hazards, and by properly using these products, there will be a reduced risk of exposure to these products.

B. Applicability:
This policy applies to all chemicals purchased for use in child occupied school buildings.

C. Steps:

1. **Inventory**
   a) Each year, the school corporation conducts a site-wide chemical inventory. During the inventory, expired and unwanted chemicals are identified for proper disposal. Compliance with this policy is reviewed.

2. **Purchasing**

a) Chemical purchases shall adhere to the following protocol:
    1) This school has identified the following procedures and guidelines for purchasing chemicals in an effort to minimize student and staff exposure to chemical hazards:
        i. Please describe how staff may purchase chemicals (i.e. is there a central person who approves purchases or does each department make the decision, etc.).
        ii. Donated items such as hand sanitizers and any products staff want to bring into the school must be approved by school administration.
            a. First in first out policy is followed. (over purchasing and stock piling are not permitted.)
            b. The least toxic chemical that is still effective for the job is selected. (Material Safety Data Sheets are reviewed to make this determination). This includes selection of cleaning supplies as well as teaching tools for classrooms. Micro and green chemistry are encouraged.
            c. This school will not purchase chemicals listed on the Banned Chemical List. (**School** – Please determine which chemicals you will not use. i.e. Mercury or mercury containing products; consider lists of chemicals that may be too hazardous)
b) Material Safety Data Sheets (MSDS)will be available at _____(**School** – Determine where these will be kept; consider 2 locations: a central location and with the chemical) The MSDS books are updated annually and as new chemicals are purchased.

3. Use

a) Chemicals will be mixed and used according to manufacturer's directions. Measuring devices or direct mixing systems are to be used. Any warnings, especially requirements for ventilation are to be followed.
b) When possible, use of cleaning products should be performed when students are not present.
c) Areas where chemicals are being used will be properly ventilated.
d) Only properly trained staff may use hazardous chemicals. Staff will receive annual training and when required, certification (i.e., pesticide applicators).
e) Required notification procedures will be followed (i.e., pesticide notifications)

4. Storage

a) Secondary containers will not be used to store chemicals unless they are properly labeled and approved for such use.
b) Storage areas will be properly ventilated.
c) Storage areas will be compatible with the chemicals being stored in them.
d) Reactive chemicals will not be stored near each other.
e) Hazardous chemicals will be stored in locked areas at all times.
f) All original containers will be labeled with the date received

5. **Disposal**
    a) Unwanted, unused, and outdated chemicals should be identified as soon as possible, and no less than annually. They should be marked for disposal.
    b) Disposal will follow state regulations. Pouring down the drain or throwing in the trash is not acceptable or proper disposal in most instances.
    c) The school has a budget for proper disposal of hazardous waste.

6. **Spills, Explosions, and Accidents (including inhalation, ingestion, or direct contact)**
    a) **School** – Outline steps staff should take in the event of one of these emergencies and include contact numbers
    b) Call 911
    c) Call Indiana Poison Center at 1-800-222-1222