

# **Long Lake Central School District**



## **Chemical Hygiene Plan**

**29 CFR 1910.1450**

**Adopted by LLCS BOE: August 14, 2014**

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APPENDIX – OSHA Laboratory Standard 29 CFR 1910.1450

## **Purpose**

The United States Department of Labor Occupational Safety and Health Administration requires that a Chemical Hygiene Plan be developed and implemented by September 1, 1996. This new laboratory standard supersedes other OSHA health standards. This standard includes the following:

- I. Employee Exposure Determination to OSHA Regulated Substances
- II. Hazard Identification
- III. Chemical Hygiene Plan

Implementation of this standard will reduce the incidence of laboratory-related injuries and illnesses by providing a safer working environment.

## **Chemical Hygiene Officer**

The Science Teacher serves as the District's Chemical Hygiene Officer.

## **Chemical Hygiene Officer Responsibilities**

- A. Ensure that the provisions of the Chemical Hygiene Plan are implemented.
- B. Maintain copies of all records pertaining to training, chemical inventories, and laboratory inspection records.

## **Teacher Responsibilities**

Teachers are responsible for implementing the chemical hygiene plan in the classroom. This includes the following:

- A. Ensuring that protective and emergency equipment is available and operational. This includes, but is not limited to:
  1. Ensure that showers, eye wash, fume hoods and fire extinguishers are inspected at the required frequencies and maintaining a record of these inspections.
  2. Safety Showers - checked annually.
  3. Eye washes - permanent eyewashes checked at the beginning of each semester.
  4. Ventilation hoods - each hood is monitored for a minimum air velocity of 100 linear ft/min., checked annually, and the door levels are marked for effective operation.

5. Fire extinguishers - Visibly mounted in every lab and prep area. Checked monthly by maintenance personnel and annually by a qualified contractor in accordance with NFPA 10.
  6. Eye Protection - Chemical Splash Goggles must be worn for all chemical use.
  7. Lab coats and plastic aprons - available for use.
  8. Gloves - Nitrile gloves are available for preserved specimen use and chemical resistance.
  9. Acid/Base spill neutralization - clearly marked bulk containers of sodium carbonate are available in all prep rooms.
- B. Provide a classroom chemical inventory list (name & quantity) to the Chemical Hygiene Officer. The list will be updated annually and maintained by the teacher.
  - C. Ensuring that labels on incoming containers are not removed or defaced.
  - D. Ensuring that chemicals and solutions dispensed into containers are properly labeled. The label must include the name of the substance, concentration, date, initials of person dispensing such as "Poison," "Carcinogen," "Flammable Liquid," or "Corrosive." This labeling is the responsibility of the person preparing the substance.
  - E. Ensuring that for substances developed in the laboratory, the hazard and chemical information will be compiled and filed with the MSDS's.
  - F. Ensuring that MSDS's received will be maintained in binders and are readily accessible to all employees in the school. The MSDS's will be available online and/or located in the classroom.
  - G. Determine if highly hazardous chemicals are present in the lab. If they are, post a special list of the "MOST DANGEROUS CHEMICALS" in each lab prep area. The list will specify annual usage and particular risks associated with the chemical. This list is an additional warning indicating that prior approval and special handling techniques may be required. Highly hazardous chemicals would include substances such as carcinogens, reproductive toxins, and substances that have a high degree of acute toxicity. **DISTRICT POLICY IS NOT TO USE HIGHLY HAZARDOUS CHEMICALS.** Instructors will continue to look for the safest chemicals for use for the job.
  - H. Instructors will identify and discuss with the students the potentially hazardous materials to be used in the lab. The discussion will include standard operating procedures and personal protective equipment for handling these materials at the beginning of each lab.
  - I. Obtain prior approval for laboratory operations under the following circumstances.

### Prior Approval Criteria

Approval to proceed with a laboratory task should be obtained from your immediate supervisor under the following conditions:

1. You are performing a new procedure, process, or test;
  2. There is a change or substitution of any of the ingredient chemicals in a procedure;
  3. There is a substantial increase in the amount of chemicals used;
  4. You are handling a particular hazardous chemical for the first time;
  5. There is a failure of any of the equipment used in the procedure, especially safety controls such as fume hoods;
- J. Provide all records required by the chemical hygiene plan to the Chemical Hygiene Officer.

### **Employer Responsibilities**

- A. To develop and provide the means of implementation of a chemical hygiene plan that complies with 29 CFR 1910.1450.
- B. When an employee uses any OSHA related substances, the district shall assure that the employees' exposures to such substances do not exceed the permissible exposure limits (PEL). Monitoring will be done "if there is reason to believe" that exposure levels for regulated substances routinely exceed the action level (or PEL in the absence of an action level).
- C. Provide For Employee Training - the training will ensure that employees are apprised of chemical hazards and available safety equipment in their work areas, employees shall receive appropriate refresher information and training, as needed, by the Chemical Hygiene Officer or others as assigned by the district.
1. Training will take place at the time of the initial assignment and prior to assignment involving new exposure situations.
  2. There shall be a session for refresher information at the onset of each year communicating the following:
    - a. The contents and availability of the laboratory standard and its appendices.
    - b. The location of the Chemical Hygiene Plan.
    - c. The location of MSDS's and reference materials
    - d. A record of the training will be maintained by the Chemical Hygiene Officer

- D. Provide for medical consultations and examinations at the district's expense and without loss of pay when:
1. An employee develops signs or symptoms associated with a hazardous chemical to which the employee may have been exposed in the laboratory.
  2. Exposure monitoring reveals an exposure level routinely above the action level of PEL for a substance for which there are OSHA medical surveillance requirements.
  3. Whenever an event such as a spill, leak, explosion, or other occurrence takes place in the work area resulting in the likelihood of a hazardous exposure.
  4. The district shall obtain a written opinion from the physician, including recommendations for follow-up, results of examination and tests, medical conditions revealed which may place the employee at increased risk as a result of exposure, and a statement that the employee has been informed of the results of the consultation. The written opinion shall not reveal specific findings unrelated to occupational exposure.
  5. The district shall establish and maintain for each employee an accurate record of any measurements taken to monitor employee exposures, and any medical consultations and examinations, including tests or written opinions.

### **Standard Operating Procedures (SOP's)**

1. ACIDS

- a. Use of chemical splash apron and chemical splash goggles
- b. Use of ventilating hood when appropriate (i.e. – highly hazardous substances or exposures likely to exceed the OSHA PEL)
- c. Concentrated acids always added slowly to water, NEVER water into a concentrated acid
- d. Volumes minimized for student use by dispensing into smallest reasonable container
- e. Solutions will be stored in appropriate containers, i.e. acid bottles with ground glass stoppers

2. BASES

- a. Use of chemical splash apron and chemical splash goggles

- b. Use of ventilating hood when appropriate (i.e. – highly hazardous substances or exposures likely to exceed the OSHA PEL)
  - c. Volumes minimized for student use by dispensing into smallest reasonable container
  - e. Solutions will be stored in appropriate containers
3. ORGANIC SOLIDS
- a. Use of proper protective clothing, splash goggles
  - b. Use of ventilating hood when appropriate (i.e. – highly hazardous substances or exposures likely to exceed the OSHA PEL)
4. ORGANIC LIQUIDS
- a. Use of proper protective clothing, splash goggles
  - b. Use of ventilating hood when appropriate (i.e. – highly hazardous substances or exposures likely to exceed the OSHA PEL)
5. INORGANIC LIQUIDS
- a. Use of proper protective clothing, splash goggles
  - b. Use of ventilating hood when appropriate (i.e. – highly hazardous substances or exposures likely to exceed the OSHA PEL)
6. COMPRESSED GASES
- a. Use of chemical splash goggles
  - b. All large tanks safety anchored
  - c. Specialty gases used only in flame hoods