

Regulation 7420.2 Part two

III. Maintenance of Fume Hoods and Other Protective Equipment

Each science laboratory will be equipped with the following:

- goggles and cabinet
- fire extinguisher
- fire blanket
- eyewash fountain
- appropriate ventilation system

Each chemistry laboratory will be equipped with the following:

- goggles and cabinet
- fire extinguishers
- fire blanket
- eyewash fountain
- drench type safety shower
- Fume hood

Fire alarms should be easily accessible in the halls,

Teachers have access to the telephone in various offices or a room intercom connected with the school main office.

1. Fume hoods will be inspected each month by the science department chairperson. Adequacy of face velocity will be determined yearly by a velometer available from the Chemical Hygiene Officer. Reports of hood inspection will be filed with the Chemical Hygiene Officer for employee review.
2. Ventilation of storage cabinets will be inspected annually by the science department chairpersons. Cabinets will be inspected for corrosion and unobstructed venting. Reports on the storage cabinet inspections will be filed with the Chemical Hygiene Officer for employee review.
3. Safety showers must conform to ANZI Z358.1 and will be inspected weekly by the science department chairperson (high schools and intermediate schools) and principals (primary schools) for function and adequate water flow. Reports of shower inspections will be filed with the Chemical Hygiene Officer for employee review.
4. Eyewash stations must conform to ANZI Z358.1 and will be inspected weekly by the science department chairperson (high schools and intermediate schools) and principals (primary schools) for function and adequate water flow. Reports of eyewash station inspections will be filed with the Chemical Hygiene Officer for employee review.

5. During the school year, floors on the laboratory areas will be cleaned nightly.
6. Fire extinguishers will be inspected annually by the company that maintains them. After usage, a fire extinguisher will be sent out to be refilled by the head building custodian. Laboratories will be equipped with the appropriate types and sizes of fire extinguishers. Carbon dioxide fire extinguishers are inappropriate for labs. A class D fire extinguisher should be available when working with flammable solids.
7. All students will be trained to use all safety devices in the laboratory and all students and employees will be taught to find the safety devices quickly in an emergency.

A. Chemical Procurement, Distribution and Storage

Procurement and Distribution

1. An updated inventory of all chemicals, their amounts, and location will be maintained.
2. Chemical reagents should be purchased in the smallest quantities possible consistent with the manner in which they are used. Quantities should not exceed a three year need.
3. Before a substance is received, information on proper handling, storage, and disposal should be known to those who will be involved.
4. No container should be accepted without an adequate identifying label.
5. All chemicals will be checked and properly labeled prior to storage.
6. Material Safety Data Sheets will be maintained by the Department Chairperson and be available to all science staff.

B. Stockrooms and Storerooms

1. Separate and secure storage areas will be designated for chemicals. Chemical exposure to direct sunlight should be avoided.
2. Storage areas should be ventilated by at least four changes of air per hour. Isolate the chemical storage exhaust from the general building ventilation system.
3. Shelving sections of storage areas would be secured to walls and floors to prevent tipping of entire sections.
4. All chemicals should be stored in chemically compatible families.
5. Toxic substances should be segregated in a well defined area with local exhaust ventilation.

6. Toxic and highly reactive chemicals, once opened, should be stored in unbreakable secondary containers.
7. Stored chemicals should be examined annually for replacement, deterioration, and container integrity.
8. Dangerous chemicals such as corrosive acids should be stored as close to the floor as possible and preferably at floor level.
9. Any chemicals which are stored at floor level should not be in the walking area.
10. Chemicals which react violently with each other should not be stored in close proximity. Dangerous combinations include glycerine and nitric acid, cyanides, and acids' peroxides, chlorates, nitrates, permanganates, and wood, paper, and many organic compounds.
11. All chemical solutions made by the teacher are to be labeled with the identity of the contents, concentration, hazard information, teacher's name and the date.
12. All shelf clips in the acid cabinet are to be inspected at least every three months for possible corrosion to prevent collapsed shelves.
13. Sodium and potassium must be stored in kerosene as soon as the original container has been opened. Potassium should not be kept longer than one academic year.
14. Hydrofluoric acid in wax bottles should be stored in a cold location.
15. Ethyl ether, once opened, should not be kept longer than three months. The shelf life of ethyl ether is less than one year.
16. Where the possibility of reagent containers slipping off a shelf exists, a ledge should be added.
17. Glass tubing should be stored horizontally and supported the full length of the tubing.
18. Reagent bottles should be prominently and accurately labeled.
19. All chemicals should be dated upon receipt and affixed with a CAS number.
20. Compressed gas cylinders should be stored in fire resistant, ventilated, dry, cool areas. Medical size cylinders should be securely strapped to a frame or a cart built for the purpose.
21. Always protect the cylinder valve stem of a gas cylinder.

22. Avoid exposure of cylinder to heat. Do not store in direct sunlight.
23. Never lubricate, modify, force or tamper with a gas cylinder valve.
24. Cylinders of toxic, flammable, or reactive gases should be used under a flame hood.
25. Do not extinguish a flame involving a combustible gas until the gas is shut off-otherwise it can reignite, possibly causing an explosion.
26. Flammable liquids such as alcohol, acetone, ethers, and other organic solvents should be stored in a metal storage cabinet. Gallon quantities should be stored in metal or plastic containers. Such liquids should be dispensed to students in quart (liter) or pint sizes.
27. Students should not have indiscriminate access to the laboratory storerooms.
28. Never store chemicals over, under or near a sink.

C. Environmental Monitoring

Regular instrumental monitoring of airborne concentrations is not justified or practical since the Vineland Public Schools do not use allergens, embryotoxins, and chemicals of moderate chronic or high acute toxicity.

IV. Employee Information and Training

A. All employees covered by the laboratory standard will be provided with the information and training so that they are apprised of the hazards of chemicals present in their work areas. This training will be given at the time of initial assignment and prior to new assignments involving different exposure situations. Refresher training will be given once per year.

B. The Training/information sessions shall include:

1. The contents of 1910.1450 and its appendices. These shall be available to employees at the personnel office.
2. The availability and location of the written chemical hygiene plan.
3. Information of OSHA permissible exposure limits (PELS) where they exist, and other recommended exposure limits.
4. Signs and symptoms associated with exposure to hazardous chemicals and laboratories.

5. Location of reference materials, including all MSD'S received, will be maintained in the department and will be updated on a regular basis. The staff will be provided with a listing of the materials available.

6. Methods to detect the presence or release of chemicals (i.e. monitoring, odor, thresholds, etc.)

7. The physical and health hazards of chemical in laboratory work areas.

8. Measures to protect employees from these hazards including:

- a. Standard operating procedures
- b. Work practices
- c. Emergency details
- d. Personal protective equipment
- e. Details of the Chemical Hygiene Plan

C. The Chemical Hygiene Officer is responsible for conducting the training session which will consist of lecture and video. An outline of the training program is provided in Part VII,. Appendix A.

D. Each employee will sign a form documenting that they have received training.

E. The Chemical Hygiene Officer is responsible for developing standard operating procedures.

F. Accident records should be reviewed and maintained by the Chemical Hygiene Officer, Personnel Director, and the Supervisor of Health Services.

1. The Chemical Hygiene Plan shall be updated each year.

2. An inventory of hazardous chemicals shall be maintained and updated annually.

3. Medial records shall be retained by the district in accordance with the requirement of state and federal regulations.

4. The chemical hygiene officer shall maintain all records mandated by the worker community Right-To-Know Law.

G. Prominent signs and labels of the following types shall be posted in the laboratories and/or science offices: emergency telephone numbers, identity labels showing contents of containers containing hazardous materials, location signs for safety showers, safety blankets, and eye wash fountains.

V. Prior Approval for Specific Laboratory Operations

A. Certain laboratory procedures which present a serious chemical hazard require prior approval by the Chemical Hygiene Officer before beginning. For the Vineland Public School these procedures include:

1. Work with carcinogens
2. Work with teratogens
3. Work with acutely hazardous chemicals including:
(suspected carcinogens)

arsenic trioxide
benzene
chromium powder
chromium VI oxide
sodium arsenate
sodium arsenite
cadmium powder
cadmium chloride
cadmium sulfate
chloroform
nickel powder
carbon disulfide (explosive)

B. Additional Protection with Select Carcinogens, Reproductive Toxins, and Chemical With High Acute Toxicity

When any of the chemicals are used, the following provision shall be employed where appropriate:

1. Establishment of a designated area.
2. Use of containment devices such as fume hoods or glove boxes.
3. Procedures for safe removal of contaminated waste.
4. Decontamination procedures (see Part VIII, Appendix A.

VI. Medical Consultation and Examination

The Vineland Public School District shall provide to affected employees, medical attention including follow-up examinations which the school physician determines is necessary under the following circumstances:

A. Whenever an employee develops signs and symptoms associated with a hazardous chemical to which s/he may have been exposed (may include, but not be limited to: accidental breakage of a hazardous material container, a skin rash or irritation occurring because of contact with a chemical, caustic splash to eyes, face or body, symptoms of nausea, dizziness, or other), the employee shall be provided an opportunity to receive medical examination.

B. Where exposure monitoring reveals an exposure level routinely above OSHA action level (AL)-or in the absence of an action level, exposure above the OSHA permissible exposure level (PEL) for OSHA regulated substances for which there are medical monitoring and medical surveillance shall be established for that employee. Currently, our VHS South laboratory uses: chloroform.

C. Whenever an event takes place in the work area such as a spill, leak, explosion, or other occurrence resulting in the likelihood of a hazardous exposure, the affected employee shall be provided an opportunity for a medical consultation. This consultation is for the purpose of determining the need for a medical examination.

D. All medical examinations and consultations are provided for by the school physician. Employees should go directly to Newcomb Medical Center for a life threatening emergency as determined by the nurse. All aspects of the examinations are provided by a licensed physician or supervised by a licensed physician. these examinations are provided without cost to the employee, without loss of pay, and at a reasonable time and place.

E. The Chemical Hygiene Officer will provide the following information to the physicians:

1. Identity of the hazardous chemical to which the employee may have been exposed.
2. A description of the conditions of the exposure including exposure date if available.
3. A description of signs and symptoms of exposure that the employee is experiencing.

F. The written opinion that the district receives from the physician shall include:

1. Recommendations for future medical follow-up.
2. Results of examination and associated tests.
3. Any medical condition revealed which may place the employee at increased risk as the result of a chemical exposure.
4. A statement that the employee has been informed by the physician of the results of the examination/consultation and told of any medical conditions that may require additional examination or treatment.

5. The material returned to the Vineland Public School by the physician shall not include specific findings and diagnosis which are unrelated to the occupational exposure. The Personnel Director and Chemical Hygiene Officer shall be informed of the physician's findings.

VII. Responsibilities Under the Chemical Hygiene Plan

Mr. Wade Anastor is designated as the Chemical Hygiene Officer for Vineland Public Schools.

In general, the Chemical Hygiene Officer is responsible for:

- A. The school's compliance with State, Local, and Federal initiatives enacted to protect and health of staff, and to promote the safety of staff and students, and
- B. Provide standards and materials for, and assistance in student laboratory experiences.
- C. Job tasks include:
 1. Formulate and implement a Chemical Hygiene Plan for the school's laboratories that includes the necessary work practices, procedures, and policies to ensure that employees are protected from all potentially hazardous chemicals.
 2. Implement and hold responsibility for the Worker Community Right-To-Know Law, Public Employee OSHA and AHERA mandates and other programs responsible for maintaining and monitoring a safe and healthful workplace environment.
 3. Integrate and coordinate compliance activities throughout all departments. Insure that there is full compliance (training of staff, walk-throughs, labeling, and record keeping.)
 4. Assist administrators, coordinator, and department heads in establishing a computerized data-base of all chemical substances in the district.
 5. Inspect, periodically, all areas with accompanying recommendations of preventive measures to avoid health, safety, and environmental hazards.
 6. Implement labeling procedures for compliance with the N.J. Worker/Community Right-To-Know Law.
 7. Develop standards for, and assistance in the proper disposal of all hazardous wastes.
 8. Maintain an on-going dialogue with the respective state agencies of recent or new developments as they pertain to employee health and safety.

9. Confer with staff members in planning and preparation of needed chemicals/chemical solutions, specimens, apparatus, and safety equipment.
10. To place the required chemicals/chemical solutions, specimens, apparatus, and safety equipment at the disposal of staff and students and other users in the laboratory class sections.
11. Make simple repairs and adjustments to scientific instrument and coordinate a regular maintenance schedule for the more complex equipment.

A chemical hygiene committee shall be formed. The membership list and minutes of their meetings are filed with the personnel director for employee review.

Adopted: 11 June 1997