



DEPARTMENT OF DEFENSE
OFFICE OF DEPENDENTS EDUCATION
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LOGISTICS

DS Regulation 4800.4
February 1995

DEPARTMENT OF DEFENSE DEPENDENTS SCHOOLS
CHEMICAL HYGIENE AND SAFETY PROGRAM

- References (a) DS Regulation 4800.1, "Department of Defense Dependents Schools Safety Program," September 1993
(b) Title 29, Code of Federal Regulations, Part 1910 (1910.1000 TO END) Current Edition
(c) DoD 6050.5-H, "Department of Defense Hazardous Chemical Warning Labeling System," June 1989
(d) DoD 1342.6-M-1, "Administrative and Logistic Responsibilities for DoD Dependents Schools," October 1978

A. PURPOSE

This regulation establishes chemical safety policy, procedures, and responsibilities for the Department of Defense Dependents Schools (DoDDS). These procedures and guidelines constitute the DoDDS Chemical Hygiene Plan and convey the Hazard Communication Standard to be adopted at applicable schools. It authorizes the publication of regional pamphlets, guidelines, manuals, or other media to assist in achieving a chemically safe environment.

B. APPLICABILITY AND SCOPE

The provisions of this regulation apply to all DoDDS personnel responsible for, or concerned with, the safety of students, staff, or visitors or with conditions which could result in injury or death, degraded bioenvironmental health, property loss or damage, or disruption of DoDDS activities due to chemical hazards.

C. DEFINITIONS

Terms and phrases used in this regulation are defined in enclosure 1.

D. POLICY

It is the DoDDS policy-that educational and support programs and activities promote a safe and healthful environment and protect students, staff, and visitors from chemical hazards in DoDDS facilities. To achieve this objective, DoDDS will comply with the stricter of U.S. Federal standards, DoD directives, or host nation bioenvironmental statutes applicable to each location worldwide.

E. RESPONSIBILITIES

1. The Director, DoDDS, will:

a. Establish a chemical hygiene and safety program.

b. Provide assistance to regional offices to achieve compliance with the provisions of this regulation and other appropriate directives or standards.

c. Authorize the creation of a compensated Chemical Hygiene Officer (CHO) position at all schools which require and use hazardous substances in conjunction with the school curriculum

2. The DoDDS Safety program Manager will:

a. Advise the Director on Federal and Department of Defense (DoD) chemical hygiene and safety standards applicable to the DoDDS academic environment.

b. Monitor the DoDDS Chemical Hygiene and Safety Program in accordance with the guidelines and responsibilities set forth in reference (a), DS Regulation 4800.1, and this regulation.

3. The DoDDS Instructional Systems Specialism Science Coordinator will:

a. Advise the Director on science program curricula impacting chemical hygiene and safety in DoDDS facilities.

b. Assist in the procurement-of resources necessary for the implementation and continuity of the Chemical Hygiene and Safety Program within the Education Division of the DoDDS.

4. Regional Directors will:
 - a. Implement the Chemical Hygiene and Safety Program within the region.
 - b. Designate regional science coordinators as Chemical Safety Advisors to ensure that chemical safety policy within the region is coordinated in accordance with the provisions of this regulation and Federal, DoD, and/or host nation standards.
5. The Regional Chemical Safety Advisors will:
 - a. Manage the chemical hygiene and safety program for the region. Maintain coordination and/or provide assistance to the Regional Safety Officer.
 - b. Direct chemical safety policy at schools through district science coordinators, if available, in accordance with this regulation “and Federal, DoD, or host nation directives.
 - c. Coordinate guidance through districts and schools concerning additional safety or bioenvironmental requirements which may be specific to countries, states, or areas within the region.
6. District Superintendents will:
 - a. Monitor the chemical hygiene and safety standards at schools within the district to ensure compliance.
 - b. Designate the district science program coordinator, where such a program exists, to serve as the district chemical safety advisor. The advisor will oversee the implementation and maintenance of chemical hygiene and safety standards at the schools within the district.
7. School principals will:
 - a. Designate a Chemical Hygiene Officer (CHO) who is qualified by training or experience to provide technical guidance in the development and implementation of the provisions of the Chemical Hygiene Plan
 - b. Maintain the annual inventory of all chemicals.
 - c. Ensure that staff know and follow the chemical hygiene rules, that protective equipment is available and in working order, and that appropriate training has been provided.

d. Provide regular chemical hygiene and housekeeping self-inspections including routine inspections of emergency equipment.

8. Chemical Hygiene Officers will:

a. Work with administrators and other employees to ensure that DoDDS chemical hygiene and safety policies and practices are followed.

b. Monitor procurement use, and disposal of chemicals used in the school

c. Conduct or see that appropriate inventories are conducted in accordance with enclosure 2.

d. Help teachers develop precautions and maintain adequate safety equipment.

e. Know the current safety requirements concerning regulated substances.

e. Monitor all chemical storage, compatibility, security, and labeling.

g. Seek ways to improve the chemical hygiene program.

h. Immediately report identified chemical safety hazards to the principal.

i. Provide for adequate, safe, and timely disposal of hazardous chemicals.

9. Teachers will:

a. Ensure that students know and follow the chemical hygiene and safety rules, that protective equipment is available and in working order, and that appropriate classroom safety training is provided to students.

b. Perform and document monthly chemical hygiene and housekeeping inspections of chemical storage and weekly functional tests of emergency safety equipment for which they are responsible. Documentation may be a simple check-off list of storage and equipment status and will be maintained for review for a minimum of one full school year.

c. Know the current safety requirements concerning any regulated substances used - or maintained for” curricula projects.

d. Comply with the required protective apparel and equipment requirements established by the Regional Chemical Safety Advisor for the appropriate course of instruction

February 1995
DS Regulation 4800.4

F. CHEMICAL HYGIENE AND SAFETY PLAN

Procedures and the plan format for standardizing chemical hygiene and safety in academic laboratories are outlined in enclosure 2.

G. CHEMICAL HAZARD COMMUNICATION STANDARD

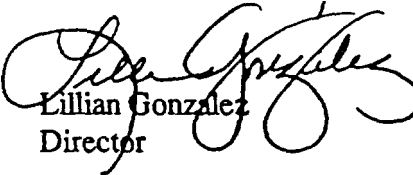
Procedures for the implementation of hazard communication are outlined in enclosure 3.

H. SCHOOL CHEMICAL HYGIENE AND SAFETY CHECKLIST

A generic checklist for chemical hygiene and safety in the DoDDS system is provided in enclosure 4.

L. EFFECTIVE DATE

This regulation is effective 30 days after date of publication. One copy of all implementing instructions will be provided to ODE, ATTN: Chief, Transportation Safety & Security Branch, within 60 days of issuance.


Lillian Gonzalez
Director

DISTRIBUTION: B,E,F,K,L,M,Y,Z,Q(WWPAC)

ENCLOSURES -4

1. Definitions
2. Chemical Hygiene and Safety in Academic Laboratories
3. Chemical Hazard Communication Standard
4. School Chemical Hygiene and Safety Checklist

DEFINITIONS

Carcinogen. A substance capable of causing cancer or cancerous growths in mammals. A chemical is considered to be a carcinogen if:

a. It was evaluated by the International Agency for Research on Cancer and found to be a carcinogen or potential carcinogen; or

b. It is listed as a carcinogen in the Annual Report on Carcinogens published by the National Toxicology Program; or

c. It is regulated by the Occupational Safety and Health Administration (OSHA) as a carcinogen.

CAS. Chemical Abstracts Semite is an organization under the American Chemical Society. CAS abstracts and indexes chemical literature from all over the world in "Chemical Abstracts." "CAS Numbers" are used to identify specific chemicals or mixtures.

Chemical. An element, chemical compound or mixture of elements and/or compounds.

Container. A bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. This does not refer to pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle.

Corrosive. A substance that causes destruction of tissue by chemical action or contact.

Disposal. The safe removal of chemical substances from DoDDS facilities.

Explosive. An unstable substance capable of rapid and violent energy release.

Exposure. Subjecting a person to a hazardous chemical in the course of employment, study, or visitation to a DoDDS facility or activity. his includes exposure through any route of entry (inhalation, ingestion, skin contact or absorption), and includes potential (e.g. accidental or possible) exposure

Fume. Airborne particulate formed by the evaporation of solid materials, e.g. metal fume emitted during welding.

Gas. A state of matter in which the material has very low density and viscosity; can expand and contract greatly in response to changes in temperature and pressure; easily diffuses into other gases; readily and uniformly distributes itself throughout any container.

Hazard Warning. Words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the hazard(s) of the chemical(s) in the container(s).

Hazardous Substance. Generally, materials which due to its chemical, physical or biological nature causes safety, public health, or environmental concerns resulting in an elevated level of support for substance management More specifically, for purposes of this regulation, it is a substance listed with/in one or more of the following

- a. Occupational Safety and Health Administration (OSHA),
- b. National Institute of Occupational Safety and Health (NIOSH),
- c. Environmental Protection Agency (EPA), or in
- d. 29 Code of Federal Regulations (CFR) 1910.1200(c), the OSHA Hazard Communication Standard.

These substances have one or more of the following characteristics; ignitable, corrosive, reactive, or possesses a toxicity.

Hazardous Waste Generator. The school from which the hazardous chemical substance is determined to be waste material.

Health Hazard. This refers to a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed persons. The term health *hazard* includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes.

Highly Toxic. Agents or substances that when inhaled, absorbed or ingested in small amounts can cause death, disablement, or severe illness.

Hood. A device enclosed on three sides and the top and bottom, designed and maintained so as to draw air into the hood at a desired rate to dilute and safely dispel potentially hazardous fumes, gases, mists, or vapors out of the facility. The hood must be designed, constructed, and maintained in such a way that an operation within the hood does not require the insertion of a person's body part other than the hands and arms.

Incompatible . Materials that could cause dangerous reactions from direct contact with one another.

Ingestion. Taking by the mouth.

Irritant. A substance that immediate, prolonged, or repeated contact with normal tissue will induce a local inflammatory reaction.

Label. Written, printed, or graphic material, displayed on or affixed to containers of hazardous chemicals.

Lachrymatory . A substance which causes weeping or a tear producing affect on the lachrymal glands.

Mists. Suspended liquid droplets generated by condensation from the gaseous to the liquid state or by breaking up a liquid into a dispersed state, such as by splashing, foaming, or atomizing.

Mutagen. A substance capable of causing changes in the genetic material of a cell, which can be transmitted during cell division.

Parts Per Million (P P M) . Parts per million parts of air by volume of vapor or gas or other contaminant. Used to measure air concentrations of vapors and gases.

Pipet. A calibrated glass tube of varying length, open at both ends and used to transfer small volumes of liquid

Protective Clothing. Clothing designed to protect a person against contact or exposure to hazardous substances.

Respirator. An apparatus to produce artificial respiration worn over the nose and mouth to prevent inhalation of potentially harmful substances.

Threshold Limit Value (TLV). A time-weighted average concentration under which most people can work consistently for 8 hours a day, day after day, with no harmful effects.

Vapor. The gaseous form of substances that normally in the solid or liquid state. The vapor can be changed back to the solid or liquid state either by increasing the pressure or decreasing the temperature alone.

Waste. A chemical substance is considered as waste when it is determined that it is no longer to be used.

CHEMICAL HYGIENE & SAFETY IN ACADEMIC LABORATORIES

This enclosure outlines occupational safety and health standards, safety rules, and procedures which will be used as minimum chemical safety procedures for each applicable DoDDS school. These procedures may also “be used to augment required student and employee chemical safety training.

1. Basic Safety Rules and Procedures. The following rules and procedures apply for laboratory work with chemicals:

a. Accidents and spills:

(1) Eye contact: Promptly flush eyes with water for a prolonged period (15 minutes) and seek medical attention.

(2) Accidental ingestion: Encourage the victim to drink large amounts of water and seek medical attention.

(3) Skin contact: Promptly flush the affected area with water and remove any contaminated clothing. If symptoms persist after washing, seek medical attention.

(4) Clean-up: Promptly clean up spills, using appropriate protective apparel and equipment and proper disposal techniques.

b. Avoidance of “routine” exposure:

(1) Develop and encourage safe habits; avoid unnecessary exposure to chemicals by any route.

(2) Do not smell or taste chemicals.

(3) Inspect gloves and test glove boxes before use. . . .

(4) Do not allow the release of toxic substances in rooms with contained recirculated atmospheres.

c. Choice of chemicals: Use only those chemicals for which the quality of the ventilation system is appropriate.

d. General ingestion and use of cosmetics: Eating, drinking, smoking, gum chewing, or application of cosmetics in areas where laboratory chemicals are present is forbidden; wash hands before and after conducting activities. Do not bring food or beverages into storage areas or store food or beverages in refrigerators, glassware or utensils which are also used for laboratory operations.

e. Equipment and glassware: Handle and store laboratory glassware with care to avoid damage; do not use damaged glassware. Use extra care with Dewar flasks and other evacuated glass apparatus; shield or wrap them to contain chemicals and fragments should implosion occur. Use equipment only for its designed purpose.

f. Exiting: Wash areas of exposed skin well before leaving the laboratory.

g. Horseplay: Avoid practical jokes or other behavior which might confuse, startle or distract other persons.

h. Mouth suction: Do not use mouth suction for pipeting or starting a siphon.

i. Personal apparel: Confine long hair and loose clothing. Wear shoes at all times in the laboratory. The teacher will determine if sandals, perforated shoes, or sneakers are appropriate for specific laboratory work

j. Personal housekeeping: Keep the work area clean and uncluttered, with chemicals and equipment being properly labeled and stored; clean up the work area on completion of an operation and double-check at the end of each day.

k. Personal protection:

(1) Assure that appropriate eye protection is worn by all persons, including visitors, where chemicals are stored or handled.

(2). Wear appropriate gloves when the potential for contact with toxic materials exists; inspect the gloves before each use, wash them before removal, and replace them periodically

(3) Use appropriate respiratory equipment when air containment concentrations are not sufficiently restricted by engineering controls and inspect the respirator before use.

(4) Avoid use of contact lenses in the laboratory unless necessary. If used, special precautions may be necessary.

“(5) Remove laboratory coats immediately on significant contamination.

1. Planning: Seek information and advice about hazards, plan appropriate protective procedures, and plan positioning of equipment before beginning any new operation. The use of regional science safety publications such as “Science Safety Handbook” and “Ideas for Laboratory Safety” is encouraged.

m. Unattended operations: Leave lights on, place an appropriate sign on the door, and provide for containment of toxic substances in the event of failure -of a utility service (such as cooling water) to an unattended operation. Avoid unattended operations where possible.

n. Use of hood:

(1) Use the ventilation hood for operations which might result in release of toxic chemical fumes, gases, mists, vapors or dust

(2) As a general rule, use a hood or other local ventilation device when working with any appreciably volatile substance with a threshold limit value (TLV) of less than 50 parts per million (ppm).

(3) Confirm adequate hood performance before use. Keep hood closed at all times except when adjustments within the hood are being made. Keep materials temporarily stored in hoods to a minimum, ensure air extraction is in operation, and do not allow the materials to block vents or air flow.

o. Vigilance: Be alert to unsafe conditions and see that they are corrected when detected.

p. Working alone: Avoid working alone in a building; do not work alone in a laboratory if the procedures being conducted are hazardous.

2. Chemical Procurement, Distribution and Storage.

a. Procurement. Before a chemical substance is received, information on proper handling, storage, and disposal should be known to those who will be involved. No container should be accepted without an adequate identifying label. Preferably, all substances should be received in a central location.

b. Stockroom/storerrooms. Toxic substances will be segregated in a well-identified area with separate exhaust-ventilation vented directly up and outside the building. Chemicals which are highly toxic or other chemicals whose containers were opened should be stored in unbreakable secondary containers. - Stored chemicals will -be examined periodically (at least annually) for replacement deterioration, and container integrity. Stockroom/storerrooms will not be used as preparation or' repacking areas. -They will remain locked, but be accessible during normal working hours by at least one authorized person.

c. Distribution. When hazardous chemicals are hand tied from their storage area to the laboratory, the primary container will be placed in a secondary container or bucket for protection.

d. Laboratory storage. Chemical substances permitted for current experiments should be as small as practical. Storage on bench tops and after-hours storage in hoods is not permitted. Exposure to heat or direct sunlight should be avoided. Chemical storage cabinets in the classroom will remain locked when not under the direct supervision of the teacher. Inventory records will be verified at least two times each school year. Unneeded items will be disposed of properly in accordance with regional or district procedures.

3. Environmental Monitoring.

Instrumental monitoring of airborne concentrations will be conducted semi-annually in accordance with DoD 1342.6-M-1 (reference d), when testing or redesigning hoods or other ventilation devices, or when a highly toxic substance is stored or used regularly.

4. Housekeeping, Maintenance, and Inspections.

a. Cleaning. Floors will be cleaned regularly.

b. Inspections. Formal housekeeping and chemical hygiene inspections will be held at least semi-annually informal inspections should be continual.

c. Maintenance. Any necessary eye wash fountains, respirators, safety showers, and other safety equipment should be inspected regularly.

d. Passageways. Stairways and hallways will not be used as storage areas. Access to exits, emergency equipment, and utility controls must never be blocked.

5. Medical Program.

a. Routine surveillance. Anyone whose work involves regular and frequent handling of toxicologically significant quantities of a chemical should consult a qualified physician to determine on an individual basis whether a regular schedule of medical surveillance is desirable.

b. First Aid. Personnel trained in first aid should be available during working hours and an emergency room with medical personnel should be nearby.

6. Protective Apparel and Equipment. These will include, as appropriate, for each laboratory:

a. Protective apparel compatible with the required degree of protection for substances being handled.

- b. An easily accessible drench-type safety shower.
- c. An eyewash fountain.
- d. A fire extinguisher.
- e. Respiratory protection, fire alarm, and telephone for emergency use should be available nearby.
- f. Other items designated by the Chemical Hygiene Officer.

7. Records.

a. Accident records will be written/typed and a copy retained, if applicable, in accordance with DSR 4800.1 (reference a).

b. Chemical Hygiene Plan records should document that the facilities and precautions are compatible with current knowledge and regulations.

c. Inventory and usage records for high-risk substances will be kept showing the amounts of these materials on hand, amounts used, and the names of personnel with direct access.

d. An annual inventory of all chemical substances stored or used for all science programs (chemistry, art, photography, biology, physics, industrial arts, etc.) will be conducted by the Chemical Hygiene Officer (CHO) prior to the end of each school year. The annual chemical inventory will be maintained by the school administrator for a period of three school years. Any excess chemicals due for disposal that cannot be properly disposed locally will be reported via letter to district or regional offices for assistance in scheduling regional or district contract disposal.

e. Medical records will be retained in accordance with governing regulations.

f. CHO designation and training will be maintained as a part of the personnel record for purposes of assignment and compensation

8. Signs and Labels. Prominent signs and labels of the following types will be posted:

a. Telephone numbers of emergency personnel/facilities, supervisors, etc.

b. Identity labels, showing contents of containers (including hazardous waste receptacles) and associated hazards.

c. Location signs for safety showers, eyewash stations, other safety and first aid equipment, exits and areas where no food, drink, or other hand to mouth contact is permitted.

d. Warnings at areas or equipment where special or unusual hazards exist.

9. Spills and Accidents.

a. Procedures will be established and communicated to all personnel covering ventilation failure, evacuation, medical care, reporting, and drills.

b. A spill control policy will be developed and should include consideration of prevention, containment, evacuation, cleanup, and reporting.

c. AU accidents or near accidents will be carefully analyzed with the results distributed as safety awareness to all who might benefit.

10. Information and Training Program.

a. Ensure that all personnel at risk (exposed through study or work) are adequately informed about chemical hazards in the laboratory, the risks, and what to do in an emergency.

b. Emergency and Personal Protection Training: All students shall be taught the location and proper use of available protective apparel and equipment. Fulltime and substitute teachers must be trained in the proper use of emergency equipment and procedures.

c. Receiving and stockroom/storeroom personnel must know about hazards, handling equipment, protective apparel, and relevant regulations.

d. Literature/Consultation: Literature and consulting advice concerning chemical hygiene will be readily available to teachers, who should be encouraged to use these information resources.

11. Hazardous Chemical Waste

Hazardous chemical waste will be disposed in accordance with the most restrictive governing U. S., DoD, or host nation statutes having jurisdiction over the hazardous waste generator. The aim of the DoDDS chemical waste disposal system is to ensure that minimal harm to people, other organisms, or the environment will result from the disposal of waste chemical substances.

a. Hazardous Chemical Waste disposal:

(1) Assure that the procedure for each laboratory operation includes plans and training for waste disposal.

(2) Deposit chemical waste in appropriately labeled receptacles and follow all other established waste disposal procedures.

(3) Do not discharge to the sewer concentrated acids or bases; highly toxic, malodorous, or lachrymatory substances; or any substances which might interfere with biological activity of waste water treatment plants, create fire or explosion hazards, cause structural damage or obstruct flow.

(4) Experiments should be planned so that waste disposal or neutralization of hazardous products from experimental work is an integral part of the overall procedure.

(5) Indiscriminate disposal by pouring waste chemicals down the drain or adding them to mixed refuse for landfill burial is unacceptable.

(6) Hoods will not be used as a means of disposal for volatile chemicals..

(7) Disposal by recycling or chemical decontamination should be used when possible. Safe and approved procedures of on-site disposal may also include evaporation, neutralization, or dilution.

(8) Whenever possible, properly identified, unneeded chemicals should be turned into the Defense Reutilization and Marketing Office (DRMO) for disposal.

(9) *If* local identification, decontamination, and disposal cannot be practically performed, a contracted chemical disposal service maybe required.

b. Many chemical disposal methods are included with the approved DoDDS chemical inventory and control software. Additional information is contained in Flinn, American Chemical Society, and other documentation authorized by the Regional Science Coordinator. Transportation of chemicals from the laboratory or school must be in accordance with the governing transposition regulations.

c. Unidentified Chemical Stocks: Unlabeled containers of chemicals and solutions will undergo prompt identification and proper disposal.

d. Prior to the transferor termination of a teacher's employment, chemicals for which that person was responsible will be inventoried. Excess, waste, or outdated chemicals will be properly

disposed, and the remaining chemicals properly prepared for a complete exchange of accountability and responsibility.

e. Controlling Disposal Costs: Disposal of hazardous wastes is expensive. However, there are a number of steps that can be taken to control costs.

(1) The first step is to control quantities purchased.

(2) Where waste chemicals are generated, chemically different substances should be kept separate.

(3) Try not to mix hazardous and non-hazardous wastes. When they are mixed, they are all considered to be hazardous waste, thereby increasing the volume and cost of hazardous waste to be disposed.

(4) The next step is to ensure that waste management is under the direct cognizance of the designated Chemical Hygiene Officer. This person is most familiar with regulatory requirements, is responsible for internal handling procedures, and works with contractors or support agencies to arrange for disposal of hazardous chemicals as required.

(5) Finally, each individual working with chemicals must understand that all containers must have their contents properly labeled. Unlabeled chemical containers create an unsafe situation and analytical costs to identify the contents of unlabeled containers are high and unnecessary if teachers do their job properly.

CHEMICAL HAZARD COMMUNICATION STANDARD

1. General Information

The Occupational Safety and Health Administration (OSHA) has issued the “Hazard Communication Standard” published in Title 29 CFR Part 1910 (reference b). The purpose of this standard is to create a uniform comprehensive program to reduce chemically related occupational illness and injury by evaluating chemical hazards and by communicating the hazard information to persons who might be exposed. In order to comply with these standards, the applicable guidelines in DoD Handbook 6050.5-H, (reference c) and the following hazard communication procedures were established for the DoDDS. These procedures and standards will be available in each classroom associated with the use or storage of chemicals in the curricula.

a. Container Labeling

The Chemical Hygiene Officer will verify that all chemical substance containers received for use are clearly labeled to indicate the following:

(1) The identity of the contents. The identity must match the corresponding Material Safety Data Sheet (MSDS) or DoD Hazard Communication Standard (HCS) equivalent

(2) The name and address of the manufacturer, importer or responsible party.

(3) Appropriate hazard warnings.

(a) The Chemical Hygiene Officer will ensure that all secondary storage containers are labeled with either a copy of the original manufacturers label or with the DoD HCS Label.

(b) The Chemical Hygiene Officer will review the chemical labeling system in June of each year and update or replace labels as required.

(4) Chemical’s compatibility family, date received, and Department of Transportation (DOT) guide number, if applicable.

b. Material Safety Data Sheets

(1) The Chemical Hygiene Officer will be responsible for obtaining and maintaining the Material Safety Data Sheets (MSDS) for the school(s) under their cognizance. If toxic or hazardous substances are received from the United States without a MSDS, a letter (with a copy retained on file) will be sent to the supplier requesting the MSDS. If the chemicals are requisitioned from the host nation, the host nation equivalent of the MSDS must be produced listing the information required in paragraph La. above. If these chemical substance containers are not properly labeled in accordance with the Hazard Communication Standard, a DoD equivalent label must be produced in accordance with DoD 6050.5H (reference c).

(2) The Chemical Hygiene Officer will review incoming MSDS's for new" and significant health/safety information. He/she will ensure that any new information is made available to any applicable staff, students, or visitors.

(3) Copies of MSDS's or host nation equivalents for all toxic and hazardous substances to which staff, students, or visitors maybe exposed will be kept in each-applicable classroom. These MSDS's will be available to all staff, students, or visitors to these rooms.

c. Employee Training and Information

The school administrator, through the Chemical Hygiene Officer, is responsible for the employee training program The school administrator will ensure that all elements specified below are carried out. Prior to starting work, each new at-risk employee will attend a health and safety orientation and will receive information and training on the following:

(1) An overview of the requirements contained in this regulation.

(2) A list of chemicals present in the school.

(3) The location and availability of the written hazard communication (MSDS's or equivalent) information.

(4) Physical and health affects of the toxic or hazardous substances.

(5) Methods and observation techniques used to determine the presence or release of toxic and hazardous substances in the school.

(6) How to use toxic and hazardous substances in the safest possible manner, including safe handling practices and personal protective equipment requirements.

(7) Steps the school has taken to lessen or prevent exposure to toxic and hazardous substances. Examples of this are chemical substitution practices, the use of “small-scale” chemistry techniques, inventory, storage, and disposal procedures.

(8) How to read labels and review MSDS’s or equivalent to obtain appropriate hazard information.

(9) Location of toxic and hazardous substances list.

After attending the training class, each employee will sign a form to verify that they attended the training, reviewed the material safety or equivalent data sheets and understand the DoDDS Chemical Hygiene and Safety Program. Staff and other applicable persons will be updated on any new substance that maybe toxic or hazardous prior to its introduction to school operations. The Chemical Hygiene Officer is responsible for ensuring that MSDS’s or equivalent are available on the new chemicals.

SCHOOL CHEMICAL HYGIENE AND SAFETY CHECKLIST

This checklist is designed to be used as a general purpose chemical safety survey for the DoDDS system

SECTION 1 LAB/CLASSROOM

| | YES | NO | N/A |
|---|-----|----|-----|
| 1. Does the laboratory have two exits? | — | . | . |
| 2. Are emergency exit procedures posted? | — | — | . |
| 3. Is a general alarm system provided for the entire building? | — | | — |
| 4. Are a minimum 6 student work stations provided for a maximum 24 students? | — | — | — |
| 5. Are work surfaces made of nonporous and chemical resistant materials? | — | _ | — |
| 6. Are safety precautions/rules posted in the room where students use the them.iczds? | — | — | — |
| 7. Is a master gas cutoff valve conveniently located in each laboratory? | — | — | _ |
| 8. Are aisles wide enough that teachers and students can move freely without interfering with others' work? | — | — | _ |
| 9. Are locks provided and is the laboratory or other room where hazardous chemicals may be accessible locked when not in use? | — | — | — |
| -10. Are household type refrigerators used for explosive chemical storage? (Prohibited) | — | — | . |
| 11. Is a fully functional water shower available in all chemistry laboratories? | — | — | — |
| 12. Is a fully functional eye flush safety station available in all chemistry laboratories? | — | — | — |

| | YES | NO | N/A |
|--|-------|-------|-------|
| 13. Are appropriate types of fully functional fire extinguishers prominently accessible? | _____ | _____ | _____ |
| 14. Are rubber or plastic gloves available for each student? | _____ | _____ | _____ |
| 15. Are approved eye protection devices available for each student? | _____ | _____ | _____ |
| 16. Are approved respiratory protection devices available to filter dust and vapors? | _____ | _____ | _____ |
| 17. Are approved fire blankets available in each laboratory? | _____ | _____ | _____ |
| 18. Are sand buckets available in each laboratory? | _____ | _____ | _____ |
| 19. Are earthenware waste jars provided in each laboratory? | _____ | _____ | _____ |
| 20. Are heat resistant gloves available in each laboratory? | _____ | _____ | _____ |
| 21. Are operational fume hoods provided in laboratories where noxious, toxic, or chemical fumes maybe present? | _____ | _____ | _____ |
| 22. Do fume hoods have operational safety glass access windows? | _____ | _____ | _____ |
| 23. Are fume hoods clear and clean and not used as a chemical storage area? | _____ | _____ | _____ |
| 24. Are fume hoods vented directly to the outside of the building? | _____ | _____ | _____ |
| 25. Is the floor kept clear of refuse and equipment that may create hazards, or lead to poor hygiene and housekeeping? | _____ | _____ | _____ |
| 26. Is a container of acid neutralizer available in chemistry laboratories? | _____ | _____ | _____ |
| 27. Are all electrical outlets grounded? | _____ | _____ | _____ |
| 28. Are all electrical equipment and appliances properly grounded? | _____ | _____ | _____ |
| 29. Are a sufficient number of properly installed electrical outlets provided so as to eliminate the use of extension cords? | _____ | _____ | _____ |

SECTION II STOREROOM/PREP ROOM

YES NO N/A

| | | | |
|--|---|---|---|
| 1. Is the chemical storeroom well lighted and force ventilated to the outside of the building? | — | . | — |
| 2. Are chemical storerooms identified to the local fire officials and are the doors appropriately retied for fire hazard identification? | — | . | — |
| 3. Are all reagent chemicals properly labelled? | — | . | — |
| 4. Are all unlabelled reagents disposed of properly? | — | . | — |
| 5. Are appropriate corrosive materials stored in specialized corrosive material storage cabinets? | — | — | — |
| 6. Are corrosives stored in a specialized corrosives storage cabinet? | — | . | — |
| 7. Are flammables stored in a specialized flammables storage cabinet? | — | . | — |
| 8. Are non-compatible chemicals stored separately from each other? | — | — | — |
| 9. Are while liquids stored faraway from heat sources and electrical switches? | — | . | — |
| 10. Are hazardous chemicals used in the lab kept only in small quantities? | — | — | — |
| 11. Are old and unneeded chemicals disposed of properly and promptly? | — | — | — |
| 12. Are large containers of chemicals stored near the floor? | — | . | — |
| 13. Is an appropriate fire extinguisher located near the floor? | — | . | — |
| 14. Are protective gloves available for transferring hazardous chemicals? | — | . | . |
| 15. Has delicate mechanical or electric equipment been stored in chemical storage rooms? | — | — | — |
| 16. Are metal shelf supports inspected frequently for signs of chemical corrosion? | — | — | . |