Sample Chemical Hygiene Plan for Maine Schools

In 1990 the Federal Occupational Safety & Health Administration (OSHA) established regulation 29 CFR 1910.1450, Occupational Exposures to Hazardous Chemicals in Laboratories, otherwise known as The Laboratory Standard. The Maine Department of Labor adopted and enforces this legislation for public-sector workplaces.

The legislation requires all employers with science laboratories that meet the requirements of the standard to develop a Chemical Hygiene Plan. The Plan details how each employee will be protected from overexposure to hazardous chemicals and describes specific work practices and procedures in the laboratory to minimize employee risk. Science laboratories are defined as areas where small quantities of chemicals are used on a non-production basis, multiple chemical manipulations or chemicals are used, protective practices and equipment are available and used to protect lab personnel, and work with substances in which the containers used are designed to be easily and safely manipulated by one person.

The Laboratory Standard supercedes other standards within 29 CFR, including the Hazard Communication Standard and the substance specific standards (with the exception of certain elements). Students are not considered employees under this law, but prudence dictates that they should be expected to comply with all practices and procedures.

A Chemical Hygiene Plan reflects a school's chemical hygiene program, which is an ongoing, dynamic effort, not a one-time event. The sample plan below incorporates both requirements and recommendations for complying with the Laboratory Standard and ensuring a safe working and learning environment in science laboratories. Administrators who think that specific measures do not apply in their situations, should refer to the Standard to determine if law requires such measures.

Some relevant Maine Department of Environmental Protection and Maine Department of Education regulations are referenced in the sample plan.

To prepare your plan, follow these steps:

- 1. Read the
- 2. OSHA Laboratory Standard, 29 CFR 1910.1450. (www.osha.gov)
- 3. Develop a policy statement, expressing the school or school district's commitment to lab safety.
- 4. Follow the sample program in order, adding information specific to your school. Review the related sections of the Standard, including Appendix A, as you work on each major program section. For clarification or assistance, contact SafetyWorks! toll-free at 1-877-SAFE-345 (1-877-723-3345) or through www.safetyworksmaine.org. An electronic version of this plan is at this website. To use the electronic version, select/copy/save to your hard drive or a disk.

The information contained in this sample program is not considered a substitute for any orovisions of any OSHA or other law or regulation. Use of this sample program does not guarantee compliance with applicable standards. We suggest that a qualified person review your final program.
Chemical Hygiene Plan for
POLICY STATEMENT
School Department has made a commitment to provide a safe environment. All personnel have a right to know about health hazards associated with their work. So that personnel can make knowledgeable decisions regarding personal risks, the Laboratory Chemical Hygiene Plan includes policies, procedures, and responsibilities designed to develop an awareness of potentially hazardous conditions or chemicals in the laboratory and to train personnel in appropriate safe working conditions
It is important that employers assume responsibility for work site safety. All employees will have access to pertinent safety information through their supervisory staff. The people who work in any given environment are often best able to detect potential hazards in either the facility or work procedures. When safety concerns arise, employees are encouraged to contact their supervisor.
This program is for the benefit and protection of all who use the school facility. It contains information on potential chemical hazards and how they should be handled.
Signed
SuperintendentDate
Chemical Hygiene OfficerDate

I. Responsibilities

(teache	c to this Chemical Hygiene Plan for School, employees ers, staff), administrators (superintendent, principal), and students all have sibilities to conform to this standard. The senior administrative officer, (person or position) is ultimately responsible for chemical hygiene
	the institution and must, with other administrators, provide continuing support for ional chemical hygiene. 29 CFR 1910.1450 (e)(3)(vii) and Appendix A(B)
A. Adı	ministration Responsibilities
1.	Appoint a Chemical Hygiene Officer from within the school system. The Chemical Hygiene Officer is
2.	Implement a Chemical Hygiene Plan conforming to the OSHA Lab Standard (29 CFR 1910.1450).
3.	Ensure that employees receive training regarding the Chemical Hygiene Plan.
4.	Allocate staff time for regular, formal chemical hygiene and housekeeping inspections, including routine inspections of emergency equipment and an annual
	chemical inventory.
5.	Maintain a record of all chemical exposures and provide employee access to these records as well as any medical records. Ensure confidentiality of all personal records.
6.	Provide resources to ensure that facilities and equipment align with requirements of the Plan.
7.	Phase out mercury in the school and/or school district, per Department of
	Environmental Protection regulations.
8.	Ensure that the local Fire Department receives a copy of the annual chemical inventory.
9.	List additional administrative responsibilities for lab safety at this school:

B. Chemical Hygiene Officer Responsibilities

- 1. Work with the administration and science department staff to develop and implement appropriate chemical hygiene policies and practices.
- 2. Monitor procurement, use and disposal of chemicals in the lab, including determining that facilities and training levels are adequate for the chemicals in use.
- 3. Perform regular safety audits.
- 4. Maintain Material Safety Data Sheets (MSDS) for science laboratory chemicals.
- 5. Oversee annual chemical inventory. Provide a copy of the current chemical inventory to the front office and local first responders.
- 6. Maintain current knowledge of legal regulations regarding laboratory and chemical safety.

- 7. Coordinate annual review of the Chemical Hygiene Plan (CHP) by science staff.
- 8. Coordinate annual hazardous waste disposal for science department.
- 9. Oversee maintenance of appropriate spill kit and materials.
- 10. Maintain communication with administration regarding the CHP.
- 11. Provide training to colleagues, including administrators, teachers, and facilities staff.
- 12. Submit budget for maintenance of lab equipment and inspections.

13.	List additional responsibilities of Chemical Hygiene Officer in this school:	
		_
		_

C. Teacher Responsibilities

- 1. Plan and conduct each laboratory operation in accordance with the Chemical Hygiene Plan and safe work practices.
- 2. Develop good personal chemical hygiene habits.
- 3. Align curriculum with Chemical Hygiene Plan. Teach good personal chemical hygiene habits. Ensure that students meet their lab safety responsibilities. Prohibit unsupervised work by students.
- 4. Participate in annual chemical inventory.
- 5. Plan and conduct each laboratory exercise with the least toxic materials. Obtain and review MSDS prior to requesting new chemical.
- 6. Annually submit a list of experiments and materials needed to the Chemical Hygiene Officer (CHO).
- 7. Label, use, and dispose of each chemical as required.
- 8. Maintain laboratory safety equipment.
- 9. Maintain spill kits that are consistent with type and amount of chemicals used.
- 10. Maintain communication with Chemical Hygiene Officer.

11. Li	st additional lab safety	y responsibilitie	s for teachers at	this school:	

D. Student Responsibilities

- 1. Understand the experimental procedure before starting to work in the laboratory.
- 2. Become familiar with the properties and hazards of the chemicals in use.
- 3. Obey all safety rules and regulations. Wear appropriate personal protective equipment as instructed.

- 4. Clean personal work area immediately after use. Obey good housekeeping practices.
- 5. Do not engage in inappropriate behavior (*i.e.* no horseplay).
- 6. Conduct only the experiments assigned by the instructor. Never perform unauthorized or unsupervised experiments.
- 7. Never remove chemicals from the laboratory.
- 8. Never work in the laboratory unless authorized to do so. Never work alone in the laboratory.
- 9. Report chemical spills and accidents to teacher immediately.

10. 1	List additional lal	b safety responsibil	ities for students a	t this school:	
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-					

E. Custodian Responsibilities

- 1. Understand and follow chemical and hazardous waste management regulations and best practices.
- 2. Clean science laboratories and storage areas with caution.
- 3. Report chemical spills to CHO and/or administrator. Do not clean up spills without proper training.

4.	. List additional lab safety responsibilities for facilities staff at this school:			

II. Basic Safety Rules and Procedures

"The Chemical Hygiene Plan shall include...standard operating procedures relevant to safety and health considerations to be followed when laboratory work involves the use of hazardous chemicals." 29 CFR 1910.1450(e)(3)(i) and Appendix A(E)

- 1. Adhere to the intent and procedures of this CHP.
- 2. Know the safety equipment. Users of the science labs must know:
 - a. The location of eyewash fountains, safety showers, fire blankets, fire extinguishers, first aid kits, and emergency exits;
 - b. How to respond in case of an emergency; and
 - c. How to use the safety equipment. Those expected to use the equipment (e.g. fire extinguishers) must receive proper training.

3.	Know the hazards of the materials being used. Read labels carefully to make sure you are using the right chemical. Know how to interpret information from a
	Material Safety Data Sheet.
4.	No horseplay, games, or pranks in the laboratory.
5.	Dispose of all waste materials according to instructions. Follow local, state, and
	federal disposal requirements.
6.	1 7
_	position) immediately.
7.	Assume any chemical mixture is more toxic than its most toxic component.
	Substances of unknown toxicity will be assumed to be toxic. Do not
0	underestimate the risk of any chemicals.
	Do not eat, drink, or apply cosmetics in the laboratory.
	Do not taste any chemical. Do not smell chemicals directly.
	Do not pipette solutions by mouth. . Wash hands with soap and water before leaving the laboratory, even if you have
11	been wearing gloves.
12	. Promptly flush exposed skin with water. Drench showers are located
12	. I folliptify flush exposed skill with water. Dienen showers are focuted
13	See also Housekeeping section of this CHP.
	. Additional basic safety rules and procedures for this school:
III. C	Chemical Procurement
• • •	
29CFI	R1910.1450 Appendix A(D)
1	Defense a shamical is an every degree bandling storage and disposal mathods
1.	Before a chemical is procured, proper handling, storage and disposal methods must be known to those responsible.
2	Purchase the smallest possible amounts. Whenever practical, chemicals should be
۷.	purchased as pre-diluted solutions to minimize mixing and the chance for
	improper labeling and storage.
3	No container will be accepted without an adequate label and material safety data
٥.	sheet.
4.	The (school name) will follow a purchasing policy and
	procedures to minimize large quantities of chemicals and/or extremely hazardous
	chemicals from entering the school.
5.	No chemical will be purchased in quantities greater than a two-year supply. (Ch.
	161 Maine Department of Education regulations)
6.	Requests for procurement of new chemicals will be made through
	(person or position). Any concerns about the safety of a
	requested chemical should be brought to the attention of the Chemical Hygiene

Officer or _____(person or position).

7.	All chemicals will be received	(location – preferably
	central location) by	(person or position).
8.	(Choose one of the following options.)	

• The school will not accept donations of chemicals from outside sources.

OR

• The school will not accept donations of chemicals from outside sources without review by the CHO to insures that the material is a) needed by the school; b) useful to the school as donated; c) a quantity no greater than a two-year supply; and d) is not a hazardous waste at the donating organization. The school will follow Maine's Hazardous Waste Management Rules, Chapter 850 Section (3)(A)(4)(xvii) & (xviii) for applicable exclusions and procedures for transfer.

IV. Control Measures

"The Chemical Hygiene Plan shall include... criteria that the employer will use to determine, and implement control measures to reduce employee exposure to hazardous chemicals including engineering controls, the use of personal protective equipment and hygiene practices...." 29 CFR 1910.1450(e)(3)(ii)

A. Engineering Controls

Engineering controls are the preferred methods of minimizing exposure to chemicals. Controls must be maintained in proper working order. Engineering controls must not be modified unless testing indicates the changes will not reduce protection. Report improper functioning of engineering controls to the Chemical Hygiene Officer immediately.

- 1. Laboratory Hoods will be used for all chemical procedures involving volatile substances with a permissible exposure limit (PEL) less than 50 ppm. Work practices for hoods:
 - a. Keep sash closed when not working in the hood. When working in the hood, keep sash height as low as possible.
 - b. Do not store chemicals inside the hood.
 - c. Do not use hood for disposal of volatile chemicals.
 - d. Minimize interference with the inward flow of air into the hood.
 - e. Maintain face velocity between 75 and 125 feet per minute. At this school ______ (person or position) is responsible for monitoring the hood and keeping records.
- 2. Storage cabinets for flammable and hazardous chemicals will be provided and ventilated as needed in compliance with state and federal regulations. The flammable cabinet will be either direct vented to the outside or not vented with gongs left in place.
- 3. All acids will be stored in an acid cabinet.

	A general ventilation system will be maintained for each lab with air intakes and exhausts located so as to avoid intake of contaminated air. Additional engineering controls used in this school's science labs include:		
B. Pro	otective Clothing and Equipment		
Clothi		protection from splashes and spills, should nd should be fire resistant.	
1.	Conduct a personal protective equipmappropriate PPE for conditions, equipactivities requiring PPE and type of P	<u> </u>	
A	Activity	Type of PPE required	
e	e.g. chemical handling	chemical goggles	
3.	d. Gloves appropriate to the mat	nemical transfer and handling. ed shoes, or bare feet in labs. vorn unless a disposable apron is worn. erials and task will be provided. All gloves e teacher will check manufacturer's for all employees at no cost.	
5.6.		be reported to the CHO by the teacher.	

- d. Other safety equipment at this school:

7.	Fire alarms and emergency telephone are located near each lab, at
	(locations).
8.	Conduct work with toxic chemicals in a fume/vapor hood. Confirm hood
9.	performance before use. Additional protective clothing and equipment practices at this school:
7.	Additional protective clothing and equipment practices at this school.
C. Ho	usekeeping
	nstructor is responsible for keeping his or her workspace clean and is jointly sible for common laboratory areas.
1.	Keep unobstructed access to emergency equipment such as showers, eyewash, fire extinguishers, fire blankets, and emergency exits.
2.	Keep work areas clean and uncluttered, with chemicals and equipment properly
	labeled and stored. Clean the work area at the end of each operation or each day.
	Make sure all gas and water outlets are completely shut off. Return all items used
2	in the experiment to their proper storage location.
3.	Dispose chemical wastes according to Department of Environmental Protection
Δ	<u>hazardous waste or solid waste rules.</u> (Scroll to chapters 850 and 851.) Secure gas cylinders.
	Clean up any spills on the floor or bench immediately.
6.	Additional housekeeping rules for chemical labs in this school:
D. Ha	zardous Material Handling and Storage
Follow dispos	v all federal, state and local regulations for material handling and storage and waste al.
1.	Chemicals will be stored in Room(s) (room number).
	(person or position) will oversee the chemical storage
	room(s).
2.	
2	(room number).
3.	All chemicals in the stockroom should be stored according to chemical
	compatibility. Chemicals will be segregated by hazard classification and compatibility in a well-identified area with local exhaust ventilation.
	companioning in a won recommon and with room extraust ventuation.

- 4. Use appropriate shelving or cabinets. If metal clips are used to hold shelves, they should be inspected for corrosion and replaced as necessary.
- 5. Store flammable liquids in approved fire cabinets. Where possible, vent flammable cabinets to the outdoors. If not possible to vent to the outdoors, do not vent the cabinet at all (leave the bungs on place).
- 6. Do not store chemicals on the floor (except gas cylinders) or above eye level.
- 7. Gas cylinders should be properly secured, segregated according to compatibility, and stored upright and away from heat sources.
- 8. Restrict access to chemical storage areas through signage and secure locks. No student or unauthorized faculty should be allowed in storage area unsupervised.
- 9. Make sure shelves holding containers are secure. Attach anti-roll lips on shelves to prevent chemicals from falling.
- 10. When opening newly received chemicals, immediately read the warning label to be aware of any special storage precautions like refrigeration or inert atmosphere storage.
- 11. Storage of chemicals is not allowed at the lab bench or areas outside the designated chemical storage room, such as in aisles, stairwells or hallways or on desks or floors.
- 13. Any chemicals identified during the inventory as expired, outdated, unlabeled, unknown, or unwanted must be listed for disposal. See **Waste Disposal** section.
- 14. Mark the acquisition dates on all peroxide forming chemicals, and test them for peroxides or dispose of them after six months.
- 15. Provide spill cleanup supplies (absorbents, neutralizers) in any room used for chemical storage or use.
- 16. Exhaust air from the stockroom should be ducted directly to the outside. At this school, ______ (person or position) is responsible for ensuring that the exhaust air is properly ducted.
- 17. Use refrigerators of explosion-proof, or explosion safe design only. Standard refrigerators that have not been converted should never be used to store flammable chemicals; a spark from a light bulb may ignite flammable vapors. Do not store food in the refrigerator.
- 18. Chemicals should be dated upon receipt, dated to be disposed where appropriate, and dated when opened (e.g., peroxides, anhydrous ethers, sodium nitrites, etc.).
- 19. Chemical containers should be periodically checked for rust, corrosion, and leakage.
- 20. Chemical labels should state name of chemical, be firmly attached to the container, list hazards, and name responsible party (manufacturer).
- 21. Chemical labels must be readable and free from chemical encrustation.
- 22. Maintain a clear access to and from the storage areas. Where possible, two separate exits shall be provided in chemical storage areas.
- 23. Highly toxic chemicals (LD 50 50 mg/kg) whose containers have been opened will be stored in secondary containers.

) will examine stored chemicals a				
	least (frequency) for container integrity.						
25.	Additional procedures for chemical handling and storage at this school include:						
Insp	pections						
1.			ponsible for activating safety				
	showers and eyewash fountain	s	(frequency) to flush the lines and				
	to verify proper operation.						
2.			ponsible for assuring that fume				
	hoods are monitored quarterly	to ensure adequa	ate airflow (75-125 linear feet per				
	minute). [SafetyWorks! can co						
3.	(person o	r position) is res	ponsible for making sure fire				
	extinguishes are the correct type	be (ABC), at reco	ommended pressure, are easily				
	accessible, and are inspected n	nonthly. Fire exti	inguishers should be securely				
	mounted on the wall and a sign	n indicating their	location posted above the fire				
	extinguisher.						
4.	Users should inspect personal protective equipment prior to each use.						
			(person				
	or position) is responsible for o						
			eeping and to make sure safety				
	equipment is working.		v 1 1,				
6.	Keep records of inspections:						
	nspection description	Date inspected	Inspected by				
	nspection description		Inspected by				
	nspection description		Inspected by				
	nspection description		Inspected by				
	nspection description		Inspected by				
	nspection description Additional inspection procedure	inspected					
In		inspected					

"The Chemical Hygiene Plan shall include provisions for medical consultation and medical examinations in accordance with paragraph (g) of this section." 29 CFR 1910.1450(e)(3)(vi) and (g)

A. Medical Consultation and Examination

When employees or supervisors suspect that an employee has been exposed to a hazardous chemical to a degree and in a manner that might cause harm to the victim, the victim is entitled to a medical consultation and examination without cost or loss of pay to the employee. Medical records shall be retained according to state and federal laws in accordance with 29 CFR 1910.1020. The events and circumstances that might result in overexposure to a chemical are:

- A hazardous chemical leaked, was spilled, or otherwise released in an uncontrolled manner.
 A hazardous chemical was spilled on the skin or splashed in the eye.
 A person displays signs or symptoms that might indicate overexposure to a
- hazardous chemical including but not limited to rash, headache, nausea, coughing, tearing, irritation or redness of eyes, irritation of nose or throat, dizziness, loss of motor dexterity or judgment.

4.	This school has arranged for (name of healthcare organization)
	to provide medical consultations/examinations in the event of chemical exposure:

B. Exposure Assessment

1.	All chemical exposure incidents shall be documented on an accident report form
	(attach sample form to this plan), along with any action taken. If no further action
	is taken, the reason for that decision should be included. In this school
	(person or position) is responsible for investigating
	chemical exposure incidents.
2	Mathod for investigating avnosura incidents at this school:

2. We mod for investigating exposure medents at this school.		

C. First Aid

1. Personnel trained in first aid should be available during work hours. The following have receive first aid training and are expected to render first aid:

	(list persons or positions)
2.	The closest emergency room with medical personnel is (name and address).
VI. Si	igns and Labels
29CFF	R1910.1450 Appendix A (D)(8)
The fo	llowing signs and/or labels should be posted prominently in the laboratory:
2.	Emergency telephone numbers of emergency personnel, emergency facilities, administration, and the laboratory instructor. Rescue:
VII. S	Spills and Accidents
29CFF	R1910.1450 Appendix A (D)(9)
1.	In the event of a spill, staff must contact the CHO or
	(other authorized persons) before beginning cleanup. The CHO or other authorized person will assess the nature of the spill

 3. 	using the School's Emergency Response Plan to determine appropriate response. The Emergency Response Plan for this school is located at (location). The responsible staff will evacuate all persons from the spill or accident area until certain that the spill is not hazardous to people in the general area (person or position) is responsible for writing the			
٠.	accident report(person or position) will maintain accident records.			
4.	Each student, teacher and staff member must know immediately what to do and where to go in case of any emergency.			
5.	• • •			
6.	The CHO or (other authorized persons) must report the spill to the Department of Public Safety (1-800-452-4664).			
	All waste generated from a chemical spill will be treated as hazardous waste.			
	Employees trained in spill response	Date trained		
9. Additional spill/accident procedures at this school:				
				

VIII. Waste Disposal

"Aim: To assure that minimal harm to people, other organisms, and the environment will result from the disposal, of waste laboratory chemicals." 29 CFR 1910.1450 (Appendix A (D)(11).

Environmental regulations also govern chemical waste disposal. Go to <u>Department of Environmental Protection Rules</u> and scroll to chapters 850 and 851.

1.	Prior to the start of each semester, (pe	ersons or					
	positions) will complete an inventory of stored chemical wastes	(including virgin					
	chemical stock identified as waste) and submit it to the CHO.						
2.	•	or position) will					
	coordinate hazardous waste disposal. Waste will be collected for	disposal at least					
	(frequency).	ursp sour at reast					
3	Indiscriminate disposal by pouring waste down the drain or addi	ng them to the					
3.	general trash is unacceptable. It is not permissible to neutralize of						
	milliliters of corrosive hazardous waste or evaporate, distill, filte	er, or burn other					
4	waste chemicals.						
4.	If large quantities of hazardous chemical wastes are being stored or if a container						
	is full, a hazardous waste pick-up should be scheduled by the CF	IO within 180					
	days of the container becoming full.						
5.	. The CHO or (specify other) is responsi	ble for all					
	hazardous waste manifests and associated paperwork.						
6.	. No waste pick-ups will be scheduled during regular school hours	3.					
7.	. All chemical wastes destined for hazardous waste disposal must	be stored in the					
	designated, signed hazardous waste storage area, Room	, in					
	appropriate DOT approved shipping containers and segregated f						
	All containers must have the following information on the label:						
	"Hazardous Waste"						
	 The chemical contents, 						
	 The date that waste was first put in and 						
	 The date that waste was first par in the The date the container was filled. 						
	 In this school, waste is collected, segregated, stored, tran 	enorted and					
	disposed of as follows (or attach waste disposal plan.):	sported and					
	disposed of as follows (of attach waste disposal plan.).						
8.	When a hazardous waste pick-up is needed, this school will contact						
	(company name) at(phone						
	transport and dispose of hazardous waste.						
	authoport and dispose of nazardous waster						
NOTE	E: Most schools are usually considered Small Quantity Generators	by the					
Department of Environmental Protection. Schools that do not know their regulator status							
should check with DEP (Ann Pistell – 287-7703).							
	20. /						
This so	school is on a (select one) septic system or municipal sewer system						
I.C.							
if on a	If on a septic system:						

<u>No liquid chemicals</u>, other than appropriate cleaning chemicals, will be disposed of down the drain. Non-hazardous liquid chemicals may be solidified for solid waste disposal (i.e. put in the trash). Custodians must be notified of any chemical put in the trash for

disposal. Hazardous waste must not be disposed of down the drain or in the trash. Hazardous waste must be dispose of by a licensed hazardous waste transporter at a facility licensed to accept hazardous waste.

	c			1		
I	t on	a	munici	pal	sewer	svstem:

Non-hazardous liquid may be disposed of down the drain with the permission of the
sewer district (contact name and phone number
). Corrosive hazardous waste, which is hazardous only due to pH (i.e. no
contaminants of heavy metals, solvents, etc.), and which is less than 500 milliliters in
quantity, may be neutralized to a non-hazardous waste prior to disposal. Non-hazardous
liquid chemicals may also be solidified for solid waste disposal (i.e. put in the trash).
Custodians must be notified of any chemical put in the trash for disposal.

IX. Information and Training

29CFR1910.1450(f)

- 1. All employees will be trained on the hazards of the chemicals in the laboratory and how to work safely with them. They will receive training at the time of employment and prior to assignments involving new exposure situations.
- 2. Teachers are responsible for teaching students about hazards and safe practices.
- 3. ______ (person or position) is responsible for ensuring that employees receive information and training to ensure they are aware of the hazards of chemicals that are present in their work area. This training must include the following:
 - a. The contents OSHA Lab Standard and appendices;
 - b. Location and availability of Chemical Hygiene Plan, chemical safety reference materials, including Material Safety Data Sheets and the Permissible Exposure Limits for OSHA regulated substances. In this school:
 - The Chemical Hygiene Plan is kept _____(location).
 - Material Safety Data Sheets are kept _____ (location).
 - Additional safety information is located _____(location).
 - c. Signs and symptoms associated with exposure to hazardous chemicals.
 - d. Methods and observations that may be used to detect the presence or release of a hazardous chemical (visible appearance, odor, monitoring equipment, etc.).
 - e. Knowledge of the hierarchy of protective measures such as engineering controls, work practices, personal protective equipment, and emergency procedures to protect workers from overexposure to hazardous chemicals.
 - f. Emergency procedures to be used in case of a spill or exposure, including clean up methods and equipment needed.
 - g. Use of fire extinguishers and other emergency equipment.

X. Annual Chemical Hygiene Plan Audit

29CFR1910.1450 (e)(4)	
	(person or position) will conduct an audit of all
phases of the Chemical Hygiene	e Plan each year. He or she will provide audit results to
	(people or positions)
who are responsible for taking of	corrective action.