Providing a safe working environment for teachers and students is a serious responsibility for school districts. In the United States during 1990, OSHA issued the Science Laboratory Standard for employees working in laboratories (including academic laboratories such as middle and high schools). The term "laboratory" is defined as "a facility where the laboratory use of hazardous chemicals occurs. It is a workplace where relatively small quantities of hazardous chemicals are used on a non production basis."

Most school employees are covered by another standard called the Hazard Communication Standard. However, because of the dangers and uniqueness inherent in laboratory work, employers are required to cover laboratory workers (including science teachers) under the Laboratory Standard.

The Laboratory Standard is performance based. This means that OSHA provides the basic outline requirements and then each employer writes a plan tailored to their needs. For example, plans may vary from district to district relative to standard operating procedures. However, all plans must contain standard operating procedures. Below is the outline of the plan's basics tenets required by OSHA.

**Elements of Laboratory Safety Plan:**

i. Standard operating procedures

ii. Criteria to determine and implement control measures to reduce employee exposure including engineering controls, use of PPE and hygiene practices.

iii. Requirement that fume hoods and other protective equipment are functioning properly and within specific measures.

iv. Provisions for employee information and training

v. Circumstances where laboratory operation requires prior approval from the employer

vi. Provisions for medical consultation and examinations

vii. Designation of personnel responsible for implementation of CHP including Chemical Hygiene Officer (CHO) and if appropriate, Chemical Hygiene Committee. The Chemical Hygiene Officer is the employer-designated employee who is qualified by training or experience to provide technical guidance in the development and implementation of CHP. This person usually is a chemistry teacher, department head or laboratory technician.

viii. Provision for additional employee protection when working with particularly hazardous substances; e.g. reproductive toxins, carcinogens. OSHA compliance officers initiate inspections by reviewing the employer's plans. They then focus on plan implementation and policing.

No matter where you are geographically, this standard is just that! It is a level of expectation in order to provide for a safer working environment. One note needs added. Although OSHA only covers employees and not students, Chemical Hygiene plans should include students. The rationale is that in order to maintain a safe working environment for teachers as employees, students must also be accountable for following standard operating laboratory procedures.
Future safety articles will deal with various components of the plan and other safety issues.

Ed. note: This will be a regular column on safety in future issues.

LIVE LONG AND PROSPER WITH SAFETY!

Dr. Ken Roy
K-12 Director of Science & Safety & authorized OSHA instructor
c/o Glastonbury Public Schools
Glastonbury, CT 06033-3099
Fax 860-652-7275
E-Mail: royk@glastonburyus.org