

# HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE PLAN

## Kenyon College

### PURPOSE

The purpose of this Emergency Response Plan is to plan for and execute an organized response to hazardous waste spills or releases which may occur at Kenyon College to effectively minimize employee exposure and injury as well as safeguard the environment.

### POLICY

The Occupational Safety and Health Administration (OSHA), Title 29 of the Code of Federal Regulations, part 1910.120, entitled "Hazardous Waste Operations and Emergency Response," outlines the requirements to be included in an emergency response plan. The standard covers workers responding to emergencies involving hazardous materials (e.g., spills). All employees will be trained by their department on the substances they work with or around which may become hazardous due to a spill or release, how to recognize potential problems, report the problem, and protect themselves.

Kenyon College has supplied a copy of this emergency plan to the following responders: College Township Fire Dept., Campus Safety and Knox County LEPC

### RESPONSIBILITIES

#### PLANNING FOR CHEMICAL SPILL EMERGENCIES

Prepare a telephone emergency sheet. This sheet should be posted by each telephone and should contain emergency numbers and location of your department spill control equipment. Postable Emergency Phone Number forms are available upon request from the Environmental Safety Office.

Train all employees in chemical spill procedures when they are first hired and then periodically thereafter. This should include all aspects of safe handling of materials in their work area, the use of fire extinguishers, and the appropriate action to be taken in case of a release of materials they work with. Document training and maintain on file.

#### EMERGENCY RECOGNITION PREVENTION

Employees are to be trained that they are to report to their supervisor any and all conditions that are not normal.

Clearly label where chemicals and waste chemicals are stored. Accurately label the waste bottles as to their exact contents.

Audit chemical supplies and use inventory control. Survey all the chemicals in your labs, shops, and storerooms and submit for disposal all of those chemicals that have not been used within the past year or two.

Fire extinguishers, eyewashes, spill kits, exit routes, and any additional hazards should be clearly marked.

#### DEPARTMENTAL SAFETY

Chemical spill cleanup kits are a must in the laboratory and other service areas that use chemicals. Chemical neutralizers and absorbents can be quickly and effectively used to contain a spill.

A list of safety equipment and the area where it may be found must be made known to the employees, Campus Safety, and The Environmental Safety Office.

#### DESIGNATION OF AREA HAZARDS

Each department must maintain both a list of hazardous substances and floor plans to visually show the location of hazardous substances which are waste products or may become waste products through accidental spills or releases. Floor plans must indicate evacuation routes should an incident occur.

#### WHO CLEANS UP THE SPILL?

For chemical spills which do not involve injury, that do not represent a fire or life hazard, that are less than a gallon, and for which you have had proper training and proper personal protective equipment, you clean up the spill.

For spills of a highly toxic or reactive chemical, spills of an unknown chemical, spills that you do not have proper training or proper personal protective equipment to do the cleanup, or spills for which you have any questions or doubts about your ability to clean up the spill, contact Environmental Safety for assistance.

Kenyon College does not have a hazmat team on campus. In the event of a spill, release or emergency situation which cannot be handled by our staff, the situation must be reported to the department supervisor. The supervisor will determine if the situation warrants the fire department. If so, the supervisor will immediately inform the fire department to initiate the emergency response procedure. The supervisor must also report the location and type of incident to Campus Safety.

## PERSONAL PROTECTIVE EQUIPMENT GENERAL REQUIREMENTS

**PURPOSE:** To establish and define general requirements for personal protective equipment.

**POLICY:** The Occupational Safety and Health Administration (OSHA) standard Title 29, CFR Part 1910, Section 132, outlines the general requirements for personal protective equipment in the workplace. OSHA requires the College to assess the work place to determine if hazards are present, or are likely to be present, which necessitates the use of personal protective equipment (PPE). If such hazards are present or likely to be present, we are to select and have affected employees use properly fitted personal protective equipment suitable for protection from existing hazards.

The College must certify in writing that a workplace hazard assessment has been performed.

**INTRODUCTION:** Personal protective equipment should not be used as a substitute for engineering, work practice, and/or administrative controls. Personal protective equipment should be used in conjunction with these controls to provide for employee safety and health in the work place. Personal protective equipment includes all clothing and other work accessories designed to create a barrier against work place hazards.

Using personal protective equipment requires hazard awareness and training on the part of the user. Employees must be aware that the equipment does not eliminate the hazard. If the equipment fails, exposure will occur. To reduce the possibility of failure, equipment must be properly fitted and maintained in a clean and serviceable condition.

Selection of the proper personal protective equipment for a job is important. It is important to understand the equipment's use and limitations. The equipment must not be altered or removed even though an employee may find it uncomfortable. (Sometimes equipment may be uncomfortable simply because it does not fit properly).

**PROCEDURE:** Assess the workplace to determine if hazards that require the use of personal protective equipment are present or are likely to be present. Select and have affected employees use properly fitted personal protective equipment suitable for protection from existing hazards. Types of Personal Protective Equipment covered within this procedure:

- A. Head Protection
- B. Eye and Face Protection
- C. Ear Protection
- D. Respiratory Protection
- F. Torso Protection
- G. Arm and Hand Protection H. Foot and Leg Protection I. Other Related Issues

**TRAINING:** Before doing work requiring use of personal protective equipment, employees must be trained to know when personal protective equipment is necessary; what type is necessary; how it is to be worn; and what its limitations are, as well as know its proper care, maintenance, useful life, and disposal.

The College is to certify in writing that training has been carried out and that employees understand it. Each written certification must contain the name of each employee trained, the date(s) of training, and identify the subject certified.

#### A. HEAD PROTECTION

Protection of head injuries is an important factor in every safety program.

Head injuries are caused by falling or flying objects, or by bumping the head against a fixed object. Head protection, in the form of protective hats, must do two things - resist penetration and absorb the shock of a blow. This is accomplished by making the shell of the hat out of a material hard enough to resist the blow, and by utilizing a shock-absorbing lining composed of headband and crown straps to keep the shell away from the wearer's skull. Protective hats are also used to protect against electrical shock.

#### B. EYE AND FACE PROTECTION

Eye and face protective equipment is required by OSHA where there is a reasonable probability of preventing injury when such equipment is used. These stipulations also apply to supervisors and management personnel, and should apply to visitors while they are in hazardous areas.

Suitable eye protectors must be provided where there is a potential for injury to the eyes or face from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, potentially injurious light radiation or a combination of these.

Typical injuries are caused by flying or falling blunt metal objects. Lacerations, fractures, broken teeth, and contusions are common types of reported injuries.

OSHA and the National Society to Prevent Blindness recommend that emergency eyewashes be placed in all hazardous locations. First-aid instructions should be posted close to potential danger spots.

Design, construction, tests, and use of eye and face protection purchased prior to July 5, 1994, must be in accordance with ANSI Z87.1-1968 USA.

#### C. EAR PROTECTION

Exposure to high noise levels can cause hearing loss or impairment. It can create physical and psychological stress. There is no cure for noise-induced hearing loss, so the prevention of excessive noise exposure is the only way to avoid hearing damage.

Earplugs or earmuffs must be properly fitted and maintained in a clean and serviceable condition.

#### D. RESPIRATORY PROTECTION

Regulations concerning the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, vapors, or in oxygen-deficient environments can be found in Title 29, CFR Part 1910.134.

See Kenyon College Respiratory Program

#### E. TORSO PROTECTION

Many hazards threaten the torso: heat, splashes from hot metals and liquids, impacts, cuts, acids, and radiation. A variety of protective clothing is available; vests, jackets, aprons, coveralls, and full body suits.

#### F. ARM AND HAND PROTECTION

Examples of injuries to arms and hands are burns, cuts, electrical shock, amputation, and absorption of chemicals.

There is a wide variety assortment of gloves, hand pads, sleeves, and wristlets for protection against various hazardous situations. The work activities of the employees should be studied to determine the degree of dexterity required, the duration, frequency, and degree of exposure to hazards and the physical stresses that will be applied.

Also, it is important to know the performance characteristics of gloves relative to the specific hazard anticipated; e.g., exposure to chemicals, heat, or flames. Rubber protective equipment for electrical workers must conform to the requirements established in the American Society for Testing and Materials (ASTM).

The employee should become acquainted with the limitations of the clothing used.

#### G. FOOT AND LEG PROTECTION

For protection of feet and legs from falling or rolling objects, sharp objects, molten metal, hot surfaces, and wet slippery surfaces, workers should use appropriate foot guards, safety shoes, or boots and leggings. Leggings protect the lower leg and feet from welding sparks. Safety shoes should be sturdy and have an impact-resistant toe. Some shoes have metal insoles to protect against puncture wounds.

#### H. OTHER RELATED ISSUES

Night workers and flag men who might be struck by moving vehicles need suits or vests designed to reflect light.

**CONCLUSION:** An on-going safety program should be used to motivate employees to continue to use protective gear.

Personal protective equipment can be effective only if equipment is selected based on its intended use, employees are trained in its use, and the equipment is properly tested and maintained, and routinely worn.