
OSHA/PESH HEALTH^A_N^D SAFETY



TRAINING REQUIREMENTS

REVISED 2003 EDITION



TABLE OF CONTENTS

Introduction	1
OSHA Standards Requiring Training	2
Biological Hazards	2
AIDS/HIV, Hepatitis B, and Hepatitis C	2
Tuberculosis	3
Hazardous Substances	3
Toxic Substances	3
Laboratories	4
Ethylene Oxide	5
Confined Spaces	5
Spills and Leaks	6
Ionizing Radiation	7
Personal Protective Equipment	8
Respiratory Protection	8
Other Personal Protective Equipment	8
Emergency Plans and Fire Protection	9
Emergency Action and Fire Prevention Plans	9
Fire Brigades	9
Portable and Fixed Fire Extinguishers	9
Fire Detection Systems	10
Electrical and Energy Safety	10
Electrical Safety Practices	10
Energy Control (Lockout/Tagout)	10
Miscellaneous	11
Medical Services and First Aid	11
Accident Prevention Signs and Tags	11
Training Resources	12
Internet Resources	Inside Back Cover

OSHA/PESH HEALTH AND SAFETY TRAINING REQUIREMENTS

The purpose of this booklet is to provide guidance to Health and Safety Committee members on mandatory health and safety training requirements.

Public employees are protected by the New York State Public Employees Safety and Health (PESH) Act. PESH enforces the U.S. Occupational Safety and Health Administration (OSHA) health and safety standards found in the Occupational Safety and Health Standards for General Industry [29 CFR 1910] and Construction [29 CFR 1926]. PESH must, at minimum, enforce the requirements of the OSHA standards, although some PESH standards contain additional requirements than their OSHA counterparts. For example, the PESH air contaminants code, OSHA 1910.1000, incorporates updates proposed by OSHA in 1989, which were later thrown out by Federal Courts. These are called the Final Rule Limits, and are **not** found in the OSHA Federal rules.

Many OSHA standards require that employers provide training on workplace hazards and the precautions necessary to protect workers from harm.

WHEN IS TRAINING REQUIRED?

Most OSHA standards require training upon the initial assignment to a job with potential hazards, and whenever exposure conditions subject to training change. Some standards also have requirements for annual training. The training must be at no cost to employees and during working hours.

WHO DOES THE TRAINING?

Most standards do not specify who does the training or the qualifications of the trainer. The Bloodborne Pathogens Standard is an exception to this, requiring a qualified trainer and forbidding use of videotapes alone. Health and Safety Committees should discuss selection of trainers.

WHAT DOES THE TRAINING COVER?

Most OSHA standards specify what topics have to be covered in training. The training should be appropriate in content and vocabulary to the educational level, literacy, and language of the involved employees. Many recent OSHA standards require employers to show that employees understand the material covered, and certify that adequate training has occurred.

OSHA STANDARDS REQUIRING TRAINING

This handbook covers the OSHA training requirements for:

- Biological hazards;
- Hazardous substances;
- Ionizing radiation;
- Personal protective equipment;
- Emergency planning and fire protection;
- Electrical and energy hazards;
- Medical services; and
- Accident prevention signs and tags.

Besides the training requirements for the above subjects, OSHA requires training for other specific hazards such as asbestos, lead, noise, flammable and combustible liquid, and welding, and for many safety hazards, such as fall protection and forklift operation. You should refer to specific OSHA standards for training. In addition, New York State has training requirements for situations not covered by OSHA standards, such as use of physical force.

Biological Hazards

AIDS/HIV, Hepatitis B, and Hepatitis C

Employees who face a significant risk of occupational exposure to blood or body fluids must receive training, at least annually, under OSHA's Bloodborne Pathogens Standard [29 CFR 1910.1030]. The trainer must know the subject matter as it applies to the specific workplace addressed by the training.

Training requirements include:

- Access to and explanation of the standard and the employer's exposure control plan;
- Who is at risk, symptoms, method of transmission, and how to recognize activities that may involve exposure to blood and body fluids;
- Use and limitations of methods to reduce or prevent exposure;
- The types, selection, proper use, location, removal, handling, decontamination, and disposal of personal protective equipment;
- Information on the Hepatitis B vaccine, including effectiveness, safety, method of administration, and benefits of free vaccination;
- What to do and who to contact in an emergency involving blood or other potentially infectious materials;
- Procedures to follow in an exposure incident, including reporting method and medical follow-up;
- The employer's post-exposure evaluation and follow-up after an exposure

incident;

- Explanation of signs, labels and/or color coding; and
- An opportunity for question and answer period with the trainer.

Employees in HIV and HBV laboratories must receive supplementary initial training, in addition to the above.

* It is important to note, though not a training requirement, the standard requires employers to solicit input from non-managerial employees (who are responsible for direct patient care and potentially exposed to injuries from contaminated sharps) in the identification, evaluation, and selection of effective engineering and work practice controls. The solicitation shall be documented in the Exposure Control Plan.

Tuberculosis

OSHA regulates exposure to the tuberculosis (TB) bacteria through its general duty clause requiring employers to have safe and healthy workplaces. Training is required for employees in health care settings (hospitals and clinics), correctional institutions, homeless shelters, long-term care facilities, and drug treatment centers, who have potential exposure to exhaled air of individuals with suspected or confirmed TB, and exposure to high hazard procedures performed on persons who may have TB and who have the potential to produce potentially infectious airborne respiratory secretions. This training must be done upon first assignment to an applicable work site, and repeated annually.

Training requirements include:

- The hazards of TB transmission;
- The signs and symptoms suggestive of TB;
- Information on medical testing and therapy;
- Information on site-specific procedures, including the purpose and proper use of controls; and
- Respirator training.

Hazardous Substances

Toxic Substances

OSHA's Hazard Communication Standard (HazCom, Right to Know) requires that employers provide training to all employees exposed to hazardous chemicals [29 CFR 1910.1200]. This training must be done at the time of

initial assignment and whenever a new hazard is introduced into the area.

Training must include information on:

- The requirements of the HazCom Standard;
- Operations where hazardous chemicals are present;
- The location and availability of the written HazCom Program, inventory of hazardous chemicals, and Material Safety Data Sheets (MSDSs);
- Ways to detect the presence or release of hazardous chemicals in the workplace;
- Physical and health hazards of the chemicals present;
- Precautions, including work practices, emergency procedures, and personal protective equipment; and
- Details on the HazCom Program, labeling system, and how to interpret MSDSs.

Section 878 of New York State's Right To Know Law, enforced by the NYS Attorney General's Office, has more stringent training requirements for employees routinely exposed to toxic substances. This law requires that the training be done before the introduction of new hazardous chemicals, if exposure conditions change, and conducted at least annually.

Training requirements for toxic substances include:

- Their location;
- Their properties;
- Their names, including generic or chemical names, trade names, and other commonly used names;
- Their acute and chronic effects;
- The symptoms of exposure at hazardous levels;
- The potential for flammability, explosivity, and reactivity;
- Emergency procedures;
- Proper conditions for safe use and exposure; and
- Clean up and spill procedures.

Laboratories

OSHA's Occupational Exposure to Hazardous Chemicals in Laboratories Standard [29 CFR 1910.1450] applies to all laboratories that use hazardous chemicals on a laboratory scale. Employees must be informed and trained in the hazards of chemicals present in their work area at the time of initial assignment, prior to assignments involving new exposures, and be given refresher training at a frequency to be determined by the employer. Laboratories do not have to comply with OSHA's HazCom Standard, but do

have to conduct NYS Right To Know training.

Requirements for information and training include:

- The contents of this standard and its appendices made available to employees;
- The location, availability, and applicable details of the employer's written Chemical Hygiene Plan;
- Permissible Exposure Limits of chemicals used;
- Signs and symptoms of exposure;
- Location and availability of known reference materials (including Material Safety Data Sheets);
- Methods and observations to detect the presence or release of a hazardous chemical;
- Physical and chemical hazards of chemicals in the work area; and
- Precautions employees can take to protect themselves.

Ethylene Oxide

OSHA's Ethylene Oxide Standard [29 CFR 1910.1047] requires that employees who are potentially exposed to ethylene oxide (EtO) at or above the action limit or above the excursion limit be trained at the time of initial assignment and at least annually. EtO is used in health care for sterilization. It is both a carcinogen and extremely flammable.

Training and information requirements include:

- Information about the standard, its appendices, its location, and availability;
- Operations in the work area where EtO is present;
- Information on medical surveillance requirements;
- Methods and observations that may be used to detect the presence of EtO in the work area;
- The physical and chemical hazards of EtO;
- Precautions, including work practices, emergency procedures, and personal protective equipment; and
- Details of the Hazard Communication Program.

Confined Spaces

Confined spaces continue to kill New York's public employees. The ability to recognize confined space hazards is the most important aspect of confined spaces training. Employees enter confined spaces during inspection, supervisory, or miscellaneous operations, unaware of the imminent risks. Therefore, they must be trained and made aware of all potential hazards.

Intermittent entries may be more hazardous than routine entries because workers may not appreciate or understand the hazards as thoroughly.

OSHA's Permit-Required Confined Spaces Standard [29 CFR 1910.146] requires that employees who enter, attend, supervise, or monitor permit-required confined space entry must be trained:

- 1) Before first assignment;
- 2) Before a change in assigned duties;
- 3) If there is a change in the hazard for which the employees have not been trained;
- 4) If the employer's required procedures are not being followed; or
- 5) If there are inadequacies in an employee's knowledge or use of these procedures.

The training must ensure an employee's understanding, knowledge, and skills needed. The employer must certify training.

Training requirements include:

- Permissible Exposure Limits of chemicals used;
- Possible hazards including information on the mode, signs or symptoms, and consequences;
- Proper use of required equipment;
- Knowledge of procedures required when performing specific assignments; and
- Employees with rescue duties must also practice permit space rescues at least once every 12 months, and must be trained in first aid and CPR.

Spills and Leaks

OSHA's Hazardous Waste Operations and Emergency Response Standard [29 CFR 1910.120] covers emergency response to spills and leaks. Section Q of this standard has extensive training requirements for employees who participate, or are expected to participate, in emergency responses to spills and leaks. This training must take place before an employee can take part in emergency responses. Annual refresher training or annual demonstration of competency is required. Different levels of training and/or competency are required for first responders at the awareness level, first responders at the operations level, hazardous materials technicians, hazardous materials specialists, and on-scene incident commanders. Trainers who have completed training courses in the subjects or have other acceptable qualifications must conduct training. The employer must certify training or competency determination.

Ionizing Radiation

OSHA's Ionizing Radiation Standard [29 CFR 1910.96] states that New York State laws and regulations on this topic apply. The Ionizing Radiation section of the State Sanitary Code [Part 16 of NYCRR] applies to radioactive materials licensees and registrants of radiation-producing equipment such as x-ray machines. Training is required for all individuals working in or frequenting any portion of a controlled area. This would include users, custodial and maintenance staff, supervisors, etc. This training must be given before an individual begins work in a controlled area and at least annually. The training must be documented and records kept for three years.

Training and information requirements include:

- Posting of the regulations and operating procedures (including emergency procedures);
- Information on storage, transfer or use of radioactive material or radiation-producing equipment, or of radiation in the controlled area;
- The operating procedures applicable to work under the license or registration, and the health problems associated with exposure to such radiation or radioactive material;
- Instruction in, and a demonstration of familiarity with, the precautions and procedures to minimize exposure, as well as the purposes and functions of protective devices used;
- Instruction in, and orders to observe, applicable parts of this regulation and licenses for the protection of personnel from exposure to radiation or radioactive material;
- Employee responsibility to report promptly to licensee or registrant any condition which may lead to a violation of department regulations or unnecessary exposure to radiation or radioactive material;
- The appropriate response to warnings made in the event of an unusual occurrence or malfunction that may involve exposure; and
- Advising of employee right to be given radiation exposure reports required under section 16.13(d).

New York City has separate regulations for training. Section 175.07 of the NYC Health Code requires that a formalized training program be provided for employees in radiation or diagnostic facilities. The training must include quality assurance provisions and information on radiation safety procedures. Radioactive material licensees must provide training according to Nuclear Regulatory Commission requirements. The above NYS training requirements would meet NYC requirements.

Personal Protective Equipment

Respiratory Protection

OSHA's Respiratory Protection Standard [29 CFR 1910.134] requires training at least annually for employees who are required to wear respirators. Instruction must be done by competent persons.

Training must include:

- The proper use and limitations of respirators;
- The proper selection, inspection, and maintenance of respirators;
- Instructions and hands-on experience in handling, proper fitting, seal checks, adjusting, wearing in normal atmosphere for a familiarity period; and
- The written procedures covering the safe use of respirators in dangerous atmospheres.

In addition, the individual supervising the required respirator protection program must be qualified and be instructed in the proper selection, use, care, cleaning and maintenance of respirators. Supervisors must also be trained in the proper selection, use, and maintenance of respirators.

Other Personal Protective Equipment

OSHA's updated Personal Protective Equipment Standard requires that employees required to wear personal protective equipment (PPE) be trained in its use (excluding respirators) [29 CFR 1910.132].

The standard requires that employees must demonstrate an understanding of the training and an ability to use PPE properly before being allowed to perform work requiring PPE. Employers must retrain employees who do not have the understanding and skills required, or when workplace changes or PPE changes make previous training obsolete. The employer has to certify the training in writing.

Employees must be trained to know at least the following:

- When PPE is necessary;
- What PPE is necessary;
- The proper use of PPE;
- The limitations of PPE; and
- The proper care, maintenance, useful life, and disposal of PPE.

Emergency Plans and Fire Protection

Emergency Action and Fire Prevention Plans

OSHA's Employee Emergency Plans and Fire Prevention Plans Standard [29 CFR 1910.38] requires training for all persons assigned to assist in the emergency evacuation of employees. This training must take place when any emergency plan is developed or changed, or when an employee's responsibilities under the plan changes. The employer must review with each employee applicable parts of the emergency plan, and the written plan must be available for employee review.

This OSHA standard also requires training of all employees about the fire hazards of the materials and processes associated with their work tasks. In addition, the employer must review with each employee the parts of the fire prevention plan affecting the employee. The written plan must be available for employee review.

For employers with 10 or fewer employees, these plans need not be written.

Fire Brigades

OSHA Fire Brigades Standard [29 CFR 1910.156] requires training of all fire brigade members before they can perform fire brigade emergency activities. Retraining must be frequent enough to ensure each fire brigade member can perform assigned duties satisfactorily and safely (at least quarterly for interior structural fire fighting, otherwise at least annually). The training must be suitable to the assigned duties and functions of the brigade member. Information, including written procedures, must also be provided on special hazards such as storage and use of flammable liquids and gases, toxic chemicals, etc. to which fire brigade members may be exposed during fire and other emergencies. Fire brigade leaders and instructors must be provided with additional comprehensive training. The quality of the training and education program must be similar to those conducted by fire training schools.

Portable and Fixed Fire Extinguishers

OSHA's Portable Fire Extinguishers Standard [29 CFR 1910.1571] requires training upon initial employment and annually thereafter, of all employees expected or allowed to use fire extinguishers. Training requirements for employees allowed to use fire extinguishers include familiarization with general principles of fire extinguisher use and with hazards associated with incipient stage fire fighting. Employees designated to use fire-fighting

equipment must receive training, including hands-on practice, in the use of appropriate fire fighting equipment.

OSHA's Fixed Extinguishing Systems Standard [29 CFR 1910.160] requires training of all employees designated to inspect, maintain, operate, or repair fixed extinguishing systems. The training must be reviewed annually for updating.

Fire Detection Systems

OSHA's Fire Detection Systems Standard [29 CFR 1910.164] requires that all employees who service, maintain, and test fire detection systems must be trained and knowledgeable in the operations and functions of the system.

Electrical and Energy Safety

Electrical Safety Practices

OSHA's Electrical Safety-Related Work Practices Standard [29 CFR 1910.332] requires training of employees facing a risk of electrical shock that is not reduced to a safe level by precautions in 1910.303-1910.308. This includes blue collar supervisors, electrical and electronic engineers and technicians, electricians, industrial machine operators, material handling equipment operators, mechanics and repairers, painters, riggers and roustabouts, stationary engineers, and welders.

Such employees must be trained in and familiar with the safety-related work practices required by 1910.331 - 1910.335 that pertain to their job assignments. Unqualified persons at risk (those not permitted to work on or near exposed energized parts) must also be trained in other safety practices necessary for their safety.

Qualified persons must also, at a minimum, be trained in:

- The skills and techniques needed to distinguish live parts from other electrical equipment parts;
- The skills and techniques needed to determine the voltage of exposed live parts; and
- The clearance distances specified in 1910.333(c), and corresponding voltages.

Energy Control (Lockout/Tagout)

OSHA's Control of Hazardous Energy (Lockout /Tagout) Standard [29 CFR 1910.1471] requires training of all employees where servicing and

maintaining machinery and equipment could cause injury to the employee through the release of stored energy.

Retraining must be done:

- 1) When there is a change in assignments;
- 2) A change in machines, equipment, or processes that present a new hazard;
- 3) A change in energy control procedures; or
- 4) If periodic inspections show, or the employer believes an employee has inadequate knowledge or use of energy control procedures.

Employees authorized to service or maintain machinery and equipment must be trained in:

- The recognition of applicable hazardous energy sources;
- The type and magnitude of the energy available;
- Methods for energy isolation and control; and
- The purpose and use of energy control procedures.

Other affected employees in the work area must be instructed in energy control procedures, and in the prohibition of restarting or re-energizing machinery that has been locked out or tagged out. For tagout systems, authorized and affected employees must be trained in the limitations of tags.

The employer must ensure that the purpose and function of the energy control program is understood, and that employees have obtained the needed knowledge and skills. The employer must also certify that training has been accomplished and is up to date.

Miscellaneous

Medical Services and First Aid

OSHA's standard on Medical Services and First Aid [29 CFR 1910.151] requires that one or more persons receive adequate first aid training to render first aid if there is no infirmary, clinic, or hospital in near proximity to the workplace which is used for the treatment of all injured employees.

Accident Prevention Signs and Tags

OSHA's standard on specifications for accident prevention signs and tags [29 CFR 1910.145] requires instruction of all employees in the following:

- The meaning of danger signs;
- The meaning of warning signs;
- The meaning of warning instruction signs; and
- The meaning of accident prevention tags.

TRAINING RESOURCES

A number of organizations can provide assistance in health and safety training. These include:

- **PEF Health and Safety Program:**
(800) 342-4306 or (518) 785-1900 X 254
- **American Federation of Teachers Health and Safety Program:**
(800) 238-1133 or (202) 393-5674
- **New York State AFL-CIO Health and Safety Program:**
(518) 436-8516
- **New York State COSH Groups:**
NYCOSH: New York City region(212) 627-3900
CNYCOSH:Syracuse(315) 471-6187
ALCOSH: Jamestown(716) 488-0720
ROCOSH: Rochester(716) 244-0420
WNYCOSH: Buffalo(716) 833-5416
- **NYS Network of Occupational Health Clinics:**
Albany:(518) 690-4420
Buffalo:(716) 894-9366
Cooperstown:(607) 547-6023
Long Island:(631) 642-9100
NYC/Mt. Sinai:(212) 987-6043
NYC/Bellevue:(212) 562-4572
Rochester:(585) 274-2554
Syracuse:(315) 432-8899
- **NYS Department of Health, Bureau of Occupational Health:**
(800) 458-1158
- **Hunter College Center for Occupational and Environmental Health:**
(212) 481-8790

INTERNET RESOURCES ON OCCUPATIONAL HEALTH AND SAFETY

The PEF Health and Safety Program www.pef.org click onto health and safety in the index.

In addition to containing a wealth of occupational health and safety information, the PEF site links to many sites including ...

OSHA

(Occupational Safety and Health Administration)

<http://www.osha.gov>

NIOSH

(National Institute for Occupational Safety and Health)

<http://cdc.gov/niosh>

NYCOSH

(NY Committee for Occupational Safety and Health)

<http://www.nycosh.org>

NYSUT

(NY State United Teachers)

<http://www.nysut.org>

DOH

New York State Department of Health

<http://www.health.ny.state>

DOL

New York State Department of Labor

<http://www.labor.ny.state.us/>

Originally written and prepared in 1999 by

Michael McCann, Ph.D., C.I.H.

Edited by

John Van Raalte, C.I.H. in 2003

*This booklet was produced by PEF's Health and Safety Program.
Partial funding was provided by a grant from the New York State
Department of Labor Hazard Abatement Board and the State of
New York/PEF Statewide Health and Safety Committee.*

May 1999 ... Revised June 2003