OKLAHOMA CITY COMMUNITY COLLEGE

PERSONAL PROTECTIVE EQUIPMENT PROGRAM

Environmental Health and Safety

Reviewed and Revised: August 28, 2008
Reviewed and Revised: August 6, 2010
Reviewed and Revised: September 13, 2011

Developed in accordance with OSHA Standard
29 CFR 1910.132
1.0 **General Information.** The Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910.132 imposes important requirements relating to basic use of personal protective equipment (PPE). A variety of PPE is available and commonly used while performing potentially hazardous tasks. PPE may include, but is not limited to, safety glasses, safety goggles, ear protection, hard hats, gloves, lab coats, respirators, or any other equipment used to protect against injury or illness. Optimal performance requires PPE be properly used and maintained.

2.0 **Scope and Application.** OSHA requires PPE to be provided by employer, used by employee, and maintained in a sanitary and reliable condition. This rule applies to all hazards involving processes or environmental hazards. This rule also covers chemical hazards, radiological hazards and mechanical irritants that are encountered in the workplace and are capable of causing injury or illness through absorption, inhalation, ingestion, or physical contact.

2.1 29 CFR 1910.132 sets forth certain requirements on the selection and use of PPE including:

2.1.1 Conducting a hazard assessment to determine if hazards present necessitate the use of PPE.

2.1.2 Certifying in writing that the hazard assessment was conducted.

2.1.3 Selecting PPE on the basis of hazard assessment and affected workers must be properly trained.

2.1.4 Repairing or discarding defective or damaged PPE.

2.1.5 Establishing training requirements for employees using PPE. Employees must be able to demonstrate an understanding of the training before certification of training can be completed.

2.1.6 Certifying in writing that training programs were provided and understood using the PPE Employee Training Certification form attached as Appendix “A” and available online at [PPE Certification Form](#).

3.0 **Program Description.** Engineering controls\(^1\) are the methods preferred for the control of hazards. These controls will eliminate a hazard at the source and do not rely on employee behavior for their effectiveness. Engineering controls offer the best and most reliable means of protection. Therefore, these controls are the first line of defense in eliminating workplace hazards. Whenever engineering controls are not available or are not fully capable of providing protection, the employee must wear appropriate PPE.

4.0 **Roles and Responsibilities.**

4.1 Departments are responsible for:

4.1.1 Conducting workplace hazard assessments;

4.1.2 Selecting PPE appropriate to the hazard identified during the assessment;

4.1.3 Providing PPE for employees at no cost to the employee;

4.1.4 Training employees in elements of PPE use; and

4.1.5 Maintaining documentation of hazard assessment and training where required.

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\(^1\) Engineering controls eliminate or reduce exposure to hazards through the use or substitution of engineered machinery or equipment. Examples include self-capping syringe needles, ventilation systems, sound-dampening materials to reduce noise levels, safety interlocks, and radiation shielding.
4.2 Supervisors are responsible for:
4.2.1 Conducting hazard assessments to determine if hazards present necessitate the use of PPE;
4.2.2 Certifying in writing that a hazard assessment has been completed for each job in the workplace. The hazard assessment form is located online at Job Safety Analysis Form;
4.2.3 Ensuring employees are trained on appropriate use of PPE;
4.2.4 Certifying in writing that PPE training for each employee required to use PPE has been completed prior to employee being required to use PPE;
4.2.5 Ensuring employees use PPE when required; and
4.2.6 Taking appropriate action which may include retraining and/or disciplinary action when employees do not use PPE.

4.3 The Office of Emergency Planning and Risk Management/Environmental is responsible for:
4.3.1 Providing assistance in conducting workplace hazard assessments;
4.3.2 Providing assistance in PPE selection;
4.3.3 Providing assistance in developing employee training;
4.3.4 Maintaining copies of Job Safety Analysis and PPE Employee Training Certification forms as required by OSHA regulations; and
4.3.5 Conducting periodic audits of PPE program.

4.4 Employees are responsible for:
4.4.1 Attending training;
4.4.2 Demonstrating an understanding of training as set forth in paragraph 11 below;
4.4.3 Notifying supervisor of defective PPE;
4.4.4 Using PPE properly and daily when performing tasks for which PPE is required.

5.0 Hazard Assessment and Equipment Selection. Departments must assess their workplaces to identify hazards requiring the use of PPE. Equipment should be selected to provide protection against the hazards identified during the assessment. The hazard assessment must be documented in writing. Sample forms for the completion and certification of the hazard assessment and training are available online at Job Safety Analysis Form or through the Office of Emergency Planning and Risk Management. Assistance with performing the hazard assessment is also available through the Office of Emergency Planning and Risk Management.

6.0 Eye Protection. Eye protection is mandatory in all areas where there is potential for injury. This applies to persons who work in these areas and to persons who may be in the area only temporarily, such as maintenance or clerical personnel.
6.1 The type of eye protection required depends on the hazard. Goggles with indirect vents are required where there is a danger of splashing chemicals. More hazardous operations include conducting reactions that have potential for explosion and using or mixing strong caustics or acids; in these situations, a face shield or a combination of face shield and safety goggles should be used.
6.2 It is recommended that contact lenses not be permitted in labs.
6.2.1 If chemical vapors contact the eyes while wearing contact lenses follow these steps:
• Immediately remove the lenses;
• Continuously flush the eyes, for at least 15 to 30 minutes with water;
• Seek medical attention immediately;
• Report incident to immediate supervisor.

6.3 If an employee experiences a splash of corrosive liquid in the eye, the employee is to proceed (with the assistance of a co-worker, if possible) to the nearest eyewash fountain and flush the eyes with water for at least 15 to 30 minutes. During this time, a co-worker should notify the proper authorities.

6.4 Visitors shall follow the same eye protection policy as employees.

7.0 Clothing.

7.1 Lab coats are provided for protection and convenience and should be worn at all times in most lab areas. Due to the possible absorption and accumulation of chemicals in the material, lab coats should not be worn outside the laboratory. Where infectious materials are present, closed (snapped) lab coats and gloves are essential.

7.2 Shoes must be worn at all times when in the presence of hazards. Sandals, open-toed shoes, Crocs, and shoes with woven uppers should not be worn because of the danger of spillage of corrosive or irritating chemicals.

7.3 Care should be exercised in protective clothing selection; some protective clothing has very limited resistance to selected chemicals or fire.

7.4 Consult the Safety Data Sheet (SDS) for a chemical to find out the recommended clothing or PPE for a particular chemical.

7.5 A protective helmet (hard hat or bump cap) must be worn when working in areas where there is a potential for injury from falling objects or exposed energized electrical conductors that could contact the head.

7.6 Due to the potential for ignition, absorption, and entanglement in machinery, loose or torn clothing should be avoided unless wearing a lab coat;

7.7 Dangling jewelry and excessively long hair pose a potential safety hazard for ignition, absorption and entanglement;

7.8 Finger rings or other tight jewelry which is not easily removed should be avoided because of the danger of corrosive or irritating liquids getting underneath the piece and producing irritation.

8.0 Aprons. Some operations (like washing glassware) require the handling of relatively large quantities of corrosive liquids in open containers. To protect clothing in such operations, plastic or rubber aprons may be supplied. A high-necked, calf- or ankle-length, rubberized lab apron or a long-sleeved, calf- or ankle-length, chemical- and fire-resistant lab coat should be worn anytime lab manipulation or experimentation is being conducted.

9.0 Gloves. Hand protection must be worn to protect against hazards of skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns, or harmful temperature extremes.

9.1 When handling chemicals use the correct gloves, as specified in 9.4, to protect the worker from accidental spills or contamination. If the gloves become contaminated they must be removed and properly discarded as soon as possible.

9.2 When working with solvents, detergents, or any hazardous material hand protection is essential in the defense of the body against contamination. Hand
exposure to a potentially hazardous chemical could result in burns and chafing of
the skin due to extraction of essential oils or dermatitis.

9.3 Proper selection of the glove material is essential. Several properties of both the
glove material and the chemical should influence the choice of the glove. Some of
these properties include, but are not limited to: permeability of the glove material,
breakthrough time of the chemical, temperature of the chemical, thickness of the
glove material, and the amount of the chemical that can be absorbed by the glove
material. Glove materials vary widely in respect to these properties, for instance,
neoprene is good for protection against most common oils, aliphatic
hydrocarbons, and certain other solvents, but is unsatisfactory for use against
aromatic hydrocarbons, halogenated hydrocarbons, ketones, and many other
solvents.

9.4 **Glove Selection** – for concentrated acids and alkalis, and organic solvents, natural
rubber, neoprene or nitrile gloves are recommended. For handling hot objects,
gloves made of heat-resistant materials should be worn and kept near ovens or
muffler furnaces. A hot object should never be picked up with rubber or plastic
gloves. Special insulated gloves should be worn when handling very cold objects
such as liquid nitrogen.

9.5 **Glove Inspection** – before each use inspect gloves for discoloration, punctures,
and tears. Rubber and plastic gloves may be checked by inflating with air and
submerging them in water to check for air bubbles.

9.6 **Glove Usage** – gloves should always be rinsed with a compatible solvent, soap
and water prior to handling wash bottles or other lab fixtures.

9.7 **Glove Cleaning** – before removal, gloves should be thoroughly washed, either
with tap water or soap and water.

9.8 **Glove Removal** – always remove gloves before leaving the immediate work site
to prevent contamination of door knobs, light switches, telephones, etc. When
gloves are removed pull the cuff over the hand.

10.0 **Respirators.** Respirator use should be avoided if at all possible (and is not usually
required if adequate precautions are taken). Where possible, engineering controls (fume
hoods, etc.) should be utilized to minimize exposure. If respirators are worn, consult
OCCC’s respiratory protection program for detailed information concerning respiratory
protection.

11.0 **Training.** Each employee that is required to use PPE shall receive training prior to being
required to use PPE.

11.1 Training shall include:

11.1.1 When PPE is necessary;
11.1.2 What PPE is necessary;
11.1.3 How to properly don, doff, adjust, and wear PPE;
11.1.4 The limitations of the PPE;
11.1.5 The proper care, maintenance, useful life and disposal of PPE; and
11.1.6 A required demonstration by each affected employee of an understanding
of the training and the ability to use PPE properly before being allowed to
perform work requiring the use of PPE.

11.2 If a supervisor has reason to believe an employee who has already been trained
does not have the understanding and skill required the employee shall be
retrained. Other circumstances that might require retraining include but are not limited to:
11.2.1 Changes in the workplace that render previous training obsolete;
11.2.2 Changes in the types of PPE to be used that render previous training obsolete;
11.2.3 Inadequacies in an affected employee’s knowledge or use of assigned PPE that indicate that the employee has not retained the requisite understanding or skill.

11.3 Supervisors shall verify that each affected employee has received and understood the required training by completing a PPE Employee Training Certification form attached as Appendix A. The form is also available online at PPE Certification Form or through the Office of Emergency Planning and Risk Management.

11.4 Supervisors shall complete Job Safety Analysis Form and PPE Employee Training Certification Form and send original to the Office of Emergency Planning and Risk Management for record retention purposes. A copy of each form shall be maintained in the department of origin.
APPENDIX A

PPE EMPLOYEE TRAINING CERTIFICATION

DEPARTMENT: __________________________________________________

NAME OF INSTRUCTOR: ___________________________________________

DATE OF TRAINING: ______________________________

FULL NAME OF EACH EMPLOYEE TRAINED (PLEASE PRINT OR TYPE)*

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SUBJECT OF TRAINING: _____________________________________________

ITEMS COVERED DURING TRAINING:

_____ WHEN PPE IS NECESSARY  _____ HOW TO PROPERLY PUT ON, TAKE OFF, ADJUST AND WEAR PPE

_____ WHAT PPE IS NECESSARY  _____ LIMITATIONS AND USEFUL LIFE OF PPE

_____ PROPER CARE, MAINTENANCE, REPLACEMENT AND DISPOSAL OF PPE

_____ OTHER (PLEASE SPECIFY) ________________________________

METHOD OF TRAINING: ___________________________________________

AUDIOVISUAL MATERIALS USED: ___________________________________  

EMPLOYEE UNDERSTANDING OF TRAINING WAS DEMONSTRATED BY: _______________________________

_____________________________________________________________________________________

SIGNATURE OF TRAINER    DATE

*ATTACH ADDITIONAL SHEET IF NECESSARY