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PPE HAZARD ASSESSMENT GUIDELINES

PURPOSE

The purpose of Emory University's PPE Hazard Assessment Procedure is to provide instructions for performing and documenting personal protective equipment (PPE) hazard assessments. Hazard assessments are performed in order to identify and control work area hazards that can be injurious to faculty, staff, students, contractors, and visitors as prescribed in the Occupational Safety and Health Administration's (OSHA's) Personal Protective Equipment Standard - 29 CFR 1910.132. This document is also intended to provide guidance on appropriate PPE selection when hazards cannot be eliminated by engineering controls or administrative controls.

SCOPE

This document applies to all Emory personnel and all visitors to Emory owned facilities and operations.

RESPONSIBILITIES

Environmental Health and Safety Office (EHSO), Emory Healthcare (EHC) Safety Management, and EHC Infection Control

As the administrative departments for the PPE program, EHSO, EHC Safety Management, and EHC Infection Control are responsible for the following:

1. Reviewing injury and accident data to identify problem areas.
2. Conducting PPE hazard assessments.
3. Ensuring that PPE Hazard Assessment Certifications are maintained, which will:
    a. Identify the workplace evaluated;
    b. Identify the person certifying that the assessment has been performed;
    c. Contain the date of the hazard assessment; and
    d. Identify the document as a certification of hazard assessment.
4. Providing training and technical assistance on the proper selection, use, care, cleaning, and disposal of PPE.

Principal Investigators (PIs), Directors, Supervisors, and Managers

PIs, directors, supervisors, managers or their designees are responsible for the following:

1. Ensuring that PPE Hazard Assessments have been completed and communicated to employees in their areas;
2. Ensuring that individuals under their supervision are trained in the proper use, care, storage and disposal of PPE;
3. Providing appropriate PPE and confirming proper use of PPE by employees, students, and visitors under their supervision.

Employees, Students, and Visitors

All persons subject to this guide are responsible for the following:

1. Demonstrating good practices of PPE use and understanding the limitations of PPE;
2. Attending required training sessions;
3. Appropriately caring for, maintaining, and disposing of PPE;
4. Alerting management, their supervisors, EHSO, EHC Safety Management, or EHC Infection Control of concerns about the PPE in use;
5. Properly using the appropriate PPE.

NOTE: Failure to appropriately use PPE when required may result in disciplinary action.

PROCEDURES

The following procedures are recommended when conducting PPE Hazard Assessments.

Walkthrough Survey

Conduct a walkthrough survey of the work area that may require the use of PPE. The objective is to prepare for an analysis of the hazards in the work environment to enable proper selection of protective equipment.

1. Consider the following basic hazard sources:
   - 1.1 Impact (falling/flying objects)
   - 1.2 Penetration (sharp objects capable of piercing)
   - 1.3 Compression (roll-over or pinching objects)
   - 1.4 Chemical exposure (inhalation, ingestion, skin contact, eye contact or injection)
   - 1.5 Biological exposure (inhalation, ingestion, skin contact, eye contact, or injection)
   - 1.6 Heat
   - 1.7 Dust
   - 1.8 Light (optical) Radiation
   - 1.9 Electrical
   - 1.10 Fall
   - 1.11 Noise
2. Observe the following hazard sources:
   - 2.1 Sources of motion (machinery or processes where moving parts could exist, or movement of personnel that could result in collision with stationary objects)
   - 2.2 Sources of high temperatures that could result in burns, eye injury, ignition of protective equipment, etc.
   - 2.3 Types of chemical exposures
   - 2.4 Sources of harmful dust
   - 2.5 Sources of light radiation (i.e., welding, brazing, cutting, high intensity lights, etc.)
   - 2.6 Sources of falling objects or potential for dropping objects
   - 2.7 Sources of sharp objects which might pierce the feet or cut the hands
   - 2.8 Sources of rolling or pinching objects which could crush the feet
   - 2.9 Layout of workplace and location of coworkers
   - 2.10 Any electrical hazards

2.11 Hazards and areas where PPE is currently used

Data Organization and Analysis

Following the walkthrough survey, organize the data and information gathered during the walkthrough for use in the hazard assessment. Review each of the basic hazards and make a determination as to the type of hazard, level of risk, and seriousness of potential injury from each of the hazards found in the area.

Equipment Selection

When possible, hazards are controlled with engineering and administrative controls. For hazards identified that cannot be adequately controlled with administrative or engineering controls refer to the PPE Selection Guidance Document for the selection of appropriate PPE. Give consideration to the possibility of exposure to several hazards at once when selecting PPE.

The general procedure for determining appropriate personal protective equipment is to:

1. Identify the potential hazards, type of PPE available, and the protection provided by the PPE (i.e., splash protection, impact protection, etc.)
2. Compare the capabilities of various types of PPE with the hazards associated with the job task (e.g., impact velocities, masses, projectile shape, and radiation intensities).
3. Select the PPE which provides a level of protection greater than the minimum required to protect employees from the hazards identified.
4. Communicate the PPE selections to the affected individuals.
5. Select PPE that will fit each individual properly and that provides adequate protection from the hazard.
6. Equip the user with the protective device(s) and provide instructions on care, use, and limitations.
7. All PPE used at Emory must meet the following industry standards:

Eye and Face Protection	ANSI Z87.1 current
Head Protection	ANSI/ISEA Z89.1 current
Foot Protection	ANSI Z41 current ASTM F-2412 current ASTM F-2413 current
Hand Protection	No industry standard is available. However, selection must be based on performance characteristics of the glove in relation to the tasks and hazards involved. Glove selection guides are available from the glove vendor web sites and the EHSO web site.

Fit the Protective Device

1. Protective devices are generally available in a variety of sizes. Give careful consideration to both the comfort and fit of the device.

2. Make adjustments on an individual basis for a comfortable fit that will maintain the protective device in the proper position while in use.
3. Take care when fitting devices for eye protection against dust and chemical splash to ensure that the devices are properly sealed to the face.
4. Proper fitting of helmets is important to ensure the helmet does not fall off during work operations. In some cases a chin strap may be necessary to keep the helmet on an employee's head (chin straps should break at a reasonably low force to prevent a strangulation hazard). Manufacturer's instructions should followed be when available.

TRAINING

Refer to the PPE Guidelines document for training requirements.

REASSESSMENT OF THE HAZARDS

1. Reassess the workplace and associated hazards every three years or when new hazards are introduced into the workplace, whichever occurs first.
2. Reassessment of the workplace will be accomplished by:
    a. Identifying and evaluating new equipment and processes.
    b. Reassessing problem areas that have been identified from injury and accident records.
    c. Reevaluating the effectiveness of previously selected PPE.

RECORDKEEPING

1. Verification that PPE hazard assessments have been conducted will be through a written PPE hazard assessment certification.
2. Supervisors should keep a copy of the PPE hazard assessment certifications for their records. EHSO will retain the original certification in the EHSO central files until re-certification.
3. Verification that each affected employee has received and understood PPE training will be through a written certification of training.
4. The EHSO Training Coordinator will retain all records from EHSO-provided training in EHSO central files.

REFERENCES

1. OSHA Personal Protective Equipment Standard – 29 CFR 1910.132-138
2. OSHA Non-mandatory Compliance Guidelines for Hazard Assessment and PPE Selection – 1910 Subpart I App B
3. Emory University PPE Guidelines
4. Emory University PPE Selection Guidance Document