

North Dakota State University

Personal Protective Equipment

I. Introduction

Protective equipment shall be provided, used, and maintained in a sanitary and reliable condition. Equipment may include, but is not limited to, personal protective equipment (PPE) for eyes, face, head, extremities, protective clothing, respiratory devices, and protective shields and barriers.

This equipment will be used wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation, or physical contact.

II. Purpose

To ensure that NDSU employees have training and available personal protective equipment (PPE) if the job/tasks performed for the positions require additional safety precautions or protection.

III. Goals

To reduce the risk of potential work related injuries or death by maximizing the application and use of personal protective equipment (PPE).

IV. Procedure

The workplace will be assessed by the department to determine if hazards are present, or likely to be present, which necessitates the use of PPE. Chief hazards identified will have Safe Operating Procedures/Standards written specific to that hazard and placed in the SOP manual.

If hazards are present, or likely to be present, the department shall perform the following:

- All PPE shall be of safe design and construction for the work to be performed.
- Select and have each affected employee use the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment
- Communicate selection decisions to the affected employee and/or department
- Select and provide PPE that properly fits each affected employee
- Train all affected employees how to properly don, adjust, and wear PPE.
- Train all affected employees to know PPE limitations, proper care, maintenance, life, and disposal of PPE.
- Mandate the use of required PPE

V. Types of PPE

A. Eye and Face Protection

- a. Eye and face protection must be worn when machines or operations present potential eye and face injury.

- b. Safety glasses are for impact protection only, and do not provide adequate chemical splash protection.
- c. Chemical goggles are for protection against chemical splash. Some chemical goggles are also approved for impact protection.
- d. Face shields protect the face from chemical splash and should not be used as the sole means of eye protection. Chemical splash goggles or safety glasses should be worn in combination with face shields, as necessary.
- e. Employees involved in welding must wear filter lenses or plates of the proper shade number.
- f. Employees exposed to laser beams must use suitable laser safety goggles which will protect for the specific wave length of the laser and be optical-density adequate for the energy involved.
- g. Goggles will be worn over any employee owned prescription glasses that do not meet industrial safety standards. Contact lenses shall not be worn where liquid splashes may occur.

B. Foot Protection

Appropriate foot protection is required for workers whose feet may be injured by hot or corrosive substances, falling objects, crushing or penetrating actions, or who are required to work in abnormally wet locations.

C. Head Protection

Workers working in areas where there is possible danger of head injury from impact, or from falling or flying objects, or from electrical shock and burns, shall be protected by protective hard hats.

- a. Protection of workers against impact and penetration of falling and flying objects shall meet the specifications contained in American National Standards Institute, Z89.1-1969, Safety Requirements for Industrial Head Protection.
- b. Protection of workers exposed to high voltage electrical shock and burns shall meet the specifications contained in American National Standards Institute, Z89.2-1971.

D. Hearing Protection

Whenever it is not feasible to reduce the noise levels or duration of exposures to sound levels that may exceed 85 decibels, ear protection devices shall be provided and used.

- a. Devices inserted in the ear shall be fitted or determined individually by a competent person.
- b. Plain cotton is not an acceptable protective device.

E. Respiratory Protection

In emergencies, or when engineering or administrative controls are not effective in controlling toxic substances, approved respirator protective equipment will be provided and used.

- a. Respiratory protective devices will be approved for the hazardous material

- involved, and extent and nature of work requirements and conditions.
- b. Employees required to use respiratory protective devices will be thoroughly trained from the University's written Respirator Protection Program.
- c. Respirator protective equipment will be inspected regularly and maintained in good condition.

F. Hand Protection

Hand protection shall be worn where applicable and shall fit well enough to allow dexterity for the job performed.

- a. Gloves that have been contaminated by chemicals, oils or greases will be either decontaminated or disposed of.
- b. Gloves shall be kept free from damage or tears.
- c. Gloves shall be worn when handling material that may be abrasive, or may have burrs.
- d. Insulated gloves should be worn when working around heat or steam.

G. Fall Protection

Lifelines, safety belts, harnesses and lanyards will be used only for employee protection. Employees working over or near water, where danger of drowning exists, will wear U.S. Coast Guard-approved life jackets or buoyant work vests.

- a. Comply with the University Fall Protection Safe Operating Procedures.

VI. Training

The employer shall provide training to each affected employee who is required to use PPE. Each employee shall be trained to know the following:

- A. When PPE is used
- B. What PPE is necessary for job/task
- C. How to properly put on, take off, adjust and wear PPE
- D. Limitations of the PPE
- E. Proper care, maintenance, useful life and disposal of the PPE

Each affected employee shall demonstrate an understanding of the training and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE, and when the following occur:

- A. The employer has reason to believe that any affected employee does not have the understanding and skill required of the job that requires the use of PPE
- B. Changes in the workplace make previous training obsolete
- C. Changes in the types of PPE to be used make the previous training obsolete

Documentation and verification of training received by each affected employee shall be maintained by the Department and are available for review upon request.