

Personal Protective Equipment – PPE

**BP WIND ENERGY
POLICIES AND PROCEDURES**

Personal Protective Equipment – PPE

[Document Control Details](#)

Personal Protective Equipment – PPE

1.0 Purpose/Scope

- 1.1 This procedure describes the minimum personal protective equipment (PPE) requirements for BPWE employees and contractors.
- 1.2 Engineering and administrative controls should be implemented, where possible, before PPE is used.
- 1.3 This procedure is not intended to replace the requirement for a risk assessment process, which identifies additional PPE required for a task, e.g., high voltage work, welding, working at heights, and specialty chemical exposures.

2.0 Reference

- 2.1 BPWE Respiratory Protection Procedure, HSSE 50.10.01
- 2.2 BPWE Hearing Conservation Procedure, HSSE 50.20.01
- 2.3 BPWE JSEA Procedure, HSSE14.20.01
- 2.4 29 CFR 1910.132 – 1910.138, Personal Protective Equipment
- 2.5 ANSI Z87.1, Occupational and Educational Eye and Face Protection
- 2.6 ANSI Z89.1, Protective Headwear for Industrial Workers
- 2.7 ASTM F2412-05 and F2413-05, Personal Protective Footwear

3.0 Responsibilities

- 3.1 Facility / Project Managers
 - A. Ensure that a PPE Hazard Risk Assessment is performed at their site. Risk Assessment must be documented and signed.
 - B. Ensure appropriate protective equipment is utilized by employees, contractors, and visitors.
 - C. Responsible to ensure that the JSEA process effectively determines and documents the appropriate PPE for tasks including tasks performed by contractors.
- 3.2 Employees and Visitors
 - A. It is the responsibility of all BP employees, contractors, and visitors to wear the required PPE, to inspect it prior to each use, and to maintain it in good working condition, free of any damage or defect.
 - B. Damaged or defective PPE should, under no circumstances, be used on site.
- 3.3 Contractors
 - A. Contractors are responsible for having a program, which meets these requirements.
 - B. It will be the responsibility of the contractor to provide the appropriate PPE for their workers. In specific situations, BP can/will provide PPE to contractors.

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4.0 Acronyms and Definitions

Acronyms Table

Acronym	Definition
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
BU	Business Unit
dBA	Decibels (Acoustic)
FAA	Federal Aviation Administration
FRC	Flame-Retardant Clothing
JSEA	Job Safety Environmental Analysis
MSA	Master Service Agreement
MSDS	Material Safety Data Sheet
NFPA	National Fire Prevention Association
NIOSH	The National Institute for Occupational Safety and Health
PPE	Personal Protective Equipment
TPP	Thermal Protective Performance

Definitions Table

Term	Definition
Administrative Controls	Procedures and methods that significantly reduce exposure to hazards by altering the way in which work is performed; examples include employee rotation, job task enlargement, and adjustment of work pace.
Engineering Controls	Design features of equipment that help reduce exposure to potential hazards either by isolating the hazard or by removing it from the work environment; examples include mechanical ventilation and process enclosure.
Personal Protective Equipment (PPE)	Personal Protective Equipment, commonly referred to as "PPE", is equipment worn to minimize exposure to a variety of hazards. Examples of PPE include such items as gloves, foot and eye protection, protective hearing devices (earplugs, muffs) hard hats, respirators and full body suits.

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5.0 Procedure

5.1 PPE Hazard Assessment

- A. A hazard assessment of the workplace must be performed to determine if hazards are or may be present that necessitate the use of PPE (refer to [29 CFR 1910, Subpart I, Appendix B](#), to determine the proper method of conducting an assessment).
- B. Refer to applicable hazard assessments to determine the proper PPE selection for specific work tasks.
- C. Certification of Hazard Assessment – A written certification containing the following information must be prepared for each location or workplace:
 - The location or workplace evaluated.
 - The name of the person certifying that the evaluation has been performed.
 - The date(s) of the hazard assessment.
 - A statement that identifies the document as a hazard assessment.

Note: 5.1 D

If a hazard assessment has been performed on a particular work task, it may be used for guidance on PPE requirements. If a hazard assessment has not been performed on a particular work task, then the JSEA may serve as a PPE hazard assessment.

- D. JSEA - The JSEA process is a risk assessment technique that is designed to identify all the hazards associated with the entire task and the appropriate hazard mitigation requirements.
 1. Part of the JSEA process is the identification of necessary PPE based on the potential hazards.
 2. During the hazard assessment of each task, inspect the layout of the workplace and look for the hazard sources, such as, but not limited to:
 - High or low temperatures;
 - Chemical exposures (use MSDS's for guidance);
 - Flying particles, molten metal, or other eye, face, or skin hazards;
 - Light radiation, e.g., welding, cutting, heat treatment, lasers;
 - Falling objects or potential for dropping objects;
 - Sharp objects;
 - Rolling or pinching that could crush the hands or feet;
 - High level noise;
 - Repetitive motion, awkward body position, ergonomic stresses;
 - Work at elevations, scaffold work;
 - Electrical hazards.

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3. Where these hazards could cause injury to employees, PPE must be selected to substantially eliminate the injury potential.
4. When conducted properly, the JSEA form will provide documentation for the risk assessment for each task and will serve as a certification of appropriate PPE selection. Refer to the BPWE HSSE JSEA procedure.

5.2 PPE Inspection and Use

- A. PPE must be used in accordance with manufacturer's requirements.
- B. All PPE must be inspected prior to each use and immediately after any event that may cause damage to the PPE.

The PPE inspection should include but not be limited to:

- Evidence of impact such as cracks, deformity, gouges, or deep scratches;
 - Excessive wear such as scratched lenses, shoes with holes, etc.;
 - Cleanliness; shake out prior to use to ensure insects have not nested in PPE
 - Any type of defect or signs of age such as brittleness, discoloration, etc., and;
 - Proper adjustment and fit.
- C. Any defect noted in the PPE requires immediate disposal and replacement of the PPE unless cleaning is all that is necessary to restore the PPE to useable condition.
 - D. Personnel should report the defect immediately to the appropriate line manager for assistance in replacing PPE.

5.3 Foot Protection

- A. Safety-toed shoes/boots shall meet or exceed the requirements of ASTM F2412-05 or F2413-05.
- B. Shoes or boots shall have leather uppers, an oil-resistant sole, and a distinctive heel (defined as a raised section 3/8" – 1/2" across the entire heel).
- C. When chemical hazards are present, select footwear suitable for the chemicals involved by using MSDS's, manufacturer's guidelines, and other appropriate technical resources. Do not use standard rain boots for acid hazard protection.
- D. Personnel that perform tasks which expose them to potential foot and/or leg injury hazards, (e. g., work involving jackhammers, ground tampers, chain saws, etc.), shall wear additional foot and leg protection, such as metatarsal guards, shin guards, or Kevlar leggings.

5.4 Eye Protection

- A. Safety Glasses
 1. All safety glasses are required to have side shields. Side shields must be rigid and attached securely only to frames for which they were designed. Safety glasses and/or including side shields must meet or exceed all requirements of ANSI Z87.1.
 2. Prescription safety glasses will be purchased for BP employees when an employee wears corrective lens and performs tasks where eye protection is necessary. The company may provide a maximum of one pair per calendar year.

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- Prescription spectacles used as safety glasses must have protection that is equal to or exceeds all requirements of ANSI Z87.1.
 - Until prescription glasses are available and if approved by the responsible supervisor, goggles or overlay type safety glasses may be worn over prescription glasses.
 - This should be considered a short term solution only used until prescription safety glasses can be purchased, typically two weeks maximum.
3. Tinted safety glasses shall not be used inside the turbine area, inside enclosed buildings, or during low ambient lighting conditions.
 4. Tinted safety glasses may be utilized only if the tint is appropriate for the ambient lighting conditions.
 5. Operations that require additional eye protection shall be assessed on an individual basis. Chemical handling may require the use of specific safety glasses/goggles per the MSDS.
- B. Impact – Type Goggles**
1. Impact type goggles shall meet ANSI Z-87.1, 1989 requirements and normally have direct ventilation to allow a good flow of air into the goggles which helps to prevent fogging of the lens.
 2. Approved impact-type goggles shall be provided to ensure greater eye protection from flying particles.
 3. Tasks which may dictate the need for impact goggles include: chipping, scraping, buffing, blowing, power sawing, hammering grinding, pneumatic tool use, etc.
- C. Chemical / Splash Resistant Goggles**
1. Approved chemical/splash goggles shall meet ANSI Z-87.1, 1989 impact requirements and can have indirect (offset) vents to allow a flow of air, but prohibit the direct path of a projected liquid droplet from entering the goggle.
 2. Chemical/Splash goggles should not be worn over basic safety glasses or prescription eyewear for recognized chemical/splash hazards due to the flange or seal of the goggle having to fit over the temple pieces of the glasses, which negates an effective seal.
 3. Chemical/splash resistant goggles shall be provided to ensure eye protection from hazards associated with the handling of chemicals. Hazardous chemical operations may include hazards from: irritants, corrosives, caustics, acids, toxics, molten metal or tar.
 4. Reference the chemical MSDS information for additional guidance on PPE and eye/face protection recommendations specific to the handling/use of a particular chemical.
- D. Face Shield**
1. A face shield which complies with ANSI Z-87.1, 1989 shall be worn to provide face protection to the employee from flying particles, splashes, or mist.

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2. It must be noted that a face shield provides only protection to the face and eyes from direct impact objects, and additional eye protection must be worn in conjunction with a face shield.
3. Tasks which may dictate the use of a face shield include:
Chipping, scraping, blowing, hot tar work, pumping concrete, power sawing, grinding, pneumatic tool use, pouring of irritants, routing, etc.

E. Burning Goggles

1. Burning goggles shall be worn when an oxy-fuel torch is used for cutting or burning to provide employee protection from injurious light radiations.
2. A Number 5 lens shade is considered adequate for routine torch cutting activities.

F. Welding Hoods

1. A welding hood with a filtered lens of Number 10 shade or darker shall be used to provide protection from injurious light radiations produced during electric arc welding.
2. Approved safety glasses with side shields and hard hats shall be worn in conjunction with the welding hood to ensure protection from popping hot slag when the hood is raised and overhead work exposures.
3. A welding hood with a "flip-up" window and secondary clear lens shall be considered to provide greater protection to the welder.

5.5 Hand Protection

- A. Personnel shall use hand protection when performing jobs that expose the hands to absorption of harmful substances, cuts or lacerations, abrasions, punctures, chemical burns, thermal burns, and harmful temperature extremes.
- B. Selection of hand protection shall be based on evaluation of the task being performed, conditions present, duration of exposure, potential hazards identified, and performance characteristics of glove material.
- C. Gloves offering chemical resistance shall be chosen based on the appropriate MSDS for the chemicals in use, the glove manufacturer's guidelines, and/or an approved glove selection chart. The FM Site HSSE Manager will maintain a glove selection chart.
- D. Gloves offering protection against electrical hazards shall be chosen based on the voltage present and the type of work being performed. WLCPM Energized Electrical Work Procedure offers additional guidance in live electrical hazards and control measures.

5.6 Head Protection

- A. Hard hats shall meet the requirements of ANSI Z89.1 Class E (Electrical).
- B. Conductive (Class C) type helmets and bump caps are not approved head protection for general use.
- C. When welding hoods are required, they shall be worn in conjunction with hard hats.
- D. It shall be forbidden for employees to:

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- Drill holes in the shell of the hard hat,
 - Alter the shape of the hat or bill,
 - Wear a hardhat backwards,
 - Remove the suspension straps or cut/alter them in any way, and
 - Paint hard hats.
- E. Employees are required to inspect head protection prior to use to ensure that the equipment is in safe condition. Equipment that is defective or damaged shall not be used and immediately replaced. Inspect for:
- Dents,
 - Cracks,
 - Suspension connector cracks,
 - Torn, loose, or worn suspension straps, and
 - Cleanliness / sanitation. Head protection should be clean and contaminated with oil, grease, chemicals, etc.
- F. If a hard hat becomes brittle, cracks, or is otherwise damaged, it shall be replaced immediately.
- G. Hard hat suspensions shall be replaced annually with new suspensions of like design and function.
- H. The entire hard hat assembly shall be replaced every 5 years.

5.7 Clothing Specifications and Requirements

- A. Standard Work Clothing
- Employees shall ensure their clothing is designed for the work being performed.
 - Cotton is the best all-around material to wear. Synthetic materials are not recommended because they melt easily and some may burn rapidly when exposed to minor flames.
 - Pants should fit properly and not have bell bottoms, large cuffs, or frayed bottoms.
 - Clothing must be in good repair. Frayed or tattered clothing can be a hazard to the employee.
 - Tank tops or sleeveless shirts are not allowed.
 - Neckties, gauntlet type gloves, and baggy, loose, or ragged clothing must not be worn around or when working with rotating or moving equipment.
 - Any work clothing, including Flame Resistant Clothing (FRC), which becomes heavily soiled, has visible accumulation of hydrocarbons or other flammable, combustible materials, or particulate matter must be changed.
- B. Special Clothing
- Because of the task situations which may arise, special protective clothing will be required to protect the employee from exposure to various workplace hazards.
 - Hazards which employees may be exposed to and where special clothing may be

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required include: fire, heat, irritants, corrosives, toxins, electrical exposures, etc.

- The task exposure shall be evaluated and the employee provided the appropriate clothing for the hazard.
- High visibility reflective safety vests (ANSI Class II or equivalent) must be worn by all personnel who work on or near active highways, roads, or parking lots.
- Vests are also required for other work that places personnel near motor vehicles, such as flaggers, security officers, landscapers/mowers, riggers, survey crews, etc.

5.8 Hearing Protection

- A. The hazard assessment shall identify areas where hearing protection is necessary and the type of hearing protection necessary.
- B. Various forms of hearing protection are available and must be worn when noise levels of 85 decibels (dBA) exist.
- C. Signs shall be posted where continuous noise levels are at 85 dBA or greater.

5.9 Fall Protection

- A. One hundred percent fall protection is required when working at heights greater than six feet.
- B. Refer to the Working at Heights procedure (HSSE 23.10.01) for additional information regarding fall protection.

6.0 Training

6.1 Personnel shall be trained in the following:

- When PPE is necessary.
- What PPE is required.
- How to properly put on, remove, adjust, and wear PPE.
- Limitations of PPE.
- Proper care, maintenance, useful life, and disposal of the selected PPE.

6.2 Personnel must demonstrate an understanding of the information in PPE training and the ability to use PPE properly before initial use in the workplace.

6.3 PPE training must be performed when:

- There are changes in the workplace that make previous training obsolete.
- There are changes in the types of PPE to be used.
- There are inadequacies in the individual's knowledge of or use of the chosen PPE.

6.4 Personnel training and understanding shall be documented in a training certification record that contains the name of the employee trained, the date(s) of training, and identification of the subject of training.

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7.0 Auditing

7.1 This procedure shall be audited every three years.

8.0 Attachments

Attachment A: PPE Hazard Assessment Form



PPE Hazard
Assessment.doc (161.

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Document Control Details

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