



Sanford

Underground Research Facility

South Dakota Science and Technology Authority

Personal Protective Equipment (PPE) Standard

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Revision History

Rev	Date	Section	Paragraph	Summary of Change	Authorized by
01	2/8/2023	NA	NA	Initial Release	CCR 669
02	5/17/2023	5.2.5	NA	Added bullet	CCR 747
03	10/4/2023	4.1 & 5.2	NA	Changed title in 4.1 & Added bullets to 5.2	CCR 821

1.0 Purpose

The purpose of the Personal Protective Equipment (PPE) Standard is to protect personnel from exposure to workplace hazards and the risk of injury.

2.0 Scope

This Standard applies to all SDSTA employees, users, contractors, and visitors at Sanford Underground Research Facility (SURF).

3.0 Definitions

Doff – To take off.

Don – To put on.

Local Hazard – A hazard created by activities that present a potential hazard to personnel in the localized area (e.g., construction zone, welding areas, etc.).

Personal Protective Equipment (PPE) – Anything worn or carried by personnel for the purpose of protecting the individual from a hazard.

4.0 Responsibilities

4.1. SDSTA Executive Director

4.1.1. Ensures accountability of the requirements of this document with direct reports.

4.2. Environment, Safety and Health (ESH) Department

4.2.1. Provides consultation to departments on the requirements for PPE and assist with the hazard assessment process to determine the need for specific PPE, if requested.

4.2.2. Provides training for PPE requirements.

4.2.3. Advises or otherwise assists in the procurement of PPE suitable for use at SURF.

4.2.4. Performs periodic inspections of PPE, as requested.

4.2.5. Conducts sampling, as required, to determine PPE requirements.

4.2.6. Maintains training documentation, as required.

4.2.7. Provides PPE when required for temporary use.

4.3. QA/QC Department

4.3.1. Ensures required calibrations of appropriate PPE is completed.

4.4. Procurement/Warehouse

4.4.1. Procures PPE suitable and required for use at SURF.

4.4.2. Ensures that required PPE is adequately stocked.

4.5. Department Directors

4.5.1. Ensure accountability of the requirements of this document with direct reports.

- 4.5.2. Ensure that direct reports are trained on the use and requirements of the PPE to perform the assigned work.
- 4.5.3. Seek advice from the ESH Department, as needed.
- 4.5.4. Provide direct reports with the support for PPE and enforcement of its use.

4.6. Project Managers

- 4.6.1. Ensure accountability of the requirements of this document with contractors/subcontractors.
- 4.6.2. Ensure that contractors/subcontractors use PPE as required.
- 4.6.3. Ensure that contractors/subcontractors are trained in the proper use of the PPE.
- 4.6.4. Identify work activities that require PPE per the ESH-(2000-S)-73320 Work Planning and Controls Standard. Ensure PPE provided is suitable for the task.
- 4.6.5. Seek advice from the ESH Department, as needed.

4.7. Supervisors

- 4.7.1. Ensure accountability of the requirements of this document with direct reports.
- 4.7.2. Ensure that direct reports are trained on the use and requirements of the PPE to perform the assigned work.
- 4.7.3. Identify work activities that require PPE per the Work Planning and Controls Standard.
- 4.7.4. Work with Procurement to ensure PPE provided is suitable for the task.
- 4.7.5. Seek advice from the ESH Department, as needed.

4.8. Workers and Users

- 4.8.1. Ensure training and documentation on applicable equipment is complete and current prior to performing work.
- 4.8.2. Use and maintain PPE as defined in this Standard.
- 4.8.3. Perform hazard analysis prior to tasks to identify PPE needs that may not specifically be covered by the standard.
- 4.8.4. Seek advice from the ESH Department, as needed.

5.0 Instructions

5.1. Hazard Assessment for PPE

- PPE is the last line of defense on the hierarchy of hazard control. It is not a substitute for more effective control methods and its use will be considered only when other means of protection against hazards are not adequate or feasible.
- PPE requirements are selected based on exposure to hazards. The work planning and controls process will identify the PPE required for the activities to be performed.
- Personnel shall utilize required PPE when entering an area where work activities may create a local hazard.
- Care will be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards.
- ESH-(7000-A)- 202795 PPE Guidelines for Common Tasks provides examples for required PPE when completing commonly performed tasks. The work planning and control process shall be followed to identify the hazards and the PPE that adequately control the hazards. Separate standards exist that specify detailed requirements of PPE such as respiratory protection, hearing conservation, fall protection and prevention, etc.

- In areas at SURF where known/unknown hazards exist, PPE must be utilized. See ESH-(7000-A)- 202796 PPE Requirements for Specific Locations.
 - Local hazards shall be considered in all areas.
 - When travelling from a common parking area directly to a location that does not require PPE, PPE is not required.
 - Leased areas may require additional PPE and shall be communicated per section 5.1.7.
- Required PPE shall be communicated to affected personnel by any of the following:
 - Posting in affected areas.
 - The work planning and control process (toolbox talks, JHA's, SOP's).
 - The use of the attachments to the PPE Standard.

5.2. Selection of PPE

- PPE will be provided at no charge to personnel who require its use.
- All personal protective clothing and equipment will be of safe design and construction for the work to be performed.
- Thorough consideration will be given to the comfort and proper fit of PPE.
- Personnel-owned PPE shall align with the requirements of this standard.
 - SDSTA personnel are provided monetary PPE allowances per SDSTA-(Manual)-187303 SDSTA Policy and Policy-Procedure Manual.
- Standard SURF PPE, when required, is as follows:
 - Head protection (hard hat) ANSI Z89.1
 - Eye protection (safety glasses with side shields) ANSI Z87.1
 - Foot protection (safety toe footwear with suitable tread) ASTM F2413
 - ◆ Escorted visitors are required to wear sturdy flat footwear. Sandals, open toes and high heels are prohibited.
 - Pants (substantial material)
 - Shirt with a minimum four-inch sleeves
 - Hi-visibility/reflective clothing.
 - During low light conditions, reflective clothing is required.
 - Cap lamp (rated by MSHA or other approved testing laboratory)
 - ◆ Electric cap lamps shall be complete units that are durable in construction, practical in operation, and suitable for the conditions of underground service. They shall offer no probable explosion hazard if used in gassy or dusty mine atmospheres or bodily hazard from the spilling of the battery electrolyte. They shall exhibit, under laboratory test conditions, a continuous intensity and distribution of light.
 - ◆ Any cap lamp used in an area of potential explosion or flammable gas hazards must use a cap lamp that is approved and rated for intrinsic use.

- Self-rescuer
- Personal floatation devices shall be utilized when entering an area where work activities may create a local hazard of drowning.
- Visitors will be informed of PPE requirements and will be provided appropriate PPE if needed.
 - Sanford Lab Homestake Visitor Center tour groups/customers who remain on designated routes do not require PPE.
 - Visitors associated with the SURF Education and Outreach program will be required to wear standard PPE.
- Standard use PPE inventories are managed by the SDSTA Warehouse. PPE is available at these locations:
 - Warehouse
 - Vending machines
 - Yates and Ross PPE rooms
 - SDSTA ESH Department

5.3. Maintenance and Inspections of PPE

- The effectiveness of some types of PPE, particularly clothing, will be significantly reduced if they are not kept clean.
- Affected personnel will perform maintenance and inspections of PPE according to the provided training and manufacturer recommendations.
- Personnel are responsible for the care of their PPE and should report any deficiencies or irregularities to their supervisors and/or ESH personnel.
- PPE must be properly looked after and stored when not in use.
- If it is reusable, PPE must be cleaned and kept in good condition.
- Follow the manufacturer's replacement schedule when required.

5.4. Training Requirements

- Personnel required to use PPE shall be trained in the following:
 - When PPE is necessary.
 - What PPE is necessary.
 - How to properly don, doff, adjust and wear PPE.
 - The limitations of the PPE.
 - Proper care, maintenance, useful life, and disposal of the PPE.

6.0 Documented Information/Related Document

- 6.1.** ESH-(2000-S)-73320 Work Planning and Control Standard
- 6.2.** ESH-(7000-A)- 202795 PPE Guidelines for Common Tasks
- 6.3.** ESH-(7000-A)- 202796 PPE Requirements for Specific Locations

6.4. SDSTA-(Manual)-187303 SDSTA Policy and Policy-Procedure Manual