

Personal Protective Equipment and Safe Work Apparel



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<i>Personal Protective Equipment and Safe Work Apparel</i>
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REVISION LOG

Revision 12	<input checked="" type="checkbox"/> Intent <input type="checkbox"/> Non-Intent
<ul style="list-style-type: none"> • This revision incorporates the changes identified in and supersedes PRCN-UPF-CP-205-R11-01, Rev. 0, and PRCN-UPF-CP-205-R11-02, Rev 0. • No forms have been edited as part of this revision. • A periodic review has been completed for this revision and addresses issues identified in DPR-UPF-CP-205-11. • An evaluation determination has been performed confirming that this Command Media implements no quality requirements as tracked in the Programmatic Requirements Management System (PRMS). • Description of other changes incorporated; examples are listed below: <ul style="list-style-type: none"> ○ Revised Section 3.1.1, <i>Safe Work Apparel—Construction/Warehousing Areas</i>, to clarify minimum clothing requirements. ○ Revised Section 3.1.12, <i>High-Visibility Apparel</i>, to remove Equipment Spotter. ○ Deleted Section 3.1.4, <i>Safe Work Apparel—Office Facilities</i>. ○ Added reference to E-POL-0050, <i>Standards of Conduct and Appearance</i>, for office work. ○ Changed phrasing in Section 3.1.3, <i>Head Protection</i>. ○ Changed phrasing in Section 3.1.4, <i>Eye and Face Protection</i>. ○ Moved bullets in Section 3.1.6 to 3.1.6.1, <i>Selection of Hand Protection</i>, and updated note. ○ Changed phrase Construction Support Areas to Construction/Warehousing Support Facilities throughout and added to Definitions. ○ Updated Acronyms and template. 	
Revision 11	<input checked="" type="checkbox"/> Intent <input type="checkbox"/> Non-Intent
<ul style="list-style-type: none"> • This procedure incorporates the changes identified in PRCN-UPF-CP-205-R11-01, Rev. 0. • This procedure supersedes PRCN-UPF-CP-205-R11-01, Rev. 0. • Because of the extent of changes, revision bars are not used. • An evaluation determination has been performed confirming this Command Media implements no quality requirements, as tracked in PRMS. 	
Revision 10	<input type="checkbox"/> Intent <input checked="" type="checkbox"/> Non-Intent
<ul style="list-style-type: none"> • This revision's intent changes include new work dress apparel requirements as well as foot protection requirements that will align with applicable section of Y72-007, <i>Safe and Appropriate Footwear Policy</i>. Non-intent changes include editorial, grammatical and formatting realignment. 	
Previous revisions on record.	

Personal Protective Equipment and Safe Work Apparel

CONTENTS

1.0 INTRODUCTION	4
1.1 Purpose	4
1.2 Scope	4
2.0 RESPONSIBILITIES.....	4
2.1 Site Manager.....	4
2.2 Environment, Safety, and Health Manager	4
2.3 Environment, Safety, and Health Representative.....	4
2.4 Responsible Superintendent.....	4
2.5 Supervisor.....	5
2.6 PPE User/Worker	5
3.0 REQUIREMENTS.....	5
3.1 Criteria for PPE and Safe Work Apparel.....	6
3.1.1 Safe Work Apparel—Construction/Warehousing Areas.....	6
3.1.2 Footwear—Construction/Warehousing Areas	6
3.1.3 Head Protection.....	6
3.1.4 Eye and Face Protection.....	7
3.1.5 Hearing Protection	8
3.1.6 Hand Protection.....	8
3.1.7 Respiratory Protection Equipment.....	9
3.1.8 Fall Protection Equipment	9
3.1.9 Electrical Protection Equipment.....	9
3.1.10 High-Visibility Apparel.....	9
4.0 RECORDS	10
5.0 REFERENCES	10
5.1 Source References.....	10
5.2 Interfacing References.....	10
6.0 SUPPLEMENTAL INFORMATION	11

<i>Personal Protective Equipment and Safe Work Apparel</i>
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1.0 INTRODUCTION

1.1 Purpose

This procedure describes how personal protective equipment (PPE) is selected, issued, inspected, and maintained at the Uranium Processing Facility (UPF).

1.2 Scope

This procedure is applicable to UPF construction site personnel, subcontractors, vendors, and visitors during the course of the Project.

This procedure does not address attire worn in project office facilities (e.g., 1060/1099 Commerce Park). Reference E-POL-0050, *Standards of Conduct and Appearance*, for further guidance.

2.0 RESPONSIBILITIES

2.1 Site Manager

The Site Manager has the overall responsibility for implementing this procedure. The Site Manager is also responsible for:

- Ensuring that all project personnel actively participate in the PPE program.
- Providing worker support, facilities, and other resources necessary to effectively carry out the PPE program.

2.2 Environment, Safety, and Health Manager

The Environment, Safety, and Health (ES&H) Manager has the overall authority to interpret the regulations associated with this procedure and provide guidance as to its intent and application.

2.3 Environment, Safety, and Health Representative

The ES&H Representative is responsible for:

- Overseeing compliance of this procedure via periodic field inspections.
- Supplying technical advice and interpreting the ES&H codes in the procedure.

2.4 Responsible Superintendent

The Responsible Superintendent is responsible for:

- Being thoroughly familiar with this procedure and having a full understanding of individual roles and responsibilities regarding compliance with and implementation of this procedure.
- Pre-planning work activities to identify the appropriate PPE to use.
- Ensuring that workers understand the requirements of the procedure.

<i>Personal Protective Equipment and Safe Work Apparel</i>
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2.5 Supervisor

The Supervisor is responsible for ensuring that the applicable safety controls and processes are incorporated into the planning and execution of the work and that the workers are using the correct PPE for the assigned task.

2.6 PPE User/Worker

The PPE user/worker is responsible for:

- Understanding and complying with the applicable requirements of this procedure, which include the following:
 - Use (wear) PPE as required or specified by this procedure, jobsite safety rules, and/or the job hazard analysis (JHA)/permits.
 - Report to the supervisor any observations where the assigned PPE does not or is unable to provide appropriate protection against the hazards that are present.
 - Inspect PPE for defects, damage, and/or wear and tear that would make the PPE unsafe to use.
 - Wear work apparel as required by this procedure, company-specific dress standard requirements, and or the JHA/permits.

3.0 REQUIREMENTS

The proper selection and use of PPE and safe apparel are important elements in the prevention of work-related injuries; however, PPE can only provide a level of protection against injuries and illnesses when it is maintained and used correctly.

This procedure does not address every type of PPE that could be used at the UPF construction site. For each potentially hazardous task performed at the construction site, appropriate controls, including PPE, are identified and documented in the JHA. Only through appropriate planning can site hazards be determined and proper PPE identified and utilized.

The hazards present in any particular work activity or area and the risks they pose shall be evaluated, and adequate PPE shall be selected based on these evaluations. Key factors to be considered in the selection of PPE include the following:

- PPE shall be capable of providing protection against risk(s) without compromising individual safety.
- PPE shall properly fit the user.
- PPE shall be compatible with the work to be performed.
- PPE shall be of safe design and construction and in compliance with a nationally recognized standard for the work to be performed. Nationally recognized PPE standards include those from the following organizations:
 - American National Standards Institute (ANSI)
 - American Society for Testing and Materials (ASTM)
 - National Fire Protection Association

<i>Personal Protective Equipment and Safe Work Apparel</i>
--

- National Institute for Occupational Safety and Health
- Underwriters Laboratories, Inc.
- PPE shall be used and maintained in a sanitary and reliable condition. PPE that has been altered beyond manufacturers' recommendations is prohibited at the UPF construction site. Any such PPE shall be removed from the site and then either repaired or destroyed.
- Specialized PPE, such as respirators or fall protection required additional training and/or medical qualifications before use. These items are outlined in their respective procedures.

3.1 Criteria for PPE and Safe Work Apparel

The following subsections identify the various types of PPE utilized on the UPF Project.

3.1.1 Safe Work Apparel—Construction/Warehousing Areas

- Minimum safe work apparel requirements include:
 - Durable shirts with full-length sleeves that cover the entire upper torso and arms. Shirts constructed of mesh and/or netting material are prohibited
 - Full length durable pants in good condition that extend to the ankles.
 - Clothing made of natural fibers (e.g., cotton) is recommended.
 - Avoid wearing loose clothing, rings, and/or necklaces that may contact or get caught or tangled in moving parts, equipment, or energized systems.

3.1.2 Footwear—Construction/Warehousing Areas

- Wear sturdy, ankle-high, safety-toed work boots that meet or exceed the requirements of ASTM F2413, *Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear*. Footwear such as tennis/athletic shoes, open-toed shoes, sandals, moccasins, high heels, boat shoes, and mules are not acceptable footwear.
- Use metatarsal guards in conjunction with the protective footwear as identified in the JHA for the task.

3.1.2.1 Footwear—Construction/Warehousing Support Facilities

- Wear sturdy, closed-toe shoes in good condition with a maximum one-inch heel when:
 - Assigned to Construction/Warehousing Support Facilities.
 - Walking on designated pathways between these facilities and/or parking lots.
 - Designated by the Facility/Building Manager.

3.1.3 Head Protection

- Hardhats must comply with ANSI Z89.1, *American National Standard Institute Standard for Industrial Head Protection*. Hardhats must be worn in accordance with the manufacturer's requirements and with the brim facing forward unless the ES&H Manager or designee provides a written exception.

<i>Personal Protective Equipment and Safe Work Apparel</i>
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- Do not wear a ball cap or any unapproved headgear under the hardhat. Hardhats fit best when worn directly on the head; however, some garments (e.g., bandanas, welding skullcaps, fabric winter liners, and tight-knit stocking caps) may be worn under the hardhat as long as these items do not diminish the protective properties of the hardhat.
- Wear a hardhat at all times while on the UPF construction site, except when you are:
 - Inside an enclosed vehicle/equipment cab.
 - In an office.
 - Taking a break in a designated PPE-free area.
 - Walking on a designated PPE-free pathway between the office/trailer building and the parking lot.
- Wear a hardhat in conjunction with a welding hood when performing welding or similar hot work operations.
- The use of a welding hood alone without a hardhat is allowed if approved/authorized by the Responsible Superintendent and an ES&H Representative. This exemption may occur when welding needs to take place in a location that is physically restrictive and impedes the safe use of a hardhat. The use of alternative head/face protection must be evaluated and implemented as determined by the evaluation.
- Store hardhats in a clean and dry location. Never use paint, solvents, hydrocarbon-type cleaners, glue, or other similar chemicals on hardhats. These substances can cause serious damage that may not be visible upon inspection.
- Visually inspect the shell and suspension system of the hardhat daily for breakage, cracks, scratches, gouges, hairline cracks, discoloration, chalky appearance, or other unusual condition. Inspect the shell for brittleness by flexing the brim. Any of these conditions indicates a loss of protection from impact and electrical conductivity.

3.1.4 Eye and Face Protection

Eye protection (safety glasses) must meet the specifications of ANSI Z87.1, *American National Standard Institute Standard for Occupational and Educational Personal Eye and Face Protection Devices*.

- Do not wear non-photochromic glasses with tinted lenses inside a building or other structure with limited (temporary) illumination, regardless of whether they are prescription or non-prescription glasses.
- Refer to ML-SH-801768-A002, *UPF Eye and Face Protection List*, for task-specific eye and face protection directives.
- Wear eye protection at all times while on the UPF construction site, except when:
 - In an office or a trailer.
 - Operating a vehicle or equipment inside an enclosed cab.
 - Wearing goggles or respiratory protection that provides equal or greater levels of protection.

<i>Personal Protective Equipment and Safe Work Apparel</i>
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- Ensure that personal eyewear (corrective lenses and frames) meets the ANSI Z87.1 requirements. If assistance is needed in determining whether specific glasses meet the ANSI standard, then contact a supervisor or an ES&H Representative. It is the employee's responsibility to initiate research and to find out and confirm that prescription glasses meet the applicable safety requirements.
- Inspect eye and face protection for damage and wear and tear before each use. Before wearing safety glasses, inspect the frames for cracks and deformation and the lenses for extensive scratches that limit visibility. Inspect goggles for pliability to ensure a good fit to the face. Check the headband and vents, if applicable, for signs of degradation and deterioration. Inspect face shields and suspension systems for breakage, cracks, scratches, and other detrimental conditions.
- Safety glasses, goggles, and face shields may be cleaned with an eyeglass cleaner. Do not use ammonia, alkaline cleaners, abrasive cleaning compounds, or solvents.

3.1.5 Hearing Protection

Refer to UPF-CP-312, *Hearing Conservation Program*, for the selection and use of hearing protection equipment.

Care includes discarding disposable earplugs when they possess visible signs of uncleanness. Reusable earplugs and earmuffs must be cleaned and sanitized. Cleaned and sanitized reusable hearing protection must be kept in a clean, dry area.

Inspect reusable earplugs and earmuffs for wear and tear. Return damaged ear muffs for repair or disposal.

3.1.6 Hand Protection

- Wear hand protection appropriate for the hazards and the task to be performed. Hand safety hazards include, but are not limited to, the following:
 - Impacts, cuts, abrasions, and infections.
 - Extreme temperatures.
 - Chemicals and other hazardous substances.

3.1.6.1 Selection of Hand Protection

- Use only hand protection that is approved and provided by the Project. Refer to ML-SH-801768-A003, *UPF Gloves Matrix*, for a sample of Project approved hand protection.
- All selected hand protection must meet or exceed the following minimum requirements.
 - Gloves must meet cut resistance equal to or greater than Level 4 as defined in ASTM F1790, *Standard Test Method for Measuring Cut Resistance of Materials Used in Protective Clothing*, or equivalent.
 - Gloves must meet puncture resistance equal to or greater than Level 2 as defined in EN 388, *Protective Gloves against Mechanical Risks*, or equivalent.

Personal Protective Equipment and Safe Work Apparel

- Where impact hazards are identified (e.g., present risks to hands or fingers such as being caught in/between or struck by/against hazards), gloves with impact protection are required.

NOTE: *Wearing gloves or loose clothing around rotating equipment can be dangerous because of the risk of entanglement. Therefore, the ES&H Representative and Responsible Superintendent will evaluate the task, equipment function, and manufacturer's instructions and provide recommendations for the task.*

- Inspect hand protection before each use. Discard damaged and/or worn gloves with holes, shredding, and/or other signs of deterioration.

3.1.7 Respiratory Protection Equipment

Refer to UPF-CP-318, *Respirator Use and Issuance*, for the selection, use, and care of respiratory protective equipment.

3.1.8 Fall Protection Equipment

Refer to UPF-MANUAL-SH-A001, *UPF Elevated Work Manual*, for the selection, use, and care of fall protection equipment.

3.1.9 Electrical Protection Equipment

Refer to UPF-MANUAL-CM-001, *Uranium Processing Facility Construction Electrical Safety Manual*, for the selection, use, and care of electrical protective equipment.

3.1.10 High-Visibility Apparel

Wear appropriate, high-visibility apparel when required in accordance with **Table 1**. High-visibility apparel includes safety vests, jackets, shirts, and other personal protective safety clothing that is intended to provide visibility during both daytime and nighttime usage and that meets the Performance Class 2 requirements of ANSI 107, *American National Standard for High-Visibility Apparel and Headwear*.

Table 1. Appropriate Apparel

PERSONNEL	APPAREL COLOR
Safety Watches: <ul style="list-style-type: none"> • Traffic Watch (Flagger) • Fire Watch • Confined Space Attendant 	Orange
Personnel Directing Crane Equipment: <ul style="list-style-type: none"> • Signalman (crane), Bellman 	Red
Excavation and Backfill Personnel (Personnel working within an excavation area where heavy equipment is operating)	Yellow/Lime Green

<i>Personal Protective Equipment and Safe Work Apparel</i>
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PERSONNEL	APPAREL COLOR
Personnel as directed by the Site Manager and ES&H Manager (e.g. K-31, Laydown 2, Alpha/Bravo/Charlie Area)	Yellow/Lime Green

4.0 RECORDS

None

5.0 REFERENCES

5.1 Source References

10 Code of Federal Regulations (CFR) 851, *Worker Safety and Health Program*

29 CFR 1926, *Safety and Health Regulations for Construction*, Subpart E, Personal Protective and Life Saving Equipment

Bechtel Corporation, ES&H Core Process 2HI-H030-00205, *Personal Protective Equipment*

Bechtel Corporation, ES&H Procedure 2HO-E0S0-00001, *Hand Protection*

National Fire Protection Association (NFPA) 70E, *Standard for Electrical Safety in the Workplace*

UPF-CP-200, *UPF General Safe Work Practices*

UPF-CP-227, *UPF Safety Watches*

Y73-95-802, *Confined Space Entry Program*

5.2 Interfacing References

ANSI Z87.1, *American National Standard Institute Standard for Occupational and Educational Personal Eye and Face Protection Devices*

ANSI Z89.1, *American National Standard Institute Standard for Industrial Head Protection*

ANSI 107, *American National Standard for High-Visibility Apparel and Headwear*

ASTM F1790, *Standard Test Method for Measuring Cut Resistance of Materials Used in Protective Clothing*

ASTM F2413, *Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear*

EN 388. 2003. *Protective Gloves against Mechanical Risks*

E-POL-0050, *Standards of Conduct and Appearance*

ML-SH-801768-A002, *UPF Eye and Face Protection List*

ML-SH-801768-A003, *UPF Gloves Matrix*

<i>Personal Protective Equipment and Safe Work Apparel</i>
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UPF-CP-312, *Hearing Conservation Program*

UPF-CP-318, *Respirator Use and Issuance*

UPF-MANUAL-CM-001, *Uranium Processing Facility Construction Electrical Safety Manual*

UPF-MANUAL-SH-A001, *UPF Elevated Work Manual*

6.0 SUPPLEMENTAL INFORMATION

Appendix A, *Acronyms and Definitions*

APPENDIX A ACRONYMS AND DEFINITIONS

Acronyms

ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
CFR	Code of Federal Regulations
ES&H	Environment, Safety, and Health
JHA	Job Hazard Analysis
NFPA	National Fire Protection Association
PPE	Personal Protective Equipment
UPF	Uranium Processing Facility

Definitions

Apparel	Clothing worn to cover the body and extremities, including shirts, pants, jackets, raincoats, etc.
Construction/ Warehousing Support Facilities	Offices and break areas directly supporting construction or warehousing activities, but where physical work is not being performed (e.g., Construction Support Building, On-boarding Center, craft break trailers, warehouse support trailers)
Job Hazard Analysis	A tool used to document workplace activities and related hazards and controls.
Personal Protective Equipment	Safety devices or garments used to protect workers from injury or exposure resulting from contact with chemical, biological, physical, or workplace hazards.
Photochromic Glasses	Eyeglass lenses that darken automatically when exposed to sunlight and then fade back when you return indoors.