**12.02.01 PERSONAL PROTECTIVE EQUIPMENT AND PROTECTIVE CLOTHING**

**1.0 REFERENCE**

WAC 296-305-02001

WAC 296-305-02002

**2.0 POLICY**

**2.1** Employers shall provide and maintain at no cost to the employee the appropriate protective ensemble/protective clothing to protect from the hazards to which the member is or is likely to be exposed. Information on hazard assessments can be found in WAC 296-800-16005. Employers shall ensure the use of all protective equipment and clothing required by this standard. Full protective equipment designated for the task, shall be worn for all department activities.

**2.2** Members shall be trained in donning, doffing, care, use, inspection, maintenance and limitations of the protective garments assigned to them or available for their use.

**2.3** Protective clothing shall be used and maintained in accordance with the manufacturer's instructions. A written maintenance, repair, retirement, servicing, and inspection program shall be established for protective clothing and equipment. Specific responsibilities shall be assigned for inspection and maintenance. This requirement applies to member's personally owned protective garments authorized for use.

**2.4** The XXXXX shall provide for the cleaning of soiled or contaminated protective clothing at no cost to the employee. Such cleaning shall be performed by either a cleaning service or at a fire department facility that is equipped to handle contaminated clothing. If the fire department does its own cleaning, they shall follow the manufacturer's recommended cleaning procedure or the 2008 edition of NFPA 1851, Standard on Selection, Care and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting.

**2.5** Personal protective clothing shall be of a type specified by NIOSH, MSHA, NFPA, ANSI or as specifically referenced in WAC 296-305.

**2.6** Station/work uniforms. Station/work uniforms are not themselves intended as primary protective garments. Station/work uniforms if provided, shall meet the requirements as specified in the 1990 or 1994 edition of NFPA 1975, Standard on Station/Work Uniforms for Fire and Emergency Services. However, departments are not required to provide station/work uniforms for their employees. Station/work uniforms include trousers, and/or coveralls, but exclude shirts, underwear, and socks.

**2.6.1** Because it is impossible to ensure that every member will respond to an incident in a station/work uniform or will change out of fabrics that have poor thermal stability or ignite easily, Members shall not wear any clothing that is determined to be unsafe due to poor thermal stability or poor flame resistance when engaged in or exposed to the hazards of structural firefighting. The fire department shall inform members of the hazards of fabrics that melt, drip, burn, stick to the skin and cause burns to the wearer due to poor thermal stability or poor flame resistance, and shall prohibit their use by employees. Garments that are not provided by the employer, and that are made from all or mostly cotton, will meet the requirements of this section.

**2.7** Structural Firefighting Clothing (SFF). All SFF clothing purchased after January 1, 2014, shall meet the requirements of the 1991 edition of NFPA 1971, Standard on Protective Clothing for Structural Fire Fighting, or the 1997 edition of NFPA 1971, Standard on Protective Ensemble for Structural Fire Fighting. Firefighters shall not wear personal protective clothing manufactured prior to 1991, except for training purposes in nonhazardous areas.

2.7.1 SFF clothing shall be maintained as specified by the manufacturer.

2.7.2 Repairs to turnout clothing shall be done to the manufacturer's specification by individuals who have been trained by the manufacturer or their designated agent.

**2.7.3** Repairs to SFF clothing shall be done to the manufacturer's specification by qualified individuals approved by the manufacturer. Repairs must be made using materials and methods in accordance with the applicable standards under which the article was produced. Repairs include any and all alterations, modifications, additions, deletions or any other change made to the manufacturer's PPE article.

**2.8** All SFF clothing shall be inspected semiannually by an individual qualified by the employer. Inspection intervals shall not exceed six months.

**2.8.1** All turnout clothing used as proximity clothing shall meet the requirements of the 2000 Edition of NFPA 1976 Standard on Protective Ensemble for Proximity Firefighting.

**2.8.2** There shall be at least a two-inch overlap of all layers of the protective coat and the protective trousers so there is no gaping of the total thermal protection when the protective garments are worn. The minimum overlap shall be determined by measuring the garments on the wearer, without SCBA, with the wearer in the most stretched position, hands together reaching overhead as high as possible.

**2.8.3** Single piece protective coveralls shall not be required to have an overlap of all layers as long as there is continuous full thermal protection.

**2.8.4**  Fire departments that provide protective coats with protective resilient wristlets secured through a thumb opening may provide gloves of the gauntlet type for use with these protective coats. Fire departments that do not provide such wristlets attached to all protective coats shall provide gloves of the wristlet type for use with these protective coats.

**3.0 DEFINITIONS**

Note: add if applicable

**4.0 RESPONSIBILITY**

**4.1** VARIABLE (Name Person(s) by title) shall ensure compliance with this policy.

**4.2** All turnout clothing shall be inspected semi-annually by an individual qualified and designated by The XXXXX

**5.0 GUIDELINES**

**5.1** The specific manufacturer recommendations should be referenced for donning, doffing, care, use, inspection, maintenance, limitations and retirement of protective clothing garments.

**5.2** Protective coats and pants must not be kept in direct contact with flame or molten metal. These protective coats and pants are not designed to provide protection for proximity to fire entry applications nor from radiological, biological, or chemical hazards.

**5.3** Soiled PPE should be cleaned before inspection to ensure proper detection of damage such as discoloration and/or heat damage that may be masked.

**5.3.1** Discolored areas indicate excessive exposure to heat and/or flame impingement. If these areas are damaged, they need to be thoroughly checked for strength loss or other signs of degradation. In protective clothing, all three layers should be examined for damage if the outer shell is charred.

**5.3.2** Fabric or material damage is evidenced by rips, tears, cuts abrasion, worn areas and fraying. To check for weakening of fabric, flex and attempt to tear and to push a finger or thumb through the material. The extent and complexity of damage should be used to determine the appropriate follow-up action. Large areas where quilt stitching in the liner is broken or missing may indicate the need to replace the liner.

**5.3.4** Thread or seam damage is evidenced by skipped, broken or missing stitches. All layers of the PPE must be checked for any type of stitch or seam failure.

**5.3.5** Turnout clothing which is damaged or does not comply with manufacturer specifications, shall not be used or worn.

**5.3.6** Inspection intervals and washing of PPE shall not exceed 6 months.

**7.0 APPENDIX**

**A-7.0 INSPECTION**

Inspection programs serve two primary purposes. To ensure that the Fire Fighter's Personal Protective Equipment will provide its designed protection and provide a means to document the service and wear life characteristics of the department's PPE.

A systematic and routine top-to-bottom inspection should be made, while wearing protective gloves, to all PPE to confirm its serviceability. Some fire departments have discovered that inspection programs are more consistent if performed by the same designated group of trained individuals. Outlined below is a straightforward inspection program including a simple grading scale which can be used to identify the PPE's current condition. Completing and documenting the results of routine inspections is recommended to ensure that unsafe PPE is found and removed from service

A. Inspection Frequency: Inspections should be performed upon receipt of new PPE, at least once a month, after each cleaning, and/or following any application where the PPE has been damaged or contaminated. In the event of exposure to hazardous materials, PPE should be isolated and inspected.

B. Inspection Grading Scale: The grading scale is designed to assist fire department personnel in identifying and documenting the condition of all PPE.

1. New or As-new Condition: Newly purchased equipment or equipment that is in like new condition.

2. Good Condition: Equipment is in good serviceable condition. The equipment may show wear but replacement is not necessary.

3. Immediate Replacement: Equipment is unsafe and should be removed from service. PPE may be repaired or retired after further inspection.

\*\* Maintenance Needed: This symbol next to a number (defined above) can be used to indicate that maintenance is necessary. Maintenance details should be described in the "Comments" section of the inspection form.

C. General areas of inspection. Inspect every article of personal protective equipment for the following types of wear or damage. Soiled PPE should be cleaned before inspection to ensure proper detection of damage such as discoloration and/or heat damage that may be masked. Each of these damage… types indicate a potential problem with the protective features of the PPE and apply to all PPE including helmets, boots, gloves, and protective garments.

D. Cleanliness, or lack thereof, can indicate contamination of the PPE with foreign substances that may be flammable, toxic, and/or carcinogenic. Soiled PPE should be cleaned and restored to 'good" condition.

1. Char, Heat Damage, or burned areas indicate excessive exposure to heat and/or flame impingement. These areas are damaged and need to be thoroughly checked for strength loss or other signs of degradation. In protective clothing, all three layers should be examined for damage if the outer shell is charred.
2. Fabric or Material Damage is evidenced by rips, tears, cuts, abraded or worn areas, fraying, weak or easily torn areas, and others. This type of damage has many possible causes and can often be repaired. To check for weakening of fabric, flex, attempt to tear, and attempt to push a finger or thumb through the material. The extent and complexity of damage should be used to determine the appropriate follow-up action. Large areas where quilt stitching is broken or missing may indicate the need to replace the liner.
3. Thread or Seam Damage is evidenced by skipped, broken, or missing stitches. All layers of the PPE must be checked for any type of stitch or seam failure.
4. Discoloration can indicate many types of possible damage including: dye loss, frosting, heat degradation, chemical contamination, and others. These areas should be thoroughly checked for strength and integrity. Any loss of strength or weakening of the material(s) is a sign of damage and grounds for removal from service for repair or retirement.
5. Dye loss resulting from heat or chemical contamination (as opposed to general fabric fading) should be thoroughly checked as to the severity of the damage.
6. Reflective trim may be missing, loose, burned, melted, or have lost its retro-reflective properties­. Trim may appear to be undamaged to the human eye when it has actually lost much of the ability to reflect. A simple 'flashlight" test for checking retro-reflective properties is: Hold a bright, "focused' beam, flashlight at eye level, either next to the temple or on the bridge of the nose. Stand at least 20 feet (40 feet is better) from the trim sample; aiming the light beam at the sample. Note the brightness of the reflected light coming back comparing this with a sample of "new" trim. Replace trim if the reflected light is substantially less than that seen on the new trim.

K. Specific Areas of Inspection: In addition to the above general inspection items, check each article of personal protective equipment for these PPE "item" specific forms of (possible) damage.

1. Helmets (Structural and Wildlands)

(a) Shell

(b) Bubbling of shell material - Delamination - Dents, cracks

nicks, gouges, flaking

(c) Loss of surface gloss

2. Face Shield or Goggles

(a) Reduced clarity

(b) Scratches

(c) Cracks

(d) Warping

(e) Attachment hardware

(f) Retention system (elasticity, hardware, seal)

3. Inner Shell and lmpact Liner

(a) Warping

(b) Wear

(c) Broken or missing components

(d) Proper installation and attachment

4. Suspensions

(a) Cracked or missing suspension components

(b) Torn head band or size adjustment slots

(c) Stripped adjustment ratchet knobs

(d) Reduced pliability and other signs of wear

(e) Proper installation and fit

5. Crown Straps and Ear Covers

(a) Proper installation and fit

6. Chin Strap

(a) Fasteners

(b) Slides and Closures

7. Hoods

(a) Shrinkage

(b) Loss of elasticity

(c) Seam integrity

(d) Closure system

8. Coats and Pants

(a) Outer Shell

(1) Damage to pockets

(2) Hardware

(3) Reinforcements

(4) Seam integrity/quilt stitching

(5) Closure system

(b) Moisture Barrier and Thermal Liner

(1) Delamination of seam seals

(2) Seam integrity

(3) Attachment system (to outer sh

(c) Protective Wristlets (coat only)

(1) Shrinkage

(2) Loss of elasticity

(3) Seam integrity

(4) Thumb hole elongation

(d) Suspenders (Pants only)

(1) Shrinkage

(2) Loss of elasticity

(3) Seam integrity

(e) Gloves

(1) Shrinkage

(2) Loss of elasticity/flexibility

(3) Seam integrity

(f) Footwear, Protective

(1) Loss of elasticity

(2) Delamination of seam seals

(3) Material damage

(4) Steel toe, shank damage

(5) Sole tread wear

(6) Waterproofness

(g) Footwear: Leather

(1) Steel toe, shank damage

(2) Rips, tears, holes

(3) Sole tread wear

(4) Closure system

(5) Waterproofness

(h) Station/Work Uniform and Wildland Garments

(1) Seam integrity

(2) Damaged pockets

(3) Closure systems