

Salina Fire Department		Number: S-602
PPE Program		Pages: 1 of 6
Effective: 01/03/08	Amends:	Issued: 03/10/08

Purpose
Procedures
PPE ensemble selection
Routine PPE inspection
Advanced PPE inspection
Advanced PPE cleaning and decontamination
Repairs to PPE ensembles
Storage of PPE ensembles
Retirement off PPE ensembles
PPE special incident procedures

Purpose

To comply with NFPA 1851; Creating an overall program for "...Selection, Care And Maintenance (SCAM) of structural fire fighting ensembles and ... elements," which includes coats, trousers, coveralls, helmets, gloves, boots, etc. (accessories, such as belts, harnesses, radios, lights, etc., are not permitted unless they are certified in accordance with NFPA 1971 *Standard on Protective Ensemble for Structural Fire Fighting*, or the fire department has the particular equipment manufacturer's approval). 'Turnout gear' or 'bunker gear' is referred to in the standard as an "ensemble." The ensemble consists of "elements" including coats, trousers, coveralls, helmets, gloves, footwear, and interface (with other protective equipment) components. We will use the terms interchangeably.

Procedures

Selection of the PPE ensemble will be done by an educated PPE committee.

Routine inspections and cleaning of the PPE ensembles will be done by the individual assigned the ensemble.

Advanced inspection of PPE ensembles will be done by qualified agents designated by the PPE program Manager every six months.

Advanced cleaning and decontamination of PPE ensembles will be done on an annual basis, unless deemed necessary during the advanced inspection.

Repairs to PPE ensembles will be done by manufacturer approved service agents only.

Disposition tracking of all PPE ensemble elements shall follow NFPA recommendations. All ensemble pieces will be entered in the database and all advanced inspections, cleaning and or repairs, will be logged and dated within the database.

Storage of PPE ensembles will follow NFPA recommendations for, reduction of cross contamination potential, shielding from UV light, and ample air flow for drying.

Retirement procedure will follow NFPA recommendations for destruction of PPE ensembles reaching 10 years past manufacture date.

Special incident procedures will follow NFPA recommendations for handling special incident, special contamination procedures for PPE ensembles.

Salina Fire Department		Number: S-602
PPE Program		Pages: 2 of 6
Effective: 01/03/08	Amends:	Issued: 03/10/08

PPE ENSEMBLE SELECTION

The overall PPE program will be ran and overseen by the PPE program manager.

Decisions respecting the selection of turnout clothing be made by a committee formed for that purpose, this committee is to be made up of personnel educated in the area of PPE specifications, manufacturer requirements and NPFA recommendations.

Overall PPE ensemble specifications and manufacture advancements will be reviewed with-in a period not greater than every 5 years, and any changes and or industry improvements will be included in updated ensemble specifications, then to be reflected in new purchases.

ROUTINE INSPECTION

The routine inspection is simpler and performed by the firefighter after each time they use their ensemble in an environment where it may become damaged or contaminated. During a routine inspection, firefighters examine their coats, trousers, hoods, helmets, gloves and footwear.

During routine inspections firefighters will be check for the following:

1. Soiling
2. Contamination from hazardous materials or biological agents
3. Physical damage such as the following:
 - a. Rips, tears, and cuts
 - b. Damaged/missing hardware and closure systems
 - c. Thermal damage such as charring [brittle residue], burn holes, and melting [flowing or dripping].
4. Damaged or missing reflective trim.

If needed the firefighter will perform a routine cleaning by; brushing off debris; rinsing the area with water; if necessary, scrubbing the area gently and rinsing again. If necessary, heavier spot cleaning in a sink can be preformed with mild detergent and a scrub brush.

Salina Fire Department		Number: S-602
PPE Program		Pages: 3 of 6
Effective: 01/03/08	Amends:	Issued: 03/10/08

ADVANCED INSPECTION

Advanced inspections must be performed whenever a routine inspection reveals a problem, or at least every 12 months.

Advanced inspections are individually performed for all layers of garment elements, hoods, helmets, gloves, and footwear and the results are documented.

As an example of how more detailed an advanced inspection is compared to a routine inspection, the following are the advanced inspection criteria for all layers of the garment elements;

- 1) Soiling
- 2) Contamination from hazardous materials or biological agents
- 3) Physical damage to all layers, such as the following:
 - a. Rips, tears, cuts and abrasions
 - b. Damaged/missing hardware
 - c. Thermal damage such as charring [brittle residue], burn holes, melting [flowing or dripping], or discoloration of any layer.
- 4) Loss of moisture barrier integrity as indicated by:
 - a. Rips, tears, cuts, and abrasions
 - b. Discoloration
 - d. Thermal damage
- 5) Evaluation of system fit and coat/trouser overlap
- 6) Loss of seam integrity; broken or missing stitches
- 7) Material integrity: UV or chemical degradation, loss of liner material, shifting of liner material
- 8) Wristlets: loss of elasticity, stretching, runs, cuts, burn holes
- 9) Reflective trim integrity, attachment to garment, reflectivity, damage
- 10) Label integrity, legibility
- 11) Hook and loop functionality

Salina Fire Department		Number: S-602
PPE Program		Pages: 4 of 6
Effective: 01/03/08	Amends:	Issued: 03/10/08

- 12) Liner attachment systems
- 13) Closure system functionality
- 14) Accessories for compliance with NFPA 1851 - 4.2.3

ADVANCED PPE CLEANING AND DECONTAMINATION

The advanced cleaning shall be managed by a member of the organization or conducted by members of the organization who have received training in the advanced cleaning of protective ensembles and ensemble elements. All advanced cleaning will be logged in PPE maintenance records.

Ensemble and ensemble elements that are issued and used shall receive advanced cleaning at the time of advanced inspection if not subjected to advance cleaning in the preceding 12 months. Advanced cleaning shall **NOT** be performed more than twice in a 12 month period unless ensemble has been subject to chemical or biological contamination.

Advanced cleaning of ensembles and ensemble elements shall be conducted by machine unless specifically prohibited.

The following NFPA procedures shall be used for machine washing:

1. The machine shall not be overloaded, no more than 4 pieces per load. PPE elements shall **NOT** be washed as mixed loads; outer shells shall **NOT** be washed with inner liners.
2. Heavily soiled or spotted areas shall be pretreated. **Chlorine bleach, chlorinated solvents, active-ingredient cleaning agents, or solvents shall NOT be used.**
3. All closures, including pocket closures, hooks and loops, snaps, zippers, and hooks and Dees shall be fastened.
4. Water temperature shall not exceed 40°C (105° F).
5. A mild detergent with a pH range of not less than 6.0 pH and not greater than 10.5 pH as indicated on the product MSDS or original product container shall be used.
6. Washing machines with the capability of drum RPM adjustment shall be adjusted so the g-force does not exceed 100 g for all elements.
7. Machine manufacturer's instructions shall be followed for proper setting or program selection for the specific element being washed.
8. The element shall be inspected and rewashed if necessary.
9. If the machine is to be used to wash items other than protective ensemble elements, it shall be rinsed out by running the machine without a laundry load through a complete cycle with detergent and filled to the maximum level with water at a temperature of 49°C to 52°C (120°F to 125°F).

Salina Fire Department		Number: S-602
PPE Program		Pages: 5 of 6
Effective: 01/03/08	Amends:	Issued: 03/10/08

10. If the coat element has a drag rescue device (DRD) and the DRD is removable, the DRD shall be removed prior to the coat being laundered. If the DRD also requires cleaning, it shall be placed in a separate mesh bag for washing and drying.
11. All PPE ensemble elements shall be air dried following washing.

REPAIRS TO PPE ENSEMBLES

All repairs must “be done in a manner and using materials that are approved by the manufacturer” and the standard generally either encourages and/or requires manufacturer consultation on repairs, including seaming.

Minor repairs is defined as; “Repair of minor tears, char marks, ember burns, and abraded areas shall be limited to those where the damaged area can be covered by a maximum of a 32cm² (50 in.²) patch.”

Major repairs to the outer shell, and all repairs to the moisture barrier, may only be performed by the manufacturer or a manufacturer recognized repair facility.

STORAGE OF PPE ENSEMBLES

NFPA 1851 states; soiled ensembles and ensemble elements shall not be stored in living quarters or with personal belongings or taken or transported in the passenger compartment of personal vehicles due to cross contamination potential.

To be compliant with NFPA recommendations; SFD PPE ensemble elements shall **NOT** be brought or worn into station living or office areas.

Ensembles or ensemble elements shall not be stored in direct sunlight or exposed to direct sunlight while not being worn.

Ensemble and ensemble elements shall not be stored in airtight containers unless they are new and unissued.

Ensembles and ensemble elements shall not be stored at temperatures below -25°F or above 180°F.

Salina Fire Department		Number: S-602
PPE Program		Pages: 6 of 6
Effective: 01/03/08	Amends:	Issued: 03/10/08

RETIREMENT OF PPE ENSEMBLES

The organization shall develop specific criteria for removal of structural fire fighting ensembles and ensemble elements and proximity fire fighting ensembles and ensemble elements from service, which includes, but is not limited to, issues that are specific to the ensembles or ensemble elements being used by the organization, the manufacturer's instructions, and the experience of the organization.

Structural fire fighting ensembles and ensemble elements shall be retired in accordance with NFPA 1851 [10.2.1](#), no more than 10 years from the date the ensembles or ensemble elements were manufactured.

10.2.1 Retired structural fire fighting ensembles and ensemble elements and proximity fire fighting ensembles and ensemble elements shall be destroyed or disposed of in a manner ensuring that they will not be used in any fire fighting or emergency activities, including live fire training.

PPE ENSEMBLES SPECIAL INCIDENT PROCEDURES

The organization shall have procedures for the handling and custody of structural fire fighting ensembles and ensemble elements and proximity fire fighting ensembles and ensemble elements that were worn by fire fighters who were victims at incidents where serious injuries or fatalities to the fire fighters occurred. (SOG – S 075)