

Organization

Book:	1- Organization
Chapter	IV- General Administration
Subject	Personal Protective Equipment
Code	1-IV-2
Revised	

2.01 Purpose

To provide policy and guidelines relative to the proper personal protection, in the form of Personal Protective Equipment (PPE), to all Jersey Village Emergency Services employees and members exposed to dangerous situations and hazardous atmospheres and/or environments.

2.02 Policy

- A. Jersey Village Emergency Services employees and members shall utilize and wear personal protective equipment (PPE) and safety gear as prescribed by those policies and procedures contained herein.
- B. Use of personal protective equipment as defined and prescribed within this policy shall be considered mandatory during emergency operations and/or whenever the chance or risk of personal injury to members may exist.
- C. The Jersey Village Emergency Services shall provide its members with the proper type of approved personal protective equipment, which is currently available in the safety clothing market.
- D. All personal protective equipment shall be inspected once a year. The Quartermaster on the proper form shall document all inspections.
- E. All personal protective equipment shall be cleaned as needed but no less than once every six months. Cleaning shall be in accordance with this policy. The cleaning shall be documented on the proper form and retained by the Quartermaster.

2.03 Responsibility

- A. The Fire Chief shall have overall responsibility to insure that Jersey Village Emergency Services employees and members adhere to this policy.
- B. The Incident Commander or Officer in Charge shall be responsible for seeing that all employees and members on the scene of an incident adhere to this policy.
- C. All employees and members are directly responsible for their safety and shall utilize proper personal protective equipment as prescribed within this policy.

2.04 Definitions

1. **Personal Protective Equipment** - Multiple elements of clothing and equipment designed to provide a degree of protection for fire fighters from adverse exposures to the inherent risks of structural fire fighting operations and certain other emergency operations. The elements of the protective ensemble are helmet, hood, coat, gloves, pants, and boots. All PPE purchased by the Jersey Village Emergency Services shall comply with the current NFPA standards in effect at time of purchase.
2. **Cleaning** - The act of removing soils and contaminants from ensembles and elements by mechanical, chemical, thermal or combined processes.
3. **Routine Cleaning** - The light cleaning of ensembles or elements performed by the end user without taking the elements out of service.
4. **Advanced Cleaning** - The thorough cleaning of ensembles or elements by washing with cleaning agents.
5. **Contract Cleaning** - Cleaning conducted by a facility outside the organization that specializes in cleaning protective clothing.
6. **Specialized Cleaning** - Cleaning to remove hazardous materials or biological agents.
7. **Routine Inspection** - Each individual member shall conduct a routine inspection of his or her personal ensemble or ensemble elements after each use.
8. **Selection** - The process of determining what protective clothing and equipment is necessary for protection of fire and emergency service responders from an anticipated, specific hazard, or other activity, the procurement of the appropriate protective clothing and equipment, and the choice of the proper protective clothing and equipment for a specific hazard or activity at an emergency scene.

2.05 Selection

The Fire Chief shall develop the specifications for the PPE used by employees and members of the Jersey Village Emergency Services. All PPE shall meet the standard as set forth in the most current edition of NFPA 1851 Standard on Selection, Care and Maintenance of Structural Fire Fighting Protective Ensembles. The most current edition of NFPA 1851 may be found through the internet at www.nfpa.org . All members may request the username and password from the Fire Chief.

Selection of PPE

Jersey Village Emergency Services shall form a committee for the purchase of new personal protective equipment. The committee shall provide direction to the Fire Chief for the purchase of equipment as set forth in NFPA 1971 Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting. In order to comply with Texas Commission on Fire Protection standards and the standards set forth in NFPA 1971, the committee shall follow guidelines set forth in NFPA 1971 with the following requirements:

1. Certification
2. Labeling
3. Design
4. Performance
5. Test Methods

The committee shall determine the brand of Personal Protective Equipment protective gear to purchase, identify if the company manufacturing the gear is meeting current standards including NFPA 1971 and make recommendations to the Fire Chief for purchase of new equipment.

Inspection of New PPE

Upon delivery of purchased gear the committee members and/or Fire Chief shall thoroughly inspect the gear to determine if the PPE purchased and delivered has met all requirements of NFPA 1971.

In addition, the committee and/or Fire Chief shall have the member receiving the PPE; try the PPE on for fit and comfort.

Return of Unsatisfactory PPE

If any PPE purchased and delivered does not meet NFPA 1971 standards or if the PPE is custom designed and does not fit the member, the gear will be returned immediately to the manufacturer. The manufacturer will be requested to address concerns found by the committee and/or Fire Chief and report their findings to the committee and/or Fire Chief.

The equipment purchased shall meet NFPA 1971 standards before being accepted or placed into service. If the manufacturer indicates the PPE sold to Jersey Village Emergency Services does meet NFPA 1971 standards, the manufacturer will provide upon request a written statement indicating the actions taken confirming the PPE meets NFPA 1971 Standards and the manufacturer shall certify the PPE being sold does meet NFPA 1971 Standards prior to the gear being placed into service.

2.06 Records

The Jersey Village Emergency Services shall compile and maintain records on their structural fire fighting protective ensembles or ensemble elements.

At least the following records shall be kept for each ensemble element:

- (1) Person to whom element is issued
- (2) Date and condition when issued
- (3) Manufacturer and model name or design
- (4) Manufacturer's identification number, lot number, or serial number
- (5) Month and year of manufacture
- (6) Date(s) of and findings of advanced inspection(s) by organization
- (7) Date(s) of advanced cleaning or decontamination by organization

- (8) Reason for advanced cleaning or decontamination and who performed cleaning or decontamination
- (9) Date(s) of repair(s), who performed repair(s), and brief description of any repair(s)
- (10) Date of retirement
- (11) Date and method of disposal

Records will be filed electronically by the Quartermaster and will only be available to the Quartermaster, Administrative Assistant, Assistant Fire Chiefs and the Fire Chief.

Manufacturer’s Instructions.

When issuing new structural fire fighting ensembles and ensemble elements, the Jersey Village Emergency Services shall provide users with the instructions provided by the manufacturer on the care, use, and maintenance of their protective ensembles or elements, including any warnings provided by the manufacturer.

The Jersey Village Emergency Services shall retain a copy of manufacturer’s instructions regarding the care, use, and maintenance of their protective ensembles for reference purposes.

2.07 Inspection

A. Routine Inspection

Individual members shall conduct a routine inspection of their personal ensemble or ensemble elements after each use. The routine inspection shall include, as a minimum, the following inspections:

Coats and trousers shall be inspected 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, burn holes, and melting
- (4) Damaged or missing reflective trim

Hoods shall be inspected 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. Thermal damage such as charring, burn holes, and melting
- (4) Loss of face opening adjustment

Helmets shall be inspected for the following:

- (1) Soiling
- (2) Contamination from hazardous materials or biological agents
- (3) Physical damage to the shell, such as the following:

- a. Cracks, crazing, dents, and abrasions
- b. Thermal damage to the shell such as bubbling, soft spots, warping, or discoloration
- (4) Physical damage to the ear flaps, such as the following:
 - a. Rips, tears, and cuts
 - b. Thermal damage such as charring, burn holes, and melting
- (5) Damaged or missing components of the suspension and retention systems
- (6)* Damaged or missing components of the faceshield/goggle system, including discoloration, crazing, and scratches to the faceshield/goggle lens limiting visibility
- (7) Damaged or missing reflective trim

Gloves shall be inspected 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. Thermal damage such as charring, burn holes and melting
 - c. Inverted liner
- (4) Shrinkage
- (5) Loss of elasticity/flexibility

Footwear shall be inspected for the following:

- (1) Soiling
- (2) Contamination from hazardous materials or biological agents
- (3) Physical damage, such as the following:
 - a. Cuts, tears, and punctures
 - b. Thermal damage such as charring, burn holes, and melting
 - c. Exposed/deformed steel toe, steel midsole, and shank
- (4) Loss of water resistance
- (5) Closure system component damage and functionality

B. Advanced Inspection

Jersey Village Emergency Services is not a certified facility for advanced inspection of Personal Protective Equipment. Personnel will follow the guidelines set forth in section 2.07 routine inspections to identify concerns to the Fire Chief. Upon any findings of items listed in Section 2.07, the Fire Chief will have the Personal Protective Gear sent immediately for Advanced Inspection.

Facility for Advanced Inspection

In the Houston Metropolitan area, the verified Independent Service Provider facility approved for Advanced Inspection is:

Lion Total Care
8484 Gulf Freeway
Houston, Texas 77017

Phone 713-644-7400
Fax 713-644-8848
liontotalcare@lionapparel.com

The Jersey Village Emergency Services will send all Personal Protective Equipment to the above listed ISP for all Advanced Inspections, Advanced Cleaning, Repairs and All Specialty Cleaning care.

All Personal Protective Equipment shall be inspected according to the following schedule to include any routine inspections finding concerns noted in section 2.07.

Personal Protective Equipment

1-2 years after manufacturer date shall

Advanced Inspection Includes – Light Test and Puddle Test

3 years – 9 years after manufacturer date

Advanced Inspection includes – Light Test and Pressurization Test

10 years after manufacturer date – All Personal Protective Equipment shall be replaced.

**The advanced inspection shall include, as a minimum, the following inspections:
All layers of the garment elements shall be inspected for the following:**

- (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, burn holes, melting, or discoloration of any layer
- (4) Loss of moisture barrier integrity as indicated by:
 - a. rips, tears, cuts, and abrasions
 - b. Discoloration
 - c. 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
- (12) Liner attachment systems
- (13) Closure system functionality

Hoods shall be inspected 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. Thermal damage such as charring, burn holes, and melting
- (4) Shrinkage
- (5) Loss of material elasticity; stretching out of shape
- (6) Loss of seam integrity; broken or missing stitches
- (7) Loss of face opening adjustment

Helmets shall be inspected for the following:

- (1) Soiling
- (2) Contamination from hazardous materials or biological agents
- (3) Physical damage to the shell, such as the following:
 - a. Cracks, dents, and abrasions
 - b. Thermal damage to the shell such as bubbling, soft spots, warping, or discoloration
- (4) Physical damage to the ear flaps
 - a. Rips, tears, and cuts
 - b. Thermal damage such as charring, burn holes, or melting
- (5) Damaged or missing components of the suspension and retention systems
- (6) Suspension and retention systems functionality
- (7) Damaged or missing components of the faceshield/goggle system, including discoloration or scratches to the faceshield/goggle lens limiting visibility
- (8) Faceshield/goggle system functionality
- (9) Damage to the impact cap
- (10) Damaged or missing reflective trim

Gloves shall be inspected 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. Thermal damage such as charring, burn holes, and melting
 - c. Inverted liner
 - d. Loss of seam integrity; broken or missing stitches
- (4) Shrinkage
- (5) Loss of flexibility
- (6) Loss of elasticity and shape in wristlets

Footwear shall be inspected for the following:

- (1) Soiling
- (2) Contamination from hazardous materials or biological agents
- (3) Physical damage, such as the following:
 - a. Cuts, tears, punctures, cracking, or splitting
 - b. Thermal damage such as charring, burn holes, and melting
 - c. Exposed/deformed steel toe, steel midsole, and shank
 - d. Loss of seam integrity; delamination, broken or missing stitches
- (4) Loss of water resistance
- (5) Closure system component damage and functionality
- (6) Excessive tread wear
- (7) Condition of lining, such as the following:

- a. Tears
 - b. Excessive wear
 - c. Separation from outer layer
- (8) Heel counter failure

2.08 Cleaning and Decontamination

All Personnel Protective Equipment shall be cleaned as needed and as a minimum at least once every six months. The cleaning method used shall be commensurate the degree of soiling or contamination. The levels of cleaning are as follows:

1. Routine Cleaning

The end user shall be responsible for the routine cleaning of their personal ensemble or ensemble elements.

The following process shall be used:

- (1) When possible, initiate cleaning at the incident scene.
- (2) Brush off any dry debris.
- (3) Gently rinse off debris with a water hose.
- (4) If necessary, scrub gently with a soft bristle brush and rinse off again.
- (5) If necessary, spot clean utilizing a utility sink.
- (6) Inspect for soiling and contamination, and repeat process if necessary. Should routine cleaning fail to render the element(s) sufficiently clean for service, the element(s) shall receive advanced cleaning.
- (7) Every Six Months at minimum, personal protective equipment shall be cleaned.

2. Advanced Cleaning

- 3.** As specified by the advanced inspection section schedule, personal protective equipment shall be cleaned prior to the advanced inspection and will be conducted by the approved Advanced Inspection Facility as determined by the Advanced Inspection Facility if so deemed. **Contract and Specialized Cleaning**

Elements that are contaminated with hazardous materials or biological agents shall receive specialized cleaning as necessary to remove the specific contaminant(s).

Elements that are known or suspected to be contaminated shall be isolated, tagged, and bagged. The contaminated elements shall be removed from service until they can receive specialized cleaning as necessary to remove the specific contaminant(s).

Universal precautions shall be observed when handling elements known or suspected to be contaminated with hazardous materials or biological agents.

For elements that have been soiled with body fluids the following process shall be used:

- (1) Follow manufacturer's instructions to determine appropriate disinfectant to use.
- (2) Clean following machine cleaning procedures or utilize a qualified contract cleaner.
- (3) Inspect for effectiveness of cleaning, and repeat process if necessary.

Where elements are known or suspected of being contaminated with a hazardous material or biological agent, the contaminant or suspected contaminant shall be identified by the Jersey Village Emergency Services and this information passed on to the Contract Cleaner if possible.

When the contaminant has been identified, the Jersey Village Emergency Services shall consult the manufacturer of the contaminant for an appropriate decontamination agent and process.

In the absence of detailed manufacturer's instructions, the following process shall be used:

- (1) Utilize a qualified contract cleaner.
- (2) Inspect for contamination, and repeat process if necessary.

Contaminated elements not capable of being cleaned by Jersey Village Emergency Services because of Advanced Cleaning / Inspection limitations shall be shipped in accordance with federal, state, and local regulations to the Advanced Inspection / Cleaning Approved Facility as noted in section 2.07B of this policy.

4. Cleaning and Decontamination Procedures

Members shall examine the manufacturer's label and user information for instructions on cleaning that the manufacturer provided with the ensemble or element. In the absence of manufacturer's instructions or manufacturer's approval of alternative procedures, the cleaning procedures provided in this section shall be used.

Chlorine bleach or chlorinated solvents shall not be used to clean or decontaminate garments.

Heavy scrubbing or spraying with high velocity water jets, such as a power washer, shall not be used.

Protective ensembles and protective ensemble elements shall be cleaned and decontaminated separately from non-protective items.

Where the shells and liners of protective garment elements are separable, those items shall only be cleaned and decontaminated with like items, including but not limited to, shells with shells and liners with liners.

The following procedures shall be used for machine cleaning:

- (1) Do not overload the machine.
- (2) If necessary, pre-treat heavily soiled or spotted areas.
- (3) Fasten all closures, including pocket closures, hook and loop, snaps, zippers, hooks and dees, and so forth.
- (4) Set and start the machine cycle; use a water temperature setting not to exceed 40°C (105°F).
- (5) Add detergent.
- (6) Run one complete cycle, rinsing at least twice.
- (7) Dry the elements.
- (8) Inspect and rewash if necessary.
- (9) If the machine is also used to wash items other than protective ensemble elements, rinse out the machine by running it while empty through a complete cycle with 49°C to 52°C (120°F to 125°F) water and detergent.

5. Drying Procedures.

Members shall examine the manufacturer's label and user information for instructions on drying procedures that the manufacturer provided with the ensemble or element. In absence of manufacturer's instructions or manufacturer's approval of alternative procedures, the drying procedures provided in this section shall be used.

The following procedures shall be used for air-drying:

- (1) Place elements in an area with good ventilation.
- (2) Do not dry in direct sunlight.

6. Additional Procedures for Helmets.

Members shall examine the manufacturer's label and user information for instructions on cleaning and drying procedures that the manufacturer provided with the ensemble or element. In absence of manufacturer's instructions or manufacturer's approval of alternative procedures, the cleaning and drying procedures provided in this section shall be used.

Helmets shall not be machine cleaned or dried.

Helmet shells, headbands, crown straps, ear covers, and suspension systems shall be cleaned in a utility sink using mild detergent and water.

The manufacturer shall be consulted if stronger cleaning agents are required.

No solvents shall be used to clean or decontaminate faceshield or goggles. The manufacturer shall be consulted when more thorough cleaning is necessary.

7. Additional Procedures for Gloves.

Members shall examine the manufacturer's label and user information for instructions on cleaning and drying procedures that the manufacturer provided with the ensemble or element. In absence of manufacturer's instructions or manufacturer's approval of alternative procedures, the cleaning and drying procedures provided in this section shall be used.

Gloves shall be cleaned in a utility sink using mild detergent and water.

Gloves shall not be machine dried with heat.

8 Additional Procedures for Footwear.

Organizations shall examine the manufacturer's label and user information for instructions on cleaning and drying procedures that the manufacturer provided with the ensemble or element. In absence of manufacturer's instructions or manufacturer's approval of alternative procedures, the cleaning and drying procedures provided in this section shall be used.

Footwear shall not be machine cleaned or dried.

Footwear shall be cleaned in a utility sink using mild detergent, water, and a soft bristle brush.

The manufacturer shall be consulted if stronger cleaning agents are required.

Footwear shall be air dried in a well-ventilated area, away from direct sunlight.

9. Additional Procedures for Hoods.

Members shall examine the manufacturer's label and user information for instructions on cleaning and drying procedures that the manufacturer provided with the ensemble or element. In absence of manufacturer's instructions or manufacturer's approval of alternative procedures, the cleaning and drying procedures provided in these sections shall be used.

Hoods shall be cleaned in accordance with the general provisions in Section 4.

Hoods shall be dried in accordance with the provisions in Section 5.

2.09 Repairs

Repair of Personal Protective Equipment shall not be done by Jersey Village Emergency Services Personnel and shall be sent to the manufacturer or approved manufacturer service center by individuals certified by the manufacturer and employed by the manufacturer or approved service facility. Jersey Village Emergency Services personnel will not repair equipment for liability reasons. Jersey Village Emergency Services is not an approved repair facility and has no intention of becoming a repair facility.

Garments shall be subjected to cleaning, advanced cleaning, or specialized cleaning, before any repair work is undertaken.

All repairs and alterations to garments shall be done in a manner and using materials that are approved by the manufacturer including, but not limited to, fabric, thread type, stitch construction, hardware, and hardware backing.

Major repairs to the outer shell shall only be accomplished by the manufacturer or by a manufacturer recognized repair facility consistent with the manufacturer's instructions and methods. The manufacturer shall be contacted if the organization is unsure of whether a repair is major or minor, or can be accomplished without adversely affecting the integrity of the garment.

All repairs to the moisture barrier shall only be performed by the manufacturer or by a manufacturer's recognized repair facility consistent with the manufacturer's instructions and methods. The organization shall contact the original manufacturer if unsure as to whether an area to be repaired contains a moisture barrier.

Minor field repairs to thermal liners shall be permitted providing there is no stitching through the moisture barrier. The types of field repairs permitted are: patching of minor tears, char marks and ember burns, repair of skipped, broken and missing stitches, and replacement of missing hardware. All repairs and alterations to thermal liners including minor field repairs, shall be performed in the same manner and using the same materials as the manufacturer, including but not limited to fabric, thread type, stitch construction, hardware and hardware backing.

2.10 Storage

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

Ensembles and ensemble elements shall be clean and dry before storage.

Ensemble and ensemble element storage areas shall be clean, dry, and well ventilated.

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 -40°C (-40°F) or above 82°C (180°F).

Ensembles and ensemble elements shall not be stored or transported in compartments or trunks with sharp objects, tools, or other equipment that could damage the ensembles or ensemble elements. Where ensembles or ensemble elements must be transported or stored in these environments, the ensemble or element(s) shall be placed in a protective case or bag to prevent damage.

Soiled ensembles and ensemble elements shall not be stored inside living quarters or with personal belongings, or taken or transported within the passenger compartment of personal vehicles. Where ensembles or ensemble elements must be transported or stored in these environments, the ensembles or element(s) shall be placed in a protective case or bag to prevent cross-contamination.

Ensembles and ensemble elements shall not be stored in contact with hydraulic fluids, solvents, hydrocarbons, hydrocarbon vapors, or other contaminants.

2.11 Retirement

Structural fire fighting ensembles and ensemble elements that are worn or damaged to the extent that the Jersey Village Emergency Services deems it not possible or cost effective to repair shall be retired and removed from service.

Structural fire fighting ensembles and ensemble elements that are contaminated to the extent that the Jersey Village Emergency Services deems it not possible or cost effective to decontaminate, they shall be retired and removed from service.

Structural fire fighting ensembles and ensemble elements that are no longer of use to the Jersey Village Emergency Services for emergency operations service but are not contaminated, defective, or damaged shall be retired and removed from service.

Structural fire fighting ensembles and ensemble elements that were not in compliance with the edition of the respective NFPA standard that was current when the element(s) were manufactured shall be retired and removed from service.

12 years after manufacturer date, 10 years from date placed in service Jersey Village shall retire all PPE which includes helmet, hood, gloves, coat, pants, boots.

2.12 Disposition of Retired Elements.

Retired structural fire fighting ensembles and ensemble elements shall be destroyed or disposed of in a manner assuring that they will not be used in any fire fighting or emergency activities, including training. Retired Structural Fire Fighting gear and

equipment shall be destroyed by separating equipment into multiple pieces by tearing, cutting or crushing the equipment. All destroyed equipment shall be recorded and photographed for proof of retirement and kept available for the next official Texas Commission on Fire Protection Inspection.

2.13 Special Incident Procedure.

The Jersey Village Emergency Services shall have procedures for the handling and custody of ensembles and ensemble elements that are directly related to serious fire fighter injuries and fire fighter fatalities. This procedure shall include the following as deemed necessary by the Fire Chief.

1. All PPE involved or suspected to be involved shall be photographed, bagged in a paper bag or cardboard box, the bagged items shall be tagged with the members name, date, address of incident, time of incident, items in bag and name person securing the PPE.
2. The bagged articles shall be sealed and marked as “evidence” and turned over to Jersey Village Police Services for securing in the evidence/property lock-up.

In the absence of any other prevailing rules of evidence, the organization’s procedures shall include at least the following:

- (a)Provisions for the immediate removal from service and preservation of all personal protective clothing and equipment utilized by the injured or deceased fire fighter. Custody of such clothing and equipment shall be maintained at a secure location with controlled, documented access.
- (b)All such clothing and equipment should be non-destructively tagged and stored only in paper or cardboard containers to prevent further degradation or damage. Plastic or airtight containers shall not be used.
- (c)Review of the personal protective clothing and equipment by qualified members of the organization or outside experts to determine the condition thereof.

The Jersey Village Emergency Services shall determine a specific period of time for retaining custody of the personal protective clothing and equipment.