# PESH / OSHA COMPLIANCE PROGRAM

# LEICESTER FIRE DEPARTMENT

## INTRODUCTION

The Leicester - Cuylerville Fire District's Fire Department ("Fire Department") hereby adopts the following PESH/OSHA Compliance Policy.

## ORGANIZATIONAL STATEMENT OF THE FIRE DEPARTMENT

The basic organizational structure shall be as follows:

The Leicester - Cuylerville Fire District's Board of Fire Commissioners shall be the governing body pursuant to law. There shall be a Chief, and up to two (2) Assistant Chiefs. The expected number of active members is approximately fifty (50) members.

The type of training provided to Fire Department members shall include but not be limited to: hands on training, classroom training, in house training, local government led training, state fire academy and outreach training, National Fire Academy courses, training led by outside vendors, out of state training and any other training approved the Board of Fire Commissioners as related to the Fire Department's mission.

The functions that the Department is to perform are as follows:

1. Interior Firefighting
2. Scene Support
3. Auto Extrication
4. Basic Wilderness Firefighting/Brush Fires
5. Hazardous Materials (awareness and first responder operations level)
6. Confined Space, awareness level
7. First Response EMS, CPR & AED
8. Traffic Control
9. Wilderness Search and Rescue

# RISK MANAGEMENT PLAN

The Department hereby adopts a comprehensive written risk management plan. This risk management plan covers the risks associated with the following:

1. Administration
2. Facilities
3. Training
4. Vehicle operations, both emergency and non-emergency
5. Protective clothing and equipment
6. Operations at emergency incidents
7. Operations at non-emergency incidents
8. Other related activities

*Risk Identification*

The Department has identified the following actual and potential hazards of participating in the workplace structural firefighting, involving serious injury and death from:

| | INJURY/CAUSE | RISK (1- lowest, 5-highest) |
|---|---|---|
| 1. | Burns, smoke inhalation, suffocation | 5 |
| 2. | Exhaustion, fainting, heart attacks, stroke | 5 |
| 3. | Motor vehicle accidents from dangerous driving conditions and responses, and from being present on roadways | 5 |
| 4. | Injuries from tools: cuts, abrasions, crush | 5 |
| 5. | Falls through floors and other lightweight structures | 2 |
| 6. | Falls from heights, including roofs, ladders and other elevations | 3 |
| 7. | Exposure to hazardous materials | 3 |
| 8. | Exposure to cold and heat and other environmental dangers | 5 |
| 9. | Disorientation and becoming lost on scenes | 3 |
| 10. | Burns and injuries from wind-shifting conditions | 2 |
| 11. | Becoming buried in confined spaces | 2 |
| 12. | Oxygen deprivation or injuries from gas or other emergencies | 4 |
| 13. | Explosion related injuries | 4 |
| 14. | Electrocution and shock | 5 |
| 15. | Injuries from falling objects | 5 |
| 16. | Violence from persons | 5 |
| 17. | Communicable and infectious diseases | 4 |

Each of the following risks are considered potential risks with consequences from mild to moderate to severe. The likelihood of their occurrence is difficult to predict, but the chances can be reduced with the proper training, equipment and protocols. Policies should be implemented to address the above risks and to reduce the chances of their occurrence.

Priorities have been established for each of the above hazards, based upon the frequency and risk of the occurrence. The priorities are ranked 1 (lowest) to 5 (highest).

*Risk Control*

Risk control techniques should be implemented for each risk. The risk control techniques should include possible solutions for eliminating or mitigating the potential hazards.

Risk control should include the following techniques:

1. Educating all personnel in the above risks of their roles, as listed above;
2. Requiring and providing training designed to reduce the risk of the above potential injuries;
3. Providing equipment designed to reduce the exposure to the above potential injuries.

Each year, the Health and Safety Officer should evaluate the injuries and "near misses" which occurred in this Department. The Department should also ensure that the HSO reviews near misses of other departments in an attempt to examine and mitigate the hazards faced by this Department. The Health and Safety Officer should be responsible for evaluating the list of hazards and potential injuries and for requesting the implementation of appropriate mitigation techniques, including proper training, equipment, and policies.

## I. Training & Education

1. The Department will provide training and education for all members commensurate with the duties and functions the members are expected to perform. Training shall be provided no less than quarterly, though this is not intended in any way to be a goal.

2. The Department will provide adequate training to ensure that the membership is capable of performing the services listed in the Operational Statement.

3. Interior firefighters shall be required to perform annual testing of their skills on a quarterly basis (some of the skills tested each quarter, with all skills tested annually) in the following areas:

    A. Donning and Doffing turnout gear (performed by each interior firefighter);
    B. Donning and Doffing SCBA (performed by each interior firefighter);
    C. SCBA Breath-Downs (performed by each interior firefighter);
    D. Self-Rescue, including but not limited to (performed by each interior firefighter):
        i. Wall breaches and through the wall practice
    E. Throwing and climbing ground ladders:
        i. Roof ladder (performed individually)
        ii. Two-fly extension (performed individually and in groups)
    F. Deploying and advancing hoses from the vehicle, and into a building and upstairs (performed in groups of two);
    G. Making a hydrant
    H. Calling a Mayday and recognizing the situations when Maydays are appropriate;
    I. Forcibly entering buildings:
        i. Residential doors
        ii. Commercial doors (inward and outward swinging)
    J. Search of residential buildings (performed in groups of two);
    K. Large area search of commercial buildings (performed in groups three or more);
    L. Roof Ventilation;
    M. Basic auto-extrication techniques
    N. Thermal Imaging use;
    O. Use of a four gas meter;
    P. Assisting in setting up a “draft”.

4. Vehicle operators shall be required to perform annual testing of their skills on a quarterly basis (some of the skills tested each quarter, with all skills tested annually) in the following areas:
    A. Donning and Doffing Turnout Gear

B. Donning and Doffing SCBA (optional)
C. Driving and operating each vehicle
D. Pumping water
E. Making a hydrant
F. Supply each of the size hose lines utilized by the Department
G. Supplying water through each appliance utilized by the Department
H. Setting up a draft.

5. Scene Support members shall be required to perform annual testing of their skills on a quarterly basis (some of the skills tested each quarter, with all skills tested annually) in the following areas:
   A. Donning and Doffing turnout gear (performed by each individual)
   B. Donning and Doffing SCBA (if qualified)
   C. Assist in establishing water supply and setting up large diameter hose lays;
   D. Assisting in setting up draft
   E. Throwing and climbing ground ladders (performed in groups of two, and individually)
   F. Deploying hoses (performed individually and in groups of two)
   G. Setting up lighting
   H. Start powered hand tools
   I. Operating ground monitors (water cannons)
   J. Basic auto-extrication techniques

6. Leaders and training instructors shall have training and education which is more comprehensive than that provided to other members of lower rank.

7. All required training must be recorded and presented to the Board of Fire Commissioners for review. The Department will ensure that every member completes the required training. Records will be maintained and available for inspection. Checklists of the minimum standards are maintained to ensure that every member completed the required minimum training. These checklists shall be presented to the Board of Fire Commissioners on a semi-annual basis to ensure compliance with the above requirements.

## II. Exposure to hazards

1. The Department shall educate members about special hazards to which they may be exposed during fire and other emergencies, such as:

   A. Storage and use of flammable liquids and gasses;
   B. Toxic chemicals;
   C. Radioactive sources;
   D. Water reactive substances;

E. Lithium Ion Batteries;
F. Electric Vehicle Hazards.

2. All first responders shall complete the Hazardous Materials Operations course prior to responding to emergencies.

3. The Department shall identify in writing the actions to be taken in situations involving the above special hazards if they are encountered.

   A. For flammable liquids and gasses, the Department may extinguish the fire, if any. The Department shall mitigate the potential of explosion by the use of ventilation, if appropriate. The Department shall avoid creating ignition sources, such as by turning on lights or creating static electricity, while in explosive vapor environments.

   B. For radioactive substances, the Department shall not approach the scene and shall contact an appropriate resource for mitigation and containment.

   C. The Department shall not mitigate toxic chemicals and shall contact an appropriate agency to do so, and shall secure the scene until proper resources arrive.

   D. The Department shall avoid putting water in contact with a water reactive substance, when such substance is known to be present, but shall use a Type K extinguisher to eliminate the hazard.

   E. Lithium ion batteries: apply copious amounts of water. Notify the county for any containment needs. An encapsulating foam may be utilized.

   F. Electric vehicle hazards: apply copious amounts of water. Notify the county for any containment needs. An encapsulating foam may be utilized.

4. The Department shall offer training and education offered about the above hazards.

5. The Department shall maintain records of this training for all members and submit the same annually to the Company for review.

## III. Protective Clothing

1. The Department will provide, at no cost, protective clothing to the members.

2. Company officers shall assure that all members utilize the protective clothing in appropriate situations.

3. The Department shall only provide Personal Protective Equipment which is NFPA Compliant.

4. The Department shall ensure that protective eye and face devices are worn while using tools which can create flying materials, or when encountering falling or flying materials which may cause eye and face injuries.

5. The Department shall provide each interior firefighter with proper PPE in strict accordance with all applicable NFPA standards on the type, fit and function of such gear, including but not limited to helmets, hood, boots, gloves, bunker pants and turnout coats.

6. Members may not provide their own PPE.

7. All PPE shall properly fit each individual.

8. The Department will provide initial training to each person who uses PPE. Firefighter 1 training courses, or their equivalents shall suffice. This training shall include:

## IV. Respirators

1. SCBA with a full-face piece will be made available to all interior firefighters.

2. Masks may not be shared between members of the Department.

3. The Department shall ensure that each firefighter wears the SCBA in proper situations. SCBA shall be worn in any IDLH environment. This includes but is not limited to:

   A. Environments with Carbon Monoxide at or above levels of 35 ppm;
   B. During overhaul of a structure fire (until HcN reads 0);
   C. Inside all interior structure fires;
   D. While extinguishing all dumpster fires;
   E. While entering any confined spaces;
   F. While extinguishing all vehicle fires;
   G. While inside any structure with any strong smell of gas or with readings of any

hazardous material.

## V. Respiratory Program

PROGRAM OVERVIEW

1. The Department hereby establishes a respiratory program. The program contains the following requirements:
   A. All members shall successfully complete medical evaluations prior to using SCBA;
   B. All members shall complete fit testing to ensure SCBA masks are properly fit;
   C. All members will receive training and education in the procedures for proper use of respirators in routine and reasonably foreseeable emergency situations;
   D. A procedures and schedule for cleaning, disinfecting, storing, inspecting, repairing, discarding and otherwise maintaining respirators will be implemented;
   E. All members will receive training in the hazards to which members are exposed which would require use of SCBA;
   F. All members will receive training in the proper donning and doffing of SCBA, the limitations of SCBA use, the maintenance of SCBA and use of all functions of the SCBA utilized by the Department

2. The Department hereby implements the following procedures to determine the effectiveness of the program:

   A. Interior firefighters shall perform annual testing and evaluation of their ability to:
      i. identify the critical parts of the SCBA;
      ii. efficiently and effectively don SCBA;
      iii. check for a proper seal using a negative pressure test;
      iv. correct problems resulting in the loss of or inhibition of air flow;
      v. Use buddy breathers, trans-fill or other rescue functions of the SCBA;
      vi. Remove the SCBA in an attempt to make a “low profile” move through a tight space and then replace the SCBA, while remaining on air;
      vii. Identify the correct procedures for cleaning the mask.

   B. Members not successfully completing the evaluation will be required to obtain retraining on each area of deficiency prior to being able to utilize SCBA on a live scene.

   C. Records of all annual evaluations and corrective action taken will be maintained for seven years.

   D. A policy on where SCBA are not required to be worn

E. Requirements of medical evaluations of members to ensure fitness to wear SCBA.

3. The Department will designate an administrator who has proper training or experience that will oversee the respiratory program and conduct the required evaluations of program fitness

MEDICAL EVALUATION OF FITNESS

1. The Department requires physical testing to ensure health of persons using SCBA before a member is fit tested.

2. The Department will identify a physician or another licensed health care professional to perform the medical evaluations using a medical questionnaire or an initial medical exam that contains the same information as the medical questionnaire. The questionnaire shall be Appendix C to 29 CFR 1910.134.

3. Any person who provides a positive response to any question on the exam will receive a follow-up exam, with proper tests, consultations, diagnostic procedures deemed necessary by the physician/health care professional.

4. A medical determination shall be made of each interior firefighter's ability to use the SCBA.

5. There must be a written statement by the physician that the individual may use a respirator. The statement must contain:
   A. Limitations on respirator use related to medical condition of member;
   B. The need for any follow-up medical evaluations;
   C. A statement that the physician/professional has provided the member with his/her written recommendation.

FOLLOW UP EXAMS AND FIT TESTING

1. Follow up medical exams of interior firefighters must be provided to the member if a member reports signs or symptoms that are related to the ability to utilize a respirator;

2. Fit testing shall be conducted if:

   A. a supervisor/line officer reports the need for an evaluation of a member;
   B. observations are made indicating the need for a medical evaluation, such as:
      i. new growth of facial hair
      ii. significant weight loss or gain
      iii. new scarring or reconstructive surgery

C. a change occurs in the equipment provided by the Department

FIT TESTING

1. Before any person may wear an SCBA on a scene or in a drill, they must be fit tested with the same make, model, style and size of SCBA mask that will be utilized.

2. The fit testing conducted and the equipment utilized shall conform with 29 CFR 1910.134[f].

FACE-PIECE SEAL PROTECTION

1. No person may wear SCBA which has:
   A. Facial hair that comes between the sealing surface of the face piece and the face or that interferes with valve function;
   B. Any condition that interferes with face to face piece seal or valve function

2. Persons that wear corrective glasses must be worn without interfering with the face piece fit. The Department shall provide necessary adaptive equipment in order to ensure that persons requiring corrective glasses to be worn under SCBA can do so.

3. Every person donning a mask shall perform a seal check each time they put it on.

IDLH ATMOSPHERES

1. Visual or voice communication must be maintained between persons in and outside the IDLH atmosphere.

2. Persons outside the IDLH atmosphere must be trained and equipped to provide effective emergency rescue.

3. Persons entering the IDLH atmosphere for rescuing persons inside must have SCBA and proper retrieval equipment for removing those persons inside.

"TWO IN, TWO OUT"

1. Any time that a firefighter is going to enter an IDLH atmosphere, whether suspected or existing, at least two members must enter the IDLH atmosphere. No person shall enter the IDLH atmosphere alone.

2. The individuals entering the atmosphere shall remain in visual or voice contact with one another at all times.

3. There must be at least two members qualified and equipped to enter the IDLH environment to perform rescue, who are located “outside the IDLH atmosphere”.

4. One of the individuals (but not both) located outside the IDLH atmosphere may be assigned to an additional role, so long as the individual is able to perform assistance or rescue activities without jeopardizing the safety or health of any firefighter working at the incident.

5. In the event that the first arriving crew deems it necessary to enter the structure without two additional firefighters outside of the structure, the crew may enter the environment so long as another crew is en-route to the scene and will be able to quickly perform a rescue.

CLEANING AND DISINFECTING

1. Respirators must be cleaned and disinfected in accordance with procedures that meet the requirements, as stated in 1910.134(h)(1) Appendix B-2.

2. Masks which are not shared between individuals need to be cleaned before they are worn by someone else.

3. Masks must be cleaned and disinfected after every use.

4. Masks used in fit testing and training must be cleaned and disinfected after every use.

INSPECTION OF SCBA

1. SCBA must be inspected before each use during cleaning.

2. SCBA and masks must be inspected monthly. The inspection will check for:
   A. Function, tightness of connections, condition of the parts including the facepiece, head straps, valves, connecting tube, cartridges, canisters or filters.

3. A log will be maintained for each inspection, for no less than seven (7) years.

4. All SCBA cylinders will be maintained for use at 90% of its capacity.

5. Any defective SCBA must be repaired by qualified individuals or removed from service.

SCBA TRAINING

1. The Department will provide effective training to members who are required to wear SCBA. This Training will recur annually. Persons not required to wear SCBA shall be trained

annually on the basic use, including how to replace cylinders on interior members.

2. All interior firefighters must demonstrate knowledge of the following:
   A. Why SCBA is necessary and how improper fit, use and maintenance can compromise the protective effect of the respirator;
   B. What the limitations and capabilities of respirator are (melting point, length of air, etc);
   C. How to use SCBA effectively and deal with malfunctions;
   D. How to inspect, don and doff, and check seal of mask and SCBA;
   E. Procedures for maintenance and storage;
   F. How to recognize medical signs and symptoms that limit or prevent the effective use of SCBA.

ANNUAL TRAINING

1. Annual training of an interior firefighter is not required if the member can demonstrate knowledge of the previous issues;

2. Retraining must occur annually when:
   A. Changes in the respirator make the prior training obsolete;
   B. The member demonstrates lack of knowledge or skills;
   C. Any other situation arises in which retraining appears necessary to ensure safe use.

RESPIRATORY PROGRAM EVALUATION

1. The department must evaluate the program to ensure that the written program is being properly implemented.

2. Evaluations must be conducted regularly, no less than annually.

3. The program will evaluate the success of programs ensuring:
   A. Proper fitting of the masks;
   B. Proper use of the mask and under which conditions;
   C. Proper respirator maintenance;
   D. Proper recordkeeping is maintained.

4. The Health and Safety Officer shall conduct the evaluation.

5. Records must be kept on all medical evaluations, fit testing, and the entire program.

6. Fit test records must include:
   A. name of member tested;

B. type of fit test performed;
C. make, model and size of mask tested;
D. date of test;
E. pass/fail.

## VI. HazMat Training

1. All persons who respond to releases or potential releases of hazardous substances as part of the initial response for the purpose of protecting persons, property or the environment from the effects of the release must receive training at the first responder operations level. This involves every individual in the Department who responds to emergencies. This will be satisfied by completion of the "hazardous materials operations" course.

2. Responders shall have knowledge of the following:

   A. Basic hazard and risk assessment techniques;
   B. An understanding of basic hazardous material terms;
   C. How to perform basic control, containment, confinement operations within the capabilities of the Fire Department;
   D. How to implement basic decontamination procedures;
   E. An understanding of relevant terminology.

3. All potential incident commanders must complete "Hazardous Materials Incident Command" or its equivalent, however, the Department will turn over all such incidents to the County Team and are only expected to command the scene temporarily.

4. Annual refresher training will be conducted to assess competency in this area.

5. The Department shall maintain the record of the assessment, and keep a record of the method used to demonstrate competency. A short written quiz may be utilized for this purpose.

## VII. Bailout Training

1. The Department has evaluated the need for bailout from elevated buildings, but has determined that all of its buildings can be reached by ladder, and no bailout equipment is required.

## VIII. Mayday Training

1. The Department shall ensure that each firefighter is familiar with how to call a Mayday.

## IX. Confined Space

1. The Departments shall ensure that SCBA is worn at all confined space events.

2. Should a confined space be entered, the entrance covers to the confined space must be removed, and sufficient safety guards implemented (eg: guard rails) to prevent falling through.

3. Proper radio communications and proper PPE must be provided to all participants entering the space.

4. Ladders and other entry and escape mechanisms will be provided.

5. The space will be monitored for gasses and other hazardous conditions.

6. The Department will ensure that training is provided to interior firefighters, at least initially, on "awareness" level for confined space entry. "Firefighter 1" includes this training and shall qualify.

## XI. Lock Out/Tag Out

1. Annual "Lock out/Tag Out" training will be provided to all members.

2. If an energy isolating device is capable of being locked out, the department shall utilize lockout, unless the Department can demonstrate that the utilization of a tag-out system will provide full protection.

3. "Lockout" means locking the on/off mechanism.

4. "Tag-out" means tagging it requiring non-use until fixed or the hazard is removed.

5. The Department shall provide training to ensure that the purpose and function of the energy

control program are understood by members and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees.

6. Locks, tags, chains, wedges, key blocks, adapter pins, self- locking fasteners, or other hardware shall be provided by Department for isolating, securing or blocking of machines or equipment from energy sources.

## XII. Bloodborne and airborne pathogen policy

I. Introduction

The Fire Department recognizes the potential for its firefighters to be exposed, in the performance of their duties, to infectious and communicable diseases. To minimize the risk of exposure, the Fire Department has implemented this Infection Control Program.

The Infection Control Program will include standard operating procedures, initial and refresher training in infection control practices, a vaccination program, the provision of proper infection control clothing and equipment, decontamination procedures for clothing and equipment, procedures for the disposal of medical waste, a system for reporting and managing exposures, a system for tracking exposures and ensuring confidentiality, monitoring of compliance with the standard operating procedures, and the design of Fire Department facilities to minimize risk of infection.

In the emergency care setting, the infectious disease status of patients is frequently unknown by Fire Department personnel. All patients must be considered infectious. Blood and body fluid precautions must be taken with all patients.

To minimize the risk of exposure, the Fire Department will provide its members with proper infection control protective equipment, including disposable medical gloves, face masks, respirators, gowns, and eyewear, and will provide necessary cleaning and disinfecting supplies. The Fire Department also will provide initial instruction and continuing education in preventive health care practices so that firefighters possess a basic awareness of infectious diseases, understand the risks and severity of various types of exposures, and exhibit proper skills in infection control.

Standard prophylactic medical treatment will be offered to exposed members, and necessary immunizations will be made available to protect members from potential exposure to infectious disease. Exposure to infectious and communicable disease shall be considered an occupational health hazard, and any infectious or communicable disease contracted as the result of a documented workplace exposure shall be considered occupationally related.

II. Definitions

Airborne pathogens**:** Microorganisms capable of producing infection and/or causing disease in humans after being inhaled.

Airborne precautions**:** The level of protection that personnel are to use when there is the potential for airborne pathogens that may stay airborne for extended periods of time and maybe inhaled. Diseases that are included in this category are TB, measles, and varicella. Personnel shall use universal precautions, as well as a particulate respirator mask (N95) prior to making patient contact or entering an enclosed area that the patient may have contaminated. When examining or treating potentially high-risk respiratory patients, personnel will use full respiratory protection (particulate respirator mask, eye protection, and gloves). All three items must be worn as an ensemble in order to qualify as full respiratory protection.

Biohazard bags: Red in color, display the universal biohazard symbol, are sufficiently sturdy to prevent tearing or breaking, and can be sealed securely to prevent leakage.

Blood: Human blood, human blood components, and products made from human blood.

Bloodborne pathogens: Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Clinical laboratory: A workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

Contaminated: The presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Contaminated laundry: Laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

Contaminated sharps: Any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

Decontamination: The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Disinfection: A process used to inactivate virtually all recognized pathogenic microorganisms but not necessarily all microbial forms, such as bacterial endospore.

Engineering controls: Controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless

systems) that isolate or remove the bloodborne pathogens hazard from the workplace.

Environmental surface: Interior patient care areas, both stationary and in vehicles, and other surfaces not designed for intrusive contact with the patient or contact with mucosal tissue.

Exposure incident: A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Foodborne pathogens: Microorganisms present in food or drinking water that can cause infection and/or disease in humans.

Handwashing facilities: A facility providing an adequate supply of running potable water, soap and single use towels or hot air-drying machines.

HBV: Hepatitis B virus.

HIV: Human immunodeficiency virus.

Medical gloves: Single-use patient examination gloves that are designed to provide a barrier against body fluids.

Needleless systems: A device that does not use needles for:

1. the collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established;

2. the administration of medication or fluids; or

3. Any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

Occupational exposure: Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Other potentially infectious materials (OPIM): (1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any bodily fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; (2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Pathogens: Microorganisms such as a bacteria, virus, or fungus that are capable of causing disease.

Parenteral: Piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.

Personal Protective Equipment: Specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Pocket mask: A pocket-size double-lumen device that is portable and designed to protect the provider from direct contact with the mouth/lips or body fluids of a patient while performing artificial respiration.

Regulated waste: Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

Sharps: Any object that can penetrate the skin including, but not limited to, needles, lancets, scalpels, broken glass, jagged metal, or other debris.

Sharps with engineered sharps injury protections: A non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

Source individual: Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

Sterilize: Means the use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

Structural firefighting gloves: An element of the protective ensemble for firefighters designed to provide minimum protection to the fingers, thumb, hand, and wrist.

Universal precautions: An approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Work practice controls: Controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

III. Infection Control Program

1. Exposure determination

   The Fire Department has determined that all personnel who respond to emergency incidents or otherwise engage in the delivery of emergency medical services are at risk of exposure to infectious diseases transmitted through blood and other potentially infectious materials, as well as airborne pathogens.

   The Fire Department has further determined that all personnel may be at risk of exposure to foodborne pathogens and other illnesses associated with eating, food preparation, cooking, cleaning, living, and working in fire stations, as well as the use and maintenance of fire apparatus.

2. Tasks and procedures at which personnel have an increased risk of the transmission of infectious diseases.

   A. Personnel are at risk of increased risk from bloodborne and airborne pathogens when:

      (1) providing emergency medical care to injured or ill patients;

      (2) rescuing patients from hostile environments, including burning structures or vehicles, water, contaminated atmospheres, or oxygen-deficient atmospheres;

      (3) extricating persons from vehicles, machinery, or collapsed excavations or structures;

      (4) recovering and/or removing bodies from any situation cited above;

      (5) responding to hazardous materials emergencies, both transportation and fixed-site, involving biohazards containing potentially infectious substances; and

      (6) the cleaning and disinfecting of patient care and training equipment.

   B. Personnel are at risk of increased risk from foodborne pathogens when eating and drinking:

      (1) food prepared in fire stations;

(2) at emergency scenes; or

(3) otherwise, while on duty and subject to having meals interrupted.

3. Methods of compliance

A. Universal precautions. Universal precautions shall be observed when members are exposed to blood or other potentially infectious materials (OPIM). Personnel shall treat all blood and OPIM as potentially infectious.

B. Airborne precautions. Airborne precautions shall be observed when members are exposed or potentially exposed to a patient with a disease capable of remaining airborne, and being spread by inhalation, such as TB, measles, and varicella.

4. Hand washing

A. Hands and other skin surfaces shall be washed thoroughly as soon as possible under the following situations:

(1) if contaminated with blood or other potentially infectious materials;

(2) after each emergency medical incident;

(3) immediately or as soon as possible after the removal of medical gloves or other PPE;

(4) after cleaning and disinfecting emergency medical equipment;

(5) after cleaning PPE;

(6) after any cleaning function;

(7) after using the bathroom;

(8) before and after handling food, cooking, or touching cooking/food utensils.

B. Hands and contaminated skin surfaces shall be washed with nonabrasive soap and water by lathering the skin and vigorously rubbing together all lathered surfaces for at least 10 seconds, followed by thorough rinsing under warm running water.

C. Where soap and running water is not available the area should be flushed with water or saline, and washed with soap and warm water as soon as possible.

D. Hands shall be washed as soon as possible after medical gloves are removed, even if the gloves appear intact.

E. Hand washing should be completed using appropriate facilities such as utility or rest

room sinks. Hands shall not be washed in sinks where food preparation occurs.

F. Where handwashing facilities are not provided, appropriate antiseptic hand cleansers in conjunction with clean cloth, paper towels, or antiseptic towelettes shall be used. Where antiseptic hand cleansers or towelettes are used, hands shall be washed with nonabrasive soap and running water as soon as feasible.

5. Personal Protective Equipment

A. The Fire Department shall provide members with suitable personal protective equipment (PPE) to accomplish the objectives of this program, including disposable medical gloves, goggles, face masks, gowns, impervious shoe coverings, and N95 respirators.

B. All PPE shall meet the requirements of NFPA 1999, Standard on Protective Clothing for Emergency Medical Operations, or provide equivalent protection that meets the requirements of 29 C.F.R. § 1910.1030(d)(3).

C. Personnel shall be responsible to select and to utilize the appropriate PPE based upon the risks presented.

D. Personal protective equipment will be considered "appropriate" only if it does not permit blood or OPIM to reach employees' work clothes, street clothes, undergarments, skin, eyes, mouth or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

E. Medical gloves must be worn whenever members anticipate contact with blood or other potentially infectious materials (including whenever involved with emergency patient care). Where multiple patients are present, members shall change gloves, if possible, after caring for one patient and before beginning care on the next.

F. To the greatest extent possible, the Fire Department shall provide latex-free medical gloves for use by all members at all times. When not feasible, latex-free or powder-free medical gloves shall be provided to members with a latex allergy or for members providing care for a patient with a latex allergy.

G. Eye wear and face masks must be worn in cases where splashing of blood or other potentially infectious materials is anticipated and may come in contact with eyes, nose or mouth.

H. Firefighting turnout gear (including structural firefighting gloves, boots, head and face protection) shall be worn when working in areas of containing sharp glass, metal, or other debris capable of puncturing or lacerating the skin of the patient, responder or

both, as well as puncturing medical gloves.

I. Contaminated disposable items must be discarded in a leak proof plastic biohazard bag that is red in color or marked with the international bio-hazard symbol.

J. Members shall not handle personal items such as combs, pens, or cellular phones, touch doorknobs, handles, or switches, nor drive apparatus, while wearing contaminated medical gloves. In the event that contact with such items occurs, members shall decontaminate and disinfect the surfaces contacted as soon as possible.

K. Contaminated medical gloves should be removed as soon as possible and discarded in a leak proof plastic biohazard bag that is red in color or marked with the international bio-hazard symbol. Contaminated medical gloves shall not be disposed of by throwing them in normal trash or by leaving them at the incident scene.

L. Prior to any contacts with patients, members shall cover all areas of abraded, lacerated, chapped, irritated, or otherwise damaged skin with adhesive dressings.

M. Members with extensive weeping dermatitis and/or open skin lesions on exposed areas shall be restricted from providing direct patient care or handling and/or decontaminating patient care equipment and devices.

N. Any member who has skin or mucosal contact with body fluids shall thoroughly wash the exposed area immediately using water or saline on mucosal surfaces and soap and running water on skin surfaces.

O. All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.

6. Needles and sharp objects

A. Members shall take precautions to prevent injuries caused by needles, knives, broken glass, razor blades or other sharp instruments, devices or debris which can puncture or lacerate the skin.

B. Used sharps and sharp objects, such as needles, scalpels, catheter stylets, and other potentially contaminated sharp objects, shall be considered infectious and shall be handled with extraordinary care.

C. Except for those sharps that are automatic or self-sheathing, needles shall not be manually recapped, bent, or broken.

D. Following use, all sharps shall be placed immediately in sharps containers. In addition,

any small, mobile sharp objects that are contaminated should be placed in sharps containers. Suitable precautions shall be taken to prevent injury from larger non-mobile contaminated sharp objects such as glass, jagged metal, etc.

E. Sharps containers shall be located in all patient transport vehicles and shall be readily available in such items as drug boxes, trauma kits, and IV kits. Officers in charge of each apparatus are responsible to ensure compliance with this provision.

F. Sharps containers shall meet 29 C.F.R. § 1910.1030(d)(4) and must be closable; puncture resistant; leak-proof on sides and bottom; and labeled or color-coded in accordance with paragraph (g)(1)(i) of 29 C.F.R. § 1910.1030.

G. During use, containers for contaminated sharps shall be easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found; maintained upright throughout use; and replaced routinely and not be allowed to overfill.

H. When moving containers of contaminated sharps from the area of use, the containers shall be closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping; and placed in a secondary container if leakage is possible. The second container must be closable; constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping; and labeled or color-coded in accordance with paragraph (g)(1)(i) of 29 C.F.R. § 1910.1030.

I. Reusable containers shall not be used.

7. Laundering of uniforms and clothing, and cleaning of PPE

A. Uniforms issued to personnel as well as non-uniform clothing worn by personnel are not considered to be protective clothing. Members shall take affirmative steps to don appropriate PPE to avoid any contamination of uniforms or non-uniform clothing with blood or OPIM.

B. Members whose uniform or other clothing is soiled by blood or OPIM shall change from the contaminated uniform or clothing to a clean uniform or clothing immediately, or as soon as possible.

C. Contaminated uniform and non-uniform items should be handled by members wearing gloves, bagged in a leak proof plastic biohazard bag that is red in color or marked with the international bio-hazard symbol. Soiled uniform items shall be decontaminated by laundering according to the manufacturer's instructions.

D. Contaminated personal protective equipment shall be placed in biohazard bags to be cleaned, laundered, or disposed of at no cost to the member.

E. The use of washer-extractors in designated Fire Department facilities shall be for the sole purpose of cleaning and decontaminating PPE. Washer-extractors shall not be used for any other purpose.

8. Resuscitation equipment

A. Resuscitation equipment, including pocket masks, shall be available on all Fire Department vehicles that provide emergency medical operations.

B. Resuscitation equipment shall be used by members performing airway management. Members are discouraged from giving direct mouth-to-mouth resuscitation to a non-breathing victim.

C. Pocket masks with one-way valves, disposable airways or resuscitation equipment are the preferred methods of treatment rather than mouth-to-mouth resuscitation.

D. Durable equipment, such as face masks and resuscitation equipment, must be thoroughly washed, cleaned, decontaminated and disinfected with an approved disinfectant after each use.

9. Housekeeping

A. All equipment and work areas shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.

B. Decontamination shall be performed with a department-approved disinfectant, with a 1:100 dilution of bleach and tap water, or 1/4 cup of bleach to 1 gallon of water.

C. The work area shall be cleaned with an appropriate decontamination/disinfecting agent as soon as possible after a spill of blood or any other potentially infectious materials.

D. Wastebaskets and receptacles that are visibly contaminated shall be cleaned immediately, or as soon as possible.

E. Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure. This expressly includes the patient compartment of emergency medical vehicles, as well as any cleaning areas and disinfecting facilities in fire stations.

F. Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on countertops where blood or other potentially infectious materials may be present. This

expressly includes the patient compartment of emergency medical vehicles, as well as any cleaning areas and disinfecting facilities in fire stations.

G. As part of routine daily inspection and cleaning of apparatus and equipment, all environmental surfaces that commonly could come in contact with blood or OPIM, directly or indirectly, shall be cleaned and decontaminated. These locations include the surface of door handles and latches, switches, oxygen valves, interior compartment doors, walls, seats, stretchers, and any other location that may reasonably be contaminated.

H. Delicate equipment (radios, microphones, cardiac monitors, etc.) will be carefully wiped clean of any debris using hot soapy water, wiped with clean water, and then wiped with disinfectant or 1:100 bleach solution. Equipment will be allowed to air dry prior to next use.

10. Cleaning areas

A. The officer in command of each fire station shall designate a specific area for the cleaning of PPE, portable equipment, and other clothing.

B. The cleaning area shall have ventilation, lighting, and drainage connected to a sanitary sewer system or septic system.

C. The designated cleaning area shall be physically separate and remote from areas used for:

(1) cleaning of food and cooking utensils;

(2) food preparation or eating areas;

(3) personal hygiene areas (bathrooms);

(4) sleeping quarters;

(5) living quarters;

(6) disinfecting facility;

(7) laundry facility used for non-emergency linen, bedding, and personal clothing.

11. Disinfecting facilities

A. Medical equipment shall not be disinfected at a fire station unless a designated disinfecting facility has been established.

B. Disinfecting shall not be conducted in fire station kitchen, living, sleeping, or personal hygiene areas.

C. Disinfecting facilities in fire stations shall be lighted, vented to the outside environment, have floor drains connected to a sanitary sewer system or septic system, and be designed in such a way as to prevent contamination of other areas of the fire station.

D. Disinfecting facilities shall be equipped with rack shelving of nonporous material.

E. Shelving shall be provided above sinks to drip-dry cleaning equipment.

F. All drainage from shelving shall run into a sink or drainage pan that empties directly into a sanitary sewer system or septic system.

G. When personnel are disinfecting medical equipment, appropriate personal protective equipment shall be utilized, including the following:

(1) splash-resistant eyewear;

(2) cleaning gloves;

(3) fluid-resistant clothing.

12. Disinfectants

A. All disinfectants shall be approved by and registered as tuberculocidal with the U. S. Environmental Protection Agency (EPA).

B. Personnel shall exercise extreme care in the use of all disinfectants.

C. Members shall be aware of the flammability and reactivity of disinfectants and shall follow the manufacturer's instructions.

D. Disinfectants shall be used only with ventilation and while wearing appropriate infection control garments and equipment, including, but not limited to, cleaning gloves, face protection devices, and aprons.

E. Disinfecting of medical equipment shall take place in a designated disinfecting facility in a fire station, or at a suitable facility in a hospital or medical facility.

13. Laundry

A. Contaminated laundry, such as sheets, blankets and towels, shall be handled as little as possible. Contaminated laundry shall be placed in a leak proof plastic biohazard bag that is red in color or marked with the international bio-hazard symbol.

B. Contaminated laundry shall not be washed in areas designated for PPE or uniforms and clothing, but shall be washed in a biohazard capable washing machine.

14. Waste

A. All contaminated or potentially contaminated waste shall be disposed of in accordance with EPA, state, and local regulations.

B. Waste may be disposed of at any medical facility with which the Fire Department has a disposal agreement.

C. Under no circumstances may contaminated waste, biohazard bags, sharps or sharps containers be left at an incident scene or disposed of with ordinary trash.

15. Vaccinations

A. Hepatitis B vaccination will be made available to all personnel. The offer of vaccination will be made after members have received training regarding Hepatitis B. Members may decline to accept the Hepatitis B vaccination by signing a waiver which includes a statement that the member acknowledges the risks associated with contracting Hepatitis B have been explained.

B. The statement shall include the following:

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

C. Members who initially decline the Hepatitis B vaccination may decide to accept the vaccination at a later date. The members must be allowed to receive the vaccination at that time.

IV. <u>Significant exposures</u>

1. A significant exposure occurs when blood or other potentially infectious materials come into direct contact with eyes, nose, mouth, into an open cut or by needle puncture injury, or through unprotected exposure to an airborne pathogen.

2. If a member sustains a significant exposure to blood, other potentially infectious materials,

or airborne pathogen, or experiences a situation where a significant exposure is likely to have occurred, the member will:

A. comply with the requirements of this standard operating procedure relative to decontamination and post-exposure washing;

B. report the incident to his/her on-duty officer/supervisor as soon as possible, who in turn will notify the assigned Infection Control Officer;

C. complete a Serious Exposure Report Form describing the incident completely. The report will specifically document the method of potential transmission of infectious disease;

D. the officer/supervisor will complete the required notice of injury forms;

E. the member will immediately report to a hospital to obtain:

(1) immediate medical guidance, evaluation, and, where appropriate, post-exposure prophylaxis;

(2) appropriate, confidential, post-exposure counseling and testing;

(3) the exposed member shall bring the completed Serious Exposure Report Form to the hospital and advise the hospital staff of the exposure or potential exposure. All required post-exposure medical evaluations and follow-ups shall be provided and shall be confidential;

(4) when appropriate and permitted by law, a source individual's blood made be tested to determine the presence of HIV, Hepatitis B virus and/or such other infectious diseases as may be relevant. 410 ILCS 305/7 (c) allows the source patient's blood to be tested without the patient's consent provided a firefighter, EMT-D, EMT-I, EMT-CC or EMT-P "is involved in an accidental direct skin or mucous membrane contact with the blood or bodily fluids of an individual which is of a nature that may transmit HIV, as determined by a physician in his medical judgment";

(5) when the source individual is already known to be infected with HBV, HIV, or another infectious disease, the testing of the source individual's blood for these diseases need not be repeated. 410 ILCS 305/9 (h) authorizes the release of this information to an exposed firefighter, EMT-D, EMT-I, EMT-CC or EMT-P;

(6) results of the source individual's testing shall be made available to the exposed member and the member shall be informed of the applicable laws and regulations concerning the disclosure of the identity and infectious status of the source individual. 410 ILCS 305/10 prohibits a member from further releasing this

information to third parties except as permitted by law;

(7) the exposed member's blood shall be collected as soon as feasible and tested after consent is obtained. If the member consents to baseline blood collection but does not consent to HBV or HIV testing, then a sample shall be preserved for at least 90 days. If the member elects to have the baseline sample tested within the 90-day period, then the testing shall be done as soon as feasible after the request;

(8) follow up testing, medical visits, prophylactic medications, and counseling arising from the exposure shall be provided at no charge to the member;

(9) the Infection Control Officer shall be responsible to ensure these procedures are followed and will serve as the liaison with the Hospital, (serving as the Fire Department's "designated officer" as required by the Ryan White Comprehensive AIDS Resources Act of 1990 [PL 101-381]);

(10) the Infection Control Officer shall serve as the exposed member's advocate to ensure the Hospital complies with the applicable law relative to medical care and information on the source patient. As necessary, the Infection Control Officer shall utilize the fire chief and the Fire Department's legal counsel for guidance and assistance.

V. Training

1. All personnel shall be provided with initial and periodic training on infection control, the provisions of this policy, and their responsibilities relative to infection control.

2. Refresher training shall be provided at least annually and otherwise as frequently as is necessary to ensure compliance.

3. The training program shall contain at a minimum the following elements:

   A. an accessible copy of the regulatory text of this standard and an explanation of its contents;

   B. a general explanation of the epidemiology and symptoms of bloodborne diseases;

   C. an explanation of the modes of transmission of bloodborne pathogens;

   D. an explanation of the employer's exposure control plan and how the employee can obtain a copy of the written plan;

   E. an explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials;

F. an explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment;

G. information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment;

H. an explanation of the basis for selection of personal protective equipment;

I. information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge;

J. information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials;

K. an explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available;

L. information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident;

M. an explanation of the infection control signs, labels and/or color coding; and an opportunity for interactive questions and answers with the person conducting the training session.

4. Officers/supervisors, including the Infection Control Officer and the Fire Department Safety Officer, shall receive training on their appropriate roles.

VI. Record keeping

1. Medical records

A. Medical records are confidential and are not released without a member's expressed written consent to any person within or outside the department, except as required by rule or law.

B. Medical records must include a copy of the member's Hepatitis B vaccination record, including the dates of vaccination or copies of refusal forms.

C. Medical records will be maintained in a file separate from the member's personnel file. Medical records will be maintained for the duration of the member's employment plus 30 years.

D. A complete record of each exposure incident shall be maintained in a member’s medical

records.

2. Health and safety database

   A. Infection and exposure data shall be maintained in a confidential database that is searchable to spot trends in infections and exposures;

   B. The Infection Control Officer and the Fire Department Safety Officer shall be responsible for managing the database.

3. Training records

   A. The department will keep a record of all training provided to its personnel. The training records will include the date and content of the training and a roster of members in attendance. The training records will be maintained for a minimum of three years from the date of training.

VII. Responsibility

1. All members: It is the responsibility of each member to:

   A. be aware of the types of infectious diseases that can be transmitted by blood or body fluid;

   B. actively participate in infection control training provided by the Fire Department;

   C. use PPE provided by the department as appropriate for the conditions encountered;

   D. maintain apparatus, equipment, stations, facilities, and clothing in such a way as to minimize the risk of infection to him/herself or other members.

2. Officers/supervisors

   A. It is the officer/supervisor's responsibility to monitor the activity of members to ensure that they comply with the provisions of this policy.

   B. Any officer/supervisor observing non-compliance with this policy or observing a potentially hazardous condition involving blood or other potentially infectious materials must immediately correct that condition, or if not possible, report that condition to his or her supervisor.

   C. This provision applies to all officers/supervisors and acting officers irrespective of rank.

3. Department administration

A. It is the responsibility of the Fire Department administration to ensure compliance with 29 C.F.R. § 1910.1030, and NFPA 1581; to provide personal protective equipment to those members with occupational exposure.

B. The fire chief shall appoint an Infection Control Officer. In the absence of the Infection Control Officer, the duties of the Infection Control Officer shall be carried out by the Fire Department Safety Officer, or such other officer as the fire chief may determine appropriate.

C. The Infection Control Officer, in conjunction with the Fire Department Safety Officer, shall review the Infection Control Program at least annually, and recommend to the fire chief such changes as are necessary.

D. The Infection Control Officer shall have primary responsibility to manage the Infection Control Program, coordinate significant exposure investigations, ensure that the Fire Department administration complies with the requirements of 29 C.F.R. § 1910.1030 and NFPA 1581, and submit written recommendations to the fire chief and the Fire Department Safety Officer for improvements to training, equipment, policies and procedures to better effectuate the Infection Control Program.

E. The Infection Control Program shall be posted in a conspicuous location within the department, and copies (digital or hard copies) shall be available to each member of the department at their station.

F. The Infection Control Officer and the Fire Department Safety Officer will ensure that each significant exposure is documented, that the member receives appropriate medical care, and that the exposure is investigated/evaluated to determine if it could have been avoided. An evaluation of the circumstances will be conducted to determine if policies, procedures, or protective equipment should be amended or changed to avoid future significant exposure incidents.

G. The Infection Control Officer will ensure that training to all members with occupational exposure is completed annually.

H. The Infection Control Officer and the Fire Department Safety Officer are jointly responsible for monitoring the compliance of all members, including officers/supervisors, with this standard operating procedure, and related procedures.

I. The department administration will be responsible for maintaining all medical and training records in the required manner.

VIII. Miscellaneous provisions

1. Kitchen and cooking areas

A. Kitchens in Fire Department facilities shall include the following appliances:

(1) range;

(2) oven;

(3) at least one refrigerator capable of providing cold storage at a temperature of 3°C (38°F) or lower, and freezer storage at a temperature of –18°C (0°F) or lower;

(4) dishwasher capable of supplying water for washing at 60°C (140°F).

B. Fire station kitchen and food preparation areas shall comply with the following:

(1) all food preparation surfaces and all surfaces directly used for holding or hanging food preparation containers and utensils shall be of a nonporous material;

(2) the use of wood countertops and/or cutting boards, including so-called "butcher block" surfaces is prohibited;

(3) shelving shall be provided above sinks to drip-dry cleaned food preparation containers;

(4) all drainage from shelving shall run into a sink or drainage pan that empties directly into a sanitary sewer system or septic system;

(5) all fire station kitchens shall have either double-basin sinks or two sinks;

(6) a sprayer attachment shall be provided to facilitate washing and rinsing;

(7) sinks, adjacent countertops and dish drainage areas, and splash guards around the sink shall be of a nonporous material;

(8) perishable food requiring cold storage shall be kept at a temperature of 3°C (38°F) or lower;

(9) perishable food requiring freezer storage shall be kept at a temperature of –18°C (0°F) or lower;

(10) food that has been removed from its original packaging shall be kept in tightly sealed food containers or wrapped with plastic food wrap;

(11) Food preparation and storage areas shall meet local health standards.

2. Sleeping areas

   A. Fire station dormitory and sleeping areas shall provide a minimum of 5.6 m2 (60 $ft^2$) of floor space per bed.

   B. Ventilation, heating, and cooling shall be provided in sleeping areas.

3. Bathroom facilities

   A. Bathroom doors, sinks, faucets, soap dispensers, and other bathroom fixtures shall be designed to prevent or minimize the spread of contaminants.

   B. Each bathroom shall have a clearly visible sign posted in a prominent location reminding members to wash their hands.

   C. Bathrooms shall meet all state and local standards.

4. Miscellaneous

   A. All fire stations and Fire Department facilities shall comply with occupational safety and health regulations, health and infection control laws, regulations, and standards for public use facilities.

   B. Personal protective equipment shall be stored in a dedicated, well-ventilated area or room.

   C. Potentially contaminated PPE shall not be stored in personal clothing lockers or taken into station living quarters.

   D. PPE shall not be worn or brought in areas used for the following:

      (1) food preparation and cooking;

      (2) living;

      (3) sleeping;

      (4) recreation;

      (5) personal hygiene.

# HAZARD COMMUNICATION STANDARD

*Background*

For purposes of this policy, “employee” includes a volunteer.

The Community Right-To-Know reporting requirements built on the Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard (HCS). The regulation applies to all businesses such as Fire Departments.

Under the Hazard Communication Standard, chemical manufacturers and importers must research the chemicals they produce and import. If a substance presents any of the physical and health hazards specified in the HCS, then the manufacturer or importer must communicate the hazards and cautions to their employees as well as to "downstream" employers who purchase the hazardous chemical. "Communicate the hazards" means training the workers specifically about the chemicals used at the workplace and how to use them properly and safely. This includes using the chemicals safely and properly in processes at the workplace. This can also mean how to safely work near or use equipment that has hazardous chemicals contained in it that could be released into the workplace. Workers should never be working with chemicals or equipment with which they are unfamiliar. The goal behind the HCS is a safer workplace for workers. Workers and their employers can create that environment when workers are informed of the hazards they encounter on the job.

Employees have both a need and a right to know the hazards and the identities of the chemicals they are exposed to when working. Employees also need to know what protective measures are available to prevent adverse effects from occurring.

The Hazard Communication Standard (HCS) covers both physical hazards (such as flammability or the potential for explosions), and health hazards (including both acute and chronic effects).

By making information available to employers and employees about these chemical hazards, and the recommended precautions for their safe use, proper implementation of the HCS will result in a reduction of illnesses and injuries caused by chemicals. Employees will be better able to participate in these programs effectively when they understand the hazards involved, and to take steps to protect themselves.

Chemical manufacturers and importers must convey the hazard information they learn from their evaluations to downstream employers by means of labels on containers and material safety data sheets (MSDS's). In addition, all covered employers must have a hazard communication

program to get this information to their employees through labels on containers, MSDS's, and training.

This hazard communication program ensures that all employers receive the information they need to inform and train their employees properly and to design and put in place employee protection programs. It also provides necessary hazard information to employees so they can participate in, and support, the protective measures in place at their workplaces.

All employers are responsible for informing and training workers about the hazards in their workplaces, retaining warning labels, and making available MSDS's with hazardous chemicals.

The written program must reflect what employees are doing in a particular workplace.

Policy:

The Company shall maintain a written "Right to Know" program which lists the chemicals present at the site, indicates who is responsible for the various aspects of the program in that facility, and state where written materials will be made available to employees.

The Company will conduct a hazard assessment for each chemical used in the workplace.

The Company will maintain a list of chemicals used in the workplace that is to be made available to the volunteers.

Safety Data Sheet (SDS)

A SDS is to be made available for each chemical in the workplace.

The Company has adopted a labeling program for each chemical used in the workplace.

The Company will train all volunteers on the HCS including the SDS. Such training shall be conducted annually, and shall last no less than fifteen (15) minutes.

Written program

Each employer is to provide a written program describing this HCS. The written program is to be available to all employees.

Hazards to be addressed include any of the following:

- Chemical

- Explosion and Fire
- Oxygen Deficiency
- Ionizing radiation
- Biological Hazards
- Safety Hazards
- Electrical Hazards
- Heat Stress
- Cold Exposure
- Noise

Response to spills

Firefighters responding to a chemical spill or release should determine the OSHA PEL for the chemical spilled and consider the "safe" zone for the public to be at 1/100th or 1/1,000th the OSHA PEL. The name used for the edge of the "safe" zone is the area where the chemical is below the Level of Concern (LOC).

The firefighters responding to a chemical spill or release often consider or use another standard, the IDLH, or Immediately Dangerous to Life or Health. The IDLH level also helps emergency responders determine whether to use a respirator, or what types of respirator to use, in a response. Obviously, knowing what these different standards are, what they mean, and how to interpret them is something to be done long before any accident occurs. This is another reason why chemical emergency preparedness depends on real-time, valid, facility chemical inventory information. The department shall ensure that its members are made aware of both standards.

## HAZARDOUS COMMUNICATIONS

I. The Fire Department hereby maintains an effective Hazard Communication Program that meets the requirements of 29 CFR 1910.1200 in order to ensure the hazards of all chemicals used in the Fire Department are evaluated and information concerning the chemical hazards is provided to the employees. The Fire Department also shall make its personnel aware of the OSHA standards to assist in the event of Fire Department operations at an emergency scene.

II. **Definitions**

Employee Volunteers and employees of the Fire Department.

Chemical Any substance, or mixture of substances. Exposure to chemicals can be in a variety of forms such as; solids, liquids, gases, dusts, mists, or fumes.

Exposure (or Exposed) Means that an employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential, e.g. accidental or possible exposure. "Subjected" in terms of health hazards includes any route of entry, e.g. inhalation, ingestion, skin contact or absorption.

Hazard Category A division of criteria within each hazard class, e.g., oral acute toxicity and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.

Hazard Class The nature of the physical or health hazards, e.g., flammable solid, carcinogen, oral acute toxicity.

Hazard Not Otherwise Classified (HNOC) An adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes.

Hazard Statement A statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Hazardous Chemical Any chemical which is classified as a physical hazard, or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified (HNOC). For example, compressed gas is considered a physical hazard and wood dust is considered a health hazard.

HAZCOM Hazard Communication

Health Hazard A chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard.

Label An appropriate group of written, printed or graphic information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the immediate container of a hazardous chemical, or to the outside packaging.

Mixture A combination or a solution composed of two or more substances in which they do not react.

Personal Protective Equipment (PPE) Devices worn by the worker to protect against hazards in the environment. Examples include safety glasses, face shields, respirators, gloves, hard hats, steel-toed shoes, and hearing protection.

Physical Hazard A chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas.

Pictogram A composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, which is intended to convey specific information about the hazards of a chemical. As of June 1, 2015, the Hazard Communication Standard (HCS) will require pictograms on labels to alert users of the chemical hazards to which they may be exposed. Each pictogram consists of a symbol on a white background framed within a red border and represents a distinct hazard(s). The pictogram on the label is determined by the chemical hazard classification.

**HCS Pictograms and Hazards**

| Health Hazard  | Flame  | Exclamation Mark  |
|---|---|---|
| • Carcinogen<br>• Mutagenicity<br>• Reproductive Toxicity<br>• Respiratory Sensitizer<br>• Target Organ Toxicity<br>• Aspiration Toxicity | • Flammables<br>• Pyrophorics<br>• Self-Heating<br>• Emits Flammable Gas<br>• Self-Reactives<br>• Organic Peroxides | • Irritant (skin and eye)<br>• Skin Sensitizer<br>• Acute Toxicity (harmful)<br>• Narcotic Effects<br>• Respiratory Tract Irritant<br>• Hazardous to Ozone Layer (Non Mandatory) |
| **Gas Cylinder**  | **Corrosion**  | **Exploding Bomb**  |
| • Gases under Pressure | • Skin Corrosion/ burns<br>• Eye Damage<br>• Corrosive to Metals | • Explosives<br>• Self-Reactives<br>• Organic Peroxides |
| **Flame over Circle**  | **Environment (Non Mandatory)**  | **Skull and Crossbones**  |
| • Oxidizers | • Aquatic Toxicity | • Acute Toxicity (fatal or toxic) |

Precautionary Statement A phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.

Pyrophoric Gas A chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130°F (54.4°C) or below.

Safety Data Sheet (SDS) Written or printed material concerning a hazardous chemical that serves as an informational tool developed by chemical manufacturers containing the following information for a hazardous chemical: product identification, use restrictions, hazards identification, chemical ingredients, first-aid measures, fire-fighting measures, accidental release measures, handling & storage information, physical & chemical properties, stability & reactivity information and toxicological information. SDS are in a standardized, 16-section format and can be obtained from the chemical suppliers and many internet sites.

Signal Word A word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used in this section are "danger" and "warning." "Danger" is used for the more severe hazards, while "warning" is used for the less severe.

Simple Asphyxiant A substance or mixture that displaces oxygen in the ambient atmosphere, and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

Substance Chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

Trade Secret Any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it.

Use To package, handle, react, emit, extract, generate as a byproduct, or transfer.

## III. Safety Data Sheets (SDS)

A. The Fire Department will obtain an SDS for each hazardous chemical that is purchased and stocked by the Fire Department. Food, drugs and cosmetics brought into the workplace for employee consumption are exempt.

B. An SDS will be provided for all each hazardous chemical present within the department. SDSs will be provided in two formats: hardcopy and electronic.

C. Hard copies of all SDS shall be maintained at the location where the hazardous chemical is stored and/or used.

D. Electronic copies of SDS information shall be available to all personnel on the Fire Department computer system.

## IV. Labels and Other Forms of Warning

A. All hazardous chemical containers used in fire stations or Fire Department facilities will either contain the original manufacturer's label --that includes a product identifier, an appropriate signal word, hazard statement(s), pictogram(s), precautionary statement(s) and the name, address, and telephone number of the chemical manufacturer, importer, or other responsible party -- OR a label with the appropriate label elements just described; OR workplace labeling that includes the product identifier and words, pictures, symbols, or combination that provide at least general information regarding the hazards of the chemicals.

B. Labels must list in English the chemical identity, appropriate hazard warnings, and the name and address of the manufacturer.

C. Information may be added in other languages as long as the information is available in English as well.

D. Labels need to be legible and prominently displayed, though the size and color can vary.

E. Labels shall not be removed or defaced. Containers of hazardous chemicals with labels that are removed or defaced shall not be used, and shall be promptly reported to the Fire Department Safety Officer for prompt identification and disposal.

F. Shipments or deliveries of unlabeled containers of hazardous chemicals shall not be accepted or allowed onto Fire Department property.

G. Hazardous chemicals shall not be placed into unlabeled containers.

## V. Employee Information and Training

A. Employees will be provided with information and training on the hazardous chemicals in their work area at the time of their initial assignment and before they come into contact with or are exposed to the chemical in the workplace.

B. Additional training will also be provided whenever a new hazardous chemical is introduced into the work area, which has not previously been included in training.

C. HAZCOM Training will include information on the following:

(1) The requirements of 29 CFR 1910.1200
(2) How to access this written program, the work area inventory lists and the SDSs for hazardous chemicals used in the work area
(3) Appendix A and B of the HAZCOM standard (29 CFR 1910.1200)
(4) Operations that involve the use of hazardous chemicals.
(5) Emergency procedures to follow in the event of an accidental spill or release of hazardous chemical
(6) How to detect potential exposures, the presence or release of a hazardous chemical in the work area, or possible exposures to hazardous chemicals in the workplace
(7) The physical and health hazards of the hazardous chemicals used within the Fire Department
(8) The specific procedures that personnel are required to take to protect themselves from these hazards, including specific procedures to protect

personnel from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and use of proper personal protective equipment (PPE)

(9) Details of the Fire Department Written HAZCOM program, including an explanation of SDSs and product labeling

(10) How to access SDSs on Fire Department computers

(11) Employees will be advised upon initial assignment of any operations in their work area where hazardous chemicals are present and the location and availability of the written Hazard Communication Program, including the inventory of hazardous chemicals and associated Safety Data Sheets.

(12) Before any employee is asked to perform any non-routine tasks that are hazardous (e.g., entering confined spaces, cleaning empty hazardous chemical containers, etc.) a special training session shall be conducted prior to starting work on such tasks. Such training will cover, at a minimum, the following elements:

i. the hazardous chemicals that may be encountered during such task
ii. an explanation of the appropriate precautions to take
iii. an explanation of the steps the Fire Department is taking to reduce hazards
iv. an explanation of emergency procedures

D. Firefighter Recruits

(1) The Fire Department will provide Hazard Communication Training to new Firefighter Recruits while they are in training.

E. New Civilian Employees

(1) New civilian employees shall receive Hazard Communication Training during the new employee orientation training.

F. Current Employees

(1) Refresher training shall be provided to all employees annually.

(2) Additional HAZCOM training will be provided to all employees when new hazardous products are introduced into their work area.

(3) All training shall be documented in writing or via electronic means, and such documentation shall be maintained for at least thirty (30) years.

## VI. Responsibilities

A. Fire Department Safety Officer's Responsibility. The Fire Department Safety Officer is the Hazardous Communication Program Administrator and is responsible to:

(1) Maintain, update and perform an annual review of the Hazardous Communication Program.
(2) Coordinate the annual chemical inventory, listing all hazardous chemicals known to be present in each workplace together with the maximum volumes, and approve all related work practices associated with the chemicals.
(3) Conduct an audit of Safety Data Sheets, obtain copies of any SDS for products without one, and notify the Fire Chief of any deficiencies in SDS availability in the workplace.
(4) Ensure employees receive Hazard Communication – Right to Know training
(5) Ensure employees receive training on the chemicals used upon initial assignment and when new chemicals are added.
(6) Ensure employees are advised of the location and availability of the written hazard communication program, including the required list(s) of hazardous chemicals and Safety Data Sheets required by this section.
(7) Ensure that the most CURRENT updated hardcopies of SDSs are obtained and maintained at each work site, along with a listing of all hazardous chemicals present.
(8) Ensure that SDSs are maintained for at least thirty (30) years.
(9) Ensure that the name of any hazardous chemical brought into a fire station or Fire Department facility by a contractor is promptly identified, and a Safety Data Sheet for the chemical is obtained.

B. Fire Department Administrative Responsibility

(1) When chemicals are delivered to the Fire Department from the manufacturer or distributor, the member accepting delivery shall inspect the container to ensure labels are affixed and Safety Data Sheets have been supplied.

C. Employee's Responsibility

(1) Attend all hazard communication training as directed.
(2) Become familiar with the safe handling procedures and emergency situation procedures (as provided on the various labels, instructions and/or Safety Data Sheets) for chemicals prior to using the chemical.

(3) Ensure all work site containers of hazardous chemicals are labeled, tagged or marked with the identity of the material and appropriate hazard warnings.
(4) Utilize personal protective equipment (PPE) recommended and/or required by the manufacturer of the chemical.
(5) Employees shall not perform non-routine tasks involving hazardous chemicals or material without first receiving training. No employee shall place himself or herself at risk in the performance of any chemical-related or other task.
(6) Employees who become discover a hazardous chemical present in the workplace that is not on the inventory list, whether through delivery by a third party, being brought in by a contractor, or for some other reason, shall promptly notify the Fire Department Safety Officer through the chain of command.

## LIVE FIRE TRAINING IN ACQUIRED STRUCTERS

The Fire Department prohibits training in acquired structures utilizing actual fire.

# PERSONAL EQUIPMENT INSPECTION POLICY

## I. INTRODUCTION

This policy provides for the Inspection and Repair of Fire Department personal protective equipment.

Any gear found to be deficient during the Annual Inspection shall be identified with a tag and immediately removed from service, or repaired immediately if possible.

## II. DEFINITIONS

**Crazing –** Small cracks on the surface of the helmet

**Contamination –**the presence of extraneous, especially infectious material that renders a substance harmful

**Drag Rescue Device (DRD) –** A strap incorporated with the Turnout gear which enables the rescuer to drag a downed firefighter in the horizontal position

**Hazardous Material –** Any item or agent (Biological, Chemical, Physical) which has the potential to cause harm to humans, animals or the environment

**Independent Service Provider (ISP) –** An expert or professional in their field of service

**Interface Component(s) –** Coat/Pant interface, front closure on the jacket, sleeve/glove interface, pant/boot interface

**Personal Safety System –** A reliable means of egress from a burning multi-story structure when using a conventional exit is no longer possible. The Personal Safety System is comprised of an integrated harness and emergency escape rope assembly

**Soiling –** unclean, dirty on the surface

**Universal Precautions –** A set of precautions designed to prevent the transmission of blood borne pathogens

**ANNUAL INSPECTION**

Annual Inspection and associated testing shall be managed and performed by the fire line officers or one or more appointees of the Chief. Annual inspections of all protective gear shall be conducted at a minimum of every 12 months or whenever non-annual inspections indicate that a problem with the gear.

The findings of the Annual inspections shall be documented on an inspection form (See Appendix A).

A. All separable layers of the Turnout Gear shall be individually inspected for the following:
    1. Soiling
    2. Contamination
    3. Rips, tears, cuts and abrasions
    4. Damaged or missing hardware and closure systems
    5. Thermal damage such as charring, burn holes, melting, discoloration of any layer
    6. Loss of moisture barrier integrity indicated by rips, cuts, tears, abrasions, discoloration or thermal damage
    7. Evaluation of system fit and coat/trouser overlap
    8. Damaged or missing reflective trim
    9. Loss of seam integrity and size compatibility of shell, liner, Drag Rescue Device and Personal Safety System
    10. Loss of material physical integrity as evidences by discoloration, significant changes in material texture, loss of material strength, loss of liner material and shifting of liner material
    11. Loss of wristlet elasticity, stretching, runs, cuts or burn holes
    12. Manufacturer label integrity and legibility
    13. Hoop and loop functionality
    14. Liner attachment systems
    15. Closure system functionality
    16. Correct assembly and size compatibility of shell, liner and drag rescue device (DRD)

B. Hood:
    1. Soiling
    2. Contamination
    3. Rips, tears and cuts
    4. Thermal damage such as charring, burn holes, melting and discoloration
    5. Loss of face opening adjustment
    6. Loss of seam integrity and broken or missing stitches

C. Helmet Elements:
    1. Outer shell – Soiling, contamination, cracks, crazing, dents and heavy abrasions. Thermal damage such as bubbling, soft spots, warping or discoloration.
    2. Ear flaps – Rips, tears, cuts
    3. Internal suspension – broken or missing components
    4. Face Shield/goggles – Discoloration, major abrasions, cracks
    5. Reflective trim

D. Gloves:
    1. Soiling
    2. Contamination
    3. Rips, tears and cuts
    4. Inverted liner
    5. Thermal damage such as charring, burn holes, melting, discoloration of any layer
    6. Shrinkage
    7. Loss of elasticity or flexibility
    8. Loss of elasticity and shape of wristlets
    9. Loss of seam integrity and broken or missing stitches

E. Footwear:
    1. Soiling
    2. Contamination
    3. Cuts, tears and punctures, leaks
    4. Thermal damage such as charring, burn holes, melting and discoloration
    5. Exposed or deformed steel toe, steel midsole or shank
    6. Loss of water resistance
    7. Excessive tread wear
    8. Closure system component damage and functionality
    9. Loss of seam integrity and broken or missing stitches
    10. Condition of lining such as tears, excessive wear and separation from the outer layer
    11. Heel counter failure – the heel counter is a rigid piece embedded within the heel of the boot to improve the support provided to the wearer's foot

F. Drag Rescue Device (DRD):
    1. Installation in the garment
    2. Soiling
    3. Contamination
    4. Cuts, tears, punctures, cracking or splitting
    5. Thermal damage such as charring, burn holes, melting and discoloration

G. Personal Safety System (Self Rescue Device): Integrated Harness and Rope Assembly
   1. Soiling
   2. Contamination
   3. Cuts, tears, punctures, cracking or splitting
   4. Thermal damage such as charring, burn holes, melting and discoloration

H. Interface Component (jacket front closure, coat/pan, sleeve/glove, pant/boot interface):
   1. Soiling
   2. Contamination
   3. Physical damage such as charring, burn holes, melting and discoloration
   4. Loss of reduction of properties that allow the component to continue as effective interface such as loss of shape or inability to remain attached to the respective elements, if attachment is required
   5. Loss of seam integrity and broken or missing stitches

## III. ADVANCED INSPECTIONS

Turnout Coat Liner:

A. Complete liner inspection of all garment elements shall be conducted at a minimum after 5 years in service or whenever advanced inspections indicate that problem with the liner could exist. The liner system shall be opened to expose all layers for inspection and testing. This may require undoing the stitching of the liner.

B. The moisture barrier and the thermal barrier shall be inspected for the following:

   1. Physical damage to all layers and sides of each layer such as rips, cuts, abrasions
   2. Thermal damage such as charring, burn holes, melting or discoloration of any layer
   3. Loss of seam integrity, broken or missing stitches, and loose or missing moisture barrier seam tape
   4. Material physical integrity; UV or chemical degradation as evidenced by discoloration, significant changes in material texture, loss of material strength, loss of liner material or shifting of liner material
   5. Delamination as evidenced by separation of film from substrate fabric, flaking or powdering

The moisture barrier shall be tested using the hydrostatic test to evaluate the water penetration barrier and shall show no leakage. The hydrostatic test is called the “Cup Test” where the

moisture barrier is placed in a leak proof, clamped, horizontal position with a cup of water applied for 15 seconds. This test provides inspection without opening the liner.

The result of each water penetration barrier evaluation (Cup Test) shall be recorded.

## IV. REPAIR OF ENSEMBLE ELEMENTS

All ensemble repairs shall be performed by the original manufacturer, an ISP Ensemble elements include a turnout coat, liner, trousers, helmet, footwear, gloves and hoods.

## V. STORAGE OF TURNOUT GEAR ENSEMBLES

Turnout gear ensembles and ensemble elements must be stored in clean, dry and well-ventilated areas.

Turnout gear ensembles and ensemble elements must not be exposed to direct sunlight or fluorescent light when not worn.

Turnout gear ensembles and ensemble elements will be stored in the turnout gear racks located in the rear of the engine bay when not in use, the exception being the Chief Officers who carry their turnout gear in their personal vehicle. Spare turnout gear ensembles will be maintained in the secure room located in the basement of the firehouse.

## VI. RETIREMENT OF TURNOUT GEAR ENSEMBLES

Turnout gear ensembles and ensemble elements used for **Interior** Firefighting shall be retired from **Interior** service 10 years after date of manufacturer. However, if the gear is in such condition that it passes inspection from a qualified company, the gear may be used as backup gear for that period of time which the inspection company deems acceptable.

**APPENDIX A**
**TURNOUT GEAR ENSEMBLE AND ENSEMBLE ELEMENTS**

ANNUAL INSPECTION CHECKLIST

Turnout Coat and Trouser Manufacturer Name _____

Turnout Coat Lot or Serial Number _____

Trouser Lot or Serial Number _____

**Inspection instructions –** place a checkmark next to the inspection criteria as the inspection of each ensemble element is completed.

**FAILURE: Place an "F" next to any item that requires failure and an "R" that requires replacement.**

Turnout Coat and Trouser

____ Soiling

____ Contamination

____ Rips, tears and cuts

____ Damaged or missing hardware and closure systems

____ Thermal damage such as charring, burn holes, melting, discoloration of any layer

____ Loss of moisture barrier integrity indicated by rips, cuts, tears, abrasions, discoloration or thermal damage

____ Evaluation of system fit and coat/trouser overlap

____ Damaged or missing reflective trim

____ Loss of seam integrity and size compatibility of shell, liner and the Drag Rescue Device

____ Loss of material physical integrity as evidenced by discoloration, significant changes in material texture, loss of material strength, loss of liner and material shifting of liner material

____ Loss of wristlet elasticity, stretching, runs, cuts or burn holes

____ Manufacturer label integrity and legibility

____ Hoop and loop functionality

____ Liner attachment systems

____ Closure system functionality

____ Correct assembly and size compatibility of shell, liner and Drag Rescue Device

<u>Turnout Coat Liner and Moisture/Thermal Barrier</u>

The liner may need to be opened to expose all layers for inspecting and testing based on the physical condition of the Liner/Barrier

____ Physical damage to all layers and sides of each layer such as rips, cuts and abrasions

____ Thermal damage such as charring, burn holes, melting or discoloration of any layer

____ Loss of seam integrity, broken or missing stitches, and loose or missing moisture barrier seam tape

____ Material physical integrity: UV or chemical degradation as evidenced by discoloration, significant changes in material texture, loss of material strength, loss of liner material or shifting of liner material

____ Delamination as evidenced by separation of film from substrate fabric, flaking or powdering

____ Water penetration barrier evaluation (Cup Test) completed; date required:

M___D___Y____

Hood

_____ Soiling

_____ Contamination

_____ Rips, tears and cuts

____ Thermal damage such as charring, burn holes, melting and discoloration

____ Loss of face opening adjustment

____ Loss of seam integrity and broken or missing stitches

Helmet (Shell)

_____ Soiling

_____ Contamination

_____ Cracks, crazing, dents and abrasions

_____ Thermal damage such as charring, burn holes, melting and discoloration

Helmet (Earflaps)

____ Rips, tears and cuts

____ Thermal damage to the shell such as bubbling, soft spots, warping and discoloration

Helmet (Misc.)

____ Damaged (charring, burn holes, discoloration, broken or missing seam stitches) or missing components of the helmet suspension or retention system

____ Damaged or missing components of the face shield/goggle lens system including discoloration, crazing and scratches which are limiting lens visibility

____ Damaged or missing reflective trim

Gloves

_____ Soiling

_____ Contamination

_____ Rips, tears and cuts

_____ Thermal damage such as charring, burn holes, melting and discoloration of any layer

_____ Shrinkage

_____ Loss of elasticity or flexibility

_____ Loss of seam integrity and broken or missing stitches

Footwear

_____ Soiling, Contamination

_____ Cuts, tears and punctures

____ Thermal damage such as charring, burn holes, melting and discoloration

____ Exposed or deformed steel toe, steel midsole or shank

____ Excessive tread wear

____ Closure system component damage and functionality

____ Loss of seam integrity and broken or missing stitches

____ Condition of lining such as tears, excessive wear and separation from the outer layer

____ Heel counter failure

Drag Rescue Device

____ Installation in the garment

____ Soiling, Contamination

____ Cuts, tears, punctures, cracking or splitting

____ Thermal damage such as charring, burn holes, melting and discoloration

Personal Safety System (Self Rescue Device): Integrated Harness and Rope Assembly

____ Soiling, Contamination

____ Cuts, tears, punctures, cracking or splitting

____ Thermal damage such as charring, burn holes, melting and discoloration

Interface Components (jacket front closure, coat/pant, sleeve/glove, pant/boot interface)

____ Soiling, Contamination

____ Physical damage such as charring, burn holes, melting and discoloration

____ Loss or reduction of properties that allow the component to continue as effective interface such as loss of shape or inability to remain attached to the respective elements, if attachment is required

____ Loss of seam integrity and broken or missing stitches

Fire Gloves

_____ Soiling
_____ Contamination
_____ Rips, tears and cuts
_____ Inverted liner
_____ Thermal damage such as charring, burn holes, melting, discoloration of any layer
_____ Shrinkage
_____ Loss of elasticity or flexibility
_____ Loss of elasticity and shape of wristlets
_____ Loss of seam integrity and broken or missing stitches

Rescue Gloves

_____ Soiling
_____ Contamination

_____ Rips, tears and cuts
_____ Inverted liner
_____ Thermal damage such as charring, burn holes, melting, discoloration of any layer
_____ Shrinkage
_____ Loss of elasticity or flexibility
_____ Loss of elasticity and shape of wristlets
_____ Loss of seam integrity and broken or missing stitches

Safety Glasses
_____ Permits clear vision (no significant scratches)
_____ Cracking
_____ Snug Fit

Name of Inspector (Print)_____

Date of Inspection M___D___Y____

Pass _____ Fail _____ (check mark)

Any item that fails, list here:

_____

Any item that needs replacement, list here:

_____

Reason(s) for failure:

_____