

# Lake Jericho Volunteer Fire and Rescue

## Standard Operating Procedure

**Subject:** Health and Safety Standard

**Effective Date:** January 1, 2010

**Authorized By:** Chief Guy Coombs

---

### I. **PURPOSE:**

By the Direction of the Fire Chief the purpose of this standard is to specify the minimum requirements for an occupational safety and health program for the members of Lake Jericho Volunteer Fire and Rescue, and safety procedures for those individuals involved in fire suppression, rescue, and related activities. This is minimum guidance that will identify the Fire Chiefs philosophy in his approach to address the membership needs as well as his approach in addressing the NFPA 1500 standard

### II. **RESPONSIBILITY:**

It will be the responsibility of each member and each fire company to exercise the appropriate control dictated by his/her rank or position in the implementation of this procedure.

### III. **DEFINITIONS:**

Contaminant. A harmful, irritating, or nuisance material foreign to the normal atmosphere.

Debilitating Illness or Injury: A condition that temporarily or permanently prevents a member of the fire department from engaging in normal duties and activities as a result of illness or injury.

Emergency Operations. Activities of the fire department relating to emergency incidents, including response to the scene of the incident and all functions performed at the scene.

Fire Apparatus. A fire department emergency vehicle used for fire suppression, rescue, or other specialized functions.

Fire Company. A group of people organized to engage in fire suppression and related activities in Lower Merion Township.

Fire Chief. The highest ranking officer in charge of LJFR fire company.

Fire Department. The organization providing rescue, fire suppression, and related activities in the Lake Jericho area.

Fire Department Facility. Any building or area owned, operated, occupied, or used by a fire department on a routine basis. This does not include locations where a fire department may be summoned to perform emergency operations or other duties, unless such premises are normally under the control of the fire department.

Fire Suppression. The activities involved in controlling and extinguishing fires. Fire suppression shall include all activities performed at the scene of a fire incident or training exercise that expose fire department members to the dangers of heat, flame, smoke, or other products of combustion, explosion, or structural collapse.

Fire Department Vehicle. Any vehicle operated by the fire department, including fire apparatus.

Fully Enclosed Area. A cab or passenger compartment of fire apparatus providing total enclosure with positive latching doors provided for entry and exit.

Hazardous Area. The immediate area where members might be exposed to a special hazard.

Hazardous Atmosphere. Any atmosphere that is oxygen deficient or that contains a toxic or disease producing contaminant. A hazardous atmosphere may or may not be immediately dangerous to life and health.

Hazardous Material. A substance that presents an unusual danger to persons due to properties of toxicity, chemical reactivity or decomposition, corrosively, explosion or detonation, etiologic hazards, or similar properties.

Health Data Base. A compilation of records and data relating to the health experience of a group of individuals, maintained in a manner such that it is retrievable for study and analysis over a period of time.

Health Promotion. Preventive health activities that identify real and potential health risks in the workplace, and that inform, motivate, and otherwise help people to adopt and maintain healthy practices and lifestyles.

Imminent Hazard. An act or condition that is judged to present a danger to persons or property that is so urgent and severe that it requires immediate corrective or preventive action.

Incident Command System. An organized system of roles, responsibilities, and standard operating procedures used to manage and direct emergency operations.

May. This term is used to state a permissive use or an alternative method to a specific requirement.

Member. A person involved in performing the duties and responsibilities of a fire department, under the auspices of the organization. For the purposes of this standard, a fire department member may be a full-time employee, a volunteer, and may occupy any position or rank within the fire department, and may or may not engage in emergency operations.

Member Assistance Program (MAP). A generic term used to describe the various methods used in the workplace for the control of alcohol and other substance abuse, stress, and personal problems that adversely affect job performance.

Occupational Illness. An illness or disease contracted through or aggravated by the performance of the duties, responsibilities, and functions of a fire department member.

Occupational Injury. An injury sustained during the performance of the duties, responsibilities, and functions of a fire department member.

Officer in Command. A member of the fire department assigned to direct emergency operations or manage the activities of a group of members.

Oxygen Deficient Atmosphere. An atmosphere in which the concentration of oxygen is less than that required to sustain unimpaired physical and mental activities.

Related Activities. For the purposes of this standard, related activities include any and all functions that fire department members may be called upon to perform in the performance of their duties.

Rescue Incident. An emergency incident that primarily involves the rescue of persons subject to physical danger and may include the provision of emergency medical services.

Service Testing. The regular, periodic inspection and testing of apparatus and equipment, according to an established schedule and procedure, to ensure that it is in safe and functional operating condition.

Shall. Indicates a mandatory requirement.

Should. This term, indicates a recommendation or that which is advised but not required.

Special Hazard. A particular substance, device, event, circumstance, or condition that presents an unusual and severe danger to members of the fire department or an abnormally high level of fire danger.

Standard Operating Procedure. An organizational directive that establishes a standard course of action.

Structural Fire Fighting. The activities of rescuing, fire suppression, and property conservation involving buildings, enclosed structures, vehicles, vessels, or like properties that are involved in a fire or emergency situation.

IV. **ORGANIZATION:**

A. This fire company shall prepare and maintain a written statement or policy that establishes the existence of the fire company; the basic organizational structure; the expected number of fire company members; the type of functions that the fire company is expected to perform; and the type, amount, and frequency of training to be provided to fire company members.

V. **POLICY:**

The fire company shall adopt an official written occupational safety and health policy that identifies specific goals and objectives for the prevention and elimination of accidents and occupational injuries, illnesses, and fatalities. It shall be the policy of the fire company to seek and to provide an occupational health and safety program for its members that complies with this standard.

A. It shall be the responsibility of the fire company to provide a safe, healthy work environment for its members. The fire company shall research, develop, implement, and enforce an occupational safety and health program that recognizes and reduces the inherent risks involved in the operations of a fire company.

B. The fire company shall be responsible for compliance with all applicable laws and legal requirements with respect to member safety and health.

C. The fire company shall establish and enforce rules, regulations, and standard operating procedures to reach the objectives of this standard.

D. Each individual member of the fire company shall cooperate, participate, and comply with the provisions of the occupational safety and health program.

- E. It shall be the right of each member to be protected by an effective occupational safety and health program and to participate or be represented in the research, development, implementation, and enforcement of the program.

**VI. FIRE COMPANY SAFETY OFFICER:**

The fire chief shall appoint a designated fire company safety officer which is currently the Assistant Fire Chief. This position shall comply with the requirements of NFPA 1501, Standard for Fire Department Safety Officer.

The fire company safety officer shall be responsible for the management of the occupational safety and health program.

The fire chief shall assign or make available such additional personnel and resources as may be required to fulfill the requirements of the occupational safety and health program.

**VII. SAFETY AND HEALTH COMMITTEE:**

A Safety and Health Committee shall be established and shall serve in an advisory capacity under the supervision of the safety officer to the fire chief.

The purpose of this committee shall be to conduct research, develop recommendations, and study and review matters pertaining to safety and health within the fire company.

The committee shall hold regularly scheduled meetings and may hold special meetings whenever necessary. Regular meetings shall be held at least once in every six months. Written minutes of each meeting shall be retained.

**VIII. RECORDS:**

The fire company shall establish a data collection system and maintain permanent records of all accidents, injuries, illnesses, or deaths that are or might be job related.

The data collection system shall also maintain individual records of any occupational exposure to known or suspected toxic products or contagious diseases.

The fire company shall maintain a confidential health record for each member and a health data base as specified in the Section covering this standard.

The fire company shall maintain training records for each member indicating dates, subjects covered, and certifications achieved.

The fire company shall maintain inspection, maintenance, repair, and service records for all vehicles and equipment used for emergency operations.

IX. **TRAINING:**

The fire company shall establish and maintain a training and education program with a goal of preventing occupational accidents, deaths, injuries, and illnesses.

- A. The fire company shall provide training and education for all members to ensure that they are able to perform their assigned duties in a safe manner that does not present a hazard to themselves or to other members.
- B. All training and education shall be provided by individuals who are qualified to provide instructions in the subjects covered. The chief will assign trainers based on their education and experience.
- C. Training shall be provided for all members as often as necessary, but not less than four times each year.
- D. Whenever changes in procedures or technology are introduced or new hazards are identified in the work environment, appropriate training and education shall be provided for all affected members.
- E. Members shall be provided with training and education appropriate for their duties and responsibilities before being permitted to engage in emergency operations.
- F. All members who engage in structural fire fighting shall meet the Commonwealth of Kentucky firefighter essentials as a minimum and strive to meet the minimum requirements of Fire Fighter I as specified in NFPA 1001, Standard for Firefighter Professional Qualifications.
- G. All fire apparatus drivers/operators shall meet the minimum requirements specified in NFPA 1002, Standard for Fire Apparatus Driver/Operators Professional Qualifications only with the express consent of the fire chief will those be grandfathered who was serving in this capacity prior to this directive.
- H. All fire officers shall strive meet the minimum requirements for at least Fire Officer I as specified in NFPA 1021, Standard for Fire Officer Professional Qualifications only with the express consent of the fire chief will those be grandfathered who was serving in this capacity prior to this directive.
- I. All members who may be involved in emergency operations shall be trained in the incident command system and NIMS standards as well as Hippa and Infectious Disease control standards.

- J. The training program for all members engaged in fire ground operations shall include procedures to be followed to provide for their safe exit from the dangerous area in the event of equipment failure or sudden changes in fire conditions.
- K. Members engaged in structural fire fighting shall participate in training at least monthly.
- L. Training in fire ground operations shall be based on standard operating procedures. These procedures shall be maintained in written form and shall address all emergency scene operations.
- M. Training exercises shall be conducted in accordance with the established fire ground operating procedures and shall be supervised by qualified instructors.
- N. When training involves live fire fighting exercises, these shall be conducted in compliance with the Commonwealth of PA standard operating procedures for the use of the drill tower or training grounds.
- O. Smoke generating devices that produce a hazardous atmosphere shall not be used in training exercises.
- P. Specialized training and education shall be provided to members regarding special hazards to which they may be exposed during fires and other emergencies.
- Q. The Fire Department shall develop written procedures that describe the actions to be taken in situations and shall provide them to the fire companies after approval by the Chief & President.

X. **VEHICLES AND EQUIPMENT:**

The fire company shall consider health and safety as primary concerns in the specification, design, construction, acquisition, operation, maintenance, inspection, and repair of all vehicles and equipment.

- A. Fire company vehicles shall be operated only by members who are trained and certified in their proper operation.
- B. Drivers of fire company vehicles shall have valid driver's licenses for the type of vehicle they operate. Vehicles shall be operated in compliance with all traffic laws, including sections pertaining to emergency vehicles, as applicable.

- C. Drivers of fire company vehicles shall be directly responsible for safe and prudent operation under all conditions. When the driver is under the direct supervision of an officer, that officer shall also assume responsibility for the actions of the driver.
- D. Drivers shall not move fire company vehicles until all persons on the vehicle are seated and secured with seat belts or safety harnesses in approved riding positions.
- E. All persons riding on fire apparatus shall be seated and secured to the vehicle by seat belts or safety harnesses at any time the vehicle is in motion. Standing while riding is prohibited.
- F. All persons except the driver shall wear full protective clothing including a helmet.
- G. All new fire apparatus shall be specified and ordered with a sufficient number of seats in and enclosed area as specified by NFPA 1901, Standard for Automotive Fire Apparatus, for the maximum number of persons who may ride on the vehicle at any time.
- H. When members respond to incidents or to the fire station in their own vehicles, the operation of these vehicles is governed by all applicable traffic laws and codes and is subject to the rules established by the fire company.

XI. **MAINTENANCE AND TESTING OF VEHICLES:**

- A. All fire company vehicles shall be inspected at least weekly and within 24 hours after any major use or repair to identify and correct unsafe conditions. A preventive maintenance program shall be established and records shall be maintained. Maintenance inspections, and repairs shall be performed in accordance with manufacturers instructions.
- B. Any fire company vehicle found to be unsafe shall be placed out of service until repaired. After being repaired, the vehicle shall be inspected prior to being placed back in service.
- C. Fire pumps on apparatus shall be service tested annually and records maintained in the Maintenance files maintained for the fire department.

XII. **EQUIPMENT:**

- A. All equipment carried on fire apparatus or designated for training shall be visually inspected after any use. Inventory records shall be maintained for all equipment.



- B. All equipment carried on fire apparatus or designated for training shall be tested at least annually in accordance with manufacturers' instructions and applicable standards.
- C. Fire fighting equipment found to be defective or in unserviceable condition shall be removed from service and repaired or replaced.
- D. All ground ladders shall be inspected and service tested as specified in NFPA 1932, Standard on Use, Maintenance, and Service Testing of Fire Department Ground Ladders.
- E. All fire hose shall be inspected and service tested as specified in NFPA 1962, Standard on Care, Maintenance, and Use of Fire Hose Including Connections and Nozzles.
- F. All fire extinguishers shall be inspected and tested as specified in NFPA 10, Standard for Portable Fire Extinguishers.
- G. Hearing conservation objectives shall be taken into account in the acquisition of new power tools and equipment.

**XIII. PROTECTIVE CLOTHING:**

The fire company shall provide each member with the appropriate protective clothing and protective equipment to provide protection from the hazards of the work environment to which the member is or may be exposed. Protective clothing and protective equipment shall be used whenever the member is exposed or potentially exposed to the hazards for which it is provided. Members shall be fully trained in the care, use, inspection, maintenance, and limitations of the protective clothing and protective equipment assigned to them or available for their use. Protective clothing and protective equipment shall be used and maintained in accordance with manufacturers' instructions. A maintenance and inspection program shall be established for protective clothing and protective equipment. Specific responsibilities shall be assigned for inspection and maintenance.

- A. All members who may be engaged in or exposed to the hazards of structural fire fighting shall be provided with both protective coats and protective trousers that meet the requirements of NAPA 1971, Standard on Protective Clothing for Structural Fire Fighting. An overlap of not less than 8" (203 mm) of protective coat and protective trouser shall be required.
- B. All members who may be engaged in or exposed to the hazards of structural fire fighting shall be provided with helmets that meet the requirements of NFPA 1972, Standard on Helmets for Structural Fire Fighting.

- C. All members who may be engaged in or exposed to the hazards of structural fire fighting shall be provided with gloves that meet the requirements of NFPA 1973, Standard on Gloves for Structural Fire Fighting.
- D. All members who may be engaged in or exposed to the hazards of structural fire fighting shall be provided with footwear that meet the requirements of NFPA 1974, Standard on Protective Footwear for Structural Fire Fighting.
- E. All members who may be engaged in or exposed to the hazards of structural fire fighting shall be provided with approved protective hoods or a combination of ear flaps and collar that provide protection for the ears and neck and interface with SCBA facepiece , protective coat, gloves and helmet.
- F. The fire company shall require all members to wear all the protective clothing specified in this section at all times when involved in or exposed to the potential hazards of structural fire fighting.

**XIV. SELF-CONTAINED BREATHING APPARATUS - (SCBA):**

SCBA shall be provided for and shall be used by all personnel working in areas where:

- a. The atmosphere is hazardous
- b. The atmosphere is suspected of being hazardous.
- c. The atmosphere may rapidly become hazardous.

In addition to the above, all personnel working below ground level or inside any confined space shall be provided with SCBA and shall use that SCBA unless the safety of the atmosphere can be established by testing and continuous monitoring.

- A. SCBA of the open-circuit design shall be positive pressure and shall meet requirements of NFPA 1981, Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire Fighters. Closed-circuit type SCBA shall be NIOSH/MSHA approved with a minimum service duration of 30 minutes and shall operate in the positive pressure mode only.
- B. The fire company shall adopt and maintain a respiratory protection program that meets the requirements of ANSI Z88.5, Practices for Respiratory Protection for the Fire Service, and ANSI Z88.6, Standard for Respiratory Protection, Respirator Use, Physical Qualifications for Personnel.
- C. Compressed gaseous breathing air in the SCBA cylinder shall meet the requirements of the Compressed Gas Association G-7.1 Commodity Specification for Air, with a minimum air quality of Grade "D", as well as meeting a water vapor level of less than 25 ppm.

- D. Sources of a compressed gaseous breathing air, such as compressors, cascade systems, storage receivers, etc., used for filling SCBA cylinders shall be tested at least every six months to assure their compliance with this section.
- E. SCBA cylinders shall be emptied per the instructions of the manufacturer if not utilized within a three-month period.
- F. SCBA cylinders shall be hydrostatically tested within the periods specified by the manufacturers and the applicable governmental agencies.
- G. All SCBA shall be inspected, used, and maintained as specified in ANSI Z88.5 Practices for Respiratory Protection for the Fire Service.
- H. Members using SCBA shall operate in teams of two or more who are in communication with each other through visual, audible, physical, safety guide rope, electronic or other means to coordinate their activities, and are in close proximity to each other to provide assistance in case of an emergency.
- I. When members are involved in operations that require the use of SCBA or other respiratory protective equipment, at least one member shall be assigned to remain outside the area where respiratory protection is required. This member shall be responsible for maintaining a constant awareness of the number and identity of personnel using SCBA, their location and function, and time of entry.
- J. The facepiece seal capability of each member qualified to use SCBA shall be verified by manual fit testing on an initial basis and any time that new types of SCBA are issued. Each new member shall be tested before being permitted to use SCBA in a hazardous atmosphere. Only members with a properly fitting facepiece shall be permitted by the fire company to function in a hazardous atmosphere with self-contained breathing apparatus.
- K. Beards or facial hair that interfere with the facepiece seal shall be prohibited for members required to use SCBA. If eyeglasses are worn, the member shall use frames that do not pass through the seal area of the facepiece.
- L. Each member involved in rescue, fire fighting, or other hazardous duties shall be provided with and shall use a PASS device. Each PASS device shall be tested prior to each use, and shall be maintained in accordance with the manufacturers' instructions.
- M. All PASS devices used by fire companies shall meet the requirements of NFPA 1982, Standard on Personal Alert Safety Systems, (PASS) for Fire Fighters.

**XV. LIFE SAFETY ROPES, HARNESES, AND HARDWARE:**

All life safety ropes, harnesses, and hardware used by fire companies shall meet the requirements of NFPA 1983, Standard on Fire Service Life Safety Rope, Harnesses, and Hardware.

- A. Class I life safety harnesses shall only be used for fire fighter attachment to ladders and aerial devices if needed.
- B. Class II and Class III life safety harnesses shall be utilized for fall arrest and rappelling operations.
- C. Rope use to support the weight of members or other persons during rescue, fire fighting, other emergency operations, or during training evolutions shall be life safety rope. Life safety rope used for any other purpose shall be removed from service and destroyed.
- D. Life safety rope used for rescue at fires or other emergency incidents shall be previously unused and shall be destroyed after such use.
- E. Life safety rope used for training evolutions shall be designated as training rope and may be reused if inspected before and after each such use in accordance with the manufacturers instructions. Training ropes shall be destroyed if subjected to impact loading, or if signs of weakness or wear are detected. Records shall be maintained to record the use of each life safety rope used for training.

**XVI. PROTECTIVE CLOTHING AND PROTECTIVE EQUIPMENT:**

- A. All new protective clothing and protective equipment shall meet the current NFPA 1971 standard.

**XVII. EYE AND FACE PROTECTION:**

Face and eye protection shall be provided for and used by members engaged in fire suppression and other operations involving hazards to the eyes and face at all times when the face is not protected by the full facepiece of self-contained breathing apparatus.

**XVIII. HEARING PROTECTION:**

Hearing protection shall be provided for and used by all members operating or riding on fire apparatus when subject to noise in excess of 90 dBA.

- A. Hearing protection shall be provided for and used by all members when exposed to noise in excess of 90dBA from power tools or equipment, except in situations where the use of such protective equipment would create an additional hazard to the user.
- B. The fire company shall engage in a hearing conservation program to identify and reduce or eliminate potentially harmful sources of noise in the work environment. Where audiometric testing indicates a significant hearing loss for a member, the fire company shall address these conditions on an individual basis, as well as take steps to control potentially harmful noise exposure to any of all other members.

XIX. EMERGENCY OPERATIONS:

- A. Emergency operations and other situations that present similar hazards, including training exercises, shall be conducted in a manner to recognize hazards and to prevent accidents and injuries.
- B. An incident command system shall be established with written procedures applying to all members involved in emergency operations. All members involved in emergency operations shall be familiar with the system.
- C. The incident command system shall identify roles and responsibilities relating to the safety of operations. Safety responsibilities shall be assigned to supervisory personnel at each level of the organization.
- D. The officer in command of an emergency incident shall be responsible for the overall safety of all members and all activities occurring at the scene.
- E. The officer in command of an emergency incident shall establish an organization with sufficient supervisory personnel to control the position and function of all members operating at the scene and to ensure that safety requirements are satisfied.
- F. A standard system shall be used to identify and account for the assignment of each member at the scene of an incident. Special attention should be given to members who arrive by private vehicles. A standard system of reporting in to a supervisor should be established both for the organization of work groups and to identify personnel on the scene.
- G. At incidents or situations where special hazards exist, the officer in command shall assign qualified personnel with specific responsibility to identify and evaluate hazards and to provide direction with respect to the safety of operations. The fire chief shall assign a safety officer.

- H. The fire company shall provide an adequate number of personnel to safely conduct emergency scene operations. Operations shall be limited to those that can be safely performed by the personnel available at the scene.
- I. When inexperienced members are working at an incident, direct supervision shall be provided by more experienced officers or members.
- J. When members are operating at an emergency incident and their assignment places them in potential conflict with motor vehicle traffic, they shall wear helmets and a garment with fluorescent retro-reflective material.
- K. When members are operating in hazardous areas, they shall work in teams of two or more. There shall be at least one member specifically assigned to remain outside the hazardous area and maintain an awareness of the operations inside the hazardous area.
- L. Whenever members are operating in positions or performing functions that present special hazards or that would subject them to immediate danger of injury in the event of equipment failure or other sudden event, back-up personnel shall be standing by with equipment to provide assistance or rescue.
- M. When members are operating in positions or performing functions that involve an immediate risk of injury, qualified basic life support personnel shall be standing by with medical equipment and transportation capability.

XX. FACILITY SAFETY:

All fire company facilities shall comply with all legally applicable health, safety, building, and fire code requirements.

- A. All food preparation and congregation areas in the fire station shall be separated from vehicle storage areas by at least one hour fire resistive assemblies and shall be protected by smoke detectors.
- B. The Fire station shall be designed and provided with provisions to ventilate exhaust emissions from fire apparatus to prevent exposure to fire fighters from contamination of living and potential temporary sleeping areas.
- C. All fire company facilities shall be inspected at least annually. Inspections shall be documented, recorded and reported to the fire chief.

XXIV. REFERENCED PUBLICATIONS:

Unless otherwise specified, all references to standards refers to the current standards of the National Fire Protection Association, OSHA and NIOSH.