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| **Self Contained Breathing Apparatus (SCBA)** | Related Policies: Operations at Structure Fires; Accountability Procedures; Rapid Intervention Teams; ICS; Building or Area Evacuations |
| *This policy is for internal use only and does not enlarge an employee’s civil liability in any way. This policy should not be construed as creating duty to act or a higher duty of care, with respect to third party civil claims against employees or the department. A violation of this policy, if proven, can only form the basis of a complaint by this department for non-judicial administrative action in accordance with the laws governing employee discipline.* |
| Applicable KY Statutes: Applicable KY Regulations:  |
| OSHA: 29 CFR 1910.134, 1910.120, 1910.156 |
| NFPA Standard: 1404, 1500, 1582, 1852, 1981 |
| Date Implemented: | Review Date: |

**Policy:** It is the policy of the Fire Department to:

* provide a respiratory protection program that meets the requirements of NFPA 1500 and 29 CFR 1910.134
* provide all members with respiratory protection training that meets NFPA 1404
* provide self contained breathing apparatus that meets NFPA 1981
* ensure self contained breathing apparatus are selected, cared for and maintained in accordance with NFPA 1852

**Purpose:** The purpose of this Respiratory Protection Program is to establish the procedures and requirements necessary to ensure that all personnel are protected from exposure to respiratory hazards that may be present at fires and emergency scenes.

**Scope:** This policy applies to the general use of SCBA by personnel at emergency incidents and is supplemented by more discipline-specific policies governing respiratory practices at incidents such as structure fires and hazardous materials incidents.

**Definitions:**

**Early Stages:** That period of time in an emergency prior to the arrival of companies beyond the first alarm assignment. The “early stages” ends with the arrival of resources not initially dispatched, including special signal or second alarm companies.

**Hazardous Area:** The area where members might be exposed to a hazardous atmosphere.

**Hazardous Atmosphere:** Any atmosphere that is oxygen deficient or that contains a toxic or disease producing contaminant

**Imminent life-threatening situation:** Circumstances where immediate action could prevent the loss of life or serious injury

**Initial rapid intervention team:** At least two members on scene and available for the rescue of a member or a crew if the need arises. An initial rapid intervention team is intended to meet the NFPA definition of a rapid intervention crew (RIC).

**Initial Stages:** That period of time in an emergency incident prior to the arrival of a second company/crew on scene

**Rapid Intervention Team (RIT) for Structure Fires:** At least four personnel supervised by a company officer, fully equipped with appropriate protective clothing, SCBA and such other specialized equipment as are necessary given the specifics of the operation, located on scene, immediately available for the rescue of a member or company should the need arise

**SCBA:** Self-Contained Breathing Apparatus

## **Working Structure Fire:** A fire in a structure that requires the use of a 1 ½” or larger fire attack hose line and also requires the use of SCBA for members entering the hazardous area

## **Respiratory Protection Program**

1. **General**
2. The fire department respiratory protection program shall be administered and overseen by the fire department safety officer.
3. Self contained breathing apparatus (SCBA) used by the fire department shall be certified as being compliant with NFPA 1981, *Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services*.
4. All personnel using SCBA shall participate in the fire department medical surveillance program, and shall be medically certified before being permitted to engage in emergency activities (prior to being allowed to use SCBA), and on an annual basis thereafter, pursuant to OSHA 1910.156, 1910.134, 1910.120, and NFPA 1582.
5. All personnel using SCBA shall be trained in respirator use in accordance with NFPA 1001, NFPA 1404, and NFPA 1500, including knowledge of the hazards associated with respirator use, hazard assessment, selection of respiratory protective equipment based on hazard exposure levels, fit testing of respirators, respirator inspection, emergency escape procedures, and disentanglement procedures.
6. All personnel using SCBA shall be qualified at least annually to wear and use SCBA.
7. SCBA shall be inspected, cared for, and maintained in accordance with NFPA 1852, *Standard on Selection, Care, and Maintenance of Open-Circuit Self-Contained Breathing Apparatus (SCBA)*.
8. SCBA shall be routinely inspected daily and after every use in accordance with NFPA 1852 and the manufacturer’s instructions.

**Editor’s Note:** *Volunteer fire departments may choose to require that SCBA be inspected weekly and after every use.*

1. The routine inspections shall include the following components:
2. Facepiece
3. Backframe and harness assembly
4. Cylinder
5. Hose
6. End-on-service-time indicators (EOSTI – or low air warning)
7. Regulators
8. Accessories
9. Cylinder pressure
10. SCBA shall be cleaned and disinfected in accordance with the manufacturer’s instructions and NFPA 1852 after each use and when ever necessary based upon routine inspection. Facepieces issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintained in a sanitary condition; facepieces issued to more than one employee shall be cleaned and disinfected before being worn by different individuals.
11. Whenever respiratory protection is required, all personnel shall utilize SCBA. No other forms of respiratory protection are authorized or allowed.

**Editor’s Note**: If the department uses respiratory protection besides SCBA, that should be indicated here, and additional language will be required to explain when such RPE is required, any fit testing requirements, etc.

1. **Fit Testing**
2. All personnel using SCBA shall be fit tested before being permitted to engage in emergency activities; on an annual basis thereafter; and whenever a new type of SCBA or a new facepiece is issued. The fit test shall be a quantitative fit test as prescribed by NFPA 1500 and NIOSH.
3. Only personnel with a properly fitting facepiece that successfully passes the quantitative fit test shall be permitted to use SCBA.
4. The fit testing records shall capture and track the following information:
5. Name, rank and assignment of the member tested
6. Type of fitting test performed
7. Make, model, size, and serial number (if available) of facepiece(s) tested
8. Pass/fail results of the tests

## **Use of Self Contained Breathing Apparatus**

1. **Limitations**
2. SCBA shall not be worn by a member with any condition which prevents a good face seal.
3. Nothing shall be permitted to enter or pass through the part of the facepiece that seals with the member’s face regardless of the fit test measurements that can be achieved. This includes facial hair, eyeglass frames, spectacle straps, head coverings, Band-Aids, bandannas, test probes, and communication devices.
4. A beard or facial hair that interferes with the facepiece seal is prohibited regardless of the fit test measurement that can be obtained.
5. If eyeglasses must be worn, the member shall use frames that do not pass through the area where the facepiece is designed to seal with the face. Nothing shall be allowed to enter or pass through the area where the facepiece is designed to seal with the face regardless of the fit test measurements that can be obtained.
6. **Conditions of Use**

1. Self Contained Breathing Apparatus (SCBA) shall be used by all personnel working in areas where:
2. the atmosphere is IDLH
3. the atmosphere is suspected of being IDLH
4. the atmosphere may rapidly become IDLH
5. the atmosphere is unknown.
6. This requirement specifically includes the use of SCBA by all members inside a fire building while firefighting operations are taking place, until the fire is extinguished and the area has been thoroughly ventilated with fresh air.
7. In addition to the above, SCBA shall be used by all personnel working:
8. below ground level (e.g. manholes, sewers, etc.)
9. inside any confined space;

unless the safety of the atmosphere can be established by testing and continuous monitoring.

1. Personnel using SCBA shall not compromise the protective integrity of the SCBA for any reason in IDLH, potentially IDLH, or unknown atmospheres by removing the facepiece or disconnecting any portion of the SCBA that would allow the ambient atmosphere to be breathed.
2. Personnel shall ensure that the SCBA facepiece and head harness with straps are worn under the protective hoods, and that neither hoods nor helmets interfere with the facepiece seal.

###### **Operational Procedures**

1. Members using SCBA shall operate in teams of two or more. No member shall enter any hazardous area, IDLH, potentially IDLH, or unknown atmosphere for any reason alone. Company officers are strictly accountable for the whereabouts of their assigned personnel assigned at all times.
2. When using SCBA, team members shall be in communication with each other by means of visual contact, audible contact, direct physical contact, or by use of safety guide/signal ropes.
3. Team members shall remain in close proximity to each other to provide assistance in case of emergency.
4. When members are involved in operations that require the use of SCBA, at least four members shall be present on scene, consisting of two members who will enter the hazardous area, and two who will remain outside the hazardous area on standby, available to provide assistance or rescue. All four personnel must be capable of and qualified to wear SCBA, and all must be properly equipped to enter the hazardous area given the specifics of the incident or situation.
5. The standby members shall maintain a constant awareness of the number and identity of members operating in the hazardous area; their location, function, and time of entry; and shall remain in radio, visual, voice, or signal line communication with the entry team.
6. One of the standby members may engage in other on-scene duties outside of the hazardous area, such as apparatus operator or incident commander, provided communication is maintained between the standby members and the entry team. However, the assignment of any personnel as a standby member shall not be permitted if by abandoning their tasks to assist or perform a rescue they clearly jeopardize the safety and health of any firefighter working at the incident.
7. Standby members must have full protective clothing, protective equipment, and SCBA immediately accessible for use if the need for rescue activities inside the hazardous area occurs. Standby members shall don full protective clothing, protective equipment, and SCBA prior to entering the hazardous area.
8. Personnel who arrive on scene to find an imminent life-threatening situation where immediate action could prevent the loss of life or serious injury, are permitted to act with less than four personnel, provided the following actions are undertaken:
9. The entry is made by a minimum of two personnel
10. A standby member is provided if available
11. All possible precautions are taken including using appropriate PPE, SCBA, air monitoring equipment, safety line/guide rope, etc.
12. Dispatch and appropriate responding companies are notified of the situation by radio, including the decision to enter, the number of personnel entering, the location where entry was made, and the entry plan.
13. Periodic updates are provided to Dispatch and responding companies as entry team changes location
14. The next arriving company or personnel immediately establish a rapid intervention team (RIT)
15. Entry with less than four personnel on scene shall not be attempted when there is no possibility to save lives.
16. Any entry with less than four personnel shall be thoroughly investigated by the fire department safety officer, and a written report of the incident shall be submitted to the fire chief.
17. Once a second crew is assigned or operating in the hazardous area, the incident shall no longer be considered to be in the initial stages and the Incident Commander shall ensure that an initial rapid intervention team is assigned by one of the following:
	1. Assigning two personnel to form an initial rapid intervention team (IRIT)
	2. Identifying on-scene members performing other functions that can be safely be stopped, and who can be tasked to redeploy as a rapid intervention team
	3. On scene members designated and dedicated as rapid intervention team.
18. For incidents other than structure fires, a rapid intervention team (RIT) shall consist of at least two members and shall be available for rescue of a member or a crew. The size and composition of the RIT shall be based upon the type of incident, and the needs and complexity of operations. For structure fires, the rapid intervention crew shall consist of at least four personnel supervised by a company officer, fully equipped with appropriate protective clothing, SCBA and such other specialized equipment as are necessary given the specifics of the operation,located on scene, immediately available for the rescue of a member or company should the need arise. The SOP on Rapid Intervention Teams provides specific guidance for procedures to be used at structure fires.
19. Each RIT shall be fully equipped with appropriate protective clothing, protective equipment, SCBA, and any discipline specific rescue equipment that may be needed given the needs of the incident.

**Editor’s Note:** *NFPA 1500, 2013 Ed., Ch. 8.8.5 requires that RITs at an incident where any SCBA being used are equipped with a RIC universal air connection (UAC) the RIC shall have the specialized rescue equipment necessary to complete the RIC UAC connection to a supplied air source. The equipment must meet the requirements of NFPA 1981 and shall have a minimum of 1200 L of breathing air before entering the hazard area. Note that a standard Scott 4.5 30 minute cylinder is rated at 1,280 liters.*

1. Upon the arrival of resources beyond the initial assignment, the RIT shall be designated and dedicated to serve as a RIT.
2. Incident Commanders, mindful of the prohibition against members removing their facepieces in IDHL atmospheres, hazardous atmospheres or in atmospheres where the quality of air is unknown, shall ensure that additional crews are available on scene to relieve companies that need to replace their air supply.

###### **Assurance of Breathing Air Quality**

1. Only Grade D breathing air or higher shall be used in the cylinders, and shall meet the requirements of NFPA 1989, *Standard on Breathing Air Quality for Emergency Services Respiratory Protection*.
2. The fire department’s air supply compressor system and/or cascade system shall meet, and shall be maintained and tested according to the requirements of NFPA 1989, and 29 CFR 1910.134(i). In particular, breathing air samples shall be tested quarterly (every three months) by an accredited testing laboratory pursuant to NFPA 1989.
3. The Fire Department Safety Officer will coordinate deliveries of compressed air with outside vendors or mutual aid partners to the extent that such becomes necessary, and will require the provider to provide documentation that the air in the cylinders meets the specifications of Grade D breathing air and NFPA 1989.
4. A minimum air supply of one fully charged replacement cylinder for each SCBA unit shall be maintained.
5. **Respiratory Protection Program Administration**
6. The Fire Department Safety Officer will periodically evaluate routine fire and emergency operations to ensure that the provisions of this program are being implemented.
7. The evaluation will include regular consultations with personnel who use respirators, supervisory personnel, site inspections, air monitoring and review of records.
8. Identified problems will be noted and addressed by the Fire Department Safety Officer. Findings will be reported to the Fire Chief, and the report will list plans to correct any deficiencies in the respiratory protection program and target dates for the implementations of those corrections.
9. A copy of this program shall be maintained in each station with the other standard operating procedures, and a written copy of the program together with a copy of the OSHA standard, 29 CFR 1910.134, shall be kept in the Fire Department Safety Officer’s office. Both shall be available to all personnel who wish to review it.
10. The Fire Department Safety Officer shall also maintain copies of training and fit test records in his/her office. These records will be updated as new employees are trained, as existing employees receive refresher training, and as new fit tests are conducted.
11. The Fire Department Safety Officer will maintain copies of the medical records for all employees covered under the respirator program. The completed medical questionnaire and the physician’s documented findings are confidential and will remain in the member’s confidential medical file. The Fire Department Safety Officer will document only the receipt of the physician’s written recommendation regarding each employee’s ability to wear a respirator.