



**ARCADIA FIRE DEPARTMENT
STANDARD OPERATING GUIDELINE**

**SELF CONTAINED
BREATHING APPARATUS**

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Approved: Michael E. Lang, Fire Chief

OBJECTIVE

To assure that all personnel are prepared to perform emergency operations while maintaining the highest degree of personal safety for all personnel.

INTRODUCTION

The use of self-contained breathing apparatus (SCBA) is an essential part of the complete personal protective equipment provided for each member of the fire department. As such, all personnel are expected to utilize SCBA whenever the need for respiratory protection is indicated.

DESCRIPTION

It shall be the policy of the fire department that personnel not be exposed to any hazardous atmosphere without the benefit of an SCBA. Instances of exposure shall be promptly and thoroughly investigated by the Battalion Chief. The Battalion Chief shall make appropriate recommendations to prevent a recurrence and submit them in writing to the Fire Chief.

This procedure shall apply to all personnel responding to any type of fire or other emergency incident.

Each firefighter bears full responsibility for adherence to this procedure. Authority to deviate from this procedure rests with the Company Officer and the Incident Commander who bear full responsibility for results of any deviation.

For the purposes of this procedure, the following definitions shall apply:

- *Use of SCBA* – the wearing of SCBA with the face piece in place, connected to the regulator and breathing air from the SCBA cylinder.
- *Hazardous Atmosphere* – any atmosphere that is contaminated with smoke, gasses, or other by-products of combustion: or any atmosphere that contains any known contaminants not normally present in clean air. An atmosphere that is oxygen deficient or suspected of being oxygen deficient shall also be considered hazardous.

The use of SCBA is mandatory for all personnel working under the following conditions:

- where the atmosphere is known to be hazardous
- where the atmosphere is suspected of being hazardous
- where the atmosphere may rapidly become hazardous

This policy shall apply to personnel involved in the following conditions:

- in an active fire area
- inside any building involved in a fire
- in a potential fire or explosion area; such as a gas leak or fuel spill
- where smoke is visible in the atmosphere, including vehicle fires, dumpster fires and outdoor rubbish fires
- where toxic products are present, suspected of being present, or could be rapidly released without warning
- in unventilated confined spaces, unless specific tests are performed to assure the atmosphere is safe
- in any below grade areas where an emergency exists, unless specific tests are performed to assure the atmosphere is safe
- in any areas suspected of containing carbon monoxide, including all areas under overhaul after a fire

Personnel using SCBA shall also wear complete personnel protective equipment as outlined in the protective clothing SOG.

Removal of the SCBA is at the discretion of the Company Officer with the concurrence of the Incident Commander. Premature removal must be avoided especially during overhaul operations. Prior to removal of SCBA, atmospheric monitoring must be conducted to assure air quality.

Any of the following conditions in the working area require continued use of self-contained breathing apparatus:

- Carbon Monoxide (CO) levels of 25 ppm or greater
- Oxygen (O₂) levels of 19.5% or less
- Continued presence of smoke from combustion

Personnel operating in area where the atmosphere could become contaminated, but where there would be sufficient warning prior to posing a danger, may wear SCBA with the face piece removed. However, the SCBA must be in a ready state such that it is available for immediate use.

Each member is responsible for restoring to service the SCBA they used during any emergency. This shall include replacing the cylinder with a full cylinder, cleaning of the face piece and harness, testing the unit for proper operation, and stowing the SCBA in its assigned position. If a problem is discovered

it is to be immediately reported to the Company Officer and the SCBA is to be tagged “Out of Service” and a repair order completed.

WORK PERIODS WHEN USING SCBA

- After one 45 work period members will report to the rehab area for fluids, rest, cooling (active and/or passive) and medical evaluation.
- Company Officers should be constantly evaluating the mental status and general appearance of their crews and report to rehab for evaluation when necessary.
- A work period shall be defined as consumption of one 45 minute bottle of air and will require assignment to rehab. Exception: using 30 minutes or less air from a 45 minute bottle.

RULES OF AIR MANAGEMENT

- Air Management is critical to the health and safety of our members.
- Firefighters shall continuously monitor and manage their air supply.
- Entry team members should help monitor each other’s air level.
- Firefighters shall make every effort to exit the fire building or hazardous atmosphere before their low-air warning alarm activates.
- Entry personnel must take into account the need for residual air to complete the decontamination process.
- A low-air warning alarm activation at an emergency scene is a warning that a firefighter may be in trouble.

AIR MANAGEMENT STANDARD

It is expected that all members plan for and complete their exit from the IDLH before their low-air alarm is activated. This can be accomplished by adhering to the following items:

1. All personnel using self-contained breathing apparatus will:
 - Ensure air supply will be above 4000 psi before entering an IDLH
 - Monitor their consumption of air and advise their supervisor when they are at $\frac{3}{4}$, $\frac{1}{2}$, and $\frac{1}{3}$ remaining in their SCBA air supply.
2. Company Officers or Crew Leaders will update their supervisor and/or Incident Commander when the following air levels are achieved.
 - When any member of crew reaches 50%
 - When any member of crew reaches 33% (this is a potential emergency if not near immediate exit of the IDLH)
 - When any member of crew reaches 10% (this is an emergency)
 - When requesting relief due to air supply trigger point

3. If any members low-air alarm is activated in the IDLH, the leader shall report the following information to the proper supervisor:
 - Unit Identifier
 - Location
 - Low-Air Status
 - Estimation of time to exit IDLH

WHEN TO CHECK AIR STATUS

- Prior to Entry
- When Changing locations on the fire ground such as moving to a different room or travelling upstairs or downstairs
- When changing assignments/tasks. (Reassigned from primary search to salvage)
- At the conclusion of each task/assignment