



SUBJECT: Air Management

GOAL: Safe Operations at Incidents requiring SCBA

PURPOSE: The purpose of this Standard Operating Guideline is to establish Air Management guidelines for Clark County Fire and Rescue. Air management is critical for the health and safety of all members of Clark County Fire and Rescue. Firefighters need to manage their air supply to ensure they have an adequate amount of air to exit hazardous conditions safely. All members are required to constantly maintain an awareness of their air consumptions and the amount of air remaining in their SCBA bottle.

Firefighters should exit the fire building or hazardous atmosphere before their low-air warning bell begins ringing. This gives them the reserve air they may need should anything unexpectedly goes wrong. A low-air warning bell ringing at an emergency scene should be an audible warning that a firefighter may be in trouble.

DEFINITIONS: **Air Management:** Air management is the ongoing assessment of air consumption by individual firefighters and/or teams that are breathing air from a Self-Contained Breathing Apparatus (SCBA). Firefighters in a hazardous atmosphere must continually check their pressure gauges to know how much air they have left in their bottle.

The Rule of Air Management (R.O.A.M.): The Rule of Air Management (R.O.A.M.) is defined as each individual firefighter knowing how much air they have used, and manage the remaining air left in their bottle so that they may exit any hazardous atmosphere **before** their SCBA low-air warning begins to ring.

Hazardous Atmosphere: A hazardous atmosphere is any atmosphere which is oxygen deficient or which contains a toxic and/or disease producing contaminant. These atmospheres can be immediately dangerous to life or health (IDLH), or not.

IDLH: An IDLH is any atmosphere which is oxygen deficient or which contains a toxic and/or disease producing contaminant. An IDLH is an atmosphere, which may or may not be immediately dangerous to life or health.



General Information on Air Management

It is unacceptable for firefighters to work in a fire building or hazardous atmospheres up to the time when their Self-Contained Breathing Apparatus (SCBA) low-air warning bell begins to ring (approximately 1125 PSI). Firefighters should exit the fire building or hazardous atmosphere before their low-air warning bell begins to ring. This gives them reserve air in the event something goes wrong before they exit the fire building or hazardous atmosphere.

A low-air warning bell ringing at an emergency scene should become an audible warning that a firefighter may be in trouble.

Air management is each firefighter's responsibility and is closely related to situational awareness. Firefighters must make sure that they have a full cylinder before they enter a hazardous atmosphere. Once inside a hazardous atmosphere, firefighters must monitor their pressure gauges at regular intervals and inform their officer/team leader of remaining air supply.

The officer/team leader should take the lead in air management. Officers and team leaders must make the decision when to exit the hazardous atmosphere so that the team members are out of the hazardous atmosphere before their team's low-air warning bells begin to ring. There are many factors that affect the duration of the team's air supply, such as; fire conditions, work rates, aerobic fitness of the team members, and stress levels.

Officers and team leaders must notify the Incident Commander (IC) or their ICS functionary (Command, Division, etc.) when their first team member's 50% heads-up-display (HUD) light activates. This allows the ICS functionary to be informed of the team's air situation and to pre-plan for replacing that team in the IDLH environment.

All firefighters are expected to be out of the hazardous atmosphere before their low-air warning bells begin to ring.

If members hear a low-air warning bell ringing in the hazardous atmosphere, and there is not an immediate radio report the team whose bell is ringing, that bell should be considered an emergency alarm until proven otherwise.



Air Management Guidelines

It is the expectation that all Clark County Fire and Rescue members utilizing Self-Contained Breathing Apparatus (SCBA) will:

- Check their air levels before they enter any hazardous atmosphere. Member must have a minimum of 4050 psi in their cylinder in order to make entry into any hazardous atmosphere. This check should be made during the pre-entry buddy check:
- If a crew leaves the hazardous atmosphere and is required to reenter after using a portion of their air, they shall perform a ready check, and inform Command of their air level and destination before entering the hazardous area.
- Follow the Rule of Air Management (R.O.A.M.) when operating any hazardous atmosphere;
- When the first member of any team has their 50% heads-up-display (HUD) lights activate (two flashing amber lights or 2250 PSI), the officer-team leader shall report, over the radio, to the proper ICS functionary. (Command, Division, etc.) that the team has 50% of their air remaining. This allows the ICS functionary to pre-plan for replacing that team in the hazardous atmosphere; and
- If a team member works into their reserve air and their low-air warning bell begins to ring in the hazardous atmosphere, the office/team leader shall report, over the radio, to the proper ICS functionary (Command, Division, etc.) their unit number, their location, that a team member's low-air warning bell is ringing, and an estimate of how close they are to the exit. The proper ICS functionary shall immediately replace that team in the hazardous atmosphere.
- Follow the Rule of Air Management when operating in any hazardous atmosphere.
- Inform Command via radio that you are entering on air, give command your destination and assignment. Example: ***"Engine 2-4 is entering on air, going to the second floor for a primary search"***.
- Inform Command when you are exiting the building. Example: ***"Engine 2-4 is exiting the second floor"***.
- Communicated to command when you are out of the IDLH. Example: ***"Engine 2-4 is out of the building off air, on the Alpha side"***.



Air Management Guidelines (Continued):

- **When the first member of any team has their 50% capacity (2250 PSI) Heads-Up Display (HUD) light activate (two flashing amber lights), the officer/team leader shall radio to the proper ICS functionary (Command, Division, etc.) that the team is at 50% air. This allows the ICS functionary to pre-plan for replacing that team in the hazardous atmosphere.**
- If a team member works into their reserve air and their low-air warning bell begins to ring in the hazard area, the officer/team leader shall report over the radio to the proper ICS functionary (Command, Division, etc) their unit signature, their location, that a team member's low-air warning bell is ringing, and an estimation of how close they are to the exit.