

Salt River Fire Department Operating Guidelines

Air Management

Rev. July 2010

202.05C

1 of 4



PURPOSE

The purpose of the air management policy is to improve firefighter safety by describing how we will manage the air in our SCBA cylinders while operating in the hazard zone at an incident.

The majority of the structure fires we respond to are single or multi-family residential occupancies. Our typical strategy is an aggressive offensive fire fight to achieve the tactical priorities. Generally, we are able to search these structures quickly, put out the fire, and exit the IDLH without having to give much thought to air management. There are usually multiple points of egress close by should a rapid retreat to the exterior become necessary.

A serious safety issue evolves when we apply these same residential air management tactics to larger, more complex structures such as commercial buildings. Air management becomes critically important in incidents involving commercial buildings and "big box" structures. Crews are challenged with greater distances to travel and obstacles to navigate in order to reach the fire and complete a search. Additionally, there are limited points of egress available for rapid retreat to the exterior. The increased size of the structure, complex interior building arrangements and contents of a commercial business challenge us as we attempt to exit the building. Locating the fire, conducting a search, extinguishment, and exiting the IDLH requires more time and air consumption. The danger of getting lost or entangled on the way out increases as well so it's critical to insure firefighters exit the IDLH with an emergency reserve of air.

Based on numerous training exercises conducted by local Departments on commercial and/or "big box" fires; it was discovered that once the low air alarm of an SCBA is activated, a firefighter can crawl approximately 150 feet until their air supply is exhausted. For this reason the maximum distance a crew should enter any building under IDLH conditions is 150 feet. If the fire is located further than 150 feet, command should consider assigning additional companies to attack from closer access points. When operating from a horizontal standpipe, gated Y's should be used cautiously inside buildings when they increase attack distances beyond 150'.

AIR MANAGEMENT

#1 Rule of Air Management- All members utilizing an SCBA in the hazard zone of an incident shall monitor the amount of air in their SCBA cylinder as well as their rate of air consumption in order to exit the IDLH prior to the low air alarm activation of the SCBA.

Firefighters shall exit the IDLH of an incident with an emergency reserve of air. It is critical that firefighters understand that the initial 75% of the air supply is the "working and exiting air". This includes air utilized for gaining access, working toward the tactical objectives, and exiting the hazard zone.

The remaining 25% of the air supply is the emergency reserve to be used only in the event an emergency occurs while exiting the IDLH such as becoming lost, trapped, or entangled.

Company officers shall frequently assess their crew's air level and consumption rates and decide the crew's exit time based on the individual with the lowest air level and greatest assumed consumption

Salt River Fire Department Operating Guidelines

Air Management

Rev. July 2010

202.05C

2 of 4



rate. It is the individual firefighter's responsibility to continually assess and report his/her air level and consumption to his/her company officer.

Strategic Level Air Management

The incident commander shall consider air management a critical fireground factor when evaluating the risk management profile of a building, performing size-up, and determining the strategy. Command will assist companies in air management by:

- Controlling position and function of crews in the hazard zone (accountability)
- Maintaining an awareness of how long crews have been working (elapsed time notifications)
- Insuring adequate resources are on-scene to maintain a tactical reserve (layered resources)
- Assigning companies to multiple points of egress (150' rule)
- Relieving and rotating operating crews as needed (recycle / rehab / on-deck)
- Assigning RIC and or On-Deck crews

Command should seek "air status" of companies in the IDLH through regular situation reports. Situation reports should include; position, conditions, actions, air level (lowest), needs and PAR (PCAANP report). Benchmarks for situation reports are 10 minute elapsed time on air, all clear, fire control, and lost stopped.

To enhance firefighter safety, command shall maintain a tactical reserve of companies on-scene. An extra company should be assigned to a forward "on-deck" position for each group/division to facilitate rapid relief and replacement of companies that are exiting the hazard zone. The forward or "on-deck" company will also be ready and available to rapidly deploy for firefighter rescue in the event the need arises and a RIC team is not already in place at that location.

Tactical Level Air Management

A company officer should be placed in each group/division to insure the actions of crews working within the area accomplish the tactical objectives. In larger or complex incidents a command officer should be assigned as the group/division officer. The responsibilities of the group/division officer include:

- Performing size-up and determining tactics for the group/division
- Accountability of members operating in the area (passports, tagging hose lines)
- Requesting resources and maintaining a reserve of "on-deck" companies
- Tracking operating crews time on air
- Managing rotation of crews and providing relief either through recycle or rehab
- Providing command with frequent PACAN reports.

Task Level Air Management

Every member shall check their SCBA at the beginning of the shift to insure that they have a full air cylinder the breathing apparatus functions appropriately and the PASS device works. On the fireground every firefighter is responsible for managing their own air supply and frequently communicating the status of their air supply to the company officer.

Salt River Fire Department Operating Guidelines

Air Management

Rev. July 2010

202.05C

3 of 4



The company officer will obtain frequent air reports from their crew and track the "lowest air" will. The company officer will give frequent progress reports including air status to command or the group/division officer. Prior to entry into the hazard zone and IDLH, the company officer will brief his/her crew on the plan for achieving the tactical objectives including exiting the hazard zone together. This insures the crew has a "round trip ticket" into and out of the hazard zone and IDLH safely. All members shall maintain constant contact with the hose line and manage the line so that excessive hose is not brought into the structure. This will assist in reducing travel time while following the hose line out of the building when air management is the most critical.

All members of the crew will exit prior to the low air alarm sounding on the SCBA.

Air Emergencies

An air emergency is defined as: "*anytime the breathing apparatus being used cannot deliver air to the user as designed; whether by mechanical failure, the individual has consumed the air supply beyond the designed work cycle (low- air alarm activation), or an individual becomes lost or trapped within an IDHL environment regardless of air supply*".

Low-air alarm activation while in an IDLH is an **immediate action** item for the individual and the crew involved. Personnel do not need to call a May-Day if they will be able to exit the IDLH safely prior to running out of air. Though a May-Day may not need to be called, this Air Emergency requires the following immediate actions;

- Notifying command of low-air alarm activation
- Immediately exiting the IDLH atmosphere intact as a crew
- Notifying command once you are out of the IDLH with a PAR.
- Evaluate the situation and determine if it warrants a May-Day (lowest air, distance inside structure, location of exits, interior conditions and visibility, can I make it out on low-air?)

A May-Day shall be called;

- If the personnel will be unable to exit the IDLH before running out of air
- If personnel will be unable to exit the IDLH due to being lost, trapped, or injured

In an Air Emergency that is not a May-Day situation the notification from the crew to command will trigger a set of questions from the IC to the crew. The IC should determine:

- Where are you in the building?
- Are you able to exit safely on your available air?
- Which side and or exit are you exiting the structure from?
- Notify command with a PAR when you are clear of the building

The IC will then;

- Notify the group officer the crew is assigned to

Salt River Fire Department Operating Guidelines

Air Management

Rev. July 2010

202.05C

4 of 4



- Notify the RIC team and/or on-deck crew that a crew/individual has a low-air activation and will be exiting on a specific side of the building
- This will give personnel that could affect a rescue a heads up that there could be a possible emergency and rescue personnel can position themselves accordingly.
- Notify the alarm room to insure that the Alarm Room copied the low air notification. This serves only as a heads up and requires no action by the Alarm Room.
- Begin monitoring elapsed time since receiving notification of the low air alarm. If the individual and crew involved have not exited the building within a five or ten minute time frame, then command would react accordingly to the circumstances of the event. This may include emergency traffic, or a May-Day declaration and deployment of a RIC crew, based upon experience or circumstances that the IC is presented with.

Summary of Key Points

- Always start with a full SCBA cylinder
- Have a plan (entry and exit plan)
- Attack plan should be evaluated closely when interior attack distance is beyond 150 feet
- Gated Y's should be used cautiously inside buildings when they increase attack distances beyond 150'.
- Everyone is responsible for their own air management
- Captain's monitor crews air supply
- Crew reports air supply to Captain
- Group/division officers monitor companies in their area
- Command communicates with groups/divisions and crews and insures adequate resources are on-scene
- Everyone exits and is out of the IDLH prior to low air alarm activation 75% - 25% rule.
- Low-air warning alarms while operating in an IDLH is considered an air emergency and requires immediate action. (Notification to Command and exiting the IDLH atmosphere intact as a crew).
- May-Day should be called if unable to leave IDLH atmosphere before exhausting emergency reserve of air supply.