BREATHING APPARATUS CONTROL PROCEDURES: LEARNING FROM THE U.K.

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At the 2003 Fire Department Instructors Conference, much discussion took place among presenters and participants regarding firefighter injuries and deaths. One presenter highlighted the fact that the fire service in the United Kingdom (U.K.) has very few firefighter deaths compared with the United States fire service. I am sure that one reason is the sheer size of the United States compared with that of the U.K., but are there other factors?

Having been fortunate to work internationally with former members of the U.K. fire service and also attend the Fire Service College at Moreton-in-Marsh, England, I have been exposed to and worked with the U.K.'s breathing apparatus (BA) command and control procedures. These procedures are comprehensive and strictly adhered to. Do these procedures enhance the safety of the U.K.'s fire service personnel? I believe they do. An overview of these procedures is presented here for evaluation by and discussion among members of the U.S. fire service.

THE U.K.'S BA COMMAND AND CONTROL PROCEDURES

The U.K.'s BA command and control procedures are guided by Technical Bulletin 1/1997, Breathing Apparatus Command and Control Procedures, which states the following as its objectives:

- To ensure the safety of firefighters and the effective use of breathing apparatus during training and operations.
- To meet the varying demands of incidents.
- To acknowledge the resources available to the officer in charge.

The U.K. approach to the use of BA employs considerable management and control of firefighter activity. On arrival at the scene, the fire officer assesses the risk and available resources to apply the appropriate level of control procedures. Whenever BA is used, a control procedure is in place.

The use of entry control points (ECPs) is given particular atten-
• The dangerous escalation of the incident can be prevented by immediate and limited action.

The entry personnel will place their tallies in a smaller rapid deployment ECB that records the time by triggering a stopwatch or stopping a clock attached to this rapid deployment ECB. I have seen this rapid deployment ECB integrated into a standard ECB by having two slots painted red and incorporating an automatic trigger device to activate a stopwatch. As soon as practical, standard BA control procedures replace rapid deployment procedures.

At advanced/large-scale incidents, a Stage II control procedure is implemented when one or more of the following apply:

• The scale of operations is likely to be protracted or demand greater control and supervision than that provided for in Stage I procedures.

• More than two ECPs are needed.

When there is more than one Stage II ECP or the number of BA wearers is large, an additional control is established to coordinate BA requirements. This control is known as the “BA Main Control” and is set up to monitor access and communicate with all Stage II ECPs and the IC. This position acts as a staging officer for BA wearers so that relief can be sent to each ECP.

The main control officer also establishes emergency teams (RITs), consisting of a minimum of two firefighters for each 10 BA wearers. Where possible, one of these emergency teams is equal to the number of personnel in the largest BA team committed.

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tallies that have holes (up to four) drilled in them to signify the guide line number—one hole for branch guide line one, two holes for branch guide line two, and so on. One is attached to the ring of the snap hook at the end of a branch guide line. Branch guide lines are used where the distance of the area of search is greater than the length of one personal line (four feet).

A maximum of four branch lines can be established at an Entry Control Point (ECP). The ECO attaches the branch guide line tally and records the user before the branch guide line is taken into the risk area. The branch guide lines are secured to the main guide lines when searching off the main guide line.

Personal lines are four feet long and are used by BA wearers to attach themselves to each other or a guide line. One personal line can be used to extend a search from the guide line. When a guide line is being laid, all members of the team, other than the team leader, should attach themselves to the team member in front of them or the guide line using the personal line. Branch or personal lines are not permitted to be joined together to extend their length, but main guide lines can be extended by joining another guide line to the first one.

During emergency withdrawal from an area, the guide line container is left in place, preferably secured to a substantial object, and the team retreats using the guide line for direction. If the team has to leave before an objective is met, the same procedure is used. The line is left in place for use by the next team.

The use of guide lines will undoubtedly save lives. Procedures must be established and firefighters must practice techniques for using such guide lines before entry with guide lines is allowed. I hope these procedures will give insight to departments that may not have known about the use of guide lines for these purposes. All procedures developed are intended to make our job safer; guide lines become another tool to be used for this objective.

**Figure 2. Guide Line Discs**

- Main guide line (2 tallies)
  - 50mm
  - 75mm

- Branch guide line (4 tallies)
  - 15mm
  - 50mm
  - 100mm

Based on illustration courtesy of Diktron Limited, England.

**References**


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As can be seen, the U.K. fire service's approach to BA use, accountability, and firefighter safety is stringent. It may seem complex, but, once practiced, it is simple to use. Recently, a large super tanker fleet adopted this system for use by its crews during emergencies aboard their ships. Personnel were trained on this system in less than a few hours and successfully used it in drills during a week of shore-based firefighting training.

The U.K. system has many similarities to the many variations of accountability sys-

tems used in the United States. It is important to note that this system is standard throughout the U.K. How many times do we talk about standardizing U.S. fire service policies, procedures, and equipment? How many firefighter injuries and deaths have been the result of incompatibility among departments, communications, equipment, and policies? If used correctly, the U.K. system has the ability and potential to save firefighters’ lives.

Endnotes
2. The term “guide line” defines the special line used as a main guide line for initial search and to indicate a route between an ECP and the scene of operations, or, alternatively, as a branch guide line, where it is necessary to traverse or search deeply off a main guide line.
3. For example, if a four-person engine company is the largest unit operating within the structure, one of the emergency teams should be comprised of at least four persons.

Additional References