

**Halifax Fire Department**

July 18, 2003

**STANDARD OPERATING GUIDELINE****Carbon Monoxide Hazards****5.01 PURPOSE**

To establish a procedure for locating and mitigating carbon monoxide hazards.

**5.02 POLICY**

The Fire Department shall respond to and investigate all reports of possible carbon monoxide incidents occurring in occupied spaces.

**5.03. GENERAL**

Carbon Monoxide (CO) is an odorless, colorless and tasteless gas that is deadly. It is a by-product of combustion. Many appliances such as furnaces, kitchen stoves, hot water heaters, automobiles, etc., can produce carbon monoxide. When a faulty device or unusual conditions exist, carbon monoxide may be vented into areas where people are present. Carbon Monoxide poisoning may be difficult to diagnose. Its symptoms are similar to that of the flu, which may include headache, nausea, fatigue and dizzy spells for low levels and convulsions, unconsciousness, and death for high levels.

**5.04 PROCEDURES**

- A. Emergency or non-emergency responses to reports of carbon monoxide shall be determined by the following criteria:
  1. Emergency Response: Caller indicates or suspects any signs or symptoms or carbon monoxide poisoning. In this event, the dispatcher will advise the caller and all occupants to evacuate the building and await the fire department's arrival. Dispatch the appropriate fire apparatus and the ambulance.
  2. Non-Emergency Response: Caller has a Carbon Monoxide Detector activation or suspects there may be carbon monoxide present in the building and does not have signs or symptoms of carbon monoxide poisoning.
  3. Any time the dispatcher feels the caller is in jeopardy, he/she can immediately initiate an emergency response, even if the initial dispatch was considered non-emergency.
  4. All emergency responses shall require full protective clothing and Self-Contained Breathing Apparatus (SCBA).

- A. All non-emergency responses shall require full protective clothing, but no SCBA unless the situation calls for them.
- B. Once the fire company arrives on the scene, they should first interview the occupant(s) to determine the following:
  - 1. If any occupants are or have been feeling ill, if so the ambulance personnel shall evaluate the occupant(s).
  - 2. The number and location of any CO detectors which have been activated.
  - 3. The location of combustion equipment/appliances.

**Note:** This interview should take place outside of any suspected contaminated areas.

- C. After or during the interview, zero the CO meter in fresh air and comply with all start-up procedures as recommended by the manufacturer of the metering equipment.
- D. Take the first reading just inside the doorway to determine initial CO level.
  - 1. If a reading of **35** ppm or greater is detected, the building or effected area shall be evacuated immediately and full turnout gear and SCBA shall be utilized during the investigation.
- E. Personnel shall begin monitoring the lower levels of the building then proceed to the higher levels.
  - 1. Be sure to check all areas especially, areas that include utility spaces, kitchens, and attached garages.

**Note:** The Gas Company is an important resource during CO investigations and shall be contacted anytime a gas appliance must be turned off or a leak is detected.

- 2. Appliance service personnel should be contacted by the occupant to check the proper operation of appliances.
- F. If a reading of **10** ppm or less is detected:
  - 1. Inform the occupant(s) that our instrument did not detect an elevated level of CO at this time.
  - 2. Recommend occupant(s) check their CO detector per manufacturer's recommendations.
  - 3. Advise the occupant(s) to reset the CO detector (if applicable) according to the manufacturer's instructions.
  - 4. Inform the occupant(s) that, if the detector re-activates or they feel there may be a problem, to call 911.

- G. If a reading above **10** ppm and below **35** ppm is detected:
1. Any reading above 10 ppm shall be considered an above normal reading.
  2. Occupant(s) shall be informed that an elevated level of CO has been detected.
  3. If it is determined that an appliance is malfunctioning and thereby producing CO, it shall be shut down and the proper utility shall be notified to respond.
  4. Once the premises has been ventilated and reduced to a safe level of CO, it may be occupied, at the discretion of the occupant(s).
  5. Advise the occupant(s) to reset the CO detector (if applicable) according to the manufacturer's instructions.
  6. Inform the occupant(s) that, if the detector re-activates or they feel there may be a problem, to call 911.
- H. If a reading of **35** ppm or greater is detected follow the same procedure as in Section G. Advise occupants of findings and further actions which may be necessary.
- I. If a reading of **1200** ppm (IDLH) is detected the premises and the immediate area shall be evacuated.