

Union County Standard Operating Guidelines
Fireground Operations

Fireground Operations, SOG 3.42

CARBON MONOXIDE HAZARDS

1. Intent and Purpose
 - a. To establish a guideline for locating and mitigating carbon monoxide hazards. UCFD's shall respond to and investigate all reports of possible carbon monoxide incidents occurring in occupied spaces.
2. General
 - a. Carbon Monoxide (CO) is an odorless, colorless, and tasteless gas that can be 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.
 - b. 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.
3. Procedures
 - a. Emergency or non-emergency responses to reports of carbon monoxide should be determined by the following criteria:
 - i. Emergency Response
 1. Caller indicates or suspects any signs or symptoms of CO poisoning. In this event the dispatcher will advise the caller and all occupants to evacuate the building and await Fire Department arrival. If this has not been done by dispatch, have dispatch call back and have done.
 2. All emergency responses shall require full protective clothing and SCBA.

Note: It is better that the building not be aired out prior to Fire Departments arrival. An accurate reading may not occur.
 - ii. Non-Emergency Response
 1. Caller has Carbon Monoxide Detector activation or suspects there may be carbon monoxide present in the building. Dispatcher should dispatch as a service run. The OIC may choose to respond Emergency if information received from dispatcher that the caller gave would make it an Emergency (i.e. High CO reading). If this is the case, the OIC should request the dispatcher call back and have them evacuate the building.
 2. Anytime the dispatcher feels the caller is in jeopardy, they can immediately initiate an emergency response, even if the initial dispatch was considered a non-emergency.
 3. All non-emergency responses shall require full protective clothing, and SCBA until the OIC indicates otherwise.

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- b. Once the first company arrives on the scene, they should first interview the occupant(s) to determine the following:
 - i. If any are or have been feeling ill. If so, have them checked by a Medic crew and if needed transport.
 - ii. The number and location of any CO detectors, which have been activated.
 - iii. The location of combustion equipment/appliances.
 - iv. Is anyone still in the building?
- c. After the interview, zero the CO meter in fresh air and comply with all start-up procedures as recommended by the manufacturer.
- d. Take the first reading just inside the doorway to determine initial CO levels.
 - i. If at any time a reading of 400 ppm (NIOSH maximum allowable short-term exposure) or greater is detected, the building or effected area shall be immediately evacuated. Investigate for the source wearing appropriate protective clothing and SCBA.
- e. Begin monitoring the lower levels of the building and then proceed to the higher levels.
 - i. Be sure to check all areas, especially areas that include utility spaces, kitchens, and attached garages. CO will seek low levels to accumulate.
WARNING: CO is a combustible gas. Do not operate light switches or sources of ignition until atmosphere is clear of CO.
Note: The Gas Company is an important resource during CO investigations and shall be contacted anytime a gas appliance must be turned off. The Gas Company utilizes a tagging system, which insures that problems are corrected before faulty appliances are placed back in service
 - ii. Advise the occupant that they should contact appliance service personnel to check the proper operation of appliances (if actual or suspected source of CO). If possible, turn off the gas.
- f. If any UCFD has a Carbon Monoxide Alarm emergency form then personnel of that Department shall fill out appropriately. Leave copy with owner.
- g. A mini CO Dosimeter card (if available) may be left in the structure to check for prolonged exposure. Entry date and time should be noted on the card (recommended for low or inconclusive readings).