

# SOUTH PORTLAND FIRE DEPARTMENT

## STANDARD OPERATING GUIDELINES

<b>SOG #:</b>	6.619	<b>Effective Date:</b>	2/17/2022
<b>Title:</b>	Carbon Monoxide Responses	<b># of pages:</b>	3
<b>Category:</b>	Hazardous Materials Response	<b>Classification:</b>	Red

1. **PURPOSE:** To establish a consistent response to CO alarm activations
2. **PROCEDURES:**

### Level 1 Carbon Monoxide Incident

When a call is received for a Carbon Monoxide (CO) detector sounding and there is no one in the building suffering any effects of CO Poisoning Dispatch will send a still alarm assignment. This should be a routine response (no lights and siren).

### Level 2 Carbon Monoxide Incident

If there are people complaining of CO symptoms, Dispatch will send an engine, ladder and ambulance(s) as needed. Dispatch will advise the occupant to evacuate the building and try to determine if anyone exhibits any or some of the following conditions:

- Nausea
- Headache
- Vomiting
- Redness of the skin
- Drowsiness

Before companies enter the building, they should check with the occupants for any of the above symptoms and if any of the above is determined to exist, an ambulance will be requested if not already assigned.

Command shall ask what fossil fuel burning appliances are or have been operating such as: a furnace, wood stove, coal stove kerosene heaters, gas appliances, etc. Ask what was going on before the alarm sounded such as a car running in a garage, a snow blower being warmed up, or a lawn mower or generator being run.

Before entering the building SCBA shall be donned and the CO monitor or 4 Gas Meter will be prepared for use. (NOTE: when a 4-gas meter is used -- it MUST be "Fresh Air Zeroed" PRIOR to entry). 4-gas meters should also have been "bumped" prior to entry as per SPFD policy. If not then it **MUST** be bumped upon return to the station. Readings will be taken in all rooms, including cellar and attic if possible, and recorded. SCBA does not have to be used until the CO reading, at any time, reaches 35 or greater parts per million. When taking readings, the building should be left as it was when you arrived. Do NOT initiate ventilation as you go until you are finished taking readings as this fresh air can skew the readings.

(NOTE: 35 ppm of CO is the maximum allowable concentration for continuous exposure in any 8-hour period, according to federal law.)

If the meter indicates that more than 35 ppm of CO is present, this is an indication that a short-term exposure hazard potential exists. Ventilation procedures must be initiated by the on scene companies by opening windows and/or implementation of PPV procedures. Ventilation must be continued until CO levels decrease to acceptable levels (at or below 35 ppm). The occupants should remain out of the building with an environmental evaluation to remedy the cause of the buildup.

If the meter indicates 100 ppm or more of CO is present, you must consider that this level is extremely high and the building is unsafe. The building **must be evacuated** and the Duty Chief should be asked to respond to the scene. Relocation of occupants should be considered until the problem is identified and corrected. The American Red Cross may assist in occupant relocation.

Attempt to locate the problem which can be a malfunctioning heating device, blocked chimney or venting device, portable heating equipment, heating with a stove, cooking inside with a gas grill, enclosed heating appliance, wood or coal stove with an insufficient air supply, etc.

A Carbon Monoxide response form **must** be completed, leaving one copy with the occupant, who should sign the form, and scanning a copy into the NFIRs report.

An EMS PCR should be completed on anyone who was in contact with the carbon monoxide.

### Monitor Display and Actions Required

Display	Situation and Action Required
0 – 10 PPM	Normal background CO level A. Complete Response form B. Return to service
10 – 35 PPM	Still within acceptable limits A. Investigate and attempt to locate source B. Advise tenant of findings and recommend they contract with certified professional to correct the problem causing elevated readings C. Complete CO Response form D. Return to service
35 – 100 PPM (Audible alarm will be heard)	Short Term Hazard exists A. All members inside structure/space MUST use SCBA for respiratory protection B. Strongly advise occupants to self-evacuate to fresh air environment. C. Attempt to locate the source of readings D. Initiate Ventilation procedures and continue

	<p>until meter indicates less than 35 PPM.</p> <p>E. Advise tenant of findings and recommend they contract with a certified professional to correct the problem causing the elevated readings.</p> <p>F. Complete CO response form</p> <p>G. Return to Service</p>
<p>100 + PPM (Audible Alarm will be heard)</p>	<p>Unsafe condition</p> <p>A. Initiate SCBA respiratory protection</p> <p>B. Notify Duty Chief</p> <p>C. Implement MANDATORY building evacuation procedures</p> <p>D. Initiate ventilation procedures</p> <p>E. Attempt to located and secure source</p> <p>F. Complete CO response form</p> <p>G. Return to service</p>

3. REFERENCES:

- None

By Order of:

James P. Wilson  
Fire Chief