

**LAKEWOOD FIRE DEPARTMENT  
STANDARD OPERATING GUIDELINES**

SOG NUMBER: 301.09	EMERGENCY OPERATIONS
DATE IMPLEMENTED: JULY 11, 2017 DATE REVISED:	TITLE: CARBON MONOXIDE (CO) ALARMS

**PURPOSE:**

These provisions are promulgated and designed to provide a structured approach for the safe response to and operation on the scene of incidents involving carbon monoxide (CO) alarms.

**SCOPE:**

This guideline shall apply to all Department personnel when responding to and operating on the scene of a carbon monoxide alarm activation.

**CARBON MONOXIDE:**

Carbon Monoxide (CO) is an odorless, colorless, and tasteless gas that is deadly. It is a by-product of combustion produced by furnaces, stoves, hot water heaters, motor vehicles, etc. The symptoms of CO poisoning are similar to that of the flu and may include headache, fatigue, nausea or vomiting, shortness of breath, confusion, blurred vision, loss of consciousness and death.

**DETERMINATION OF ALARM AND CONDITION OF OCCUPANTS:**

1. Determine whether alarm is coming from CO detector. If so:
  - A. Determine whether occupants are experiencing symptoms of CO poisoning.
  - B. Occupants experiencing symptoms of CO poisoning shall be immediately removed to the outside and Dispatch notified to have EMS respond.
  - C. If occupants are not experiencing any symptoms, do not evacuate until further investigation.
  - D. Determine how long detector has been in alarm mode.

**INVESTIGATION PROCEDURES:**

1. Zero the CO Gas Indicator before entering the building.
2. The first reading shall be taken at the entrance to the building and personnel shall don SCBA if an elevated reading is detected at this point.
3. Readings shall be taken throughout the building with special attention directed to sleeping areas as well as rooms adjacent to sleeping areas.
4. Subsequent readings shall be taken progressively closer to a suspected CO source.

5. The following areas shall be considered when determining the source of CO:
  - A. Furnaces
  - B. Hot water heaters
  - C. Fireplaces
  - D. Wood burning stoves
  - E. Kerosene heaters
  - F. Gas heaters
  - G. Gas stoves
  - H. Gas dryers
  - I. Automobiles (attached garage or in driveway)
6. Readings of 9 PPM or less:
  - A. Inform occupants the meter did not detect elevated levels of CO.
  - B. Advise occupants to check their CO detector in accordance with manufacturer's instructions.
  - C. At the discretion of the Incident Commander, New Jersey Natural Gas (NJNG) may be notified to respond.
7. Readings of more than 9 PPM but less than 100 PPM:
  - A. Above 9 PPM shall be considered above normal and occupants shall be advised of a potentially dangerous level of CO.
  - B. RECOMMEND that occupants evacuate the premises and begin ventilation.
  - C. If reading is 35 PPM and occupants have been exposed for 8 hrs. (maximum allowable concentration permitted by OSHA), ORDER occupants to evacuate the premises immediately and notify Dispatch to have EMS respond.
  - D. If an appliance is suspected, it shall be shut down.
  - E. At the discretion of the Incident Commander, New Jersey Natural Gas (NJNG) may be notified to respond.
8. Readings of 100 PPM or more:
  - A. Occupants shall be advised of a potentially lethal level of CO.
  - B. ORDER occupants to evacuate the premises immediately and notify Dispatch to have EMS respond.
  - C. Ventilate the premises.
  - D. Notify NJNG to respond.

#### PERSONNEL SAFETY:

1. All personnel shall don SCBA whenever a CO reading of 100 PPM or more has been detected. However, nothing stated or implied herein shall prevent personnel from donning SCBA when a CO reading is less than 100 PPM.

#### CO RESPONSE FORM:

1. A CO Response Form shall be completed in duplicate on the scene of all CO incidents. One copy shall be given to the respective owner/occupant of the residence while on the incident scene and the other shall be forwarded to the on-duty Ranking Career Officer or Senior Career Firefighter prior to leaving the incident scene. Should this not be possible (as may be the case involving the sole response of a Volunteer Company), every effort will be made to

provide the CO Response Form to the respective on-duty Career Firefighter/Officer as soon as practicable, either in-person, through the Incident Commander; or, via email or fax, immediately upon returning to quarters.

2. Upon completion of Incident Reports by Career Personnel, the CO Response Form will be forwarded to the Career Captain. The Career Captain will be responsible for filing and maintaining the CO Response Forms in date order throughout the current year. At the end of every calendar year, the CO Response Forms will then be forwarded to the Board Office.

#### INCIDENT REPORTING:

In accordance with the reporting procedures outlined by the Division of Fire Safety, the following procedures shall be used when filing a NFIRS Incident Report regarding CO.

1. Under "Incident Type" in the NFIRS, use the following numbers for the following circumstances:
  - A. ELEVATED LEVEL OF CO..... 424 (Carbon Monoxide Incident)
  - B. NO ELEVATED LEVEL OF CO ..... 746 (Carbon Monoxide Detector Activation, No CO)
2. Under "Actions Taken" in the NFIRS, use the following numbers for the following circumstances:
  - A. RESIDENTS OVERCOME BY CO ..... 22(Rescue, Remove from harm)
  - B. APPLIANCE/SYSTEM SHUT DOWN ..... 64 (System shut down)
  - C. VENTILATE ..... 51 (Ventilate)
3. The issuance to the owner/occupant of a CO Response Form as well as the investigation results as recorded on the CO Response Form, must be reflected in the narrative section of the NFIRS incident report.

**LAKEWOOD FIRE DISTRICT NO. 1**  
**316 River Avenue**  
**Lakewood, New Jersey 08701**

**Carbon Monoxide (CO) Response Form**

**ADDRESS:** \_\_\_\_\_ **DATE:** \_\_\_\_\_ **TIME:** \_\_\_\_\_

The Lakewood Fire Department responded to investigate a possible carbon monoxide problem at the above address and CARBON MONOXIDE was \_\_\_\_\_ was not \_\_\_\_\_ detected by our instruments. If we did not detect CO, this does not mean this was a false alarm. If we did detect CO, our instruments found the highest level of Carbon Monoxide to be \_\_\_\_\_ p.p.m. (parts per million) in the following location(s) \_\_\_\_\_.

Carbon Monoxide (CO) is an odorless, colorless, and tasteless gas that is deadly. It is a by-product of combustion produced by furnaces, stoves, hot water heaters, motor vehicles, etc. The symptoms of CO poisoning are similar to that of the flu and may include headache, fatigue, nausea or vomiting, shortness of breath, confusion, blurred vision, loss of consciousness and death. Since the source may be transient in nature, the source may not always be detectable. Carbon monoxide affects individuals differently depending upon the size and medical history of the occupant(s). Therefore, families with young children, or members with medical conditions, or aged individuals should take extra precautions in the event that carbon monoxide is detected.

**Readings below 9 p.p.m.**

Our instruments did not detect ELEVATED levels at this time. However, this does not mean that higher levels did not exist prior to our arrival or that higher levels will not accumulate after our departure. Check your carbon monoxide detector per manufacturer's recommendations. Replace or reset detector as directed by manufacturer's specifications. Do not hesitate to call 911 again should you have another activation of your CO detector.

**Readings more than 9 p.p.m. but less than 100 p.p.m.**

Our instruments may have detected potentially dangerous levels of carbon monoxide. If we feel these levels are unsafe, we may recommend that you leave this building until repairs are made and your detector is replaced or reset according to manufacturer's specifications. Note that 35 p.p.m. is the maximum allowable concentration for continuous exposure in any 8-hour period as per the Occupational Safety and Health Administration (OSHA). NJNG and/or EMS may also be notified to respond.

**Readings of 100 p.p.m. or more**

We have detected a potentially lethal level of carbon monoxide in your home. You are hereby ordered to leave your building IMMEDIATELY. It is not safe until repairs are made and your detector is replaced or reset according to manufacturer's specifications. NJNG and EMS will be notified to respond.

**Incident Commander** \_\_\_\_\_ **Date** \_\_\_\_\_

**Owner/Occupant** \_\_\_\_\_ **Date** \_\_\_\_\_