



**ARCADIA FIRE DEPARTMENT
STANDARD OPERATING GUIDELINE**

CARBON MONOXIDE INCIDENTS

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Approved: _____
Michael E. Lang, Fire Chief

PURPOSE

The intention of this policy is to provide a source of information for department members responding to incidents involving carbon monoxide. Carbon monoxide exists at all structure fires. The decision to remove self-contained breathing apparatus (SCBA) will be based on the presence or permissible exposure limit (PEL) of carbon monoxide.

Carbon monoxide is a colorless, odorless, tasteless gas. Limited or mild exposure to carbon monoxide may cause nausea, dizziness or headaches. Higher amounts or severe exposure may result in brain damage, heart damage or even death.

Carbon monoxide is the incomplete burning of any material containing carbon, such as gasoline, natural gas, oil, propane, coal or wood. One of the most common sources of carbon monoxide is the internal combustion engine.

The Department of Health Services and Cal/OSHA have determined **the exposure limits for a normal healthy adult is 25 parts per million (ppm) over an eight (8) hour period or 200 ppm for any period.**

PROCEDURE

Structure fires:

Before the removal of self-contained breathing apparatus (SCBA) the Incident Commander and/or Incident Safety Officer will monitor the atmosphere in which personnel will be working. Using a calibrated atmospheric monitor, readings will be taken in the affected area. Readings should be documented by the I.C. Documentation should include: Time and numeric reading of the monitor. Carbon Monoxide levels shall be below 25 ppm to allow the removal of SCBA. Continuous monitoring and positive pressure ventilation may be required to ensure a safe working environment. The final decision to remove the SCBA shall be made by the Incident Commander and/or Incident Safety Officer.

Residential/Commercial Carbon Monoxide Detector Alarms:

Response to carbon monoxide alarms shall be a CODE 2 response unless:

1. Smoke/Fire is present
2. Occupants complain of CO poisoning symptoms (headaches, dizziness).

Residents/occupants should be removed to an open area. Fire/Rescue personnel should monitor the atmosphere using a calibrated carbon monoxide monitor. It is recommended that personnel don self-contained breathing apparatus before entering an area with an activated carbon monoxide alarm. Readings should be taken continuously to determine the presence or absence of carbon monoxide.

ACTIONS:

Carbon Monoxide Present:

If carbon monoxide is detected (any reading greater than ambient or outside atmosphere) attempts should be made to locate the source. Check the heating system, including ducts, fireplace, doors/windows near the garage area, possible running vehicles in close proximity and all gas appliances. Remove and or eliminate the source of carbon monoxide. Positive or natural ventilation should be used to remove existing CO. Ventilation should continue until carbon monoxide levels are at, or below the outside ambient reading.

Carbon Monoxide Absent:

In the event no abnormal readings are detected, false activation or a faulty detector determination should be made. The resident/occupant should be assured the area is safe. Advise the occupant to replace the defective CO detector and/or batteries.

The gas company will assist with the following situations:

1. Fire personnel are unable to locate the source of a positive CO reading.
2. Occupants are hospitalized or death results from CO exposure.