



GLASTONBURY FIRE DEPARTMENT
STANDARD OPERATING GUIDELINES



SOG NUMBER: HZT-301 ISSUED DATE: 01-03-97 EFFECTIVE DATE: 01-03-97
REVISION #: 3 REVISED DATE: 01-11-16 EFFECTIVE DATE: 01-11-16
CATEGORY: HAZ-MAT
SUB-CATEGORY: EMERGENCY RESPONSE – CARBON MONOXIDE
SUBJECT: CARBON MONOXIDE – NO SYMPTOMS
RELATED GUIDELINES: HZT-201 and HZT-301

Section I – Introduction

A. Objectives

To identify Carbon Monoxide (CO) problems and their source, secure the hazard and protect the building's occupants from harm with a minimal commitment to resources.

B. Applicability

Applies to all calls for CO alarms reported with no symptoms.

C. References

Carbon Monoxide Awareness Participant Manual, CSFA, 1995

Fire Department Guide for Development of Procedures for Response to Carbon Monoxide Detector Activations, CSFA & CFDA, 1995

Section II – Personal Protective Equipment

Ordinarily no personal protective equipment is required. However, investigating crews shall immediately back out and don SCBA if it becomes necessary to enter any area of the structure with a CO concentration in excess of 35 PPM.

Section III – Response

All responding apparatus and personnel are to proceed with the flow of traffic.

CNG is automatically requested upon dispatch for all structures having natural gas service.

If additional meters are needed they should be requested in the following order of preference:

1. Duty Officer
2. Secondary Company

3. FMO
4. Mutual aid Department.

Section IV – Arrival On-Scene

Park vehicles far enough from the building to ensure that meters can be properly warmed up and zeroed out prior to investigation.

Establish command, verify that the building has been evacuated, that the scene is safe and retrieve a CO checklist (example attached).

Using the checklist, interview building occupants to identify pre-existing medical conditions, current symptoms of CO exposure and conditions in the structure prior to arrival.

If any symptoms of CO exposure are noted, immediately request EMS to respond. Pay particular attention to the condition of children, elders and sick persons as they may be affected by CO exposure more so than healthy adults

Section V – Investigation

Limit the number of personnel entering the structure to two or three people in order to perform the investigation. All members are to stay out of areas that have not been tested /verified by the meter operator.

Begin the investigation by recording the outdoor CO concentration on the checklist. Then perform a systematic room-by-room and floor-by-floor investigation of the building to identify area with the highest concentrations of CO. Make an effort to avoid disturbance of air currents and pockets when entering new areas of the structure. Note pertinent readings, particularly peaks on the checklist.

Note the CO concentration found at the detector(s) on the checklist and the manufacturer, model number and date of UL compliance.

Once the areas of highest concentrations are found, narrow the search to try and identify the exact source of CO. This may require additional metering and the activation and visual inspection of appliances/equipment. Once the suspected source(s) are identified they are to be secured to prevent further CO production. Note the suspected sources(s) on the checklist.

Section VII - Ventilation

Once the investigation is completed and all suspected sources (if any) are secured the structure is to be ventilated as follows:

Residential/General use occupancies – Ventilate the structure if any readings in excess of 9 PPM are found until no concentrations in excess of 9 PPM are detected. This category would include any structure not falling under the description for industrial occupancies and those open to the general public.

Industrial occupancies – If the CO concentration exceeds 35 PPM the structure is to be ventilated, unless this is normal operation for the facility and personal protective equipment/systems are in use. This category includes structures that are not open to the public that house manufacturing, warehousing, assembly, vehicle/equipment repairs and similar operations.

If there is any questions as to what category a structure falls into either use the residential/general use occupancy guidelines or contact the Health Department for assistance.

Once ventilation is ordered, all efforts should be made to complete it as quickly as possible using mechanical ventilation or a combination of natural and mechanical ventilation. The use of gas powered blowers is to be limited to exhaust operations as they will introduce additional CO and exhaust odors into the structure.

Section VII – Owner/Occupant Debriefing

Fill out the notice of findings (example attached) and review it with the owner/occupancy of the building as well as the actions taken. Have a second member of the department present during the debriefing if at all possible.

Use the pre-written recommendations as follows:

- #1 Use if there has been an activation of a detector meeting the October 1995 UL certification (see back of unit). Circle or underline "relocate" if location is suspected to be a problem.
- #2 Use anytime that detectors in the structure do not indicate UL compliance as of October 1995
- #3 Self-explanatory
- #4 Use to note the specific appliances/equipment suspected of creating the problem and secure by the fire department.
- #5 Use if any building occupant exhibits symptoms of CO exposure (see checklist). Note names in space provided.
- #6 Use if any building occupant having any of the pre-existing conditions on the checklist or other medical conditions, if prudent, and were exposed to concentrations in excess of 9 PPM. Note names in space provided.
- #7 Self-explanatory

Following the debriefing have the responsible building owner/occupant sign and date the form and issue him/her a copy. In the event, that he/she refuses to sign the form note that it was refused on the form and have a second member, if available sign it as a witness.

Section VIII – Reports

Fill out an incident report and attach the CO checklist and notice of finding to the report.

Section IX – Approval

Fire Chief

Michael P. King

Date of Approval:

1/16/16

GLASTONBURY FIRE DEPARTMENT
NOTICE OF FINDING FROM CARBON MONOXIDE INVESTIGATION

Carbon Monoxide (CO) is an odorless, tasteless, colorless gas that may be produced by combustion engines, appliances, burning wood/coal, and chemical processes. The symptoms of CO exposure, range from flue like symptoms (fatigue, nausea, headache, to unconsciousness and even death. Its affects on specific individuals varies by age, size and medical history. In many cases it is not possible to identify the source of the gas because they are transient.

The Glastonbury Fire Department responded to your building located at 2012 Clark Rd on 2/12/99 at 14:35. At this time the concentrations of CO detected were:

- Highest Concentration: 45 ppm in the (area/floor) heater room/basement
- Highest Concentration in a living space: 20 ppm in the (area/floor) Living Room/1st floor

These readings should be interpreted as follows:

Residential/General Use Structures - Concentrations of 9 ppm or less are deemed safe for residential occupancies by the U.S. Environmental Protection Agency and the CT Dept. of Public Health and Addiction Services. Concentrations above 9 ppm indicate that a problem needing correction is present. This problem, if left uncorrected could result in health problems, unconsciousness, and even death.

Industrial Structures - Concentrations of 35 ppm or less are deemed safe for commercial/industrial occupancies for exposures up to 8 hours per day, 5 days per week and 52 weeks a year by the U.S. Occupational Safety and Health Administration. Concentrations or duration of exposures in excess of those outlined above indicate that a problem needing correction is present or that specialized personal protective measures should be implemented in accordance with the recommendations of an industrial hygienist and CT OSHA.

Notifications

Based on our findings the fire department has notified the following agencies:

- CT. Natural Gas Co. Town Building Official Town Health Dept. Town Fire Marshal _____
- Others: _____

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Recommendations:

The fire department recommends that you immediately exit the building, leaving all doors and windows as they are, and call the Fire Department (911) in the event that your CO detectors sound a high level alarm again. The fire department also recommends that:

- Your detector(s) be reset, serviced, and/or relocated in accordance with the manufacturer's recommendations or replaced with detector(s) bearing an Underwriters Laboratories (UL) approval effective October 1995.
- Your detector(s) be replaced with detector(s) bearing an Underwriters Laboratories (UL) approval effective October 1995. Locate and install in accordance with the manufacturer's recommendations.
- Automobiles/Power equipment not be allowed to run in garages for any period of time (regardless of whether the garage door is open or closed) and that the garage be allowed to air out before closing the garage door following the running of any engine in the garage.
- The following equipment/appliances not be operated or utilized until inspected, serviced and/or repaired by a qualified technician: boiler, hot water heater
- Exposed individuals seek treatment from Emergency Medical Services. Specifically:
- Exposed individuals contact their physician concerning their exposure to CO. Specifically:
Mrs. Florence Public (Pregnant)
Bobby Public (3 yr. old)
- Other:

Issued by: Joe Firefighter of the Glastonbury Fire Department.
Received by: Jon Q Public Date: 2/12/99