

## SECTION II: FIREGROUND OPERATIONS AND FIRE RELATED DUTIES

### 2.19 RESPONSE TO CARBON MONOXIDE INCIDENTS

#### 2.19.1 Carbon Monoxide Detector Alarms

It is the purpose of the Washington Township Fire District to provide a safe and standard response procedure for carbon monoxide detector activation and or carbon monoxide poisonings.

Carbon Monoxide (CO) is a colorless and odorless gas, produced as a by-product of combustion. Common household sources of CO include, but are not limited to furnaces, stoves, hot water heaters, and automobiles. CO is lighter than air and therefore may be found at higher elevations within a structure. CO is an asphyxiant to humans. Excessive levels of CO over a prolonged period of time can cause flu-like symptoms, convulsions, unconsciousness, or death in humans.

Levels of carbon monoxide can be grouped into the following three categories:

- Less than 10 PPM - Not considered elevated
- 10 to 35 PPM - Potentially dangerous (NIOSH Threshold)
- 35 PPM or greater - Exceeds the NIOSH Threshold

#### **Safety Precautions**

The incident command system and the district's accountability system shall be utilized. All personnel operating at this type of incident shall wear full PPE including SCBA. **SCBA masks shall be donned in the hazardous atmosphere if CO levels exceed 35 PPM at anytime during the investigation.** The IC shall ensure the "2 in 2 out" rule is in place when entry is made into a hazardous or potentially hazardous environment. All fire department personnel who respond to these types of events shall receive training in the subject of CO responses.

#### **IC Procedures**

- All occupants shall vacate the structure until the fire department completes an investigation.
- Ensure the occupants are interviewed to determine if they are experiencing any symptoms of CO poisoning, and if so ensure EMS is dispatched to the scene.
- Ensure investigation team turns gas monitor on and allows it to "zero" in fresh air.
- Follow manufacturer's recommendations for operation of gas monitors.
- The structure should not be ventilated until the investigation is complete, unless a rescue is necessary.
- Ensure investigation team takes initial readings with a gas monitor just inside the doorway to determine the need for respiratory protection.

- Ensure investigation team measures and records CO levels in all rooms and at all recognized sources of combustion.

Actions to mitigate the CO incident will be based on the levels of CO found during the investigation.

### **Less than 10 PPM**

- a. Notify the occupant(s) that the level of CO detected by the fire department's meter DID NOT EXCEED NORMAL LIMITS.
- b. Provide the occupant(s) with a completed copy of our "Carbon Monoxide Investigation Notice of Findings" report.
- c. Advise occupant(s) to have CO alarm checked following the manufacturer's recommendations and/or replaced.
- d. Advise the occupant(s) to call 9-1-1 should the detector activate again.

### **10 PPM to 35 PPM**

- a. Notify the occupant(s) that the level of CO detected by our meter is POTENTIALLY DANGEROUS.
- b. Attempt to identify the source of the CO.
- c. If the source is a gas/oil appliance, request the appropriate service company to respond. At the discretion of the IC:
  - Await the service company's arrival.
  - Allow the structure to be re-occupied at the discretion of the service company.
- d. If the source is not a gas/oil appliance and it can be eliminated, at the discretion of the IC:
  - Eliminate the source of CO.
  - Ventilate the structure.
  - Take and record a second set of CO level readings.
  - If the CO levels are within the NORMAL LIMITS the structure may be re-occupied.
  - A courtesy call to a service company may be placed.
- e. Provide the occupant(s) with a completed copy of our "Carbon Monoxide Investigation Notice of Findings" report.
- f. Advise occupant(s) to reset or replace the CO detector based upon the manufacturer's recommendations.
- g. Advise the occupant(s) to call 9-1-1 should the detector activate again.

### **35 PPM or Greater**

- a. Notify the occupant( s) the level of CO detected by our meter is above the NIOSH threshold and could become POTENTIALLY LETHAL.
- b. Have EMS respond for a formal medical evaluation of the occupant(s).
- c. Have appropriate service company respond.

- d. Await the service company's arrival.
- e. Allow structure to be re-occupied at the discretion of the service company and IC; provided that the source of co has been eliminated, the structure has been ventilated, and the CO levels are confirmed to be within NORMAL LIMITS.
- f. Provide the occupant(s) with a completed copy of our "Carbon Monoxide Investigation Notice of Findings" report.
- g. Advise occupant(s) to reset or replace the CO detector based upon the manufacturer's recommendations.
- h. Advise the occupant(s) to call 9-1-1 should the detector activate again.