Bath Township Fire Department			Standard Operating Guideline	
Section Operations	**Referral No.** O-08	**Subject:** Carbon Monoxide Emergencies	**Date Issued** 5/05	**Date Revised** 9/10

Purpose:

- To provide guidelines for the response to Carbon Monoxide Emergencies.

Scope:

- This standard operating guideline shall apply to all personnel.

Responsibilities:

- Officer
  - Ensure personnel that operate the gas analyzer are properly trained.
  - Ensure that conditions are safe to occupy.
  - Ensure completion of a Property Release / Post Incident Report.
- Personnel
  - All personnel have the responsibility of wearing proper safety equipment and to operate in a safe manner.
  - All personnel have the responsibility to ensure the completion of a Property Release / Post Incident Report.

General:

- Carbon monoxide (CO) is a colorless, odorless and tasteless gas.
- CO is a byproduct of combustion; heaters, hot water heaters, and furnaces are common sources.
- CO can produce symptoms of headache, dizziness, weakness, confusion, nausea, fatigue and unconsciousness.
- A safe working limit for CO is 35 parts per million (PPM) over an 8-hour period.
  - The EPA limit is not to exceed 9 PPM over an 8-hour period for residential structures.

Guidelines:

- **SAFETY OF OUR PERSONNEL IS OUR TOP PRIORITY.**
- **A "Limited Response" shall be initiated for all Carbon Monoxide Incidents.**
- **Respond Tanker 1303**
  - The determination of an Emergent Response shall be determined by the nature of the call.
- If there is concern of occupants with CO poisoning, a Medic Unit will be dispatched.
  - If there is a suspicion of an unsecured scene, such as attempted suicide, ACSO shall be called to respond.
    - Personnel shall not enter an unsecured scene.

- Turn on the gas analyzer outdoors, prior to entering the structure.
- Take a reading at the front door prior to entering.
- If high levels are noted (>35ppm), SCBA **must** be worn before progressing further.
- If levels are low or normal (<35ppm), continue into the structure, continuously monitoring CO levels.
- Attention should be given to gas appliances, heating units, and attached garage areas.
- If levels are 9 PPM or less, it is considered to be a No Detection Noted.
- If levels are over 9 PPM, it is considered a potential danger level and the potential source of CO needs to be shut off and the structure ventilated.
- If the level is over 100 PPM, the structure needs to be evacuated.
- Once the source is shut off and ventilation completed, repeat readings need to be taken.
- If repeat readings remain high, another source exists and needs to be located.
- If repeat readings are low or normal, advise the owner of your findings and advise them to have the source fixed.
- Complete the CO notice of findings form, have the owner/occupant sign it and give them the yellow copy of the form.
  - If any occupants are transported or refuse care, the CO and Oxygen readings shall be documented on the EMS report.
  - After each use of the Gas Analyzer, the battery should be charged for a minimum of 2 hours.
  - **ADDITIONAL INFORMATION:**

- 35 ppm (0.0035%) Headache and dizziness within six to eight hours of constant exposure
- 100 ppm (0.01%) Slight headache in two to three hours
- 200 ppm (0.02%) Slight headache within two to three hours
- 400 ppm (0.04%) Frontal headache within one to two hours
- 800 ppm (0.08%) Dizziness, nausea, and convulsions within 45 minutes. 1,600 ppm (0.16%) Headache, dizziness, and nausea within 20 minutes. Death in less than two hours.
- 3,200 ppm (0.32%) Headache, dizziness and nausea in five to ten minutes. Death within 30 minutes.
- 6,400 ppm (0.64%) Headache and dizziness in one to two minutes. Death in less than 20 minutes.
- 12,800 ppm (1.28%) Unconsciousness after 2-3 breaths. Death in less than three minutes.