

GERMAN TOWNSHIP VOLUNTEER FIRE DEPARTMENT

CARBON MONOXIDE INCIDENTS

S.O.P. #735

01/10/08

I.Purpose. To establish a procedure for the German Township Fire Department's response to reports of Carbon Monoxide incidents.

II.General Information. Carbon Monoxide is an odorless, tasteless, colorless toxic gas. It is a by-product of a fuel burning process. Many appliances such as furnaces, kitchen stoves, water heater, fireplaces and automobiles can produce carbon monoxide. When a faulty device or unusual conditions exist, carbon monoxide may be vented into areas where people are present. Carbon monoxide poisoning may be difficult to diagnose. It's symptoms are similar to the flu, which may include headache, nausea, fatigue and dizzy spells. OSHA has established a maximum safe working level for carbon monoxide at 35 parts per million (ppm) over an eight (8) hour period in the workplace. The U.S. Environmental Protection Agency has established that residential levels are not to exceed 9 ppm over an 8 hour average. The gas company will not respond to all carbon monoxide investigations. They will respond only if the initial call received by them indicates that someone is ill, or if the fire department requests that they respond to the scene.

III.Procedures.

A. Placement and Maintenance of Carbon Monoxide meters.

1. A carbon monoxide meter will be placed on the first due engine at Co. 8 and at Co. 9.
2. This carbon monoxide meter shall be used to monitor the atmosphere during any suspected carbon monoxide investigation.
3. The carbon monoxide meter shall be examined, tested and maintained in accordance with the manufacturers specifications.

B. Response Procedures.

1. The first due Co. 8 Engine and 8Rescue1 shall be the designated apparatus for carbon monoxide alarm runs south of and including responses on Mill Road.
2. Where Mill Road intersects with Hwy. 66, Company 8 goes west on Hwy. 66.
3. The first due Co. 9 Engine and 8Rescue1 shall be the designated apparatus for carbon monoxide alarm runs north of Mill Road.
 - a. Designated reporting districts have been established through Central Dispatch.
 - b. Determine if the alarm sounding is a smoke detector or a carbon monoxide detector.
 - c. If the alarm is a smoke detector:
 - d. Investigate the cause of the alarm.
 - e. Take necessary action to mitigate the situation.
 - f. If the alarm is a carbon monoxide detector:

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- g. Determine if anyone is exhibiting any symptoms of possible carbon monoxide poisoning. If so, evacuate the occupants,
- h. Begin appropriate medical treatment, request necessary EMS response and request the County Health Department respond.
- i. Begin investigation.

Carbon Monoxide Investigative Procedures.

1. Zero the carbon monoxide meter in fresh air and comply with all other start up procedures as recommended by the manufacturer of the metering equipment.
2. b. Initiate a survey of the premises to determine if there are any amounts of carbon monoxide present above 9 ppm.
3. c. All German Township Volunteer Fire Department members shall make complete use of SCBA in any atmosphere that is in excess of 35 ppm of carbon monoxide or at any location where the occupants are exhibiting any symptoms of possible carbon monoxide poisoning.
4. If the alarm is a First Alert carbon monoxide detector, check the detector's sensor pak to determine if it has been exposed to carbon monoxide.

The incident commander shall request that the gas company respond to the scene if:

1. A CO level of over 9 ppm is indicated on their meters if the responding company needs to shut off gas due to a leak.
2. If someone is showing signs of being ill due to carbon monoxide.
3. If the incident commander feels that a response by the gas company is needed.

If a reading of 9 ppm of carbon monoxide or less is found:

1. Inform the occupant that our instrument did not detect an elevated level of carbon monoxide at this time.
2. Recommend occupants check their carbon monoxide detector per manufacturer recommendations.
3. Attempt to reset the detector.
4. Inform occupants that if it activates again, call 9-1-1
5. Possible causes for failure to detect elevated levels of carbon monoxide after a detector has alarmed could include changes in conditions in the structure after the alarm sounded, (These could include certain appliances having shut off such furnaces, stoves, clothes dryer, etc. or the occupants having ventilated the structure prior to arrival of the fire department or a carbon monoxide detector mounted too close to an appliance (see manufacturer recommendations).

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If a reading above 9 ppm carbon monoxide but less than 100 ppm is found:

1. Any reading above 9 ppm shall be considered above normal.
2. Occupants shall be informed that potentially dangerous levels
3. of carbon monoxide have been detected.
4. Recommend that all persons leave the premises and begin
5. ventilation.
6. Request gas company respond to check gas appliances.
7. If it is determined that an appliance is malfunctioning and thereby producing carbon monoxide, it shall be shut down. If it is suspected that an appliance is malfunctioning and producing CO, it shall be reported to the County Building Inspector.
8. Once the level of carbon monoxide has been reduced to a safe level, the premises may be occupied at the discretion of the occupant.
9. Attempt shall be made to reset the detector.
10. Inform occupants that if it activates again, call 9-1-1.
11. The occupants shall be informed of the action taken and that
12. They should contact a qualified service representative to repair the malfunctioning appliance as soon as possible.

If a reading of 100 ppm of carbon monoxide or greater is found:

1. Any reading of 100 ppm or greater-inform the occupants that a potentially lethal level of carbon monoxide has been detected.
2. Order the occupants to leave the premises immediately.
3. Request the gas company respond to check gas appliances.
4. If it is determined that an appliance is malfunctioning and thereby producing carbon monoxide, it shall be shut down and reported to the County Building Inspector.
5. Once the premises has been reduced to a safe level of carbon monoxide, the premises may be occupied at the discretion of the occupant.
6. Attempt shall be made to reset the detector.
7. Inform occupants that if the carbon monoxide detector activates again, call 9-1-
8. The occupants shall be informed of the action taken and that they should contact a qualified service representative to repair the malfunctioning appliance as soon as possible.

C. What To Advise Owner/Occupant

1. **9 ppm or less:** 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 nor that higher levels will not accumulate after our departure. Check your carbon monoxide detector for addition information (number may be on back of unit). Replace or reset detector as directed by the manufacturer's specifications.

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2. **More than 9 ppm:** Our instruments have detected **potentially dangerous levels** of carbon monoxide. We recommend that you leave this building immediately. We feel that it is unsafe to re-occupy this building until repairs are made and your detector is replaced or reset according to manufacturers specifications.
3. **100 ppm or greater:** We have detected a **potentially lethal level** of carbon monoxide in your home. Leave your building immediately. It is not safe until repairs are made or the source is found and corrected. Have your sources of carbon monoxide examined and if necessary repaired by a qualified repair technician. Replace or reset your detector according to manufacturers specifications. Carbon Monoxide affects individuals differently depending on the size, age and medical history of the occupants. 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.

Note: If the occupant requires **overnight lodging** have **Central Dispatch** contact the **Red Cross** for arrangements.

D. Phone Numbers

1. Vanderburgh County Health Department

8am-5pm office 435-5695

after hours call Central Dispatch

2. Vanderburgh County Building Commission

8am-5pm office 426-5453

Heating Inspector after hours 464-8348

3. Southern Indiana Gas and Electric Company

Emergency Assistance 8am-5pm office 464-4760