

Buechel Fire Protection District

SAFETY POLICIES

SP-0013

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Title: Carbon Monoxide Procedures

Approval Date – 8-1-1998

Section	Instruction
	<p>Carbon monoxide is a poisonous gas that is especially dangerous due to it's physical characteristics and effect on the body.</p> <p>Carbon monoxide is an odorless, colorless and tasteless gas that is very toxic. When carbon monoxide is inhaled, it produces an effect known as chemical asphyxiation.</p> <p>Carbon monoxide is produced by the incomplete burning of fuels such as natural gas, propane, heating oil, kerosene, coal, and charcoal, gasoline or wood. This problem can occur in any device that depends on burning for heat or energy. For example, furnaces, boilers, room heaters, water heaters, stoves, grills and any gasoline engine.</p> <p>OSHA Exposure limits 50 parts per million (PPM) for 8 hours 1200 PPM IDLH (Immediate Danger to Life and Health) within 30 minutes of exposure.</p> <p>The Incident Commander will ask the occupant(s) several questions before entering the structure.</p> <ol style="list-style-type: none">1. Are you experiencing dizziness, nausea or fatigue.2. Do you feel better away from your home.3. What type of fuel do you use to heat your house or what type of water heater do you use.4. Do you or anybody in your household smoke. <p><i>Remember:</i> if the house has been closed up for long periods of time and the occupants smoke the reading may be as high as 8 - 10 PPM.</p> <p>If yes is answered to 1. or 2., the first arriving unit must don SCBA. If no is answered to either 1. or 2., no SCBA is necessary. If you detect levels of 25 or higher then exit the structure and close doors behind you. Make sure all residents leave the structure along with you.</p> <p>During salvage/overhaul or investigation operations the structure will need to be monitored to determine level on CO. If the CO level are 35 PPM and over SCBA will need to be worn.</p> <p>The following is the procedures for notifying Jefferson County Health and the Louisville Gas Company.</p>

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	<p>Jefferson County Health Department must be notified if the C.O. level is greater than 25 PPM.</p> <p>Louisville Gas and Electric must be notified if levels are greater than 25 PPM they will respond to plug off gas meter or appliance(s).</p> <table border="0"><thead><tr><th><u>Parts Per</u></th><th><u>Million</u></th><th><u>Inhalation time and toxic symptoms developed</u></th></tr></thead><tbody><tr><td>0-1</td><td>25</td><td>Normal background levels</td></tr><tr><td>25</td><td>50</td><td>Maximum exposure TWA (Time Weighted Average) in the workplace</td></tr><tr><td>50</td><td>200</td><td>Maximum exposure allowed (OSHA)in the workplace</td></tr><tr><td>200</td><td>400</td><td>Mild headache, fatigue, nausea and dizziness</td></tr><tr><td>400</td><td>800</td><td>Serious headache other symptoms intensify life threatening after 3 hours</td></tr><tr><td>800</td><td>1600</td><td>Dizziness, nausea and convulsions. Unconscious within 2 hours, dead within 2 to 3 hours.</td></tr><tr><td>1600</td><td>3200</td><td>Headache, dizziness and nausea. Death within 1-2 hours.</td></tr><tr><td>3200</td><td>6400</td><td>Headache, dizziness and nausea. Death within 1 hours.</td></tr><tr><td>6400</td><td>12,800</td><td>Headache, dizziness and nausea. Death within 25 - 30 minutes.</td></tr><tr><td>12,800</td><td></td><td>Death with 1 - 3 minutes</td></tr></tbody></table> <p>PPM = Parts per million (parts of air by volume of vapor or gas or other contaminant)</p>	<u>Parts Per</u>	<u>Million</u>	<u>Inhalation time and toxic symptoms developed</u>	0-1	25	Normal background levels	25	50	Maximum exposure TWA (Time Weighted Average) in the workplace	50	200	Maximum exposure allowed (OSHA)in the workplace	200	400	Mild headache, fatigue, nausea and dizziness	400	800	Serious headache other symptoms intensify life threatening after 3 hours	800	1600	Dizziness, nausea and convulsions. Unconscious within 2 hours, dead within 2 to 3 hours.	1600	3200	Headache, dizziness and nausea. Death within 1-2 hours.	3200	6400	Headache, dizziness and nausea. Death within 1 hours.	6400	12,800	Headache, dizziness and nausea. Death within 25 - 30 minutes.	12,800		Death with 1 - 3 minutes
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