	GALENA FIRE DEPARTMENT Standard Operating Guideline **CARBON MONOXIDE INCIDENTS** Randy L. Beadle Fire Chief Signature January 1, 2021	**SOG: 038** Effective: 01Apr13 Revised: 01Jan2021 Page: 1 of 2

Purpose: To establish criteria to assist GFD personnel when responding calls relating to carbon monoxide.

When Dispatch receives a call for a Carbon Monoxide Incident the dispatcher will determine if it is a non-emergency call by asking the caller if they are experiencing medical symptoms. Based on the response, the dispatcher will dispatch GFD for non-medical situations, and will dispatch GFD and Galena Ambulance for situations in which emergency medical assistance may be necessary.

While enroute, the GFD Officer shall inquire about the following:

- Are there any patients experiencing of medical symptoms or exhibiting medical signs within the structure that may be related to the call?
    - If yes, request that dispatch notify the caller and request that all occupants and pets are immediately evacuated from the structure?
- Inform Dispatch and all responding units that, upon evacuating the building, all windows and doors should remain closed so that GFD can obtain accurate gas detector readings.

Upon arrival, the GFD Officer will ensure that the gas detector is activated while outside the structure and in a fresh air environment that is remote from vehicle exhausts or other possible sources of gaseous exposure. This is necessary as other sources of gas while calibrating the detector will give false readings once inside the structure.

Prior to entering the structure, the Officer will inquire from the occupants the location of the utility room(s), and any additional information that may be helpful to those entering the structure.

GFD personnel will don full PPE including SCBA and will have a radio available, to do a situation size-up by entering the building slowly.

The Incident Commander will be informed whenever the detector indicates gas present, as well as the specific areas where the highest readings occur.

Once complete readings are taken, windows and doors can be opened to air out the building. In addition smoke ejectors can be used to assist in gas evacuation. During this time continuous air monitoring will be provided until the air quality returns to normal.

If higher than readings of normal carbon monoxide or other gases persist, or the source of the gas is not yet determined, occupants should contact a repair resource company for an inspection. All occupants should stay out of the building until the necessary repairs are made.

Close all doors and windows when readings from the Carbon Monoxide Detector normalize.

Turn off gas measuring instruments in outside/clean air in order to purge the meter.

CO Concentration in Air	**Effect on Humans**
9ppm	Maximum allowable short-term exposure in a living area. No effects detected.
35ppm	Maximum 8-hour concentration for continuous exposure.
200ppm	Slight headache, tiredness, dizziness, nausea after 2-3 hours.
400ppm	Frontal headaches within 1-2 hours - life threatening after 3 hours. This is also maximum flue gas concentration-EPA.
800ppm	Dizziness, nausea, convulsions within 45 minutes. Unconsciousness within 1 hour and death within 2 hours.
1,600ppm	Headache, dizzy, nausea within 20 min. Death within 1 hour.
3,200ppm	Headache, dizzy, nausea within 5-10 min. Death within 30 min.
6,400ppm	Headache, dizzy, nausea within 1-2 min. Death within 10-15 min.
12,800ppm	Death within 1-3 minutes.