



Liquid Propane Gas Leaks

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Revisions			
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1.0 Purpose

- 1.1. The purpose of this SOG is to identify the proper procedures for handling LPG emergencies in the field.

2.0 Scope

- 2.1. This SOG will clarify and set the standard guideline for fire department actions at an emergency incident involving Liquefied Petroleum Gas.

3.0 LPG Data

- 3.1. Properties of propane is the expansion ratio of liquid to gas for propane is 1 to 270. The amount of flammable vapor propane will produce in a short time far exceeds that of gasoline.
 - **Flash Point -100 degrees F**
 - **Ignition Temperature 871 degrees F**
 - **Flammable Limits 2.2% to 9.5%**
 - **Specific Gravity of Liquid 0.509**
 - **Vapor Density 1.6**
 - **Flame Temperature 3497 degrees F**

4.0 Considerations

- 4.1. Calls for odor of gas, gas leaks, broken gas lines and similar situations may range from minor to potentially major incidents. All LPG Incidents should be approached as potentially dangerous situations.
- 4.2. Park fire apparatus up-wind and uphill when possible, to avoid exposure to crew and equipment. (Apparatus motor could be damaged if parked in an enriched LPG Atmosphere.)
- 4.3. Notify the Gas Company through the 911 Center as necessary.
- 4.4. Full protective equipment and SCBA are required if explosive limits or hazardous situation exist. **Always play it safe.**



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- 4.5. Evacuate any civilians in the area of the escaping gas. Gas leak situations within a building where the source of the leak is unknown or uncontrolled shall be shut off at the LPG meter or tank, when possible.
- 4.6. If there is any indication of gas accumulating within a building, evacuate all civilians from the structure and control ignition sources. Shut off electrical power from exterior main breaker. Check for explosive concentrations with a combustible gas indicator if there is any suspicion of accumulation within a structure, ventilate using explosion proof fans.
- 4.7. On underground or aboveground gas lines do not attempt to stop the leak unless a valve is readily available and can be closed without danger to fire personnel.
- 4.8. Gas company personnel shall be responsible for locating and eliminating the leak sources. The fire department will provide stand-by protection for gas company personnel with an appropriately charged hose line and two fire fighters in full protective equipment and SCBA.
- 4.9. The senior officer on scene will make sure that any damaged LPG equipment is red-tagged and that the Fire Marshal's Office is notified of the problem.