**SOG #2000.7(1/03)**

# LPG Emergency

## Purpose:

To establish guidelines for the response, operations, and safety of personnel in the handling of LPG (Liquefied Petroleum Gas) emergencies.

## Standard Response:

One Engine and One Ladder, Hydrant Area – One Engine and One Tanker, Non-hydrant Area for any inside leak/odor and One Engine for an outside leak/odor.

## Upon Arrival:

A. Attempt to determine the hazardous area (flammable vapor area).
B. Remember that LPG is heavier than air, so avoid low lying areas and do not approach from a down hill direction.
C. Give a report on conditions, and request additional equipment or special equipment if needed.
D. Determine if rescue or evacuation problems exist.
E. Formulate a plan of action based on initial size-up. The plan of action must provide for:
    1. Safety of personnel and citizens.
    2. Evacuation of endangered area if necessary.
    3. Control of situation.
    4. Stabilization of the spilled or leaking material.
    5. Disposal or removal of the spilled or leaking container.
    6. Coordinate with law enforcement personnel for evacuation and traffic control.

## Safety:

A. Avoid commitment of personnel and apparatus until a complete size-up has been made.
B. All personnel should be in full protective clothing and SCBA.
C. Keep all bystanders a minimum of 2000 feet away from the hazardous area.
D. Remove all ignition sources in the hazardous area.
E. Keep clear of tank ends if fire is impinging on the tank.
F. During LPG tank fires, if whistling from pressure relief valve becomes progressively louder, evacuate the area, explosion is imminent.
G. If the tank is burning, fire streams must be used to cool the vapor area of the tank (area above the liquid level).
H. Do not extinguish tank or cylinder fires unless shut-off can be effected.

I. Use at least two crews with fog streams to cover the personnel attempting to close the valves or effecting the shut-off.
J. LPG tanks that have rolled over (such as vehicle accidents) may have rendered the relief valve inoperable.
K. If personnel must operate in a precarious position, they must be protected with another fire stream.
L. Do not park apparatus in low areas – flammable vapors may have accumulated there.

**Confinement:**

A. If vapor is leaking use fog streams to protect exposures and direct vapor cloud.
B. If ignition has occurred, use streams to protect the container from over heating and protect exposures from radiant and convected heat.

**Control:**

A. Approach the fire or leak from upwind.
B. Use heavy fog streams to dissipate the vapors if possible without disturbing the liquid. Disperse vapor to safe location.
C. Attempt to shut off leak by shutting off valves, plugging hole in container or crimping lines. Consult driver of vehicle or plant personnel as to possibility of shutting off fuel supply.
D. Heavy streams should be used to divert flames from exposures.
E. Apply heavy streams to all areas of the tank exposed to heat.
F. The controlled burning of escaping LPG (which cannot be shut-off by closing a valve) is a commonly accepted firefighting practice.
G. Dry chemical and CO2 extinguishers are effective for extinguishing small LPG fires.