

Gas Leak/Odor Response

TECHNICAL GUIDANCE

The technical guidance provided in this document is designed for trained and qualified propane professionals responding to a reported leak or odor call.

This document is intended as technical guidance for companies to use in the creation of their own leak response procedure. Companies may consider creating a leak response procedure that provides instruction to employees on their steps to determine if entry is safe into the suspected leak area.



This document provides two options for consideration, which are outlined on the following pages: one option involves the use of a combustible gas indicator (CGI) and the other involves a situation in which a CGI is not available.

Atmospheric Testing

All gas leak calls should be treated as emergency calls until proven otherwise.

If your employees are equipped with a combustible gas indicator (CGI), this device should be capable of sampling and displaying detectable gas-in-air readings and will identify if the building structure or outside leak area is safe to enter. If this device is not available, employees responding to these calls should wait for emergency response personnel to arrive before entering a building or leak area.

CGIs are complex air-monitoring devices that can detect both the presence and level of combustible gases present in an area. CGIs must be set up and calibrated for the specific gases suspected and anyone who uses a CGI must receive specialized training on the specific instrument being utilized. These units must be properly operated, stored, maintained, and calibrated per the manufacturer's instructions.

A combustible gas detector (CGD) is not the same as a CGI. A CGD will detect propane and other combustibles, but they do not have the ability to identify the actual percentage of gas in the air to determine if the mixture is flammable or not. A CGD is generally equipped with indicator lights only and therefore should not be used in place of a CGI to investigate if a building or area is safe to enter or not. A CGD is useful in locating leaks when conducting a leak check, but only after a building or area has been determined safe to enter.

Area Entry

Personnel should obtain adequate CGI gas concentration readings to evaluate the hazard and take appropriate action during these incidents. It is critical to remember that propane vapor is heavier than air, so it may accumulate in low-lying areas or in the lower portions of structures.

If leaking gas is suspected, a qualified technician must assess the nature of the problem, determine the extent/source of the odor, the potential danger to life or property, and the actions required to bring the situation under control. Actions taken will depend on the assessment of the situation. **A propane professional should not enter a building or a leak area with an audible gas leak, gas detector alarm, or strong odor of gas until emergency response personnel arrive and/or air-monitoring equipment has been used to determine that the building or area is safe for entry.**

Some companies will rely on the fire department to respond for the purposes of air monitoring and determine if the building or area is safe or if further action is needed.

A minimum number of trained and qualified personnel should be allowed to enter the area to evaluate the situation. Any additional resources should remain in a location out of the potentially dangerous zone. As soon as the presence of gas is detected, only properly trained personnel with adequate personal protective equipment (PPE) should enter an area where there could be a potentially flammable atmosphere. All other personnel must stay out of the area until there is no longer a danger of ignition.



Inside Leak/Odor Calls



WARNING: Gas leaks and gas odors should be approached as potentially dangerous, and it is important for propane professionals to follow proper procedures to keep themselves and the public safe.

GENERAL GUIDELINES USING A CGI



CAUTION: If, at any point, the CGI alarms, immediately evacuate the building and call 911 for help. All personnel should remain outside and at a safe distance until the structure has been determined to be safe.

1. Ensure the propane container(s) gas supply source to the building is OFF/CLOSED.
2. Check CGI readings around the building perimeter as you approach the building.



WARNING: The operation or activation of any electrical device, such as light switches or doorbells, or a discharge of static electricity can spark a fire or explosion. Precautions should be taken to eliminate any potential sources of ignition when entering or walking through a building.

3. Open the door to the building and immediately check CGI readings at the floor level.
4. Ask any personnel inside the building to evacuate to a safe area outside and remain at a safe distance from the building.
5. **IF** CGI readings indicate that the atmosphere is safe, **THEN** proceed into the building and monitor the air continuously.



CAUTION: Low-lying areas within the building (lower levels, basements, etc.) can accumulate higher concentrations of propane due to propane's being heavier than air.

6. Proceed through the building and identify any detectable propane inside the building.
7. **IF** nothing is detected
OR only low readings are identified
AND you have determined the building is safe for you to continue the investigation,
THEN proceed with conducting a leak check according to your company policy.

GENERAL GUIDELINES WHEN A CGI IS NOT AVAILABLE

1. Call 911 for assistance to ensure the building is safe for entry.
2. Ensure the propane container(s) gas supply source to the building is OFF/CLOSED.
3. Always remain outside of the building and a safe distance away.
4. Ask any personnel inside the building to evacuate to a safe area outside and remain at a safe distance from the building.
5. **WHEN** emergency response personnel have determined the building is safe to enter, **THEN** proceed with conducting a leak check and investigate the leak according to your company policy.



Outside Leak/Odor Calls



WARNING: Gas leaks and gas odors should be approached as potentially dangerous and it is important for propane professionals to follow proper procedures to keep themselves and the public safe.

GENERAL GUIDELINES USING A CGI



CAUTION: If, at any point, the CGI alarms, immediately evacuate the area and call 911 for help. All personnel should remain at a safe distance until the area has been determined to be safe.

1. Eliminate any potential sources of ignition in the area.
2. Ask any personnel in the area to evacuate to a safe location and remain at a safe distance from the area.
3. Check CGI readings as you approach the suspected leak area.



CAUTION: Low-lying areas can accumulate higher concentrations of propane due to propane's being heavier than air.

4. Immediately check for any readings at ground level as you approach the suspected leak area.
5. Proceed through the entire area and identify any detectable propane in the leak area.
6. **IF** nothing is detected
OR only low readings are identified
AND you have determined the area is safe for you to continue the investigation,
THEN proceed with finding the leak and conduct a leak check according to your company policy.

GENERAL GUIDELINES WHEN A CGI IS NOT AVAILABLE

1. **IF** you can hear propane leaking
OR can smell propane,
THEN call 911 for assistance in making the area safe to investigate
AND remain clear of the leak area.
2. Ask any personnel in the area to evacuate to a safe location and remain at a safe distance from the area.
3. Eliminate any potential sources of ignition in the area without going near the leak area.
4. **WHEN** emergency response personnel have determined the area is safe to be near,
THEN proceed with finding the leak and conduct a leak check according to your company policy.

Restoration

Upon completion of leak response procedures, ensure any follow-up actions are taken based on your company policies. This may include:

- Document or record findings
- Follow local, state, and federal reporting requirements
- Record lessons learned for future guidance