

Safety Tip #9

Natural Gas Safety Tips

for Your Home

We Rise and Shine

“On a sunny Saturday morning, I was working in the yard when a loud explosion rocked the neighborhood. Knowing that this could be a catastrophic incident, I started heading in the direction of the sound. As I drove through the neighborhood, people were coming out of their homes and looking towards the sky, I could see what I thought were birds in the air some 200 feet plus up, it turned out to be debris from the explosion. As I traveled close to the incident, the debris started fall to the street below. This was a surreal experience, as if I was in a movie. Upon arriving at the scene, I observed one home on fire and debris covering the homes and yards nearby. The home on fire was not the one that had exploded.....it was the one next door that was no longer there.....only a deep hole filled with the remnants of someone’s life and home.”

The investigation found that an undetected natural gas leak triggered by an undetermined ignition source caused the devastation, taking one person’s life.

Natural gas can be dangerous if improperly handled. By following a few simple safety tips (and knowing what to do if you have a gas leak or have been exposed to one), you can keep yourself and your loved ones safe.

Signs, Symptoms and What to Do When a Gas Leak Occurs

Signs of a natural gas leak:

- The smell of rotten eggs
- Hissing sound
- Air bubbles outside your home
- Dead or dying plants
- Physical symptoms of natural gas poisoning
- Higher than normal gas usage

Signs of a Natural Gas Leak



Rotten eggs smell



Hissing sound



Air bubbles



Dying plants



Symptoms of gas poisoning



High gas usage

Comments and lessons learned are from calls-for-service that retired Chief William Selzer attended or has researched.

1. The smell of rotten eggs – Natural gas is colorless and odorless, until the odorant mercaptan is added to the gas at a distribution station. Unfortunately, if a gas leak occurs underground, the soil can leach the odorant out of the gas rendering it odorless.
2. Hissing Sound - Large leaks in pipes or appliances can create a hissing noise. Check pipes and appliances regularly for sound of a leak.
3. Air Bubbles outside your home – When a leak occurs underground, you may see bubbles forming in standing water, puddles, or mud.
4. Dead or dying plants – Dead, dying, or stunted plants inside or outside your home can be a potential sign of a natural gas leak in your home, especially if you are taking proper care of your plants. Yellow patches of grass can also be caused by a gas leak.
5. Physical symptoms of natural gas poisoning – Symptoms of exposure to low levels of natural gas include headaches, dizziness, fatigue, nausea, and irregular breathing. High levels of natural gas exposure can cause natural gas poisoning, which is characterized by fatigue, severe headaches, memory problems, loss of concentration, nausea, loss of consciousness, and suffocation. If you believe you have one or more of these natural gas symptoms, call 911.

Depending on the concentration of natural gas in the atmosphere an explosion can occur when an ignition source comes in contact with the natural gas mixture. For example, a leak in the basement starts, the gas levels are low, and the concentration is too lean to ignite. As the concentration builds, it enters the explosive range that is extremely dangerous.

An ignition source can be a:

- (Open Flames) Pilot light for a furnace, hot water heater, stove, and fireplace.
- Impact sparks, friction, hot surfaces, lightning strike.
- Electrical arcs from a light switch, doorbell, static electricity from walking across a rug in winter in low humidity conditions.

If the gas concentration continues to build, the levels will become too rich to ignite. As the concentration diminishes, the explosive range is re-entered. Continued lowering of the concentration takes the mixture back into the too lean, non-explosive range.

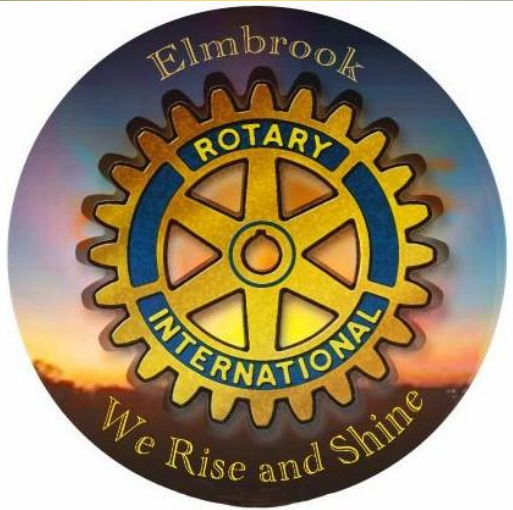
What To Do if you have a Natural Gas Leak in Your Home and What NOT to Do

1. Evacuate the premises and stay up wind, at a distance in case there is an explosion. Do not re-enter the home and, do not search for the leak source.
2. Do not use electronics inside the house.
3. Leave the doors and windows open, not closed.
4. Call 911 – advise the Dispatcher and arriving units any information you may have on suspected location, how long it has been leaking and are any of the occupants having symptoms.

The Fire Department and gas company will respond and use gas meters to determine the explosive levels of the atmosphere and location of the leak.

Natural gas is lighter than air and rises, while LP, Propane and gasoline are heavier than air and will settle in lower levels of a home and ditches, drains, etc. outside.

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If you ever wondered what those little colored flags you have seen in a neighbor's yards identify.



Here, they are per LFG Pipeline – Partners with MMSD

White – Proposed excavation

Pink – Temporary survey markings

Red – Electric power lines, cables, conduit, and lighting cable

Yellow – Gas, oil, steam, petroleum, or gaseous materials

Orange – Communications, alarms or signal lines, cables, or conduit

Blue – Potable water lines

Purple – Reclaimed water, irrigation, and slurry lines

Green – sewer lines