

Fired Up for Payson

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Propane Awareness and Safety

Recently the Payson Fire Department responded to a home explosion due to the collection of propane gas. This and other similar calls for service experienced by the department in the past several months have prompted my writing this article. **While you may or may not use or have propane delivered to your home, you may still be susceptible to a gas explosion.**

WHAT IS PROPANE?

Propane is the type of fuel that many of us here in Payson use to heat our homes, water, cook our food, or other type of uses.

Propane is a hydrocarbon (C₃H₈) and is sometimes referred to as LP-gas or LPG, produced from both natural gas processing and crude oil refining, in roughly equal amounts. While propane is colorless and odorless, a foul-smelling odorant, ethyl mercaptan is added to make gas leaks easier to detect.

Propane vapors are heavier than air. For this reason, propane may accumulate in low-lying areas such as basements, crawl spaces, along floors and ditches. However, air currents can sometimes carry propane vapors elsewhere within a building. The smell may be in a location (basement or attic) where it is not detected during normal daily activities.

Propane is flammable when mixed with air (oxygen) and can be ignited by many sources, including open flames, smoking materials, electrical sparks, and static electricity.

The problem we have experienced in the past home explosions is with leaks in the supply piping outside the home. This is especially true after heavy rains. While propane is heavier than air, it is lighter than water. This makes propane in the ground come to the surface as the water soaks down. This propane finds its way into, around or under your home and builds in volume until it finds an ignition source.

REASONS YOU MAY NOT SMELL PROPANE

It is very possible for the foul smelling odorant mercaptan to be scrubbed from the gas by the soil as the gas perked from the ground, making it almost impossible for the occupants to smell.

Other reasons you may not smell propane:

Some people (especially the elderly) are unable to detect the smell of gas.

Colds, allergies, sinus congestion, and the use of tobacco, alcohol, or drugs, may diminish your sense of smell.

Cooking or other strong odors can cover-up the smell of gas.

Always be sensitive to the slightest propane gas odor. Any sort of a propane gas odor may signal a serious leak. Investigate all foul odors. What you think may be garbage or sewer may be a serious propane gas leak. Propane gas detectors are designed to sound an alarm if they sense the presence of propane. **Remember while you may or may not use or have propane delivered to you home, you may still be susceptible to a gas explosion.**

Will my smoke or carbon monoxide detectors sense propane leaks?

NO

Carbon monoxide (CO) is a colorless, odorless, tasteless, and toxic gas. Smoking a cigarette; idling a gasoline engine; and burning fuel oil, wood, kerosene, natural gas, and propane all produce CO. CO is the product of incomplete combustion.

Do they make a combination gas and carbon monoxide detector?

YES

I did a Google search for "Propane Gas Leak Detectors" and found a lot of different types and prices. One of the combination detectors was designed to detect natural gas, propane gas, methane gas and carbon monoxide in your household, priced around fifty dollars. Consider installing one or more propane gas detectors if you or others in your home have difficulty smelling propane, or if appliances are in little-used areas in your home where the smell of propane might not be detected. Detectors can provide an additional measure of security, **as long as you can hear them.**

WHAT SHOULD I DO IF I SMELL GAS?

NO FLAMES OR SPARKS! Immediately put out all smoking materials and other open flames if possible. Do not operate lights, appliances, telephones, or cell phones. Flames, sparks or static electricity from these sources can trigger an explosion or a fire.

LEAVE THE AREA IMMEDIATELY! Get everyone out of the building or area where you suspect gas is leaking.

REPORT THE LEAK. From a neighbor's home or other nearby building away from the gas leak, call your propane retailer right away. If you can't reach your propane retailer, call 911 or your local fire department.

DO NOT RETURN TO THE BUILDING OR AREA until your propane retailer, emergency responder, or qualified service technician determines that it is safe to do so.

GET YOUR SYSTEM CHECKED. Before you attempt to use any of your propane appliances, your propane retailer or a qualified service technician must check your entire system to ensure that it is leak-free.

ILL HEALTH SIDE EFFECTS OF PROPANE INHALATION

High concentrations in the immediate area can displace oxygen and can cause central nervous system depression from lack of oxygen. Symptoms may include headache, excitation, euphoria, dizziness, incoordination, drowsiness, light-headedness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death, depending on the concentration and duration of exposure. May cause cardiac sensitization, including arrhythmias (irregular heart beats) and death due to cardiac arrest. Sounds like one of those new drug commercials on TV.

If you need additional information please contact us here at the Payson Fire Department, 474-5242 Ext 300.

Until next time be **'Fired Up'** about Propane Safety in your home.