

NATURAL GAS LIQUIDS: WHAT YOU NEED TO KNOW

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OVERVIEW

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WHAT ARE NATURAL GAS LIQUIDS?

The natural gas used to generate electricity or to heat our homes is mostly methane, the simplest form of hydrocarbon. But natural gas at the well site may include other hydrocarbons, such as ethane, propane, butane, isobutane and pentanes. Collectively, these hydrocarbons are called natural gas liquids, or NGLs.



NGLs have their own unique properties that make them suited to a specific use – for example, butane is used in lighters, while propane is used in backyard grills and home heating systems. Petrochemical plants are the largest consumers of these liquids, which are used in the manufacturing of plastics.

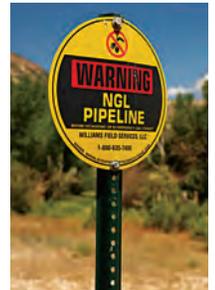


Processing facilities remove NGLs so they can be recovered and used separately.

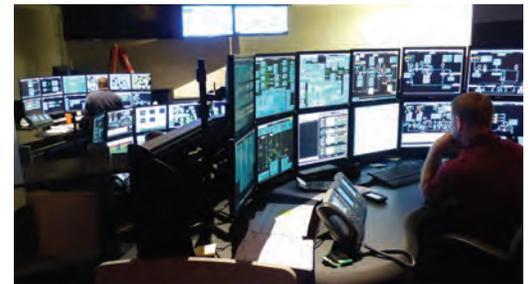
NGLs are naturally-occurring compounds found in natural gas. NGLs are valuable as separate products, therefore, it is profitable to remove them from the natural gas.

HOW ARE NGLs TRANSPORTED?

NGLs are transported by pipeline under pressure in a liquid state. NGLs have a vapor pressure in the range of 300 pounds per square inch (psig) to 600 psig. At pressure lower than this, which is called the vapor pressure, the NGLs can only exist in the gaseous state. However, the total pressure on the NGL pipeline may be as high as 1440 psig.



Our NGL pipelines are monitored 24 hours a day, seven days a week at a state-of-the-art pipeline control center in Tulsa, Okla.



RECOGNIZING A LEAK

The release of NGLs causes a rapid expansion of the NGL liquid into a vapor state, which creates a cooling effect near the point of release. The only indication for small leaks may be the appearance of frozen ground over the pipeline location, or frost around aboveground piping. Large leaks may be detected by the appearance of a high velocity vapor jet near the exit point. The visibility of the vapor jet is caused by water vapor in the air being frozen by the cooling effect. This vapor cloud will have the appearance of a very thick fog. Away from the release point, the vapor will be colorless.

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One Williams Center
Tulsa, Okla. 74172

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ACTIONS TO TAKE IN THE EVENT OF A LEAK

- > In the event of a leak from an NGL pipeline, all forms of ignition must be turned off immediately.
- > Do not smoke, do not turn on gas grills, do not start any kind of electrical motor or gasoline engine. Do not start cars or trucks. Do not turn on lights.
- > If an NGL leak is suspected by a driver, turn off automobiles and do not drive into low points where a vapor cloud (colorless and odorless) may exist. Driving into a vapor cloud may cause an explosion.
- > If an NGL leak is suspected, leave the area immediately on foot – up wind, uphill and upgrade – and try to gain higher ground.
- > Do not start cars or trucks or operate electrical machinery or apparatus.
- > Call 911. Call the pipeline company and advise them of suspected leak location.
- > Our emergency phone number is 800-635-7400.



Know what's below.
Call before you dig.

PROPERTIES OF NGLs

NGLs are odorless and colorless vapor under atmospheric conditions. They are flammable, dangerous if inhaled and can cause frostbite.

HAZARDS OF A RELEASE

When NGL is released into the atmosphere (from a leak) it becomes a vapor and may appear as a white cloud near the exit point from the pipeline, but otherwise, it is an odorless,

colorless gas. NGL vapor is heavier than air and will tend to stay low to the ground following terrain features such as valleys, canyons, creeks, rivers or other low points.

Igniting a vapor cloud of NGL could result in an explosion causing injury, destruction of property and even death.

The Path of Natural Gas Liquids

