City of Chireno Municipal Gas System

P.O. Box 87
Chireno Texas 75937
Office: (936) 362-2312
Fax: (936) 362-2188
Emergency: (936) 362-2370

COMPANY PROFILE

The Chireno Municipal Gas System maintains approximately 250 miles of main line in Nacogdoches, Shelby, and San Augustine Counties with approximately 1550 customers. For gas line locates please call 811 to be connected with the closest call center. Gas facilities cannot be marked without a locate ticket number generated from a call center. Distributing natural gas to our customers safely and reliably is our number one goal. Please do not hesitate to contact us if you have any questions or concerns regarding the Chireno Municipal Gas System or would like additional information regarding the City of Chireno Municipal Gas System's emergency response plans and procedures.

DESCRIPTION/TECHNICAL CHARACTERISTICS OF NATURAL GAS

Natural gas is colorless, odorless, tasteless, shapeless and lighter than air. It is gaseous at any temperature over -161º C. When it is at its natural state, it is not possible to see or smell natural gas. For safety reasons, a chemical odorant that smells a little like rotten eggs, Mercaptan, is added to natural gas so that it can be smelled if there is a gas leak.

Natural gas is a mixture of light hydrocarbons including methane, ethane, propane, butanes and pentanes. Other compounds found in natural gas include CO2, helium, hydrogen sulphide and nitrogen. The composition of natural gas is never constant, however, the primary component of natural gas is methane (typically, at least 90%), which has a simple hydrocarbon structure composed of one carbon atom and four hydrogen atoms (CH4). Methane is highly flammable, burns easily and almost completely, while it emits very little air pollution. Natural gas is neither corrosive nor toxic, its ignition temperature is high, and it has a narrow flammability range, making it an inherently safe fossil fuel compared to other fuel sources. In addition, because of its specific gravity of 0.60, lower than that of air (1.00), natural gas rises if escaping, thus dissipating from the site of any leak.

The carbon and hydrogen in natural gas are thought to have originated from the remains of plants and animals that were accumulated at the bottom of lakes and oceans over millions of years. After having been buried under huge layers of other sediments, the organic material is transformed into crude oil and natural gas as a result of the high pressure from the layers of sediments and the heat from the earth's core. The oil and gas are then squeezed out of the marine shale's in which they were deposited, and from there go into porous sedimentary rocks. Oil and gas migrates upward through the porous rock, as it is less dense than the water, which fills the pores. Several different types of oil and gas "traps" exist.

Natural gas is found throughout the world in reservoirs deep beneath the surface of the earth and floor of the oceans. It forms as pockets of gas over crude oil deposits or is trapped in porous rock formations.

Natural gas can be found in oil deposits, as associated natural gas, although non-associated natural gas is often found without the presence of oil. When natural gas is cooled to a temperature of approximately -260°F at atmospheric pressure, it condenses to a liquid called liquefied natural gas (LNG). One volume of this liquid takes up about 1/600th the volume of natural gas. LNG weighs less than one-half that of water, actually about 45% as much. LNG is odorless, colorless, non-corrosive, and non-toxic. When vaporized it burns only in concentrations of 5% to 15% when mixed with air. Neither LNG, nor its vapor, can explode in an unconfined environment. Since LNG takes less volume and weight, natural gas is liquefied for ease of storing and transporting.

Natural gas is considered as a clean fuel because of its environmentally friendly properties: commercialized natural gas is practically sulphur free and thus it produces virtually no sulphur dioxide (SO2), natural gas emits lower levels of nitrogen oxides (NOx) emissions than oil or coal and emissions of carbon dioxide (CO2) are less than those of other fossil fuels (According to Eurogas 40-50% less than coal and 25-30% less than oil).

EMERGENCY CONTACT:
1-936-362-2370

PRODUCTS/ DOT GUIDEBOOK ID#/ GUIDE#:		
Natural Gas	1971	115

TEXAS
COUNTIES OF OPERATION:

Nacogdoches San Augustine
Shelby

Changes may occur. Contact the operator to discuss their pipeline systems and areas of operation.

PHYSICAL PROPERTIES OF NATURAL GAS

- Natural gas is nontoxic.
- It is lighter than air.
- It is colorless.
- It is odorless. Mercaptan is added to the gas to give an odor but the odorant does not affect the gas in any other manner.
- It reduces our dependence on foreign oil imports.
- It contributes to a cleaner environment.
- Does not support life and can be suffocating when displaces oxygen.

CHEMICAL PROPERTIES OF NATURAL GAS

- It is made of hydrocarbons. The main component is methane which is a very unreactive component.
- It has narrow combustion limits. It will ignite only when there is an air and gas mixture of between 4 and 15 percent natural gas.
- Ignition point : 1099.4 degrees Fahrenheit
- Relative density : 0.3 m/s +

- It has a flammability range of 4.5% to 14.5%
- It undergoes uninhibited chain reaction.
- When gas is burned completely carbon dioxide and water vapor are

MOST COMMON SIGNS OF NATURAL GAS ESCAPING FROM A PIPELINE

- “Rotten Egg” smell
- Abnormally dead vegetation
- Hissing or roaring sounds

Never Extinguish a natural gas fire until gas supply is shut off! Reignition of escaping gas can cause explosion and extensive injuries/death to emergency responders/general public.

CONTACTS

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