

# Important Safety Message

*for Emergency Response Personnel\**

## PIPELINE SAFETY



*\*Please share this with others in your organization.*

## Responding to a pipeline emergency

The following guidelines are designed to ensure the safety of those in the area if a petroleum product or natural gas pipeline leak is suspected or detected:

- **Secure the area around the leak to a safe distance.**

Because vapors from the products carried in pipelines can migrate great distances, it is important to remove all ignition sources from the area. Keep in mind, Highly Volatile Liquid (HVL) vapors are heavier than air and can collect in low areas such as ditches, sewers, etc. If safe, evacuating people from homes, businesses, schools and other places of congregation, as well as controlling access to the site may be required in some incident scenarios. Sheltering in place may be the safest action if the circumstances make going outdoors dangerous.

- If the pipeline leak is not burning **DO NOT** cause any open flame or other potential source of ignition such as an electrical switch, vehicle ignition, light a match, etc. **DO NOT** start motor vehicles or electrical equipment. **DO NOT** ring doorbells. Knock with your hand to avoid potential sparks from knockers. **DO NOT** drive into a leak or vapor cloud at any time.
- If the pipeline leak is burning attempt to control the spread of the fire, but **DO NOT** attempt to extinguish a petroleum product or natural gas fire. When extinguished, petroleum products, gas and vapor could collect and explode if reignited by secondary fire.
- **DO NOT** attempt to operate any pipeline valves yourself. You may inadvertently route more product to the leak or cause a secondary incident.
- **Establish a command center.** Work with pipeline representatives as you develop a plan to address the emergency. The pipeline operator will need to know:
  - Your contact information and the location of the emergency
  - Size, characteristics and behavior of the incident, and if there are any primary or secondary fires
  - Any injuries or deaths
  - The proximity of the incident to any structures, buildings, etc.
  - Any environmental concerns such as bodies of water, grasslands, endangered wildlife and fish, etc.
- **Evacuate or shelter in place.** Depending on the level of chemical, natural gas, or product, and whether or not the product was released, or other variables, it may be necessary to evacuate the public or have the public shelter in place. Evacuation route and the location of the incident will determine which procedure is required, but both may be necessary. Evacuate people upwind of the incident if necessary. Involving the pipeline company may be important in making this decision.



## 911 Dispatch

911 Dispatch personnel play a critical role in effective response to pipeline incidents. Knowing the companies, their contact information, and the products transported in your respective jurisdiction is important for prompt and correct responses in the case of a pipeline incident. Dispatchers actions can save lives, direct the appropriate emergency responders to the scene, and protect our nations' infrastructure from additional issues that can be caused by improper response. Follow these simple guidelines in the case of a pipeline incident:

- Gather the proper information (*if possible*): company, product, and release characteristics
- Know the appropriate response to each product
- Know the wind direction at the time
- Warn of ignition sources if possible
- Dispatch appropriate emergency responders
- Contact the pipeline company



## How would you know where a pipeline is?

Pipeline markers are important for the safety of the general public and provide emergency responders with critical information. Most pipelines are underground, where they are more protected from the elements and minimize interference with surface uses. Even so, pipeline rights-of-way are clearly identified by pipeline markers along pipeline routes that identify the approximate—NOT EXACT—location of the pipeline. Every pipeline marker contains information identifying the company that operates the pipeline, the product transported, and a phone number that should be called in the event of an emergency. **Markers do not indicate pipeline burial depth, which will vary.** Markers are typically seen where a pipeline intersects a street, highway or railway. For any person to willfully deface, damage, remove, or destroy any pipeline marker is a federal crime.



**Pipeline Marker** — This marker is the most commonly seen. It contains operator information, type of product, and an emergency contact number. Size, shape and color may vary.

**Aerial Marker** — These skyward facing markers are used by patrol planes that monitor pipeline routes.

**Casing Vent Marker** — This marker indicates that a pipeline (protected by a steel outer casing) passes beneath a nearby roadway, rail line or other crossing.



## What does the pipeline company do if a leak occurs?

In order to prepare for the event of a leak, pipeline companies regularly communicate, plan and train with local emergency personnel such as fire and police departments. Upon the notification of an incident or leak, either by the pipeline company's internal control center or by phone, the pipeline operator will immediately dispatch trained personnel to assist public safety officials in their response to the emergency. Pipeline operators will also take steps to minimize the amount of product that leaks out and to isolate the pipeline.

### The pipeline company's control center may:

- Stop or reduce the flow of product
- Dispatch pipeline emergency response personnel and equipment to the emergency site
- Inform you of any special precautionary recommendations
- Act as a liaison between emergency response agencies and pipeline company personnel
- Help bring the emergency to conclusion as quickly and safely as possible

## How would you recognize a pipeline leak?

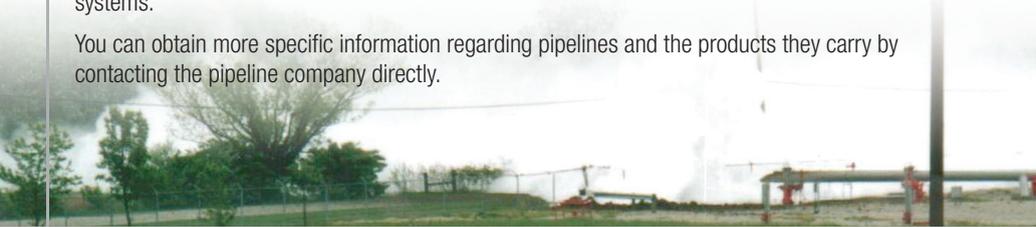
- **Sight:** Liquid pools, discolored or abnormally dry soil/vegetation, continuous bubbling in wet or flooded areas, an oily sheen on water surfaces, and vaporous fogs or blowing dirt around a pipeline area can all be indicative of a pipeline leak. Dead or discolored plants in an otherwise healthy area of vegetation or frozen ground in warm weather are other possible signs. Natural gas is colorless, but vapor and "ground frosting" may be visible at high pressures. A gas leak may also be indicated by bubbles in wet or flooded areas, distinct patches of dead vegetation, dust blowing from a hole in the ground or flames if the leak is ignited.
- **Sound:** Volume can range from a quiet hissing to a loud roar depending on the size of the leak and pipeline system.
- **Smell:** An unusual smell, petroleum odor, or gaseous odor will sometimes accompany pipeline leaks. Natural Gas and Highly Volatile Liquids are colorless, tasteless and odorless unless commercial odorants or Mercaptan is added. Gas transmission/gas gathering pipelines are odorless, but may contain a hydrocarbon smell.

## What do pipelines transport, and what are the potential hazards?

Many pipelines transport petroleum products and natural gas. Some pipelines transport other hazardous products such as chemicals, highly volatile liquids, anhydrous ammonia, or carbon dioxide. Exposure to these products can be harmful if inhaled, and can cause eye and skin irritation, and difficulty in breathing.

Fortunately, pipeline accidents are extremely rare, but they can occur. Natural gas and petroleum products are flammable and potentially hazardous and explosive under certain conditions. Pipeline companies undertake many prevention and safety measures to ensure the integrity of their pipeline systems.

You can obtain more specific information regarding pipelines and the products they carry by contacting the pipeline company directly.



## Pipeline purpose and reliability

Pipelines are the safest and most efficient means of transporting natural gas and petroleum products, according to National Transportation Safety Board statistics. These pipelines transport the natural gas, which provides about 24 percent of all the energy used in the United States, and over 700 million gallons of petroleum products per day.

In the United States alone, there are over 200,000 miles of petroleum pipelines and 300,000 miles of natural gas transmission pipelines in use every day. Transmission pipelines are typically larger than gathering and distribution lines. They transport energy products across the country and to storage facilities. Compressor stations and pumping stations are located along transmission and gathering pipeline routes and help push energy products through the line.

Local Distribution Companies deliver natural gas to most homes and businesses through underground main and utility service lines. These lines cover over 800,000 miles of underground pipeline in the United States.

Onshore gathering lines are pipelines that transport gas from a current production operation facility to a transmission line or main. Production operations are piping and equipment used in production and preparation for transportation or delivery of hydrocarbon gas and/or liquids.

## Maintaining safety and integrity of pipelines

Pipeline operators invest significant time and capital maintaining the quality and integrity of their pipeline systems. Most active pipelines are monitored 24 hours a day via manned control centers. Pipeline companies also utilize aerial surveillance and/or on-ground observers to identify potential dangers. Control center personnel continually monitor the pipeline system and assess changes in pressure and flow. They notify field personnel if there is a possibility of a leak. Automatic shut-off valves are sometimes utilized to isolate a leak.

Gas transmission and hazardous liquid pipeline operators have developed supplemental hazard and assessment programs known as Integrity Management Programs (IMPs). IMPs have been implemented for areas designated as "high consequence areas" in accordance with federal regulations. Specific information about an operators' program may be found on their company Web site, or by contacting them directly.

## How can you help?

While accidents pertaining to pipeline facilities are rare, awareness of the location of the pipeline, the potential hazards, and what to do if a leak occurs can help minimize the number of accidents. A leading cause of pipeline incidents is third-party excavation damage. Pipeline operators are responsible for the safety and security of their respective pipelines. To help maintain the integrity of pipelines and their rights-of-way, it is essential that pipeline and facility neighbors protect against unauthorized excavations or other destructive activities. Here's what you can do to help:

- **Become familiar with the pipelines and pipeline facilities in the area (marker signs, fence signs at gated entrances, etc).**
- **Record the operator name, contact information and any pipeline information from nearby marker/facility signs and keep in a permanent location near the telephone.**
- **Be aware of any unusual or suspicious activities or unauthorized excavations taking place within or near the pipeline right-of-way or pipeline facility; report any such activities to the pipeline operator and the local law enforcement.**

All damages to underground gas or hazardous liquid pipeline facilities in the State of Texas are required by law to be reported to the Railroad Commission of Texas online at [www.rrc.state.tx.us](http://www.rrc.state.tx.us). Excavators must notify the pipeline company through the One-Call Center immediately but not later than two hours following the damage incident.

## Emergency Response Plans for Gas and Hazardous Liquid Pipeline Operators

Federal regulations for both gas and hazardous liquid pipelines require operators to have written procedures for responding to emergencies involving their pipeline facility. Because pipelines are often located in public space, the regulations further require that operators include procedures for planning with emergency and other public officials to ensure a coordinated response. Please contact your local pipeline operators for information regarding their company specific emergency response plan.

Each operator shall establish written procedures to minimize the hazard resulting from a gas pipeline emergency. At a minimum, the procedures must provide for the following:

- *Receiving, identifying, and classifying notices of events which require immediate response by the operator.*
- *Establishing and maintaining adequate means of communication with appropriate fire, police, and other public officials.*
- *Prompt and effective response to a notice of each type of emergency, including the following:*
  - o *Gas detected inside or near a building.*
  - o *Fire located near or directly involving a pipeline facility.*
  - o *Explosion occurring near or directly involving a pipeline facility.*
  - o *Natural disaster.*
- *The availability of personnel, equipment, tools, and materials, as needed at the scene of an emergency.*
- *Actions directed toward protecting people first and then property.*
- *Emergency shutdown and pressure reduction in any section of the operator's pipeline system necessary to minimize hazards to life or property.*
- *Making safe any actual or potential hazard to life or property.*
- *Notifying appropriate fire, police, and other public officials of gas pipeline emergencies and coordinating with them both planned responses and actual responses during an emergency.*
- *Safely restoring any service outage.*
- *Determining which facilities are located in high consequence areas*
- *Each operator shall establish and maintain liaison with appropriate fire, police, and other public officials to:*
  - o *Learn the responsibility and resources of each government organization that may respond to a gas pipeline emergency;*
  - o *Acquaint the officials with the operator's ability in responding to a gas pipeline emergency;*
  - o *Identify the types of gas pipeline emergencies of which the operator notifies the officials; and*
  - o *Plan how the operator and officials can engage in mutual assistance to minimize hazards to life or property.*

Reference 49 CFR 192.605, 192.615 and 195.402



## Transmission Pipeline Mapping

The National Pipeline Mapping System (NPMS) is a geographic information system created by the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS) in cooperation with other federal and state governmental agencies and the pipeline industry to provide information about pipeline operators and their pipelines. The NPMS Web site is searchable by ZIP code or by county and state, and can display a county map that is printable.

Within the NPMS, PHMSA has developed the Pipeline Integrity Management Mapping Application (PIMMA) for use by pipeline operators and Federal, state, and local government officials only. The application contains sensitive pipeline infrastructure information that can be viewed via internet browser. Access to PIMMA is limited to Federal, State, and Local Government officials as well as pipeline operators. PIMMA access cannot be given to any person who is not a direct employee of a government agency.

For a list of pipeline operators with pipelines in your area and their contact information or to apply for PIMMA access, go to [www.npms.phmsa.dot.gov/](http://www.npms.phmsa.dot.gov/). Operators of production facilities, gas/liquid gathering piping and distribution piping, are not represented by NPMS nor are they required to be.

## Capabilities

It is important for pipeline companies to understand what resources and capabilities emergency response agencies have in the event of a pipeline emergency. By providing your capabilities, pipeline companies can better plan and respond in the event of an emergency. Any information you provide will only be used for pipeline companies communication and planning information. It is not sold, nor is it used for marketing purposes. Please go to <http://bitly.com/capabilities2012> and tell us what your capabilities are.

## Training

Pipeline companies regularly host local emergency responder liaison events. A list of events can be found at <http://www.pipelinesafetyinfo.com/Schedule.aspx>.

However, if you are not able to attend an event, additional resources and training are available on-line at <http://bitly.com/ROW2012>. This can also serve as a resource for all personnel within your department. Once you complete the registration you will be distributed an email with a username and password.



**For more information regarding pipeline safety and an overview of the pipeline industry please visit the following Web sites:**

### ***Pipeline Resources and Information***

- 811 - [www.call811.com](http://www.call811.com)
- Pipeline 101 - [www.pipeline101.com](http://www.pipeline101.com)
- Association of Oil Pipe Lines (AOPL) - [www.aopl.org](http://www.aopl.org)
- American Petroleum Institute (API) - [www.api.org](http://www.api.org)
- In the Pipe - Newsletter from the Oil Pipeline Industry - [www.enebuilder.net/aopl/](http://www.enebuilder.net/aopl/)
- Interstate Natural Gas Association of America (INGAA) - [www.ingaa.org](http://www.ingaa.org)
- American Gas Association (AGA) - [www.aga.org](http://www.aga.org)
- Common Ground Alliance (CGA) - [www.commongroundalliance.com](http://www.commongroundalliance.com)
- For more information on the NASFM *Pipeline Emergencies* program - [www.pipelineemergencies.com](http://www.pipelineemergencies.com)

### ***Government/Regulatory Agencies***

- Pipeline Hazardous Materials Safety Administration (PHMSA) - [phmsa.dot.gov](http://phmsa.dot.gov)
- Department of Transportation (DOT) - [www.dot.gov](http://www.dot.gov)
- National Transportation and Safety Board (NTSB) - [www.nts.gov](http://www.nts.gov)
- Federal Energy Regulatory Commission (FERC) - [www.ferc.gov](http://www.ferc.gov)
- Federal Energy Regulatory Commission (FERC - Oil Pipelines) - [www.ferc.gov/industries/oil.asp](http://www.ferc.gov/industries/oil.asp)
- Occupational Safety & Health Administration (OSHA) - [www.osha.gov](http://www.osha.gov)
- National Fire Protection Association (NFPA) - [www.nfpa.org](http://www.nfpa.org)

To view this information on the Web and to take our online survey, go to:  
**[www.pipelinesafetyinfo.com](http://www.pipelinesafetyinfo.com)**

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