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#### NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C.

Survival Factors Group Chairman Factual Report – Appendix T Example of a Brochure for Public Officials

(8 Pages)

VOLUME 5, ISSUE 1

PIPELINE ASSOCIATION FOR PUBLIC AWARENESS

**FALL 2010** 

## **Dispatchers Play Critical Role**

On the morning of November 1st, 2007 a pipeline near the town of Carmichael Mississippi split open, releasing liquid propane that quickly turned to vapor. Residents in the area called 9-1-1 to report the event. The dispatch center told callers they would send help. However, shortly after the first call was received, the vapor cloud ignited, resulting in a large explosion, ultimately killing two people, injuring seven others and destroying four homes.

The National Transportation Safety Board (NTSB) was called in to investigate this accident. The NTSB is the agency responsible for investigating transportation-related events involving planes, trains, pipelines and other forms of transportation. As part of any investigation, the NTSB makes determinations about the cause and issues recommendations intended to prevent future accidents. In some cases, these recommendations include directives to be followed by the involved parties.

The NTSB investigation for the Carmichael incident revealed that despite pipeline operators providing emergency response training events for community responders on a regular basis for decades, the local dispatchers had not received key safety information and training regarding pipeline related emergencies. Specifically, the dispatchers were not prepared to recognize the tell-tale signs that are suggestive of a pipeline emergency. Because they were unaware of these signs, they could not warn those who were at risk of the steps that should be taken to protect themselves, including evacuation.

The final report issued by the NTSB made several recommendations relating to pipeline operators' efforts to educate the general public and responders about the potential hazards posed by a pipeline. Specifically, dispatchers should be included in the groups of stakeholders who receive regular information, training and other learning opportunities relating to pipeline safety.

The NTSB acknowledged that there was insufficient time in the Carmichael event for the area to be evacuated soon enough to prevent the tragedy that occurred. However, many important lessons were learned. In consideration of the recommendations issued by the NTSB, representatives of the pipeline industry joined forces with members of the National Emergency Number Association (NENA) to develop guidelines for those who serve as dispatchers for emergency services.

Working cooperatively, the group developed an industry standard that focuses on three areas of pipeline awareness for the dispatching (continued page 7)

# C9-1-1 POLICE \* MEDICAL \* FIRE EMERGENCY NENA



A dispatcher takes calls at the Greater Houston 9-1-1 Center. This is not the Center involved in the Carmichael, MS incident.

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# What is the Purpose of the Pipelines in Your Community

Do you know whether pipelines are in your community? There is an excellent chance the answer is yes. The U.S. pipeline infrastructure stretches more than 2.2 million miles across the county. In comparison, the national highway system is comprised of only 160,000 miles of roadway, or thirteen times less than the total pipeline mileage. Both of these systems are critical in terms of the country's national defense and economic viability in that they provide the means for the transportation of people, products and services.

Pipelines are built in different sizes depending on the purpose of the pipeline and the commodity being transported. There are three types of pipelines. Gathering pipelines collect the oil and natural gas from production fields. They are typically smaller in diameter and function at a lower operating pressure. Transmission pipelines then carry the energy resources from production centers to areas of consumption, manufacturing or electric generation facilities, or to even larger pipelines that transport the energy resources for long distances. Transmission pipelines also deliver crude oil to refineries and then transport the resulting refined products like gasoline, diesel and jet fuel to terminals for transportation by truck. These larger pipelines operate at higher pressures than their smaller-diameter counterparts and usually travel long distances within a state or even across state boundaries.

Natural gas transmission pipelines also deliver gas to the third type of pipeline, a local distribution system. A local distribution company, or LDC, receives gas at a point commonly referred to as a city gate. It is at this location that the gas is transferred from a large, high pressure line to a smaller, lower pressure pipeline. LDC pipelines run down city streets and are connected to homes and businesses via service lines. These pipelines actually deliver natural gas to commercial and residential neighborhoods and serve as the conveyance for a fuel that heats our homes, cooks our meals and provides us with a source of hot water. Pipelines come in a variety of sizes, typically ranging from 1/2 to 42 or greater inches in diameter. The size of the pipeline will depend on the purpose, quantity, and product being transported. The graphic to the right represents the most common diameter sizes for gathering, transmission and distribution systems. 48 36 Gathering Pipelines ● 2 to 24 inches Transmission Pipelines • Typically 8 to 42 inches and above Distribution Pipelines • ½ inch to 18 inches

# Do you know how to locate pipelines in your community?

There are visible markers that indicate the presence of a pipeline in your area and there are resources that can be accessed to obtain confirmation of such markers. These markers and a clear, wide green-space free of trees and brush, that extends as far as you can see in either direction are the two most obvious indicators of an underground facility. At one time, these signs and the use of the local one-call center were the only means by which to identify pipelines in a community.

Today, developments in technology and the internet give ready access to more comprehensive information. The National Pipeline Mapping System, or NPMS, is a tool that can be used by anyone to learn more about the transmission pipelines in their area. All you need is your state abbreviation and the name of the county where you work or reside. Once you have entered that information into the system, you'll find you can learn more about the operators in your area of interest including the types of products being transported, the name and contact information of individual operators, and the location of road and county borders.

If you are a public official or emergency responder, you can obtain even more specific data with regard to critical energy infrastructures by applying to PHMSA. On approval you may be provided access to an even more thorough examination of a variety of location and operational details. By contacting PHMSA via their web site, you may also receive GIS information in layers that can be downloaded into your system.



# Environmental stewardship

is a topic on everyone's mind. Enthusiasm for "going green" is cropping up in all aspects of everyday life ranging from television commercials to supermarket product labels. We're more likely to be concerned these days with how much energy a product uses or whether the method by which it is

manufactured is efficient with regard to its environmental impact. The same can be said for pipeline operators seeking to proactively monitor and control their environmental footprint.

One of the primary environmental concerns for pipeline operators is air emissions. Emissions are generated through the operation of various equipment including compressors, pumps, processing and other gas treatment facilities. Fugitive emissions can also be released from valves, vents, tanks and metering stations along a pipeline. Emissions from pipeline facilities are regulated by your state environmental agency and the U.S. Environmental Protection Agency and what such regulations entail depends on the type, the source and the amount of the emission being released.

The goal for any pipeline operator is to abide by the terms and conditions of their permits and to comply with the applicable state and federal laws. Any release of emissions could result in a violation of the restrictions set forth in those permits. In addition, a release that occurs while the commodity is in transit can result in a loss of revenue for the company.

To prevent these situations from occurring, pipeline operators are using new technology to monitor and control the emissions released from their systems. On example of this is the use of infrared cameras, or IRs, that utilize thermal imaging, to examine emissions. These cameras provide the means to monitor facilities by identifying the wave patterns of the air around individual pieces of equipment. The images captured by an IR camera can distinguish vapors or plumes from the ambient air and provide operators with the ability to determine the source of the emissions, if unknown, while also ensuring they are properly corrected. The benefit of IR cameras is that they can find emission sources that in the past have been difficult to detect.

Many companies have taken proactive steps to reduce their emissions by participating in voluntary reduction programs or by installing newer, more efficient equipment that uses less fuel and/ or releases fewer emissions. These programs often require a significant financial investment and commitment from the company.

# New Regulations for Gas Distribution Companies

If your city or community is responsible for supplying natural gas to your area residents, this local distribution system is now subject to new regulations. As of February 12, 2010 local distribution operators are required to establish a Distribution Integrity Management Program (DIMP). Local distribution companies have until August 2, 2011 to write and implement their program.

Under the new regulations, local distribution companies will be required to develop an integrity program that is tailored to its specific operations rather than imposing the same prescriptive requirements for everyone. DIMP requirements are different from the integrity management requirements for transmission pipelines because of the substantial differences between the two types of pipelines. (continued on page 5)



# Supporting Member Companies

Aera Energy, LLC

Aka Energy Group, LLC

Alliant Energy - IPL & WPL

Alliance Pipeline L.P.

Anadarko Midstream

Anadarko Petroleum

**Archer Daniels Midland** Company (ADM) Barnett Gathering, LP **Basin Electric Power** Cooperative Bear Paw Energy, LLC **Beartooth Pipeline** Belle Fourche Pipeline Co **Beta Offshore** Bitter Creek Pipeline - CO **Black Hills Energy** Black Hills Power, Inc. **BP America Production Breitburn Management** Company, LLC **Bridger Pipeline LLC Butte Pipe Line Company Cascade Natural Gas** Cenex Pipeline, LLC Central Resources, Inc. **Chaparral Energy** Chevron Pipe Line Company Cheyenne Light, Fuel & Power Cimmarron Gathering, LLC City of Sioux Falls **Colorado Interstate Gas** Company (CIG) **Colorado Natural Gas Colorado Springs Utilities** ConocoPhillips - Northwest NM ConocoPhillips Pipe Line Co - CO, MT and WY Copano Energy **CPN Pipeline Company Crooks Municipal Utilities Dakota Gasification Company** DCP Midstream, LLC **Devon Energy Production** Company LP **Dick Brown Technical Services** El Paso Natural Gas (EPNG) **Enbridge Energy Enbridge Pipelines** (North Dakota) LLC EnCana Oil & Gas (USA) Inc. **Energy Operations** Management Inc. **Energy West** 

Contact information for the companies listed can be found at pipelineawareness.org

- Montana and Wyoming

- Jonah Gas Gathering

- Mid America Pipeline

Enterprise

## **Promoting Damage Prevention**

One of the greatest risks to pipelines remains the people who dig where a facility is located. Accidents that result from such activity are preventable by being aware of your surroundings and by simply following a few basic steps. Preventing damage to pipelines and other underground facilities is a joint responsibility. Following are some things you can do to help.

The pipeline industry is also doing its part to educate many stakeholder groups about the importance of making the call to 8-1-1 before digging occurs. Events are held throughout the country during the month of April, which has been designated as National Damage Prevention Month, to promote underground damage prevention. June 10th has also been proclaimed National Pipeline Safety Day by Congress. Additional events are planned for August 11 or 8-1-1 Day.

The industry is an active stakeholder in the Common Ground Alliance, or CGA. CGA is a national organization dedicated to bringing different stakeholders together that have a shared interest in prevention of damage to underground facilities and also to ensure the safety of the public and their employees. The group works to define those practices and standards that are most effective in governing the activities of excavators and facility owners in the attempt to prevent damage. The organization also develops and implements educational programming to promote 8-1-1.

#### Things you can do...

- Encourage operators of underground facilities to register their facilities with the local one-call center. Many laws exempt some facilities from the requirement to participate. If parties are exempt, there is no way to know whether there are underground pipes, cables or wires buried in the area of an excavation.
- It's the law -- Require that anyone planning to dig dial 8-1-1 before beginning such an activity. This call will be directed to the local one-call center, where operators in the area will be notified of the upcoming project. By way of reinforcement, an excavator can also be required to list their one-call ticket number on any building or construction permit that is stipulated by local governments.
- Provide a mechanism to fine or penalize those who fail to call before they dig. This is the most effective way of reinforcing the importance of calling before you dig. Damage prevention programs are found to be more successful when there is an incentive to call.

View the "Call before you Dig" video for kids at: www. call811kids.com



# **Education of 8-1-1 is Key**

Stories of hunting for buried treasure can capture the imagination of children and adults alike. A new video has been developed for school-aged children that combines themes of hidden treasure and pirates who carry the message that you should call before you dig. The pipeline industry is hoping that in the future this message will be as familiar to children as Smokey the Bear's well-known message regarding the prevention of forest fires.

The opening scene shows children playing in what could be any neighborhood in America who happen to find a spyglass. The spyglass magically reveals the location of buried facilities like water, sewer, natural gas and other utility lines, a pirate

explains how and why everyone must call 8-1-1 before they dig. The pirate also explains that colored flags marking the location of such facilities are in place to caution that all digging should be undertaken away from the flags.

The material was developed by a pipeline operator in conjunction with the Common Ground Alliance, or CGA, an organization dedicated to underground damage prevention, and by PHMSA.

Copies of the video are available to schools at no cost by contacting PAPA. Each CD comes with materials that support the messages found in the video including a treasure map and a lesson plan for teachers.



#### **Prevention Measures Taken**

There are many similarities between a pipeline operator and a homeowner. Protecting the value and integrity of a pipeline for an operator is just like protecting the value of a home for its owner. Over time, both parties will invest a substantial amount of time, money and energy in order to safeguard their property from outside forces and the elements.

What you might not realize is that pipelines are fairly expensive to build. The cost of just one mile of transmission pipeline can amount to more than \$2 million and that only covers the pipeline's actual construction. At almost \$400 a foot, you can believe that operators take a number of steps that are critical to the maintenance of their investment. We've named 20 below just to highlight a few.

To learn why these steps are taken and to find additional information regarding the voluntary steps operators undertake to ensure the reliability of their systems, visit the PAPA web site.

Bury the pipe at minimum depths depending Install cathodic protection to safeguard on the type and location of the line the steel from external corrosion Design the strength and thickness of the Ensure employees meet minimum steel or plastic to adhere to standards qualification standards Coat the pipeline with protective covering Participate in the one-call program so facilities are marked prior to excavation to prevent damage to the pipeline x-ray the welds of pipe connections to Inject corrosion inhibitors to prevent examine for any possible defects or cracks corrosion from occurring internally Mark the route of the pipeline with Provide on-going public awareness markers education to key stakeholders Fly and walk the right-of-way to check Indicate where pipelines cross roads, waterways, and railroad tracks for any signs of a leak or encroachment Monitor the pressure and flow of the Prepare and practice emergency commodity being transported response procedures Schedule regular cleanings of the inside of Conduct testing to confirm the integrity of the pipe with the use of an internal device pipe before the line becomes operational Evaluate the risks posed to the pipeline Train emergency responders to recognize a potential release and how to properly respond under different operating conditions Clear the right-of-way to make it Odorize consumer-ready gas in possible to monitor the pipeline's route distribution systems

#### Distribution Integrity Management Plan (continued from page 3)

Distribution pipelines are found in largely urban centers, while transmission pipelines are usually in rural areas and traditional methods of confirming the integrity of the line, for example in-line inspection, is not feasible for the smaller diameter, lower pressure distribution systems.

The new regulations will require operators to identify those conditions, characteristics or threats that cause leaks in order to make their systems even more reliable and safe. The operator will then be required to take steps to mitigate the particular risk before a release occurs, while also taking the appropriate steps when a leak does occur. Operators will also have to demonstrate their program has been implemented as outlined and that the plan is effective over time.

By thoroughly accounting for these concerns operators will gain additional working knowledge of their particular system that will increase their ability to identify and assess the potential for threats to the facility and enable them to implement measures to correct such threats. In short, distribution operators are required to measure their performance, monitor their results and evaluate their overall effectiveness and reliability via industry mandates.

PHMSA is in the process of developing frequently-asked questions relating to the new DIMP regulations. The FAQs can be viewed at: http://primis.phmsa.dot.gov/dimp/faqs.htm. To learn more about the integrity management requirement for transmission operators, see page 6 of this newsletter or contact your local transmission operator.

# Supporting Member Companies

Continued from page 3...

**Express Pipeline LLC** 

ExxonMobil Pipeline Co **ExxonMobil Production** Fayetteville Gathering Co **FMC Corporation** Fort Union Gas Gathering Fountain Valley Power LLC Front Range Pipeline, LLC Frontier Pipeline Company **Garretson Natural Gas Great Lakes Gas** Transmission (GLGT) **Great Plains Natural Gas Company** Havre Pipeline Company LLC Hawthorn Oil Transportation Holly Energy Partners-Operating L.P. **Humboldt Municipal Gas Inergy Services** Intermountain Gas Company Kern River Gas **Transmission Company** Kinder Morgan - Cochin Pipeline - Interstate Gas Transmission **Koch Pipeline** Linne LLC Linn Operating Inc. Lost Creek Gathering LLC Magellan Midstream Partners Marathon Pipe Line LLC Merit Energy Company MGTC, Inc. MidAmerican Energy Company MIGC Montana Dakota **Utilities Company Montana Refining Company Mountain Gas Resources** N. G. Transmission Nexen Pipeline U.S.A. Inc. Northern Border **Pipeline Company** Northern California **Power Agency** Northern Natural Gas Company NorthWestern Energy - MT, NE and SD NuStar Logistics, L.P. **NuStar Pipeline Operating** Partnership L.P. Omimex Canada, Ltd. ONEOK NGL Pipeline, L.L.C. Pacific Gas and Electric Company Pacific Operators Offshore

Contact information for the companies listed can be found at pipelineawareness.org

# Why are they asking about "Identified Sites"?

Every now and then pipeline companies will send letters to emergency officials asking for information about "Identified Sites". Why are they doing this? The answer is somewhat complicated, but it has to do with managing the integrity of the pipelines.

Pipeline companies began developing formal pipeline integrity management programs about ten years ago. These programs are risk-based and focus on populated areas where a leak could have a significant impact or the consequences would be very serious. Operators take additional steps to monitor and inspect pipelines in these "high consequence areas" to make sure the system integrity is not compromised. "Identified Sites" are smaller areas where people may congregate near a pipeline. If enough people occupy a site, it will be designated as a high consequence area and additional safety measures will be performed.

While operators have an excellent understanding of their systems, there are outside factors that may not be obvious to them. This is especially true for areas that are used for outdoor activities or gatherings, but that are not necessarily set aside for that purpose. These can include unmarked camping areas, locations where young people gather to play sports outside of public parks, places where people come together on the weekends for special events, places habituated by indigent people, and any other similar unmarked area where people might gather frequently.

Operators are also concerned with identifying places known to be occupied by people who as a result of disability may be more difficult to evacuate in the event of an emergency. Facilities in this category may include nursing homes, schools, medical facilities or hospitals and even prisons. This information assists them with the development of emergency response plans that take such facilities into account as well as providing the means to create and dispense materials that can be used to alert and to educate those who live or work in the vicinity of a pipeline.

It is important for a pipeline operator to identify places of congregation and other facilities that may be at greater risk of consequence if a pipeline incident were to occur. Pipeline companies attempt to gain information from those people who know the local area best, typically law enforcement, emergency responders and local officials. Each year, letters are sent to local officials asking for help in identifying these potentially more sensitive locations in their communities. Please respond to these requests and provide whatever information you can.

Additional information about "Identified Sites" can be found under the Government and Emergency Officials tab at www.pipelineawareness.org. Specific information about a pipeline operator's integrity management program should be obtained by contacting the operator directly. Contact information for member companies is also available on the Association's web site.



## **Commodities Transported and Hazards Posed**

The chart below highlights the purpose, characteristics and the particular potential hazard(s) posed by products transported via pipeline. These products, along with several other materials, can pose a variety of hazards to the environment as well as to your health if improperly released.

More extensive information on emergency preparedness can be found on the PAPA web site. Procedures that are key to remember when responding to an emergency are also highlighted. There are four critical steps that must be followed when addressing a pipeline emergency: assess the situation; protect the public; contact the operator and work together. A proper response can only be accomplished by being fully informed and coordinating with the pipeline operator.

Product	Appearance	Characteristics	Hazard
Natural Gas	Natural gas is usually colorless	Form	r with a spark or flame. Exposure can cause asphyxiation. Natural gas can contain
	and odorless and is neither toxic nor poisonous. Natural gas does not emit a smell similar to a recently lit match or rotten eggs until an odor is	Natural gas typically remains a gas whether under pressure or not.	
	added.	<b>Vapo</b> rs	
		Natural gas is lighter than air.	
Crude oil and refined products including gasoline, diesel, jet fuel and heating oil	Crude oil occurs in a liquid form ranging from a water-like substance to a very thick tar and ranges from amber to black in color. Colors are added to refined products at the distribution point to make each type of product distinct.	Form Liquid Vapors  Vapors from crude oil are heavier than air.	Crude oil is combustible. Exposure can cause moderate irritation including headaches and dizziness. Crude oil can also contain hydrogen sulfide, which is toxic.
Highly Volatile	HVLs are odorless, tasteless	Form	HVLs are extremely flammable. A person who inhales HVLs may experience drowsiness or suffer from asphyxiation. Direct contact with HVLs can result in burn or frostbite like symptoms.
Liquids (HVLs) include natural gas liquids (NGLs), liquid	and colorless. Vapors can travel long distances and will form vapor clouds in low- lying, areas.	HVLs are transported in liquid form. If released, HVLs will change into a gaseous form.	
petroleum gases (LPGs)		Vapors	
		Vapors from HVLs are heavier than air.	

#### **Key Information for Dispatchers**

#### Know:

- •The pipelines in your area
- •The signs of a pipeline release
- •The procedures to take in the event a potential release is identified or suspected

Ask for Information Relating to:

- Caller's location & contact information
- Facts relating to the emergency
- Ways to determine whether the caller is in immediate danger

#### Take Steps to:

- Direct the caller to take specific actions
- Avoid certain activities
- Help coordinate the initial response by making contact with emergency responders and the pipeline operator

## Dispatchers Play (9-1-1 **Critical Role**

(continued from cover)

community with regard to incidents that involve natural gas and hazardous liquids pipelines. Those areas are outlined in the blue box to the left.

EMERGENCY

NENA

Taking the first step along the path toward implementation of this important document, NENA is in the process of reviewing the proposed Standard with their members. The partnership between the pipeline industry and the dispatching community will continue to develop new training opportunities and educational materials that can be used by pipeline operators to interact with emergency responders and especially 911 dispatchers.

#### Supporting Member **Companies**

Continued from page 5... Patara Oil & Gas LLC Pecan Pipeline (North Dakota) Inc. Petro - Hunt, LLC Pinedale Natural Gas, Inc. **Pioneer Natural Resources** Pioneer Pipe Line Company Plains Exp. & Prod. (PXP)

- Los Angeles
- Santa Barbara Plains Pipeline Plains Pipeline, R.M.P.S. Platte Pipe Line Platte River Power Authority **Portland Natural Gas Transmission System QEP Field Services** 
  - Gas Management
  - Pipeline Company

Quicksilver Resources, Inc. Red Cedar Gathering Company **Redding Electric Utilities** Ringwood Gathering Co **Rockies Express Pipeline LLC** Rosetta Resources San Diego Gas & Electric ScissorTail Energy, LLC SemStream L.P. Seneca Resources Silicon Valley Power Sinclair Pipeline Company SourceGas Distribution and Transmission South Dakota Intrastate Pipeline Co. Southern California **Gas Company** Southern Dome, LLC Southern Natural Gas (SNG) Southern Star

St. Mary Land & Exploration Co. **Summit Gas Gathering** Suncor Energy (U.S.A.) **Pipeline Company** 

Central Gas Pipeline

Tennessee Gas Pipeline (TGP)

- Alaska Pipeline Company
- Hawaii Corporation
- High Plains Pipeline Company
- Refining Northern and Southern CA
- Refining and Marketing - Utah

Thunder Creek Gas Services, LLC

**Contact information** for the companies listed can be found at pipelineawareness.org



#### Supporting Member Companies

Continued from page 7...
Timberland Gathering &
Processing Company, Inc.
TransCanada

- ANR Pipeline (ANR)
- Bison Pipeline, LLC
- Gas Transmission Northwest
- Keystone Pipelines L.P.
- North Baja Pipeline

TransColorado Gas

Transmission Co. LLC
Trend Gathering & Treating L.P.
Tuscarora Gas Transmission
Venoco Inc.
Viking Gas Transmission Co
Vintage Production
California, LLC

Walden Gas
Watertown Municipal Utilities
White Cliffs Pipeline
Whiting Oil and Gas
Wild Goose Storage, LLC
Williams

- Midstream Colorado and Wyoming
- Northwest Pipeline -Kemmerer, Moab and Vernal Districts

Williston Basin Interstate PL Wyoming Gas Company Wyoming Refining Company Xcel Energy XTO Energy Inc. Zia Natural Gas

Contact information for the companies listed can be found at pipelineawareness.org

#### Visit the Association's New Web site

Have you visited the PAPA web site lately? We are excited about the redesign, which now provides more information on the pipeline industry with specific regard paid to issues involving safety. The content focuses on supplying information and resources to key stakeholder groups, government officials, emergency responders, excavators, and the general public including area schools.

The new web site has been reorganized to make finding information easier and provides expanded coverage on every aspect of pipelines and their operations. Some of the new features include an on-line training center for emergency responders. The site contains six virtual training scenarios where emergency responders can test their knowledge regarding the proper actions to take in the event of a pipeline emergency. The emergency response section also contains additional reference materials for any and all personnel who have the potential for involvement in responding to a pipeline related emergency.

The site also provides basic instruction to the public and their communities from explaining how to find the general location of a pipeline to what steps to take in the event of an emergency. The information also highlights the "Call before you dig" state one-call programs and contains contact data for pipeline operators and a host of other resources including related government agencies, industry associations, regulators and other stakeholders.

Check back over time to find out what new data has been added. We hope to be your source for pipeline information in the future. Also let us know if there are topics you would like to see addressed or if you have ideas that should be considered.



Pipeline Association for Public Awareness

The Pipeline Association for Public Awareness (PAPA) is a nonprofit organization dedicated to providing pipeline safety information to the public, emergency responders, public officials and excavators. To learn more about topics in this publication, the pipeline industry or the Association, please visit:

www.pipelineawareness.org

#### How to get additional information

There is additional data available on pipelines through a number of other sources. If you have questions, please contact this Association or one of the following resources:

- Your local pipeline operator (you can determine local operators by):
  - Looking for pipeline markers
  - Dialing 8-1-1
  - Using the National Pipeline Mapping System at www.npms.phmsa.dot.gov
- Contacting your local or federal pipeline safety regulator at: www.phmsa.dot.gov