York County Natural Gas Authority
Patriots Energy Group

pipeline connection

FOR EMERGENCY RESPONDERS

spring 2020

PIPELINE EMERGENCY RESPONSE & TRAINING

Effective Risk Management During Emergency Response

Effective risk management is a key enabler for safe emergency response operations especially during a pipeline incident. Often, those engaged in emergency response from both the public and private sector are engaged in risk management activities without even recognizing it. Performing an effective scene size-up or assessment is the initial step in building a foundation for effective incident risk management.

Without question, emergency response operations carry with it certain risks. While some risk is going to be inherent in those operations, there are tools that can be employed to effectively manage, and even minimize risk.

Situational Awareness

"Situational Awareness" is a key concept used by the military to minimize risk. As it relates to emergency response, situational awareness is rooted in conducting effective scene size-ups and continuing to assess the incident for changing conditions. In many cases, responders can become fixated on the incident itself and be unaware of potential hazards to fellow responders. For example, while responding to an incident involving outside force damage to a pipeline, responders may fail to notice that secondary damage to underground power lines has occurred, creating an electrical hazard, as well as a potential source of ignition for leaking gas. This is termed tunnel vision. Having a dedicated Safety Officer, focused on continual scene assessment will minimize the potential for tunnel vision and enhance the safety of responding personnel. It is critical to recognize that emergencies often are dynamic events and should be closely monitored for changing conditions that may affect risk management related decision making.

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Technical Advisory Input in Decision Making

When responding to incidents that are complex in nature, seeking input from technical experts knowledgeable on the affected systems or product is essential for making risk management related decisions. From a pipeline emergency response perspective, seeking counsel from company operations personnel on atmospheric monitoring, evacuations, and leak isolation will aid the Incident Commander immeasurably when it comes to making proactive risk management related decisions. Prior to making evacuation decisions, it may be beneficial to consult pipeline operations personnel who are equipped with combustible gas indicators (CGIs) or multi-gas detectors that can detect the leaking commodity.

While it is impossible to eliminate all risks during response to an emergency incident, by employing keen situational awareness coupled with proactively seeking technical advisory assistance from key subject matter experts, risk may be minimized.

What is a ... Combustible Gas Indicator (CGI)

A Combustible Gas Indicator or CGI, is an instrument used to detect the presence of flammable or combustible gases in an environment. The GMI brand multi-gas monitors used by YCNGA have the capability to measure natural gas in percent of the lower explosive limit (LEL) and percent gas by volume. This affords our technicians the ability to monitor gas accumulations for safety purposes, as well as determining the source of potential gas leaks.

Pipeline Emergency Response Tactics:

HOW RESPONSE TACTICS DIFFER IN URBAN AND RURAL AREAS

Virtually all emergency response jurisdictions in the country have pipelines traversing the area transporting gas and liquid fuels. While incidents involving these pipelines are rare, they can occur and depending on the location, response priorities and tactics can differ.

PIPELINE EMERGENCY RESPONSE TACTICS

Response to pipeline emergencies in rural areas can present specific challenges. Often in rural areas, emergency response organizations have limited resources which can hamper tactical operations such as incident area isolation and exposure protection. In addition, emergency response organizations may not have access to atmospheric monitoring equipment such as combustible gas indicators. When a pipeline emergency occurs, the most prudent response tactic is to quickly isolate the area, notify the operator, and request assistance to mitigate the incident.

TAKE PART IN OUR ANNUAL PIPELINE SAFETY SEMINAR FOR EMERGENCY RESPONDERS IN THE FALL OF 2020

Especially in rural settings, resources are limited requiring solid mutual aid agreements, and pre-incident coordination with pipeline operators. The most effective tool for addressing concerns related to rural pipeline emergency response is face-to-face discussion. Pipeline operators are very open to participating in pre-planning meetings whereby operational response limitations can be raised and action plans developed prior to a pipeline emergency occurring. Further, open discussions may help identify resources from area response agencies as well as private sector pipeline operators that can be made available in the event of an incident. For example, pipeline operators have gas detection and leak monitoring equipment that can be used to help responders execute area isolation operations.

Outside force damage continues to be a leading cause of pipeline incidents across the nation. Rural settings present unique challenges when it comes to pipeline damage prevention. In many cases, pipelines transporting natural gas and petroleum products traverse farm fields. In the course of conducting farming operations, pipelines can be placed at risk from harrowing, plowing, drain tile installation and other agricultural activities. Emergency responders, as our partners in safety, can help us spread the word about the need to prevent pipeline damage and the importance of calling 811 prior to any excavation activity-including traditional farming operations that involve soil disturbance.

The Pipeline Safety Ag Alliance *(http://www.pipelineagsafetyalliance.com/)* has resources available to help educate farmers on how to work safely around pipelines

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Damage prevention is a key goal for pipeline safety

The importance of calling SC811 by anyone conducting excavation activities cannot be overstated. Public sector emergency responders are keenly aware of the development operations that are occurring in urban areas that they serve and should always be mindful of excavation activities that may be creating a risk to underground pipelines and the public.

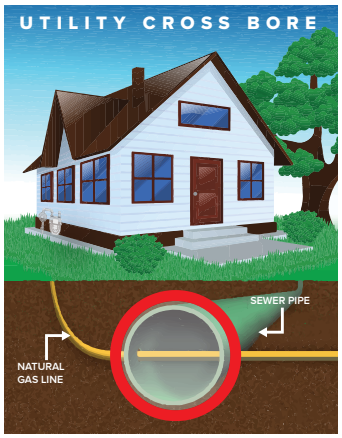
811

URBAN

PIPELINE EMERGENCY RESPONSE TACTICS

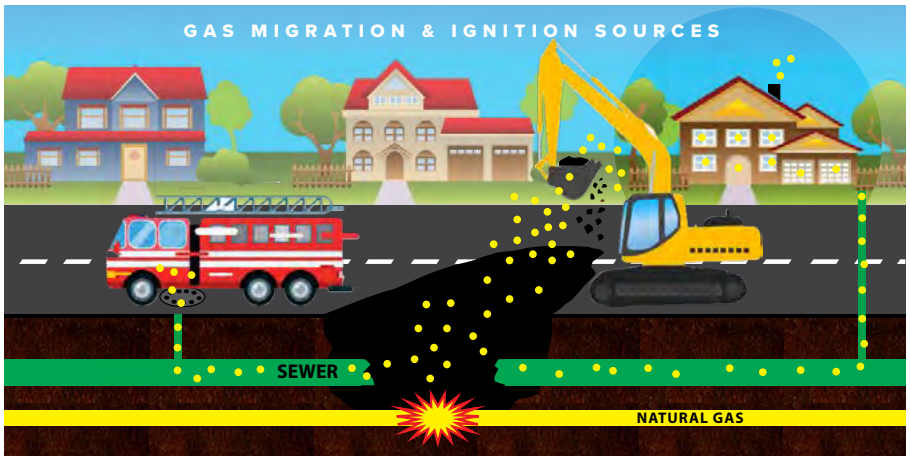
Response to pipeline incidents in urban areas has its own unique set of issues. While typically resources for response are more abundant in urban areas, population density and urban sprawl can escalate the severity of pipeline incidents. As with rural pipeline response tactics, notification of a pipeline emergency should be quickly followed by a request for response by the pipeline operator.

In situations where a pipeline has been damaged and product is leaking in an urban area, migration of the material should be a primary concern. Using atmospheric monitoring equipment such as a multi-gas detector or **combustible gas indicator**, the extent of any product migration should be quickly determined and tactical operations implemented accordingly. In the event flammable gas or combustible liquids enter sewer systems consideration should be given to executing evacuations immediately in the affected area. Instances of **"cross bores"** have occurred where directional drilling operations result in damage to underground pipelines releasing product into other utilities such as sewer and storm water lines. Pipeline operators are your best source of information concerning the physical characteristics and hazards associated with the products that they transport.



FROM AN EMERGENCY RESPONDER PERSPECTIVE, IT IS VERY IMPORTANT TO **INCORPORATE THE RISK OF CROSS BORE INCIDENTS** INTO YOUR SCENE SIZE UP

NATURAL GAS IS METHANE — CH_4, WHICH IS **LIGHTER THAN AIR** AND WILL RISE INTO THE ATMOSPHERE. LEAKING GAS **CAN BECOME TRAPPED UNDERGROUND** BY CONCRETE, ASPHALT, OR EVEN A LAYER OF FROST AND, AS A RESULT **MAY MIGRATE UNDERGROUND** LONG DISTANCES



We are ready to assist

Whether rural or urban, successful response to a pipeline emergency has one important commonality – the need for pre-planning and exercising of tactical response procedures prior to an incident occurring. Pipeline operators stand ready to assist public sector responders with information sharing, education, and a willingness to participate in drills and exercises to enhance response capabilities.

York County Natural Gas Authority

The Patriots Energy Group (PEG) pipeline is operated and maintained by the employees of York County Natural Gas Authority. That's why you might see YCNGA vehicles at sites outside of York County.

Patriots Energy Group

What is a Utility Cross Bore?

Many underground utilities are installed using 'trenchless' technologies. The technology causes minimal disruption to the surface as opposed to 'open' trenching. While a very efficient construction process, it can have pitfalls if existing utilities are not properly located in advance of the work.

While cross bore incidents can impact any underground utilities, one of the most serious involves an intersection between sewer lines and natural gas lines. A cross bore is unintentional and can exist for years before a sewer line clogs or collapses.

From an emergency responder perspective, it is very important to incorporate the risk of cross bore incidents into your scene size up when responding to an outdoor gas leak report. Checking for gas migration in sewer systems should be considered as a tactic when responding to outside gas leak calls. York County Natural Gas Authority personnel are equipped with combustible gas indicators (CGIs) and are highly trained to effectively conduct leak assessments and to assist public sector emergency responders with elimination of hazards associated with gas leaks.

DID YOU KNOW?

There Are Multiple Pipeline Operators in Our Area

All pipelines are required by federal pipeline safety regulations to be marked with pipeline markers and signage.

On pipeline signage, you will be able to identify the name of the operator, a telephone number that is answered 24 hours a day/ 7 days a week and the name of the product being transported in the pipeline.

Pipeline markers are located at road crossings, railroad crossings, and along the right-of-way so that the pipeline is readily identifiable. It is important to note that the marker does not indicate the exact location of the buried pipeline — only that a pipeline exists in the vicinity. Keep in mind also, that there may be multiple pipelines operated by different companies in the same or adjacent rights-of-way.

PIPELINE OPERATORS IN AREA COUNTIES:

York County Natural Gas Authority	Natural Gas Distribution
Lancaster County Natural Gas Authority	Natural Gas Distribution
Chester County Natural Gas Authority	Natural Gas Distribution
Duke/Piedmont Natural Gas	Natural Gas Distribution
Patriots Energy Group (PEG)	Natural Gas Transmission
Dominion Energy Carolina Gas Transmission	Natural Gas Transmission
Williams-Transco	Natural Gas Transmission
Crestwood Equity Partners (formally Plains All American Pipeline)	Liquefied Petroleum Gas
Colonial Pipeline	Petroleum Products
Plantation Pipeline	Petroleum Products

CONTACT INFO

Patriots Energy Group

Emergency	(888) 609-9858
Website	*patriotsenergy.com*

York County Natural Gas Authority

Emergency	(866) 201-1001
Non-Emergency	(803) 323-5304
Website	*ycnga.com*

Chester County Natural Gas Authority

All Calls	(803) 385-3157
Website	*chestergas.com*

Lancaster County Natural Gas Authority

All Calls	(803) 285-2045
Website	*lcngasc.com*

SC811

Toll-free	(888) 721-7877
Website	SC811.com

National Pipeline System

npms.phmsa.dot.gov

USDOT Pipeline Safety

primis.phmsa.dot.gov/comm/EmergencyOfficials.htm

Training Opportunities for your Department

York County Natural Gas Authority personnel are available to provide training to local emergency responders on how to safely handle a pipeline emergency. Please feel free to contact us for more information or to schedule a training session.

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