York County Natural Gas Authority
Patriots Energy Group

pipeline connection

FOR EMERGENCY RESPONDERS

fall 2020

Pipeline Emergency Response Liaison in a COVID-19 World

The impact that COVID-19 has had on our daily lives is immeasurable. Coordination and training associated with pipeline emergency response has also been affected as a result of this worldwide pandemic. Nonetheless, daily life goes on and the need for preparedness for response to pipeline emergencies continues.

WE CONTINUE TO RESPOND TO REPORTS OF GAS LEAKS, BROKEN GAS LINES AND CARBON MONOXIDE ALARMS

While York County Natural Gas Authority has had to modify work practices, schedules, and non-essential activities, safety and response to pipeline incidents continues to be a top priority. Our personnel have been issued appropriate personal protective equipment (PPE) including fire retardant face masks for use during the pandemic. We continue to respond to reports of gas leaks, broken gas lines, and carbon monoxide alarms while practicing social distancing whenever possible.

Pipeline operators are having to be creative when it comes to methods to share critical emergency response recommendations with public sector responders while maintaining the ability to have two-way dialogue. In the past, we typically conducted annual meetings that included a variety of activities such as tabletop exercises, mock line strikes, and information station scavenger hunts. Unfortunately, right now the pandemic precludes us from having large gatherings and these types of activities.

However, we recognize the need to continue providing critical pipeline safety and emergency response information to you, our partners in safety. To this end, we will conduct a series of free, web-based training sessions using the *Join-Me* application. To accommodate volunteer responders and varying shifts, we will conduct sessions during the day and evening. While not the same as an in-person session, we hope to provide valuable information and the opportunity for questions and answers.

join me

YCNGA Pipeline Safety & Emergency Response Meeting

In December, York County Natural Gas Authority will conduct two virtual training sessions via "Join Me" and we want you to attend.

December 16 | 12:00pm-1:30pm

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December 17 | 6:00pm-7:30pm

TO JOIN THE MEETING GO TO:
join.me/ycngameeting

No registration is required. As a follow up to the meeting we will deliver a bag with safety materials and a thank you gift for those in attendance.

If you have questions regarding the training, please contact Glen Boatwright at (803) 323-5439 or by email at *glen.boatwright@ycnga.com*

In this issue of Pipeline Connection, we have included a *Tailboard Tabletop Exercise* that can be used for training and discussion during a shift meeting for your department. Please feel free to duplicate it and use it as needed.

We are all hoping for a better 2021 and are looking forward to the opportunity to get back together for face-to-face training and liaison in the very near future.

PIPELINE EMERGENCY RESPONSE TACTICS:

Responding to Natural Gas Escaping Inside a Building

The directional drill crew, rushing to complete the job before rain sets in, didn't update the one-call notice ticket showing the new excavation location. As the drill work progresses, a pipeline transporting natural gas is nicked and gas begins migrating underground, through the sewer system and into a multi-story residential structure. Numerous 911 calls report a smell of natural gas in the structure and fire units are dispatched to the scene. While fictitious, this incident can and does occur sometimes with tragic results.

Natural gas escaping inside a building should be treated with urgency and caution. Natural gas is inherently odorless. However, a chemical called mercaptan is added to give it the characteristic rotten egg or sulfur smell. While recognizing the odor might indicate the presence of a natural gas leak, only the use of instrumentation can accurately measure concentration of the product.

A combustible gas indicator (CGI) calibrated with methane is used to determine the concentration in air and the associated percentage of the explosive limits, referred to as the lower explosive limit (LEL) and upper explosive limit (UEL).

The explosive range for natural gas (methane) is typically 4.5 to 15 percent in air. A reading on a CGI of less than 4.5 percent means the gas to air mixture is too lean to burn. Conversely, a reading above 15 percent means the mixture is too rich to burn. In situations where gas to air mixtures are above the upper explosive limit, extreme care should be exercised since ventilation will result in concentrations that pass through the explosive range.

THE EXPLOSIVE RANGE FOR NATURAL GAS (METHANE) IS TYPICALLY 4.5 TO 15 PERCENT IN AIR

UNLIKE PROPANE, NATURAL GAS IS LIGHTER THAN AIR AND WHEN RELEASED WILL TYPICALLY DISSIPATE IN THE ATMOSPHERE

When searching for natural gas accumulations in structures, responders should be aware of this physical characteristic and sample at high and low points in the structure.

- Extreme caution should be exercised when natural gas is trapped in sealed enclosures such as basements, attics, storage rooms, and similar areas.
- Upon confirmation of gas accumulating in a structure, responders should ensure elimination of ignition sources and begin evacuations immediately.
- Occupants should be evacuated to a safe location far enough from the structure to minimize risk should an explosion occur.
- In addition, responders should use combustible gas indicators to assess for gas migration which can occur through sewers, storm drains, or other underground voids.

When dispatched to a report of natural gas accumulating in a structure, it is imperative that the pipeline operator be contacted as soon as possible to assist with isolation of the leak. In addition to providing atmospheric monitoring and leak source identification, the pipeline operator is the best source of information regarding the safest course of action to eliminate the hazard.

NOTIFY THE GAS COMPANY
24HR EMER #: 866-201-1001

PIPELINE EMERGENCY RESPONSE TACTICS:

Emergency Site Management and Control

STEP 1: ESTABLISH CONTROL

Upon arrival at a pipeline emergency there may be multiple priorities depending on the nature of the event. It is critical however, to establish control over the scene as the first step in the response process. Establishing control at the scene may require different actions than that required for response to a more frequent emergency such as a structure fire. Given that a pipeline is linear by nature, the site control process may indeed look different.

AS WITH ANY EMERGENCY, PROPER SITE ASSESSMENT IS THE KEY TO SAFETY

STEP 2: PROPER SITE ASSESSMENT

As with any emergency, proper site assessment is the key to safety. Ensure that all personnel are conducting a thorough assessment to identify hazards. When approaching any pipeline emergency, determining wind direction should be a priority, and apparatus placement should be a major consideration. Parking a piece of fire apparatus downwind from a propane leak or above a manhole cover with natural gas migrating through a sewer pipe, can have disastrous consequences.

STEP 3: IDENTIFY THE LEAKING PRODUCT

Another early consideration during the site management and control phase is the pipeline product itself. Identifying a leaking product should be a key action item. Here in York County and surrounding areas, pipelines transport natural gas, propane (LPG), and highly volatile liquids (HVLs). Once the pipeline operator is contacted, they can assist with providing Safety Data Sheets (SDS) or other product specific information. In situations where multiple pipelines are in adjacent rights-of-way, it becomes critically important to accurately identify the operator and the product involved.

STEP 4: ESTABLISH A COMMAND POST

Once a thorough site assessment has been accomplished, establishing a Command Post, Staging Area, and isolation perimeter should be accomplished. When possible, a unified command structure should be established, and representatives of all involved agencies should be present in the Command Post. This would include a representative from the pipeline operator to provide technical assistance and serve a communications link with the company's response effort.

STEP 5: PROPER GEAR

Personnel entering the "hot zone" or in the proximity to the product being released must be in approved personal protective equipment (PPE) appropriate for the hazards that may be encountered. Access control must be established to ensure that personnel not authorized to enter the hot zone are kept out.

STEP 6: ESTABLISH A PUBLIC INFORMATION AREA

A pipeline emergency is likely to attract media attention. The Public Information Area should be located away from the Command Post in a safe location. A Public Information Officer should be designated to provide information to media representatives.

Finally, it is important to remember that emergencies are dynamic events and conditions often change. Scene site assessment should be a continual effort and site management and control should be adjusted as conditions warrant.

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.

EMERGENCY RESPONSE TRAINING:

Tailboard Tabletop Exercise

It's 6:30 a.m. on a Friday morning. The weather is cloudy and temperature is 28° F. Sleet has fallen sporadically through the night. A passenger vehicle has left the roadway, crashed through fencing and struck piping in a natural gas meter and regulation station serving a populated portion of the district.

Upon arrival, you observe that an occupant of the vehicle is lying on the ground adjacent to the vehicle and is not moving. Natural gas, under pressure, is escaping from the damaged piping and venting to the atmosphere. It appears that the vehicle's engine is not running. Gasoline appears to be leaking from the rear of the vehicle.

DISCUSSION POINTS

1. **Based on the scene size-up, what are the safety concerns and tactical objectives?**
2. **How would you identify the operator of the pipeline facility?**
3. **What are potential sources of ignition for the escaping natural gas?**
4. **Upon arrival at the natural gas pipeline facility what information is requested?**
5. **If the escaping natural gas ignites, how are the tactical objectives affected/revised?**

Consult the New 2020 ERG for Pipeline Safety Information

The 2020 U.S. Department of Transportation Emergency Response Guidebook (ERG) has recently been published and is available in printed form, mobile applications, and electronic (PDF) versions. The Guidebook is intended to be used during the initial phase of response to a hazardous materials incident. Pages 22-27 of the ERG contain pipeline safety information including guidance on how to identify signs of a pipeline emergency.

https://www.phmsa.dot.gov/hazmat/erg/emergency-response-guidebook-erg

Be Aware - Carbon Monoxide Signs & Symptoms

Symptoms of carbon monoxide (CO) poisoning are similar to those of the flu and can be misdiagnosed. Physical symptoms of CO poisoning vary depending on the amount in the bloodstream — the higher the concentration, the higher the danger.

If you suspect CO is present, evacuate the building, request EMS for any affected parties needing medical attention and investigate the cause of the CO. Contact us if a natural gas appliance is faulty and we will isolate the fuel source until the necessary repairs are made.

CONTACT INFO

York County Natural Gas Authority

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

Patriots Energy Group

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

Glen Boatwright
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