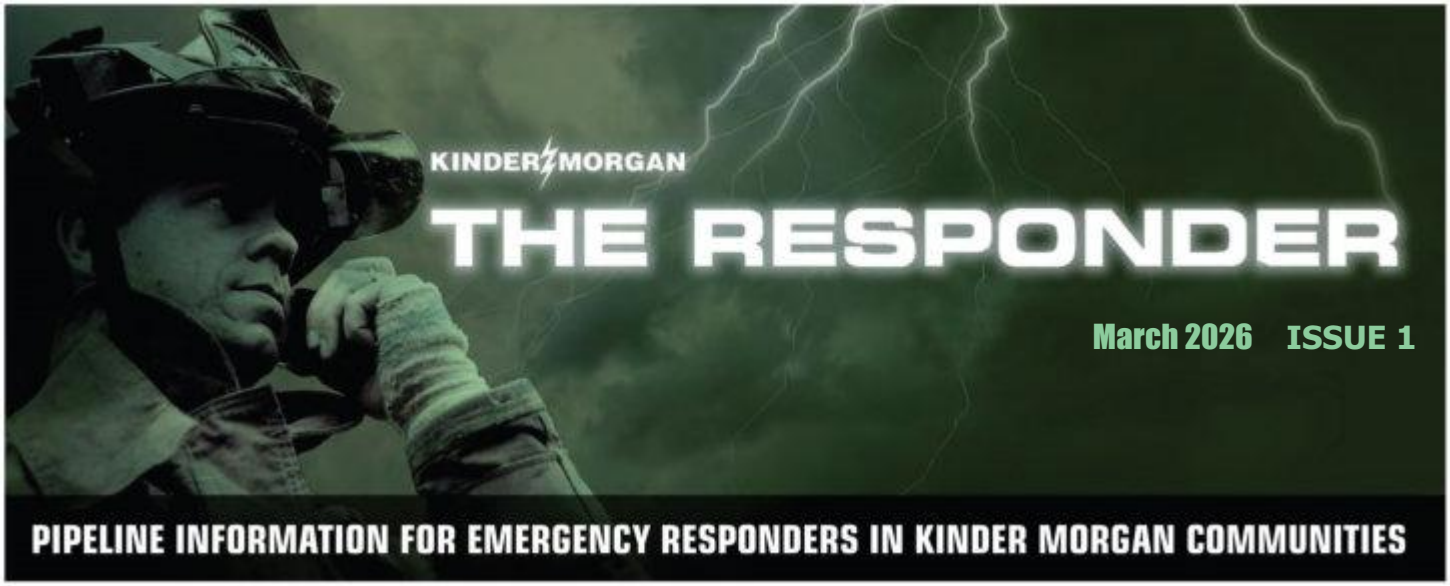

Case Study: Natural Gas Fueled Building Explosion- Youngstown, OH

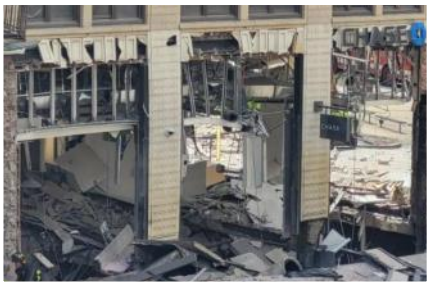

Photo courtesy of WKBN

In the afternoon of May 28, 2024 a natural gas-fueled explosion occurred at a Realty Building in Youngstown, Ohio leaving 1 person dead and 9 others hospitalized. The building was occupied by 22 apartments and Chase Bank. At the time of the incident it was 70 degrees with 14 mph winds and no precipitation. The released natural gas originated from a 1-inch-diameter steel distribution service line (accident service line) in the building's basement.

The accident service line was pressurized at approximately 38 pounds per square inch. The building also contained another 3-inch active service line providing service to the tenants which led to a bank of meters on the east side of the building. Prior to the incident, a contract crew for the city of Youngstown was conducting planned work to abandon utility vaults. The distribution operator had been to the area twice to mark the active service line , but the accident service line was not marked either time because they believed it to be abandoned. As the scrap removal crew began cutting into the steel pipeline with a saw, they heard a hissing sound and felt blowing gas. They immediately pulled the fire alarm, exited the building and called 911. Less than 2 minutes later, the building exploded.

Emergency response teams from Mahoning County Sheriff's Office, Youngstown Fire Department, Boardman Fire Rescue District, and Youngstown Police responded to the incident. Incident Command

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Best Practices

"We have a very positive and productive relationship with our local terminal and regularly check-in on operations, changes, and needs. We attend tabletop exercises when provided or notified. We are excited about the proactive approach and protective measures that our local facility has implemented."

"All personnel are trained in to the appropriate FEMA levels for their job description."

(continued from page 1)

was established in less than 10 minutes and the pipeline operator was asked by the Incident Commander to shut gas service off immediately, and the electrical utility was also directed to shut off power. Within 40 minutes the pipeline operator had stopped the flow of gas to the area. As a results of the explosion, a water main broke flooding the area. Since electrical crews were not able to access the scene and shut off electricity, rescue crews could not enter the area and risk electrocution. This forced search and rescue operations to be halted for nearly 2 hours.

Post incident analysis found that the pipeline operator had incomplete records, which resulted in the 1" service line not being marked. Pipeline operations personnel believed the valve had been in the "off" position since 2015 and was not active. In addition, it was found that Chase Bank's employees had not been sufficiently educated on the dangers of natural gas leaks and only 1 of the 8 employees evacuated when they were informed of the leak. Tragically, the individual who was killed was an employee of the bank. Another response concern was lack of access to the incident site. With electric personnel not being able to gain access and leaving the scene without shutting the power off, search and recovery was significantly delayed. The National Transportation Safety Board (NTSB) found that had communication been better between electric crews and Incident Command, this delay could have been avoided.

Following the incident, the distribution system operator excavated 10 service lines that were marked as abandoned during the same time frame. It was found that 2 of these lines still contained gas. They also planned to investigate another 5,921 that were marked as abandoned and revised practices for contractors abandoning mains and service lines. Chase Bank has also revised its emergency response procedures and directed employees that any gas leak is grounds for immediate evacuation. The electrical contractor has also revised training courses for employees to reiterate the importance of coordination with local emergency responders, even if there is no work order given, to aid in timely emergency response.

Preparing for Hurricane Season

Hurricane season in the Atlantic basin runs from June 1st to November 30th. An average hurricane season consists of fourteen named storms with seven becoming hurricanes and three turning into major hurricanes. While the majority of the hurricanes that develop don't result in landfall with catastrophic damage, the risk is ever present.

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BUXUS

Buxus is a free app funded by pipeline operators that gives emergency officials instant, offline access to pipeline details, emergency contacts, hazard information, response guidance, interactive maps, and the ability to request resources — all in one place. Buxus helps responders stay prepared before and during a pipeline emergency.

NOTE

To request additional information, or to schedule a presentation or tabletop drill with Kinder Morgan, please fill out the form found **here.**

Suggest an Article for The Responder!

Is there a topic you'd like to see featured in the next issue?! Please click **here** to suggest your topic for *The Responder* newsletter!

Download the NIOSH Pocket Guide to chemical hazards-

this guide is intended to inform workers, employers and occupational health professionals about dangerous chemical hazards in the workplace.

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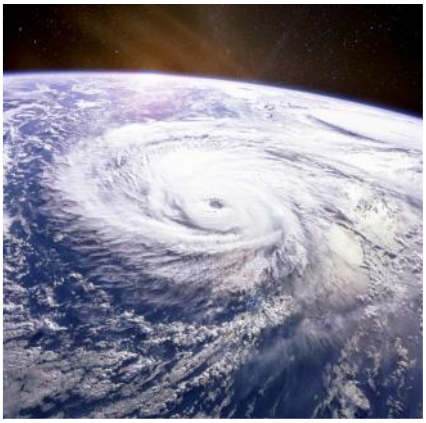


While elevated electric transmission and distribution systems bear the brunt of damage during a hurricane, underground systems such as energy pipelines are at risk during the storm and afterwards when restoration activities are underway. Operators of these pipelines engage in preparedness activities that aid in mitigating risk.

Prior to a hurricane making landfall, pipeline operators will inspect above ground stations and valves to ensure they are protected, to the extent possible, and that any onsite generators are in working order. They will also inspect pipelines located in low lying areas and at waterbody crossings to ensure they are in proper condition. Pipeline operations personnel will check equipment, fuel vehicles, and ensure they are prepared to respond after the storm passes. In addition, provisions are made for critical staff that operate on a twenty-four hour/seven day a week schedule, such as pipeline controllers, which may include relocation to a backup or alternate pipeline control facility.

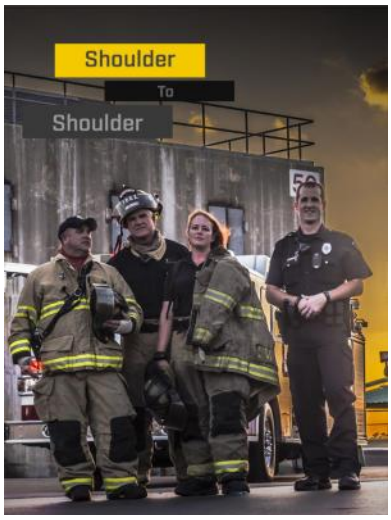
After the storm passes, pipeline operations personnel will begin inspecting the system to identify any potential areas of damage. If communications with pipeline equipment is out, priority will be given to restoring the system as soon as possible. Aerial and ground patrols will inspect the pipeline rights-of-way for signs of damage and leaks. As electric service restoration commences, pipeline operators will be focused on ensuring lines are kept safe while power/communications poles are replaced. Mutual assistance agreements exist among pipeline operators so that aid can quickly come to operators in need from those that weren't impacted by the storm.

First to face the impacts of a hurricane are emergency responders. Until state and federal resources are mobilized, they are often conducting search and rescue and a host of other responsibilities alone in their communities. Periodic face to face meetings with pipeline operations personnel provide an opportunity to not only discuss pipeline emergency response, but also pre-planning for natural disasters including hurricanes. Understanding the pipeline operator's post storm response procedures as well as damage prevention priorities will enhance collaborative efforts to respond to and mitigate disasters in the communities they serve.

(continued on page 4)

First Responder Training Video Series

Learn how to safely and effectively respond to a pipeline emergency, how pipelines work, how different products impact response, response leading practices, how to better prepare to respond to pipeline incidents and roles in pipeline response. Videos feature interviews with pipeline and emergency response experts, covering a wide variety of emergency response disciplines. Videos available at **https://www.youtube.com/channel/UCLQv4arPbGluPt7j_JuETWw**



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Damage Prevention – How Do We Keep Pipelines Safe?

Third party damage continues to be a leading cause of pipelines incidents in the United States. Underground boring for the installation of communications lines has increased in frequency over the last couple of years and has led to a surge in pipeline damages. While 811 is recognized as the nationwide number for requesting underground utility locates, and has been in existence for numerous years, there are still excavators who don't make the call.

Pipeline operators are regulated by the United States Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA). Regulations requiring pipeline operators to have proactive damage prevention programs have been in effect for years. In addition to requirements that pipelines be clearly marked with signage, the regulations require operator participation in 811 and for them to have an ongoing outreach and education program for excavators. Pipeline operators invest significant time and money into damage prevention efforts to keep the public, and pipelines, safe.

Pipelines are monitored by a continual surveillance program which includes regular inspections and maintenance. Pipelines are also regularly patrolled by foot, vehicle, and air to look for signs of leaks, damage, or unauthorized excavation in proximity to the rights-of-way. Many transmission and hazardous liquids pipeline operators have requirements that stipulate that any time excavations are being conducted in close proximity to the line, a company representative must be onsite to ensure safety.

Courtesy of the Pipeline & Hazardous Materials Safety Administration (PHMSA)

Pipeline operators spread important information about damage prevention through damage prevention mailings to excavators, information on operator's websites, participation in Utility Coordinating Committees and on-going training programs. So, what can emergency responders do? Above all, help spread the message about pipeline damage prevention! If you are a volunteer department and have members who work for excavation contractors, engage them to provide damage prevention information to their employers and stress the importance of safety when

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NPMS and PIMMA Updates

The Operator Submission And Validation Environment **(OSAVE)** has added specific workflows to facilitate the annual NPMS LNG plant data submissions. OSAVE is a one-stop shop for operators to view existing LNG plant data in a map viewer; review and update LNG plant-related contact information; and fulfill the yearly LNG plant submission requirement by submitting a notification of no changes or removal to NPMS staff, or by uploading a data submission.

Did you know ...

811 is the nationally recognized three digit number to provide notification of pending excavation activity so that utilities can properly locate underground assets. Help us spread the word for safety ...**Call 811 before you dig!**

811®
Know what's **below.**
Call before you dig.

(continued from page 4)

digging. While out in the community, if you observe an excavation activity occurring and don't see painted marks on the ground or utility locate flags, question the excavator to determine if they have notified 811 and have a proper dig ticket.

Working together, we can reduce the risk of damage to pipelines and literally save lives by prevention careless excavation.

Is Your Department Prepared for a Pipeline Emergency?

Incidents involving pipelines are not common occurrences, but they can and do occur. A nationwide increase in the installation of other utilities, such as fiber cable for broadband communications has elevated the risk of damage to pipelines. Prudence dictates that like any other emergency, proper pre-planning and training for a pipeline incident should be implemented.

Kinder Morgan developed a self-assessment tool that can be used by emergency response agencies to evaluate their preparedness for response to a pipeline emergency. The tool can be found at: **https://www.kindermorgan.com/WWWKM/media/Documents/Public%20Awareness/ER-self-assessment-form.pdf** This tool focuses on roles and responsibilities, training, tools and equipment, and plans and procedures. It provides a checklist that can lead to action items which will enhance an agency's overall preparedness for a pipeline emergency.

Pipeline operator personnel are trained in the Incident Command System (ICS) and are instructed to report to the Incident Commander (IC) upon arrival at an incident. In most cases, a unified command structure will be established in which a pipeline operator's representative will be present to help coordinate tactical response. Use of the Incident Command System should be a focal point for discussion with pipeline operators during training and liaison meetings.

Pipelines transport a variety of products. When an incident occurs, the U. S. Department of Transportation's Emergency Response Guidebook (ERG) provides valuable information to be used during

NOTE

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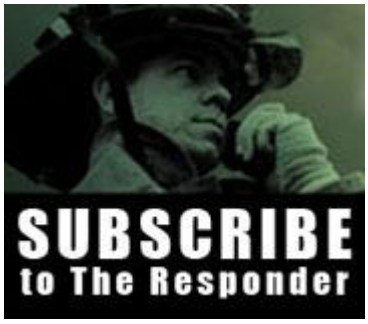

NOTE

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the initial phase of a hazardous materials incident. It also contains pipeline specific information. Review of the ERG should be accomplished on a frequent basis-especially as new versions are published and released.

Atmospheric monitoring is a key tactical priority during response to a pipeline emergency. Does your department or agency have gas detection equipment? If so, when was it last calibrated? Is it kept charged or are the batteries replaced on a reasonable interval? Most importantly, do your personnel understand what the unit is telling them? Pipeline operators have combustible gas indicators and can be counted on to help with atmospheric monitoring to search for gas migration and to aid in decisions related to evacuations.

Do you have plans or procedures for response to a pipeline incident? If so, have they been coordinated with the pipeline operators that are located in your coverage area? Most importantly, do you exercise these plans and procedures through periodic tabletop or full-scale drills? The worst time to find out your plans are lacking is during an actual response, when you need them the most.

Pipeline operators are more than willing to help you further develop your incident response plans and provide training. The Pipeline Safety Self-Assessment is a great please to start with enhancing your response capability! Please email **publicawarenesscoord@kindermorgan.com i**f you would like to coordinate with Kinder Morgan personnel in your area.

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