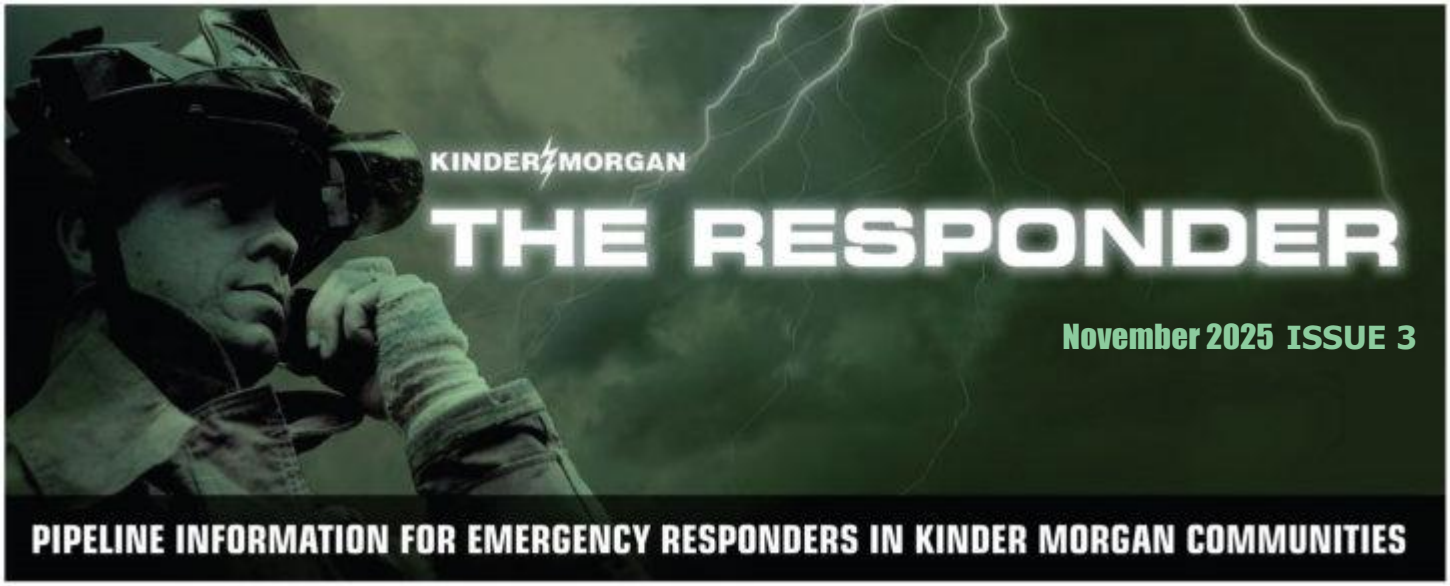
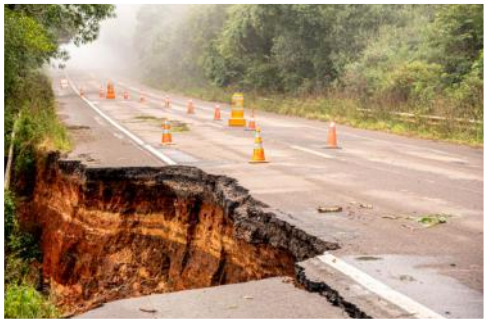


How Landslides can Damage a Pipeline



Landslides can occur for a variety of reasons including earthquakes, ground displacement, flooding, ground settlement, construction disturbance, and movement due to freezing and thaw events. Typically, buried pipelines that are located in regions of seismic activity or in areas that received extreme rainfall, do not sustain significant damage when there is minimal ground surface breaching or erosion due to the depth of the pipelines. Pipelines are linear and traverse a variety of geologically diverse areas which enhances the risk of damage resulting from landslides.

Hazardous liquids and natural gas pipeline operators are required by federal pipeline safety regulations to inspect pipeline rights-of-way following extreme weather events or seismic activity to ensure that no damage to the pipeline has occurred. Indications of sloughing that would require further investigation include holes, cracks, or fissures in the right-of-way in proximity to the location of the pipeline, or in cases where the pipeline is exposed.

Water bodies that include pipeline crossings are inspected following severe weather and earthquake events to verify that the integrity of the pipeline is not compromised by erosion. Pipeline river crossings that become exposed after a severe weather event or show signs of potential damage from debris, require inspection and potential remediation.

In extreme damage situations, pipelines may be breached and release their contents. Pooling liquids, bubbles in bodies of water,

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Best Practices

“We have a property where high pressure gas pipelines get reduced and distributed to homes and businesses and on that same property we have 90000 gallons of LPG stored and transferred to home distribution bobtails. So we work with all 3 companies to train on the facility and last year we did a multiagency drill on site with a bobtail truck and a stationary tank to simulate large scale leak requiring constant water supply.”

“We hold annual exercises varying from TTX, functional, EOC and full scale through out our county.”

(continued from page 1)

fires at ground level, visible vapor clouds or dirt blowing into the air are all signs of possible pipeline releases. During damage assessment, these indications should be reported to the pipeline operator immediately and the area surrounding the release should be isolated.

When preplanning for earthquake events or severe weather, remember to include pipeline operators as part of the critical infrastructure discussion. They are committed to being your partner in safety for the entire community.

Responding to a Pipeline Emergency in a Recreational Area

It's a bright sunny Saturday afternoon in early spring. The local public park is almost at capacity with families having picnics and children of all ages playing organized sports. The playgrounds are full of kids enjoying the first real break from an extremely cold winter.

911 Dispatch receives a call reporting a loud roaring noise and heavy gas odor in the vicinity of Cloud's Creek which traverses through the center of the park. Dispatch sends your fire departments to the scene. Upon arrival, during scene size-up, you observe mud and water blowing into the air from the center of Cloud's Creek. What are your initial scene size-up concerns and tactical actions?

Key Considerations

- **Public safety and accountability are key concerns. You will need additional resources to conduct evacuations and confirm there are no injuries.**
- **Wind direction, identification and elimination of ignition sources should be addressed immediately.**
- **Given the weather conditions there may be a need to consider shelter options for evacuees.**
- **Law enforcement will be key to ensuring traffic gridlock is avoided and responders (including pipeline operator personnel) can gain access to the area.**

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BUXUS

BUXUS is a free, operator-funded application that provides emergency officials with offline access to pipeline details, maps, hazards, contacts, response guidance and resource requests- all in one place. For more information on BUXUS or to register, go to **www.buxus.io**

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!

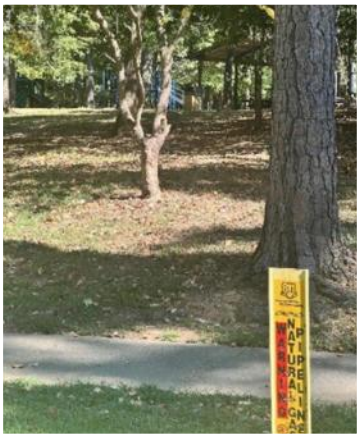
Is there a topic you'd like to see featured in the next issue?! Please click **here** to suggest your topic for *The Responder* newsletter!

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.

(continued from page 2)

Most of the park goers in the vicinity of the pipeline rupture have self-evacuated but many are in a state of panic. Thankfully no injuries are apparent. You identify the operator and the product being transported (natural gas) and request them to respond. The pipeline is isolated, leak eliminated, and repairs are underway.



While rare, with over 2.5 million miles of natural gas pipelines in the United States operating silently underground delivering critical energy to residential, commercial, and industrial customers, while rare, incidents like this can occur. In many cases, these pipelines are in rural areas and pose little risk to the public. However, with population growth and development there are increasingly more cases of once rural pipelines being surrounded by development and areas of congregation such as parks.

Natural gas and hazardous liquids pipelines are regulated by the U.S. Department of Transportation, specifically, the Pipeline and Hazardous Materials Safety Administration (PHMSA). Contained in these safety regulations are requirements for transmission pipelines that operate in "High Consequence Areas" (HCAs) to be designated and inspected on a re-occurring basis to ensure the integrity of these lines. Internal and external inspections are conducted to ensure the pipelines are free from corrosion or damage that could affect pipeline integrity and safety. Areas of limited mobility, like hospitals or retirement communities, and areas where people congregate near pipelines, like parks, require increased scrutiny. Further, pipeline operators are required to request assistance from government officials and emergency responders in identifying new areas that could be classified as HCAs.

Emergency responders are encouraged to have on-going dialogue with pipeline operators regarding the identification and location of HCAs in their jurisdictions. Pipeline operators are always willing to assist emergency response agencies with pre-planning and training related to emergency management and response.

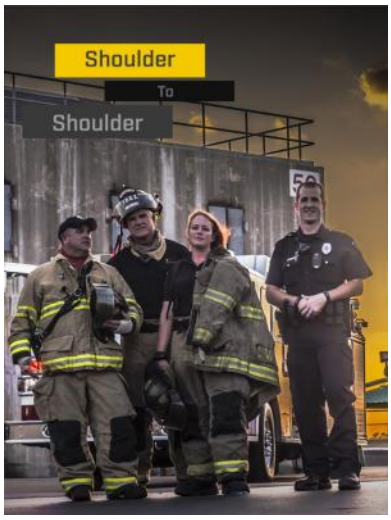
LEPCs and Emergency Planning Involving Pipelines

There are approximately 2,760 local emergency planning committees or "LEPCs" throughout the United States. In 1986, The U.S. Congress passed the Emergency Planning and Community

(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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LOCAL EMERGENCY PLANNING COMMITTEE
LEPC
...safety in knowledge®

Right-to-Know Act, known as EPCRA. A key provision of this law was the establishment of LEPCs. The goal of LEPCs is to provide a structured forum where citizens, local emergency responders, and representatives from industry can work together to plan for chemical emergencies. LEPCs are typically supported and coordinated by the county or parish emergency management agency.

In addition to maintaining hazardous chemical inventories and providing a forum for public sector and industry emergency planning coordination, LEPCs are charged with conducting periodic drills and exercises to test response capability and emergency plan validation. These drills and exercises can involve multiple participants with scenarios that simulate complex hazardous materials incidents. For example, a flood, severe storm or hurricane scenario can provide the trigger for hazardous materials incidents that affect multiple LEPC members and challenge strategic and tactical response decision making.

Pipeline operators are key members of LEPCs. Given the fact that pipelines transport hazardous liquids and gases, their participation in the LEPC's planning function is critical. In addition to providing expertise in response planning for pipeline emergencies, they also can provide critical information regarding above ground facilities such as terminals, pump/compressor stations, liquified natural gas storage (LNG) plants and propane storage facilities. In many cases, industrial or commercial sites that use and maintain hazardous materials also are supplied by natural gas local distribution or transmission pipelines.

Participation in LEPCs helps pipeline operators meet federally mandated public awareness requirements which require outreach to local public and emergency officials. Beyond regulatory requirements, LEPC participation affords pipeline operators a mechanism to have direct dialogue with both emergency responders and local industry that could be involved in response to a pipeline emergency.

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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.

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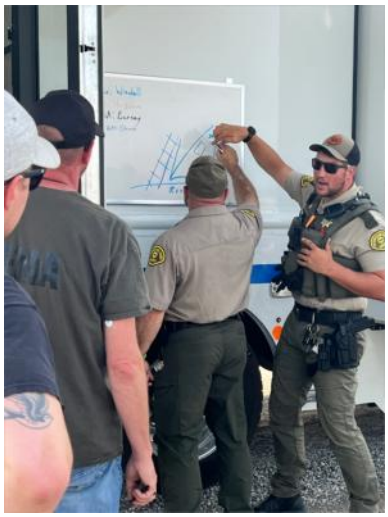
The Importance of Communication between Emergency Responders and Pipeline Personnel During an Incident



Effective communication is fundamental to a successful outcome during any emergency response, and pipeline incidents are no exception. Communications between the public sector responders and the pipeline operator should occur early and often during a pipeline emergency.

When dispatched to a reported pipeline emergency, priority should be given to identifying the pipeline operator and making notifications information: the product being transported, the name of the operator, and a contact telephone number that is answered 24/7 by a real person. Once the operator is notified, and a pipeline first responder arrives on the scene, he or she should report to the incident commander and obtain a briefing based on the initial scene size-up. After reporting back to his or her control center or dispatch via cell phone or radio, the pipeline operator should be able to convey to the incident commander any initial actions being planned to isolate the release of product.

Key information that should be provided to the first responding pipeline representative on scene should include the precise location of the release (if known), scene conditions, the estimated amount of release, and if there are any injuries or evacuations being conducted. This information will then be relayed back to the pipeline operator's command center/supervisory staff to support emergency response and resource assignments.

Prior to the arrival of the pipeline first responder, the Incident Commander can use the Emergency Response Guidebook (ERG) to make initial determinations regarding protective actions and evacuations, if needed. Once the pipeline representative is on site, he or she can provide specific product information including a safety data sheet (SDS), information concerning available resources, and recommendations for tactical actions such as isolating the area and performing operations level defensive actions to contain liquid releases.

As part of a unified command, the pipeline operator representative/first responder is a critical resource to assist in the

NOTE

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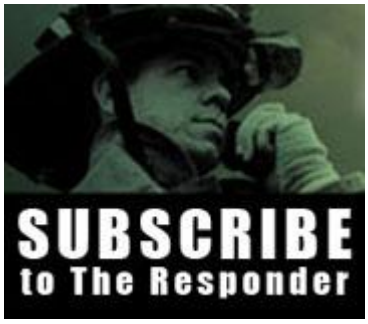

NOTE

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safe and effective management of a pipeline emergency. Kinder Morgan's first responders are instructed in the incident command system and fully understand their responsibility to report to the IC and serve as the technical advisor during the incident. ■

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