



Pipeline Emergency Preparedness & Training: City of El Paso Drill Conducted with Emergency Responders & Operators

One of the most important ways to prepare for pipeline emergencies is through conducting joint full-scale drills between first responders and pipeline operators. In May 2019, Kinder Morgan's Wink Pipeline Group conducted a drill in the city of El Paso, Texas. Drill participants included the El Paso Fire



Department, El Paso Office of Emergency Management, Railroad Commission of Texas, Lower Valley Water District, El Paso Water, TSA, Texas Department of Transportation, and several other pipeline operators. The Kinder Morgan Wink 20-inch Pipeline transports crude oil from West Texas to the Marathon Refinery in El Paso, Texas.

The drill took place the morning of May 8 with the Wink Pipeline Control Center receiving alarms indicating a potential release from the Wink 20-inch Crude Oil pipeline in the city of El Paso. As soon as the Controller recognized the drop in pressure, the Wink Pipeline Control Center shut the pipeline down and notified the El Paso Field Operations group. Shortly thereafter, the Wink Pipeline Control Center hotline received a call from the El Paso 911 Operator that a Contractor that was digging in the area struck the Wink 20-inch pipeline and oil was flowing out of the pipe. At 7:07 a.m., the El Paso Fire Department and the El Paso Office of Emergency

Best Practices

"We attend local pipeline operator-sponsored training meetings and we post any and all information we receive from pipeline operators, like Kinder Morgan."- **Sheriff Sal Rivera, Castro County, Texas Sheriff's Office**

"Dunn County first responders attend the NDPA training in Killdeer each year. This brings them together and provides an opportunity to hear first-hand the correct way to respond to pipeline emergencies."

"A PPT was created to show the hazards on wellpads and compressor stations and incorporated the use of the 4gas meters."- **Sean Thibodeault Mildred Fire Co., Mildred, PA**

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Management arrived on scene along with a Kinder Morgan Supervisor.

After assessing the situation, Kinder Morgan initiated the Incident Command System (ICS) and activated the Emergency Response Line (ERL), an internal notification and classification system Kinder Morgan uses during incidents. The Wink Integrated Contingency Plan was activated, and the Spill Management Team and Oil Spill Removal Organization (OSRO) were notified. National Response Center (NRC) notifications were made within the appropriate timeframe as well.

Kinder Morgan notified first responders that the Wink 20-inch pipeline was transporting Sour Crude Oil, which contained Hydrogen Sulfide (H₂S), at the time of the incident. Exposures to concentrations of H₂S gas equal to or greater than 100 ppm are likely to cause death or permanent adverse health effects. H₂S has unique properties requiring a different response than typical pipeline incidents. It is a colorless, flammable and extremely hazardous gas that is heavier than air and may travel along the ground and collect in low-lying areas such as manholes and sewers.

Before entering the area, the El Paso Fire Department and Kinder Morgan employees conducted atmospheric monitoring with a multi-gas meter to determine if H₂S was present. Any level of H₂S gas found would be addressed with the proper precautions for public safety. Any registered reading of above 100 ppm is considered Immediately Dangerous to Life and Health (IDLH), and access to the area can only be conducted by properly trained personnel using the appropriate PPE.

At the same time, the El Paso Police Department simulated blocking roads and controlling traffic in the vicinity of the release. Due to the nature of H₂S, the Lower Valley Water District was contacted to discuss the potential risks to sewers and the water supply in the area. Fortunately, it was discovered that this location in El Paso does not have sewers for the gas to travel through. The simulated wind direction continued to push the release to a very populated nearby shopping center. Evacuation of the people in the shopping center was considered during the drill.

To remediate the spilled crude oil, Kinder Morgan Operations brought out vacuum trucks and 500-barrel frac tanks. During the exercise, fatigue assessments were conducted on Kinder Morgan key operations personnel. The drill simulated product containment and stand-down after 4 hours, and following the drill an after-action review (Hot Wash) was conducted with first responders and key takeaways from the drill were discussed.

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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!



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

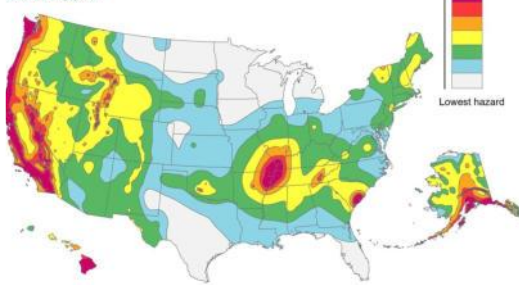
April is Safe Digging Month!

April is National Dig Safe Month! As the start of digging season begins, please remember to call 811- no job is too small to call!

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Conducting effective full-scale joint emergency response drills are an integral component of Kinder Morgan's emergency management programs. If you are interested in learning more or conducting a joint drill with Kinder Morgan, please go to: <http://PA-InfoRequest.KinderMorgan.com>.

Pipeline Emergency Response Tactics: Scene Size-Up and Response to Seismic Events



As the diagram from the United States Geological Survey indicates, much of the United States is at risk of seismic events, specifically earthquakes. Following a major earthquake, approximately 1 in 4 fires are related to natural gas leaks. First responders

should be aware of the risk associated with pipeline damages resulting from earthquake events.

Natural gas transmission and distribution pipelines, as well as those transporting hazardous liquids are very resilient during exposure to earthquakes. Modern steel pipelines, as well as those made of plastic, are designed to accommodate certain ground movement forces without subsequent failures. There are numerous factors that affect a pipeline's ability to withstand ground movement associated with earthquakes. These include age and type of pipeline material, (cast iron used in older distribution systems tends to be more susceptible to damage from ground movement), intensity of the earthquake and proximity of the pipeline to the origin of the seismic event.

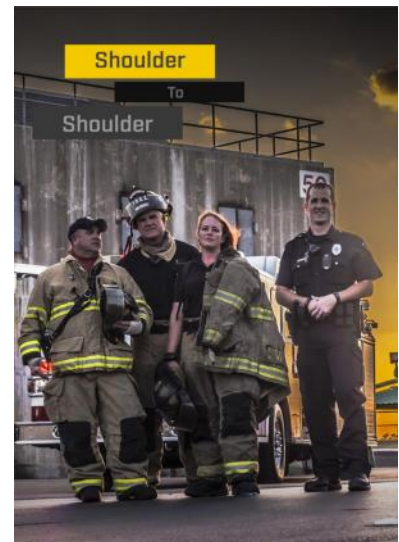
Pipeline operators continue to implement new technologies that minimize the risk of releases associated with seismic events. Beginning in 2010, natural gas distribution pipeline operators were required by federal regulation to install excess flow valves on service lines to customers. These devices are designed to greatly reduce or eliminate the flow of natural gas when a service line upstream from a meter is severed. It's important to note that not all service lines (those installed prior to 2010) have excess flow valves installed. Also, excess flow valves do not activate for leaks downstream from a customer's meter. Natural gas transmission and hazardous liquids pipeline operators have been implementing the use of remotely operated or automatic control valves in areas where

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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



www.shoulder2shoulder.tv

First Responder Online Pipeline Training

To access the API-AOPL Emergency Response Team's free online training, click <https://nasfm-training.org/>

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feasible, which may expedite line isolation in the event of an emergency.

Upon notification of, and dispatch to a post-earthquake event, first responders should be aware of the risk of pipeline product release due to structural damage. Buildings closest to the epicenter and most affected may be subject to post-incident fires triggered by damage to natural gas fueled appliances or systems.



During size-up activities related to responding to a seismic event, responders should be aware of the signs of a product leak. Some obvious signs include pooling of hydrocarbons, dead vegetation, a hissing or roaring sound, or an unusual petroleum type or gaseous odor. If a fire is present, in the case of natural gas distribution systems, responders can best extinguish gas fed fires at residences or commercial occupancies by isolating the flow at the meter shut-off. For natural gas transmission or hazardous liquids pipeline releases, responders should quickly identify the operator (via pipeline markers or facility signage) and request assistance. Emergency responders should NEVER attempt to isolate a natural gas transmission or hazardous liquids pipeline without contacting the operator.

Pipeline operators welcome the opportunity to discuss pre-planning response to seismic events with first responders. Further, tabletop exercises or full-scale mock emergency drills can be conducted using an earthquake as the trigger event. To contact Kinder Morgan for more information or to schedule an exercise please go to <http://PA-InfoRequest.KinderMorgan.com>

Overview of Pipeline Systems: Overview of Liquid Petroleum Pipeline Systems

There are over 218,000 miles of liquid petroleum pipelines in the United States. Uniquely different from natural gas pipelines, liquids lines transport a wide variety of products including refined petroleum products, CO₂, crude oil, highly volatile liquids (HVLs), and biofuels to the end user.

Liquid petroleum products originate as raw crude or raw natural gas that is extracted from a well and is then separated into various liquid
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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!

WISER

WISER 5.4 Release Includes:

- *More detailed bibliographies for much of the substance data
- *Protective distance mapping now supports the export of KML (Keyhole Markup Language) on the WISER for Windows and WebWISER version
- *Redesigned the WISER for Windows protective distance mapping capability

A set of WISER tutorial videos can be viewed [here](#) and videos can also be found in the training section of the [NLM YouTube Channel](#).



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petroleum products. Initially the raw crude is separated from water and gas and placed into small gathering pipelines, usually two to eight inches in diameter, to transport the crude out of production areas. It can then be placed into larger transmission lines that move the product to refineries or to offshore regions where crude can flow from oil production wells to a tank battery. Offshore platforms are constructed to process the crude in a similar manner as onshore facilities and after separation; the crude may be shipped through underwater pipelines.

At the onshore refinery, through the processes of separation, conversion and treatment, the crude oil is converted into refined petroleum products; jet fuel, gasoline, diesel and home heating oil; highly volatile liquids including propane, butane, ethylene, and condensates; supercritical carbon dioxide; and anhydrous ammonia. On average, at U.S. refineries a typical 42-gallon barrel of crude oil will produce 19 to 20 gallons of motor gasoline, 11 to 12 gallons of distillate fuel (most of which is diesel), and 4 gallons of jet fuel.

The product is then stored in large tanks before it is ready to be transported via rail, truck or pipeline. If it is traveling by pipeline, it will most likely be placed into a transmission line and be pushed through the pipeline by pump stations, located every twenty to one hundred miles, depending on the product, pressure and terrain. Pump stations are often remotely controlled and feature many valves and inherent safety systems that are closely monitored in pipeline control rooms.

Liquid petroleum pipelines can carry several different refined products at the same time in a process known as batching. Batched products move through the pipeline at relatively low speeds, usually between five and eight miles per hour. This means that product originating in Houston, Texas could take over 3 weeks to transport to the end user in Boston, Massachusetts.

Transporting hazardous liquids is an inherently very safe, yet complex process. The transportation of these products provides critical home heating oil, gasoline, jet fuel and other necessary commodities to consumers.

Keeping Pipelines Safe/Practices & Protocols: Pipeline Markers and Encroachments

The majority of pipeline systems are buried and are not visible to the naked eye. For this reason, pipeline operators utilize pipeline markers along their rights-of-way (ROW). In addition to clearly marking the approximate location of the pipeline route, markers

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NPMS iPhone app for PIMMA and Updates

The National Pipeline Mapping System (NPMS) now includes Version 5 of the Commercially Navigable Waterway (CNW) data, which can be downloaded from the CNW Data Page. New Great Lakes Unusually Sensitive Area (USA) GIS Data is also now available for download.

NOTE

If you would like to request additional information, or to schedule a presentation or tabletop drill with Kinder Morgan, please fill out the form found at **PA-inforequest.kindermorgan.com**



Pipeline Markers

For more information on pipeline markers, please go to: https://www.kindermorgan.com/pages/public_awareness/AdditionalInformation/PipelineMarkers.aspx

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provide key information that residents and first responders may need to quickly access in an emergency.

Pipeline markers can appear as placards, signs, or stakes in the ground. Pipelines transporting gas, oil, petroleum or gaseous materials are typically marked with yellow markers, although sometimes markers may be red, white, or orange. Federally regulated pipelines must have marker placed intermittently along pipeline ROW, should appear at every road and railroad crossing, and aboveground facilities. Those reading a pipeline marker will be able to find the name of the pipeline operator, the operator's 24-hour emergency phone number and the product being transported in the pipeline.



Although pipeline markers indicate there is a pipeline in the area, they should never be used to determine the exact location of the pipeline. Nor does the presence of a pipeline marker replace the need to call 811 prior to excavation activity. A pipeline ROW can be over 50-feet across and the marker could be placed to the right or left of the pipeline and not necessarily on top of the pipeline itself.

Pipeline markers play an important role in notifying the residents, businesses and excavators of a pipeline in the vicinity and providing emergency contact information.

In addition to the pipeline markers containing emergency information, aerial pipeline markers are also placed along the pipeline ROW with numbers on top of them that are visible to patrol pilots. The numbers usually indicate a mile marking and is used by the pilot to use as a reference in reporting the location of an issue along the pipeline ROW. More commonly aerial patrol pilots use GPS to reference the location of the pipeline and potential encroachments or other issues identified along the pipeline corridor. If a pilot conducting an aerial patrol of the pipeline notices a potential ROW encroachment, such as a backhoe in the area or a fence being constructed, it will be reported to the pipeline operator for further investigation. ■

NOTE

To read past issues of *The Responder*, please go to the archived issues at http://www.kindermorgan.com/pages/public_awareness/The_Responder/archive.aspx

NOTE

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