



Tailboard Scenario for a Terminal Incident

It's late on a Friday evening and thus far the shift has been unusually quiet. Except for an MVA (motor vehicle accident) with entrapment, it has otherwise been uneventful. Shortly after midnight the tempo changes dramatically.

On the outskirts of town on Highway 21 sits the Green Hills Terminal complex. The terminal storage facility receives flammable liquids, namely gasoline, jet fuel, and diesel fuel by pipeline and stores the products in large covered floating roof tanks for later distribution via tanker trucks. Your department's personnel are very familiar with the operations of the Green Hill Terminal having been to several liaison sessions and developed pre-plans for the facility. Recently, you were advised by plant personnel that an expansion of the terminal was underway on the east side of the facility, adjacent to Highway 21.



At 12:30 a.m., 911 dispatchers receive a call from Green Hills Terminal personnel reporting a large fuel-fed fire near the expansion construction area involving a backhoe. They further advise that no construction activities were occurring at the time of the incident and suspect a

malicious intentional act. Based on this information, a combined fire and law enforcement response is dispatched to the scene.

Upon arrival, you find a large jet fuel-fed fire involving the backhoe, which apparently was used to attack an aboveground pipe manifold. The manifold is the entry point for fuel batches delivered to the terminal. Based on initial size-up, you determine the backhoe is fully

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Best Practices

"This has been a crazy year for training. It has been extremely hard to keep up with all the required changes. The newsletter makes it a little easier to pass on to my firefighters."

"For the dispatch center, we do annual training on pipeline incident response."

"We conduct tabletop exercises with our DOME partners that is very helpful, especially for young responders. The PDMA Plan that we participate in is a good guideline for our local responses."

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engulfed in the fire and that the manifold has sustained extensive damage. A significant amount of jet fuel has been released forming a product pool fire. Fire Department personnel locate a critically burned, unconscious individual who apparently was operating the backhoe at the time of the incident. Law enforcement personnel report there was a car located nearby containing anti-fossil fuel flyers and signage referencing an environmental extremist group.

Terminal personnel report that the damage to the manifold is extensive. Isolation of the pipeline from the terminal storage facility will have to be accomplished upstream and involve a mainline valve. Terminal officials are requesting law enforcement escort to the valve site.

Exercise Discussion Questions

- What are the response priorities and safety concerns for this incident based on the initial findings?
- What does the Incident Command System structure look like for this event? Unity of Command or Unified Command?
- How does the intentional act/security concern impact the response?
- Based on the scenario, what additional resources would be needed for the response?
- What information would be requested from terminal operations personnel?
- What information would be provided by the department Public Information Officer to the news media at this point in the event?
- Have security risks be incorporated into pre-planning for similar facilities within your jurisdiction?

Effective Scene Size Up at a Natural Gas Incident

Effective scene size up begins with training and pre-planning. Many pipeline operators offer joint training opportunities with first responders in their areas of operation, as well as facility tours of their location. Being familiar with the operators and their facilities in your area is a critical step in pre-planning.

Upon arrival at a suspected natural gas incident, first responders should approach the area from an uphill, upwind location at least ¼- mile from the incident site and take a moment to assess the

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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



Need to Locate Pipelines in Your Area?

To assist identification of transmission pipelines in your area go to the **National Pipeline Mapping System (NPMS)**.

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scene. If available, emergency responders should utilize their combustible gas indicators (CGIs) to measure combustible gas or vapor content in the air. CGI's are a very important tool to help identify natural gas since it is naturally colorless, odorless and a simple asphyxiate.

Depending on composition, the explosive limit for natural gas can vary from 4% to 17% by volume in air. Next a flammable area, or "hot zone" should be established.



If the CGI indicates natural gas is present, all potential ignition sources should be immediately removed from the area. These can include cell phones, vehicles, radios, non-intrinsically safe flashlights, and other electronics. If possible, at this time other external ignition sources, such as vehicular and pedestrian traffic should be routed away from the area. An evacuation of the area would be called for at this time.

After an initial assessment has been conducted, the Incident Command System (ICS) should be employed, and a command center should be established. Incident Command is typically located in an area uphill, upwind of the incident, and outside the "hot zone". Pipeline personnel are very familiar with ICS and are able to assist with recommended actions and additional resource requests for emergency responders. If pipeline personnel are not present at the scene already, and you are not familiar with the operator in the area, locate the nearest pipeline marker and call them as quickly as possible. Pipeline markers always contain the operator's name and 24/7 emergency contact number.

After Incident Command has been established, emergency responders can continue to deploy CGI's and test the perimeter of the incident, and adjoining structures for migrating gas. Upon arrival at a pipeline incident, pipeline operations personnel will typically shut off natural gas supply to the area by closing specific valves along the pipeline route. Emergency responders should never attempt to operate pipeline valves. If a CGI indicates natural gas in surrounding areas, buildings, sewers, windows, manhole covers, and vents should be opened to allow the gas to escape and naturally dissipate.

For more information on training opportunities with Kinder Morgan please email publicawarenesscoord@kindermorgan.com. To access the Natural Gas Tabletop Drill Guide and Scenarios, please click [here](#).

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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 <http://PAinforequest.kindermorgan.com>



Products Transported by Kinder Morgan

Kinder Morgan transports a wide variety of products. To see the Products we transport by pipeline, click [here](#).

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Characteristics of Natural Gas, Refined Products, CO₂, and HVLs

Pipelines safely transport the majority of fuels used in the United States. Statistically, pipelines are the safest mode of transportation for these products. While infrequent, releases of product can and sometimes do occur. It's important to be aware of the characteristics of these products in the event of response to a release.

Product	Specific Gravity	Vapor Density	Boiling Point	Flash Point	Ignition Temperature	Flammable Range	Other Hazards	Response Tactics
Natural Gas	.422	.60	-259°F	-188°C	1,200°F	4-17%	Simple Asphyxiate	Isolate fuel source; do not extinguish fire
Propane	.5	1.5	-44°F	-156°F	920-1,120°F	2-10%	Simple Asphyxiate; thermal (cold) burns	Isolate fuel source; do not extinguish fire
Gasoline	.8	3-4	105°F	-45°F	536-833°F	1.4-7.6%	N/A	Isolate fuel source; do not extinguish fire; contain spilled product
Jet Fuel	.775	6.0	291°F	140°F	410°F	0.6-4.6%	N/A	Isolate fuel source; do not extinguish fire; contain spilled product
Diesel Fuel	.85	7.0	325°F	140°F	126-205°F	0.6-7.5%	N/A	Isolate fuel source; do not extinguish fire; contain spilled product
Carbon Dioxide	1.5	1.5	-109.2°F	N/A	N/A	N/A	Simple Asphyxiate; cryogenic hazard	Isolate leak; avoid area of release; where SCBA

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WISER

NEW- WISER 6.1 Released for iOS, Android and WebWISER! It includes:

- *The 2020 ERG with limited French translations
- *Updated transportation search criteria for the Help Identify Chemical Tool
- *Updated Android API's

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.



NPMS iPhone app for PIMMA and Updates

The National Pipeline Mapping System (NPMS) now offers Tribal Government applications for PIMMA applicants and GIS Data requests. Tribal Lands are now viewable on a pipeline map in PIMMA or the **NPMS** Public Map Viewer.

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As always, the best source for detailed information regarding the characteristics of hazardous materials is their respective safety data sheet. The U.S. Department of Transportation **Emergency Response Guidebook** is also a useful tool for product release information in the initial stages of a hazardous materials incident.

After taking appropriate steps to secure the area and protect life, identifying the product, pipeline operator, and emergency phone number is a priority. This information is required by federal pipeline safety regulations to be posted on signage and markers along the pipeline route. It's also imperative to recognize that in some cases pipeline right-of-ways can contain multiple pipelines transporting different products. An initial, accurate scene size-up during response to a pipeline incident is critically important.

Products transported by Kinder Morgan and their potential hazards are listed within the **Emergency Response Officials Safety** brochure and also available as a stand-alone **PDF**.

HCA's and Identified Sites in Your Community

The U.S. Department of Transportation defines a high consequence area (HCA) as "a location...where pipeline releases could have greater consequences to health and safety, or the environment." These areas are typically highly populated areas or have environmentally sensitive features that make them unique areas to protect. Some common examples of HCAs are schools, hospitals, prisons, outdoor areas of congregation, drinking water sources or endangered wildlife species.

According to the Pipeline and Hazardous Materials Safety Administration (PHMSA), operators must identify HCAs by evaluating a corridor around the pipeline. Natural Gas operators must engage with local emergency responders to identify potential HCAs in their footprints. Once an HCA is identified, operators must take additional measures to prevent and mitigate the risks to these areas.

When identifying these sites, it's important to be familiar with the inherent properties of the product in the pipeline. HCAs for Natural Gas are focused on population density and urban locations, and utilize a potential impact circle to identify people or property near the pipeline. Natural Gas operators identify HCAs in an area where there are more than 20 buildings or an identified site (defined below) within the circle.

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To view the latest version of the Emergency Response Guidebook, please go to <https://www.phmsa.dot.gov/hazmat/erg/erg2020-english>

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!

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.**

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To be classified as an identified site an area must have any of the following:

1. An outside area or open structure that is occupied by twenty or more persons on at least 50 days in any twelve month period. Examples include but are not limited to, beaches, playgrounds, recreational facilities, camping grounds, outdoor theaters, and stadiums.
2. A building that is occupied by twenty or more persons on at least five days a week for ten weeks in any twelve month period. Examples include but are not limited to, religious facilities, office buildings, community centers, general stores, 4-H facilities, and roller skating rinks.
3. A facility occupied by persons who are confined, are of impaired mobility, or would be difficult to evacuate. Examples include but are not limited to hospitals, prisons, schools, day-care facilities, and assisted-living facilities.

In addition to taking into account population density, Hazardous liquids pipelines usually have HCAs that are of greater impact to drinking water facilities, commercially navigable waterways, and sensitive ecological resources.

Emergency responders and public officials play an important role in the protection of HCAs and may be aware of certain risks and aspects of a given facility or outdoor gathering location, that pipeline operations personnel are not. Communities continue to change and develop, and new HCAs may emerge in your area of jurisdiction. New HCAs must be incorporated into an operator's integrity management plan within one year of identification. If you believe there are new identified sites in your area that you would like to discuss with Kinder Morgan personnel, please go to our HCA submission form found [here](#). ■

NOTE

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