DOT
PHMSA

Office of Pipeline Safety Emergency Management Initiatives

November 2011

How PHMSA Supports Emergency Management: Improvement Plans

PIPELINE EMERGENCY MANAGEMENT

The Department of Transportation (DOT) Pipeline and Hazardous Material Safety Administration (PHMSA) Office of Pipelines Safety's pipeline emergency management program examines the risks posed by pipelines; develops and implements programs aimed toward reducing the impact of unintended pipeline releases on the community, prepares for those risks that cannot be eliminated; and analyzes incidents to better understand why they occurred. PHMSA has long required pipeline operators to develop and implement emergency plans, and state and federal staff conduct inspections to verify compliance with those requirements on a regular basis. To enhance our efforts towards improved safety, PHMSA has a number of additional initiatives underway that directly impact emergency management and response.

Emergency management activities are divided into four phases that form a cycle. The phases of the cycle are:

1. **Mitigation**—Taking sustained actions to prevent or reduce the long-term risk to people and property from pipelines releases. Mitigation is the most important phase in developing an emergency-resistant community.

2. **Preparedness**—Building the emergency management function to respond effectively to, and recover from an emergency. During the preparedness phase, governments, organizations, and individuals assess risks, develop plans to save lives and minimize damage, and enhance emergency response operations.

3. **Response**—Conducting emergency operations to save lives and property by taking action to reduce hazards to acceptable levels (or eliminate them entirely); evacuating potential victims; providing food, water, shelter, and medical care to those in need; and restoring critical public services.

4. **Recovery**— Recovery occurs after an event or incident, restoring all systems and conditions to normal operations. It includes rebuilding communities so that individuals, businesses, and governments can function on their own, return to normal life, and protect against future hazards.

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WAYS PHMSA IS ENHANCING PIPELINE EMERGENCY MANAGEMENT - BY PHASE

(select hyperlinks for additional information)

1. Mitigation

- Expanding Integrity Management (IM) Protection – PHMSA issued Advance Notices of Proposed Rulemaking (ANPRMs)for hazardous liquids pipelines in January and for gas transmission pipelines in August 2011. Both rulemakings consider similar requirements. PHMSA supports integrity management reforms to consider expanding and revising the integrity management program requirements beyond existing high consequence areas. PHMSA is considering whether additional restrictions should be placed on the use of specific pipeline assessment methods, repair timeframes, and stress corrosion cracking.
- Valve Spacing & Remotely Operated/Automatically Operated Valves - The ANPRMs also consider non-IM requirements such as revising requirements for mainline valve spacing and the installation of remotely operated or automatically operated valves in order to reduce the time it takes to shut off the flow of product through the pipeline.
- Leak Detection Systems - PHMSA supports the study on leak detection systems and requiring computational leak detection systems where technically feasible for hazardous liquid pipelines located in high consequence areas.
- Excess Flow Valves – On November 25, 2011 (76 FR 72666) PHMSA issued an ANPRM on expanding the requirements for excess flow valves, where technically feasible, to portions of gas distribution systems not yet required to have them. The National Transportation Safety Board (NTSB) has made a safety recommendation to PHMSA that excess flow valves be installed in all new and renewed gas service lines when the operating conditions are compatible with readily available valves. In response to that recommendation, PHMSA is seeking public comment on several issues relating to the expanded use of excess flow valves (EFVs) in gas distribution systems. PHMSA is also interested in seeking comment from gas distribution system operators on their experiences using EFVs, particularly from a cost-benefit perspective.
- Damage Prevention Programs - Excavation damage remains one of our greatest challenges. Damage prevention “one-call” laws are developed and implemented at the state level. PHMSA supports States’ efforts to improve their damage prevention programs by funding State Damage Prevention grants. You can see a summary of the existing state damage prevention laws and how states are implementing effective damage prevention programs on PHMSA’s Stakeholder Communications web site. As part of our damage prevention efforts, PHMSA is committed to raising awareness of 811 – the national “Call Before You Dig” number – and works with the Common Ground Alliance and other stakeholder groups to promote the use of 811 as the first step in safe digging. Finally, PHMSA is developing a rulemaking pertaining to enforcement against third-party excavators who unlawfully damage underground pipelines during excavation activity. Third-party excavators are excavators who are not employees or contractors of pipeline operators.
- Public Awareness of Pipelines – Pipeline Safety regulations require pipeline operators to conduct public awareness programs that provide critical safety messages to various stakeholder audiences, including the public, emergency responders and other groups and to analyze the effectiveness of their programs. State and federal inspectors are currently evaluating the effectiveness of pipeline operator public awareness

programs. PHMSA is analyzing the inspection results as they become available to identify trends and opportunities for improvement. PHMSA will ensure that public awareness programs include provisions for outreach to 911 operators. We are committed to completing these effectiveness evaluations by the end of 2012.

- PHMSA is also steward of the Pipelines and Informed Planning Alliance (PIPA). PIPA is a set of recommended practices that looks to improve pipeline safety through implementation of recommended practices for risk informed land use and development planning. PIPA's recommended practice *ND 23 Consider Site Emergency Response Plans in Land Use Development* encourages local governments to consider emergency response plan requirements as part of the land use and development approval process. The PIPA Communication Team will be piloting a joint review of this recommendation with a local government emergency management personnel and the requisite pipeline operator of an existing transmission pipeline right-of-way.
- The Community Assistance and Technical Support (CATS) program provides outreach to all pipeline safety stakeholders. Responsibilities of CATS managers include:
  - Communicating information to help communities understand pipeline risks and improve pipeline safety and environmental protection.
  - Fostering effective communications regarding pipeline safety among PHMSA, other federal agencies, state pipeline safety regulators, elected and emergency officials, pipeline operators and the public.
  - Serving as "honest brokers" in facilitating permits required for safety-related pipeline repairs.

  CATS managers are located within each PHMSA region. Contact information for the CATS manager for your state is noted below.
- Stakeholder Communication Web Site - On this website all stakeholders will find information that they can use now to help ensure pipeline safety in their community.

2. Preparedness

- In partnership with the National Association of Fire Marshalls, PHMSA developed and recently updated the *Pipeline Emergencies* training program for firefighters, law enforcement, and other emergency responders to better prepare them to respond to leaks, spills and fires cause by releases from liquid and natural gas pipelines. The training has been distributed to over 45,000 emergency responders in the U.S.

- The National Pipeline Mapping System (NPMS) is a geographic information system (GIS) created by the Office of Pipeline Safety (OPS) in cooperation with other federal and state governmental agencies and the pipeline industry. The NPMS consists of geospatial data, attribute data, public contact information, and metadata pertaining to the interstate and intrastate hazardous liquid trunklines and hazardous liquid low-

stress lines, gas transmission pipelines, liquefied natural gas (LNG) plants, and hazardous liquid breakout tanks jurisdictional to PHMSA.

- The nominal accuracy of geospatial data in the NPMS is +/-500 feet. Therefore, the NPMS should never be used as a substitute for contacting a one-call center before excavating. Transportation Research Board (TRB) Project - *A Guide for Communicating Emergency Response Information for Natural Gas and Hazardous Liquids Pipelines* The objective of this research is to develop a guide for natural gas and hazardous liquid pipeline operators and emergency responders that (1) includes the appropriate emergency response content that should be provided to emergency responders; (2) recommends effective means of disseminating this guidance by pipeline operators to recipient emergency response organizations and by those emergency response organizations to sub-units; and (3) recommends strategies for implementing and exercising the emergency response plan.
- PHMSA issues advisory notices to inform affected pipeline operators and Federal and state pipeline safety personnel of matters that have the potential of becoming safety or environmental risks. PHMSA has issued several advisory notices pertaining to emergency management including:

  ADB-10-05

  Title: Pipeline Safety: Updating Facility Response Plans in Light of the Deepwater Horizon Oil Spill

  Summary: PHMSA issued an Advisory Bulletin to operators of hazardous liquid pipeline facilities required to prepare and submit an oil spill response plan under 49 CFR part 194. In light of the Deepwater Horizon oil spill in the Gulf of Mexico, which has resulted in the relocation of oil spill response resources to address the oil spill, PHMSA is reminding operators of their responsibilities to review and update their oil spill response plans and to comply with other emergency response requirements to ensure the necessary response to a worst case discharge from their pipeline facility.

  ADB-05-03

  Title: Pipeline Safety: Planning for Coordination of Emergency Response to Pipeline Emergencies

  Summary: This document alerted pipeline operators about the need to preplan for emergency response with utilities whose proximity to the pipeline may impact the response. Coordination with electric and other utilities may be critical in responding to a pipeline emergency. Preplanning would facilitate actions that may be needed for safety, such as removing sources of ignition or reducing the amount of combustible material.

  ADB-01-02

  Title: Pipeline Safety: Emergency Plans and Procedures for Responding to Multiple Gas Leaks and Migration of Gas into Buildings

  Summary: The Office of Pipeline Safety (OPS) issued this advisory to owners and operators of gas pipeline distribution systems. Owners and operators should review their emergency plans and procedures to determine whether the procedures prompt the appropriate actions for gas leaks caused by excavation damage near buildings, and whether the procedures adequately address the possibility of multiple leaks and the underground migration of gas into nearby buildings.

3. Response

- The 2012 Emergency Responders Guidebook (ERG) will include additional information in the pipeline transportation section in the white pages.

- PHMSA regulations require pipeline operators to develop and implement emergency response procedures, train their operating personnel on the procedures and verify that the training is effective.
- *Pipeline Emergencies* training program (see above).

4. Recovery

- PHMSA uses a data-driven approach to developing and refining pipeline safety programs. Incidents investigation after an event can provide critical information to preventing future accidents. PHMSA Stakeholder Communication web site contains the results of analysis of incident reports provided from pipeline incidents over the past 20 years.

Further Information

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