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

PHMSA Your Safety Our Mission

PHMSA OPS National Rule Making Update

TGA O&M Conference

June 29, 2016

San Marcos, TX

National Association of Pipeline Safety Representatives

RAILROAD COMMISSION OF TEXAS

U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration

To Protect People and the Environment From the Risks of Hazardous Materials Transportation

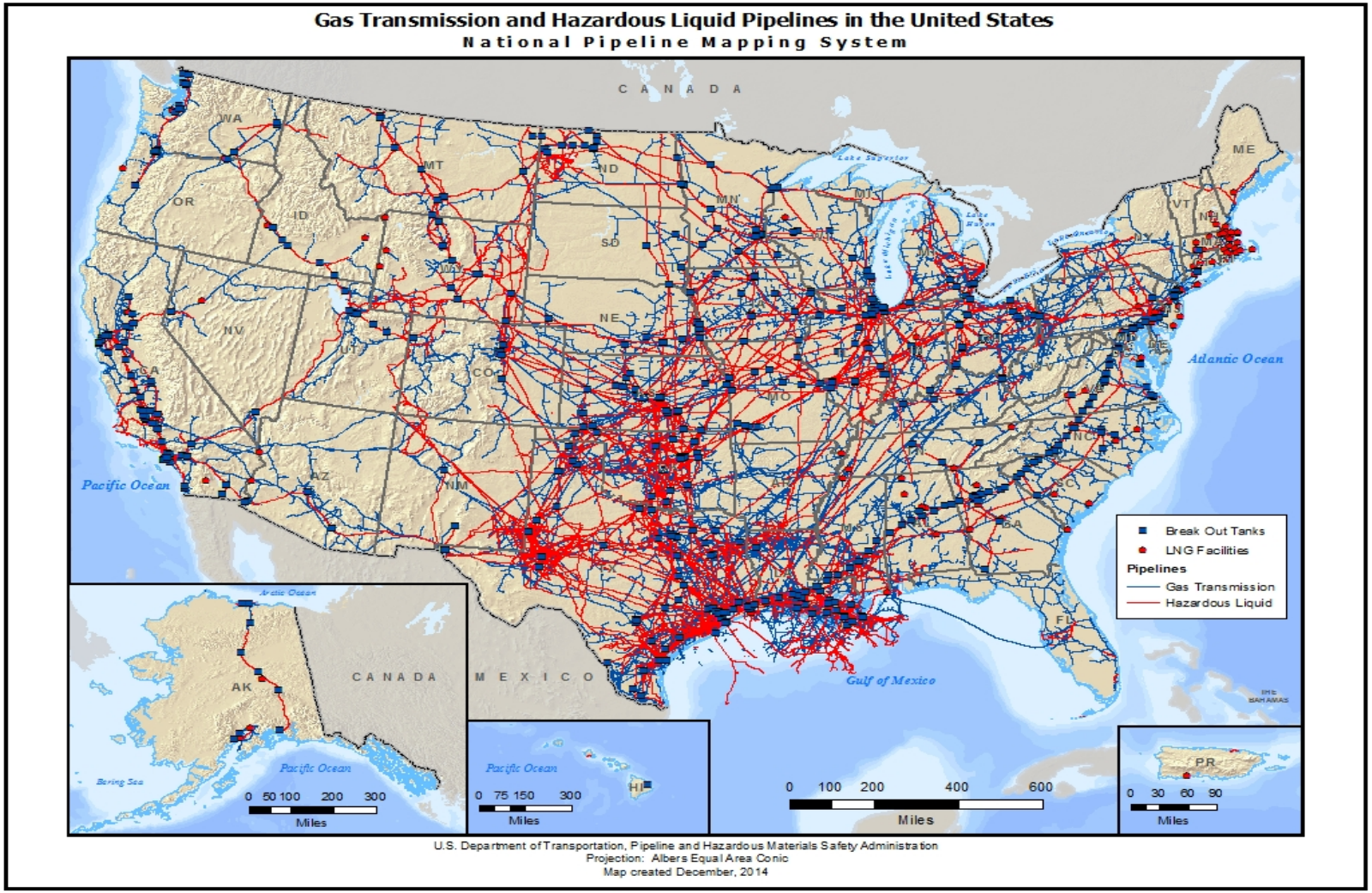
Mission and Vision

- **Our mission** is to protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives.
- **Our vision** is the most innovative transportation safety organization in the world.

What PHMSA OPS Regulates

System Type	Miles	% Miles	# Operators
Hazardous Liquid	199,334 7,677 Tanks	7%	456
Gas Transmission	301,810	11%	1,020
Gas Gathering	17,663	1%	367
Gas Distribution (Mains & Services)	2,168,599	81%	1,373
Total	2,687,406	100%	Some Operators have multiple System Types
Liquefied Natural Gas	115 Plants	205 Tanks	83

What PHMSA OPS Regulates



Some of PHMSA's Roles and Responsibilities

- Development and Implementation of Safety Regulations: 49 CFR Parts 190-199, including
  - Part 192: Transportation of Natural and Other Gas by Pipeline
  - Part 193: LNG Facilities: Federal Safety Standards
  - Part 195: Transportation of Hazardous Liquids by Pipeline
- Perform Comprehensive Inspections
- Monitor and Enforce Compliance
  - Require remedial actions
  - Assess civil penalties
  - Criminal referral

Underlying Principles

- Operator responsibility to understand and safely manage the risks (safety conditions) associated with their pipelines
- PHMSA's primary role is to establish minimum safety standards (regulations) and to verify that the operators perform to these standards
- PHMSA also strives to impact operator performance beyond mere compliance with the regulations
- Focus is on PERFORMANCE

Performance Based Regulations

- Historically, regulations have been prescriptive, providing tasks that must be completed to meet established, minimum safety requirements
- Performance based regulations (such as IM) provide a framework that an operator continuously improves to meet their unique operating environment and objectives

Performance Based Regulations

- The term “performance-based” refers to:
  - Standards that mandate outcomes and give operators flexibility in how to meet them; or
  - Requirements for operators to use management systems consisting of internal plans and practices for promoting safety and reducing risk.
- Prescription is added to performance based IM regulations as time goes by to address inadequacies identified in inspections and accident investigations

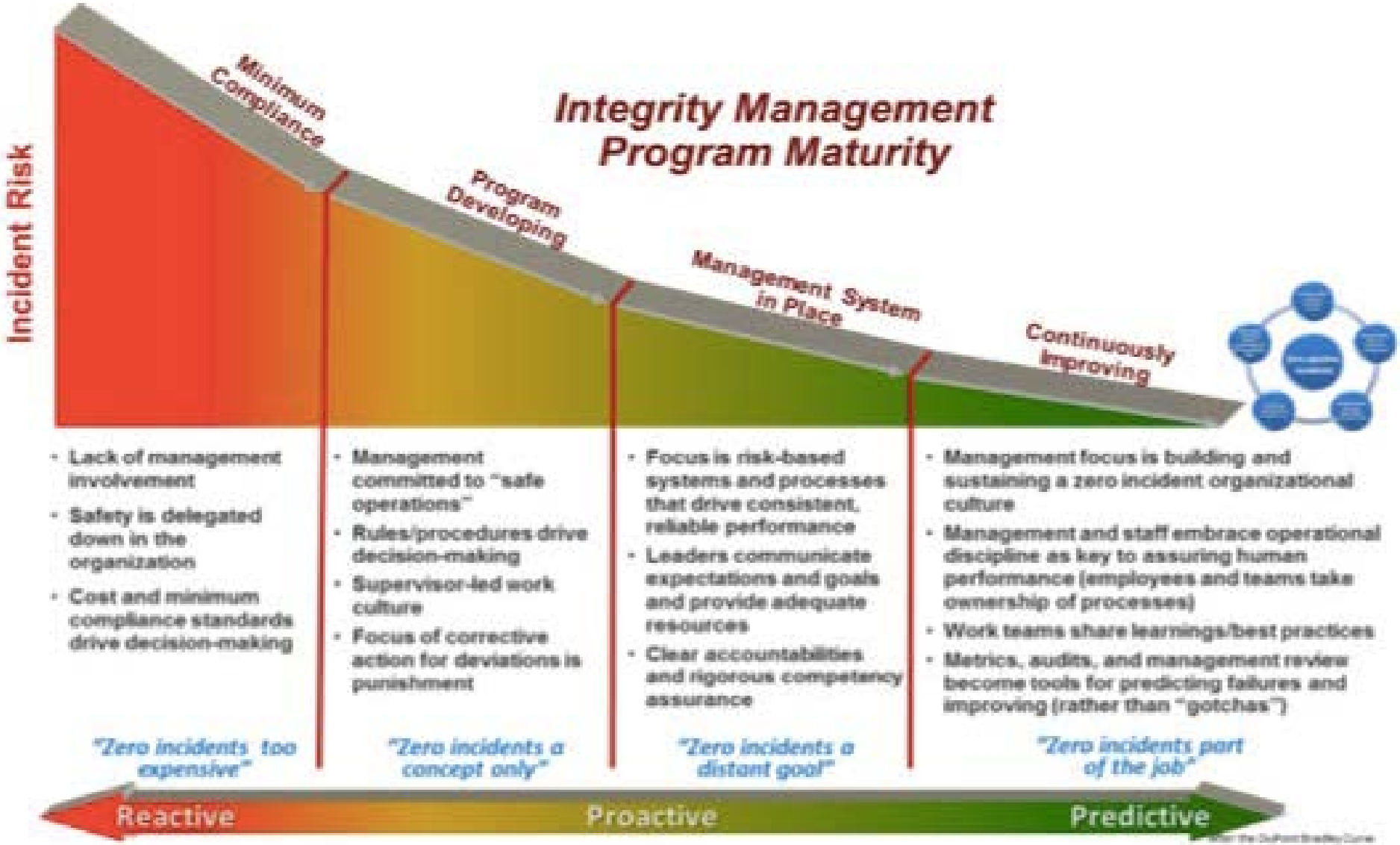
Risk Analysis Application in IM

- Integrity Management is a Performance based Risk Management Program
- Risk Models and Assessments are required to be used throughout the IMP
  - Baseline Assessment
  - Data Integration / Information Analysis
  - Preventive Measures Determinations
  - Mitigative Measures Determinations
  - Continuing Evaluation and Assessment

Implementation

- PHMSA has identified through inspections, failure investigations, and NTSB Recommendations that operators need additional guidance and directions on the requirements for using Risk Analysis in their IMPs.
- PHMSA has addressed these deficiencies by:
  - Issuing Advisory Bulletins
  - Updating Inspection Materials (Protocols and Inspection Assistant inspection question set)
  - Updating PHMSA Inspector Training Materials
  - Proposing New Regulations (Gas and HL IM NPRMs)

Assessing Maturity



NTSB and Others' Comments On Risk Methodologies

- **Risk evaluation methods must be sufficiently analytical to be predictive (NTSB Investigations and Safety Study)**
  - Threats on a particular line segment increasing or decreasing?
  - Consequence potential increasing?
  - Interactive threat potential becoming a major issue?
- Industry and PHMSA are in general agreement that risk models need to evolve in such a way as to be more investigative in nature

As summarized and discussed in past public forums and workshops on pipeline safety (*e.g.*, 2014 *Government/Industry Pipeline R&D Forum*)

Sufficiently Analytical to be Predictive

- Do Results reflect year-to-year changes in risk levels?
  - Operational, Environmental, Assessments
- Does the overall risk profile adequately match operational experience?
- Approaches may need to vary between respective types of threats (time dependent/independent)
- More complex does not necessarily mean better
  - Interactive threats may need more sophisticated modeling than threats evaluated individually

Connection to Decision Making

- **Risk evaluation results must have a connection to real-life decision making**
  - Point of risk evaluations is not to do a risk evaluation
  - Risk insights must be integrated into routine integrity-related decision making
  - Operators should be able to easily demonstrate how risk evaluation results influence work practices

Risk Modeling Meeting website
http://primis.phmsa.dot.gov/meetings/

PHMSA

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PHMSA Pipeline Risk Modeling Methodologies Public Workshop

PRESENTATION VIDEOS ARE AVAILABLE: HTTPS://WWW.YOUTUBE.COM/PLAYLIST?LIST=PL4WHDSUQ-UKK9O1MPHXFWGHL5A3ERG--F

Meeting Information	
Status	Completed
Starts	Sep 9, 2015 at 8:30 AM EDT
Ends	Sep 10, 2015 at 12:00 PM EDT
Location	Crystal City Marriott at Reagan National Airport
Virtual Information	Webcast Link: http://www.onlinevideoservice.com/clients/PHMSA/090915/ Q&A Responses: (pipelineforum @ dot.gov) email submissions; and Tweet (#phmsaRMM)
Purpose & Summary	On September 9-10, 2015, the Pipeline and Hazardous Materials Safety Administration (PHMSA), partnering with the National Association of Pipeline Safety Representatives (NAPSR), will hold a public workshop to discuss risk modeling methodologies of gas transmission and hazardous liquid pipelines and non-pipeline systems. Pipelines are the primary energy highways of the Nation that provide efficient means to transport the vast volumes of commodities on which we depend. Understanding the risk profile and underlying risk drivers for each pipeline system is a fundamental aspect of safe pipeline operations. This workshop will provide the pipeline industry, Federal and State regulators, interested members of the public, and other stakeholders an opportunity to share their knowledge and experience about risk modeling and practical approaches to improving pipeline risk models. It will focus on improving risk modeling approaches and techniques for pipeline and non-pipeline systems to advance pipeline risk models. Federal Registry Notification: https://federalregister.gov/a/2015-19929

Results

Additional Information

Contact: Vincent Holohan, Office of Pipeline Safety
202-366-1933 or by email at vincent.holohan @ dot.gov

Files

AGENDA

08/28/2015:
Risk_-_Agenda_-_Handout.pdf (87 KB)
[VIEW] [DOWNLOAD/SAVE...] [File #661]

PRESENTATION FILES

09/10/2015:
1-01_Alan_Mayberry-_PHMSA_-_Agenda_Overview_and_Day_1_Opening_-_PHMSA_Risk_Modeling_Workshop.pdf (220 KB)
[VIEW] [DOWNLOAD/SAVE...] [File #691]

09/10/2015:
1-02_Steve_Nanney_and_Ken_Lee-_PHMSA_-_Current_Regulatory_Requirements_for_Evaluations_of_Risk_-_PHMSA_Risk_Modeling_Workshop.pdf (882 KB)
[VIEW] [DOWNLOAD/SAVE...] [File #692]

09/10/2015:
1-03_Steve_Allen-_NAPSR_-_State_Regulatory_Perspective_-_PHMSA_Risk_Modeling_Workshop.pdf (139 KB)
[VIEW] [DOWNLOAD/SAVE...] [File #693]

Risk Modeling Work Group (RMWG)

- The PHMSA Pipeline Risk Modeling Work Group was formed as a follow up to the September 2015 - Pipeline Risk Modeling Methodologies Public Workshop
- The purpose of the group is to provide technical, integrity management and operational input to PHMSA to aid in the development of a pipeline system risk modeling technical guidance document
- http://primis.phmsa.dot.gov/rmwg/index.htm

Risk Modeling Work Group

- PHMSA is seeking a wide range of input and consensus as part of the development of this technical guidance, both from within, and from applicable stakeholders
- There are approximately 30 members from the regulatory, operator, and interested party communities
- This work group provides a forum to obtain the combined perspective of industry, regulators, public, and risk services providers, and it will also provide a mechanism for eventual public input/comment

RMWG Mission Statement

- The mission of the Risk Modeling Work Group (RMWG) is:
  - Characterize the state of the art of pipeline risk modeling for gas transmission and liquid pipelines,
  - Identify and, if necessary in specific areas, develop a range of state-of-the-art methods and tools capable of addressing the spectrum of pipeline risk management applications, and
  - Provide recommendations to PHMSA regarding the use of these methods, tools, and data requirements

Risk Modeling Work Group

- PHMSA has identified a need to provide technical guidance on
  - Methods, and tools to be used in pipeline risk modeling, and
  - Application of these methods and tools in pipeline risk management.
  - PHMSA's technical guidance needs to be based on the state of the art of pipeline risk modeling, as reflected in the views of the technically informed community of practice

RMWG Guidance Document

Following several RMWG meetings, a Guidance Document will be published in the Summer, 2017, covering the following:

- Regulatory Requirements for Risk Analysis Performance
- How Risk Modeling Fits into Overall Pipeline Risk Management
- Likelihood Modeling
- Consequence Approach Selection
- Facility Risk Approach Selection
- Risk Modeling Data Needs

Model Types to be Covered

Likelihood Models

- Relative Assessment (Index) Models
- Scenario-Based Models
- Semi-Quantitative Models
- Quantitative Models
- Probabilistic Models
- Facility Risk Models

Consequence Models

- Gas Transmission Consequence Models
- Hazardous Liquid Consequence Models
  - Non-HVLs
  - HVLs

Facility Risk Models

Likelihood Topics to be Covered

- Pipeline Threats
- Single Approach or Threat-Specific Approach
- Selection of Approach
- Human Performance Modeling
- Critical Likelihood Parameters
- Interactive Threat Modeling
- Threshold for Threat Consideration
- Validation of Results
- Application to Identification of Preventive Measures

Consequence Topics to be Covered

- Selection of Approach
- Identification of Receptors
- Emergency Response
- Critical Consequence Parameters
- Validation of Results
- Application to Identification of Mitigative Measures

Facility Topics to be Covered

- Selection of Approach
  - Hazard Identification, Bowtie Analysis, Scenarios, etc.
- Comparison with Line Pipe Risk
- Application to Preventive Measures and Mitigative Measures

Data Need Topics to be Covered

- Threat-Specific Data
- Consequence-Specific Data
- Data Validation
- Available Industry Data
- Available Government Data
- Available International Data
- Related NTSB Recommendations

RMWG Public Meeting in 2017

- PHMSA is planning on hosting a Public Meeting in the Summer, 2017 to present the findings of the RMWG efforts
- The Public Meeting will allow for the combined perspectives of industry, regulators, public, and risk services providers to be considered prior to publication of the Guidance Document

PHMSA Technical Advisory Committee Meeting June, 2016

- http://www.phmsa.dot.gov/pipeline/june1-to-june3-2016-gas-liquid-and-joint-committee-meetings
- Key Gas Topics from Joint meeting included:
  - Plastic Pipe Proposed Rule
  - Operator Qualification Proposed Rule
  - Gas Transmission and Gas Gathering Proposed Rule

June 1-3, 2016 - Gas, Liquid and Joint Committee Meetings

Pipeline Safety: Meeting of the Gas Pipeline Safety Advisory Committee and the Liquid Pipeline Safety Advisory Committee

Register here: https://primis.phmsa.dot.gov/meetings/MtgHome.mtg?mtg=113

Meeting Details and Agenda

The Pipeline and Hazardous Materials Safety Administration will hold meetings of the GPAC and LPAC. The GPAC will be considering and voting on the notice of proposed rulemaking (NPRM) titled: Pipeline Safety: Plastic Pipe Rule (80 FR 29263; May 21, 2015), and in a joint meeting of the GPAC and LPAC, members will consider and vote on the NPRM titled: Pipeline Safety: Operator Qualification, Cost Recovery, Accident and Incident Notification, and Other Pipeline Safety Proposed Changes (80 FR 39916; July 10, 2015). Other topics of discussion will include the regulatory agenda and agency and stakeholder priorities. A briefing on the NPRM, titled: Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines (81 FR 20722; April 8, 2016), will also be presented to both committees and the public.

The agenda will be published to include committee discussions and votes on the two rules mentioned above. PHMSA staff will also brief the committees on several regulatory and policy initiatives.

DATES: The committees will meet as follows:

- Wednesday, June 1, 2016, from 1:00 p.m. to 5:00 p.m., ET – GPAC only

Related Downloads

- Final Agenda - June 1-3, 2016 - Gas and Liquid Advisory Committee Meeting
- Member Portfolio - rosters, charters, NPRMs, RIAs, comment summaries and more
- Plastic Pipe Presentation
- Operator Qualification Presentation
- SMS Briefing
- Public Outreach - Bridging Divide
- NAS PBSR Study
- Gas Transmission NPRM

Plastic Pipe Proposed Rule

- Tracking and Traceability
- B. Design Factor for PE
- C. Expanded use of PA11
- D. Incorporation of PA12
- E. Risers
- F. Fittings
- G. Plastic Pipe Installation
- H. Repairs
- I. General Provisions

Operator Qualification Proposed Rule

- Specifying an operator's accident and incident reporting time to within one hour.
- Setting up a cost recovery fee structure for design review of new gas and hazardous liquid pipelines.
- Expanding the existing OQ scope to cover new construction and previously excluded operation and maintenance tasks, addressing NTSB recommendation, and extending the requirements to operators of Type A gathering lines in Class 2 locations and Type B onshore gas gathering lines.
- Providing a renewal procedure for expiring special permits.
- Excluding farm taps from the DIMP requirements.
- Requiring pipeline operators to report to PHMSA permanent reversal of flow.

Summary of Proposed "Gas Rule"

PHMSA is proposing rule changes in 16 areas in this NPRM published on April 8, 2016

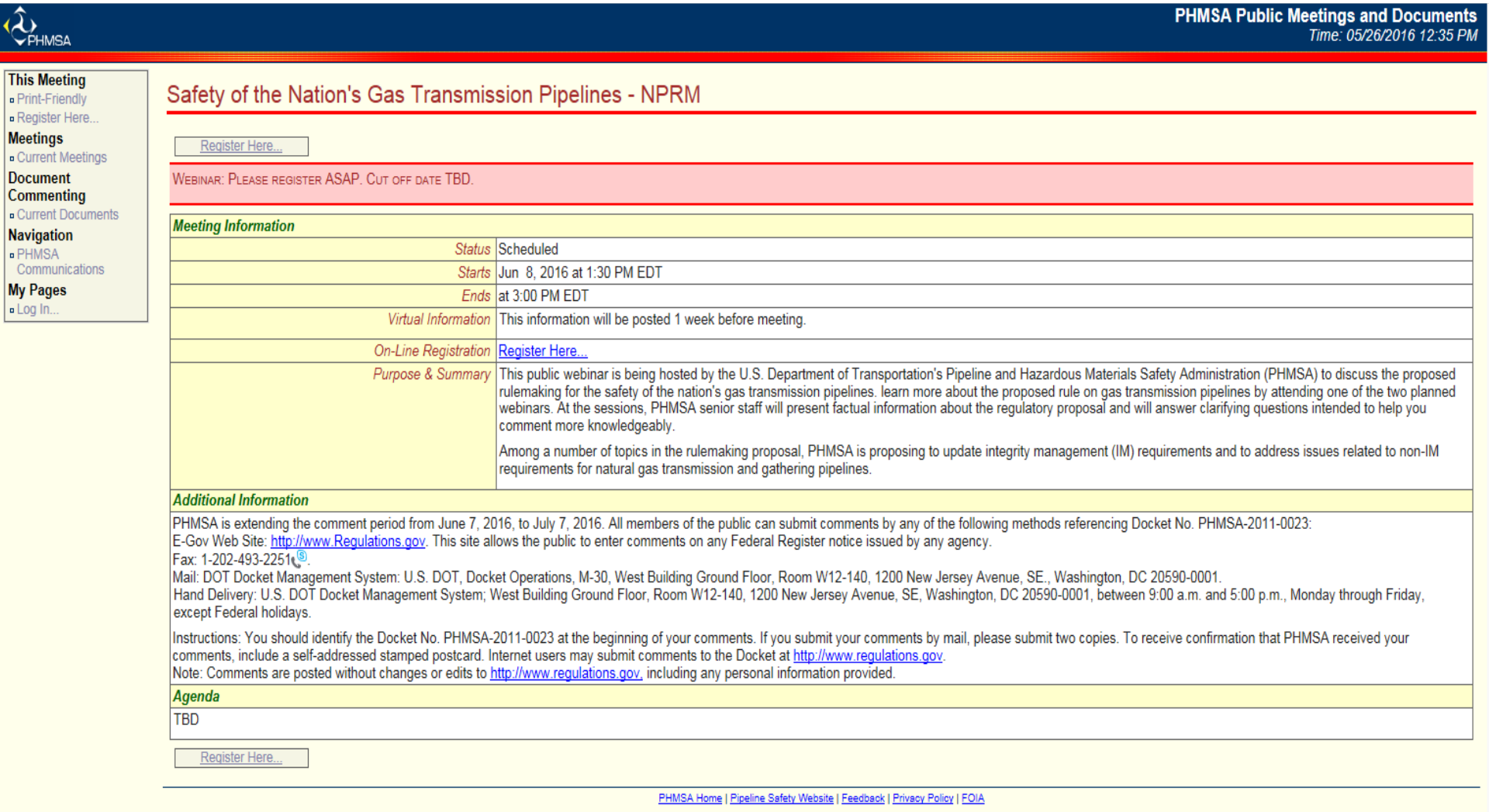
1. Require Assessments for Non-HCA's
2. Strengthen repair criteria for HCA and Non-HCA
3. Strengthen requirements for Assessment Methods
4. Clarify requirements for validating & integrating pipeline data
5. Clarify functional requirements for risk assessments
6. Clarify requirement to apply knowledge gained through IM
7. Strengthen corrosion control requirements
8. Add requirements for selected P&M measures in HCAs to address internal and external corrosion

Summary of Proposed "Gas Rule"

9. Management of change
10. Require pipeline inspection following extreme external events
11. Include 6 month grace period (w/notice) to 7 calendar year reassessment interval (Act § 5(e))
12. Require reporting of MAOP exceedance (Act § 23)
13. Incorporate provisions to address seismicity (Act § 29)
14. Add requirement for safety features on launchers and receivers
15. Gathering lines- Require reporting for all & some regulatory requirements
16. Grandfather clause/Inadequate records - (IVP)

Gas IM NPRM Webinar – Be Informed

- Materials from the June 8th Webinar are posted at http://primis.phmsa.dot.gov/meetings/MtgHome.mtg?mtg=117



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Safety of the Nation's Gas Transmission Pipelines - NPRM

Register Here...

WEBINAR: PLEASE REGISTER ASAP. CUT OFF DATE TBD.

Meeting Information	
Status	Scheduled
Starts	Jun 8, 2016 at 1:30 PM EDT
Ends	at 3:00 PM EDT
Virtual Information	This information will be posted 1 week before meeting.
On-Line Registration	Register Here...
Purpose & Summary	This public webinar is being hosted by the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) to discuss the proposed rulemaking for the safety of the nation's gas transmission pipelines. learn more about the proposed rule on gas transmission pipelines by attending one of the two planned webinars. At the sessions, PHMSA senior staff will present factual information about the regulatory proposal and will answer clarifying questions intended to help you comment more knowledgeably. Among a number of topics in the rulemaking proposal, PHMSA is proposing to update integrity management (IM) requirements and to address issues related to non-IM requirements for natural gas transmission and gathering pipelines.

Additional Information

PHMSA is extending the comment period from June 7, 2016, to July 7, 2016. All members of the public can submit comments by any of the following methods referencing Docket No. PHMSA-2011-0023:
E-Gov Web Site: http://www.Regulations.gov. This site allows the public to enter comments on any Federal Register notice issued by any agency.
Fax: 1-202-493-2251.
Mail: DOT Docket Management System: U.S. DOT, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001.
Hand Delivery: U.S. DOT Docket Management System; West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590-0001, between 9:00 a.m. and 5:00 p.m., Monday through Friday, except Federal holidays.

Instructions: You should identify the Docket No. PHMSA-2011-0023 at the beginning of your comments. If you submit your comments by mail, please submit two copies. To receive confirmation that PHMSA received your comments, include a self-addressed stamped postcard. Internet users may submit comments to the Docket at http://www.regulations.gov.
Note: Comments are posted without changes or edits to http://www.regulations.gov, including any personal information provided.

Agenda

TBD

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Safety Administration

Rupture Detection and Mitigation Rule

Projected Date for NPRM Publication-XX/XX/2016

- NPRM for Parts 192 and 195 is under development to require Valve installation and Minimum Rupture Detection Stan
- Overall intent is that rupture detection metrics will be integrated with ASV and RCV placement with the objective of improving overall incident response
- Propose installation of automatic shutoff valves, remote controlled valves, or equivalent technology and establish performance based meaningful metrics for rupture detection for gas and liquid transmission pipelines

Workshop on U/G Natural Gas Storage

- Solicit input and obtain background information concerning U/G natural gas storage safety.
- The public workshop will be held on July 14, 2016 in Broomfield, Colorado - http://primis.phmsa.dot.gov/meetings/MtgHome.mtg?mtg=115
- Currently, throughout the US, approximately 400 interstate and intrastate underground natural gas storage facilities are operating with more than four trillion cubic feet of natural gas working capacity
- API RP 1170 & 1171 are standards in place that cover design and mechanical integrity topics

Questions?

Thank you for your participation in Pipeline Safety