

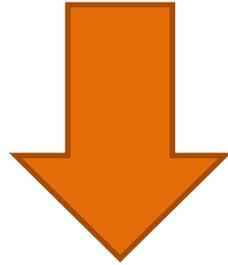
**U.S. DOT**  
**Pipeline and Hazardous Materials**  
**Safety Administration**

**PHMSA Rulemaking**  
**Update and PSMS**

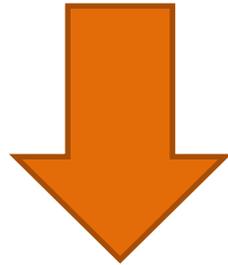
**2016 Michigan PSC Safety Seminar**



Gas NPRMs can be found here



**FEDERAL REGISTER**  
The Daily Journal of the United States Government



or linked on the PHMSA website

# PHMSA Website Locations for Regulatory Status

Interpretations (Search by date or regulation)

<http://www.phmsa.dot.gov/pipeline/regs/interps>

Special Permits and State Waivers

<http://www.phmsa.dot.gov/pipeline/regs/special-permits>

Rulemakings (tabular with links to detail)

<http://www.phmsa.dot.gov/pipeline/regs/rulemaking>

Advisory Bulletins (tabular with links to detail)

<http://www.phmsa.dot.gov/pipeline/regs/advisory-bulletin>

And more ....



# 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

### Related Downloads

**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:

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

- [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](#)

# Current Rulemakings in Process

## Safety of Gas Transmission and Gathering Lines (NPRM stage)

- ❑ NPRM published 4/8/2016
  - ❑ Comment period closed 7/7/2016
- ❑ Major Topics under consideration:
  - Expansion of assessments beyond HCA's – MCA's
  - Repair criteria for both HCA and non-HCA areas
  - Assessment methods
  - Corrosion control
  - Gas gathering; additional reporting and regulations
  - Assessment methods for GT Lines
  - Grandfathered pipe/pipe records/legacy - IVP



# Gas IM NPRM Webinar – Be Informed

- Materials from the June 8<sup>th</sup> 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

<i>Status</i>	Scheduled
<i>Starts</i>	Jun 8, 2016 at 1:30 PM EDT
<i>Ends</i>	at 3:00 PM EDT
<i>Virtual Information</i>	This information will be posted 1 week before meeting.
<i>On-Line Registration</i>	<a href="#">Register Here...</a>
<i>Purpose &amp; Summary</i>	<p>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.</p> <p>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.</p>

### 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

[Register Here...](#)

# Current Rulemakings in Process

## EFV Expansion beyond Single Family Residences (NPRM stage)

- ❑ NPRM published 7/15/2015; Comment period ended 9/14/2015
- ❑ GPAC meeting 12/17/15
- ❑ *Major Topics*
  - *Rule proposes to require EFVs for:*
    - *branched service lines serving more than one single family residence*
    - *multi-family residential dwellings*
    - *commercial buildings*
  - Final rule anticipated in the fall of 2016



# Current Rulemakings in Process

## Operator Qualification, Cost Recovery and Other Pipeline Safety Proposed Changes (NPRM stage)

- ❑ NPRM published 7/10/15; comment period ended 9/8/2015
- ❑ This rule will address reauthorization issues related to:
  - Operator Qualification for new construction
  - Incident Reporting
  - Cost Recovery
  - Assessment methods for HL lines (NACE petition)
  - Renewal process for special permits
  - API 1104 and in-service welding
- PAC meeting June 1-3, 2016
- Final rule anticipated in the fall of 2016.



# Current Rulemakings in Process

## Plastic Pipe (NPRM stage)

- ❑ NPRM published May 21, 2015; Comment period ended 7/31/2015
- ❑ Address the following plastic pipe topics:
  - Authorized use of PA12
  - AGA petition to raise D.F. from 0.32 to 0.40 for PE pipe
  - Tracking and traceability
  - Miscellaneous revisions for PE and PA11 pipelines
  - Additional provisions for fittings used on plastic pipe
- GPAC meeting for June 1-3, 2016
- Final rule anticipated in the fall of 2016



# Current Rulemakings in Process

## Rupture Detection and Valve Rule (NPRM stage)

- ❑ This rule would establish and define rupture detection and response time metrics including the integration of Automatic Shutoff Valves (ASV) and Remote Control Valve (RCV) placement as necessary, with the objective of improving overall incident response
- ❑ This rule responds to requirements of the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (The Act):
  - Section 4: ASV/RCV or equivalent technology be installed on newly constructed or entirely replaced natural gas and hazardous liquid transmission pipelines 2 years after the act was issued
  - Section 8: Require operators of hazardous liquid pipeline facilities to use leak detection systems and establish standards for their use.
  - The Act also mandated two studies of leak detection and response, one by the GAO, and one by PHMSA.
- ❑ Also - Two NTSB Recommendations related to valves and leak detection



# Rupture Detection and Mitigation Rule

Projected Date for NPRM Publication-Fall 2016

- Require Valve installation and Minimum Rupture Detection Standards
- **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



# Current Rulemakings in Process

## Underground Storage Facilities for Natural Gas (NPRM/IFR stage)

- ❑ This rule would require operators of underground storage facilities for natural gas to comply with minimum safety standards, including compliance with:
  - ❑ API RP 1171, Functional Integrity of Natural Gas Storage in Depleted Hydrocarbon Reservoirs and Aquifer Reservoirs
  - ❑ API RP 1170, Design and Operation of Solution-mined Salt Caverns Used for Natural Gas Storage
  - ❑ Annual and Incident reporting requirements
- ❑ PHMSA is considering adopting the non-mandatory provisions of the RPs in a manner that would make them mandatory, except that operators would be permitted to deviate from the RPs if they provide justification.



# Workshop on U/G Natural Gas Storage

- Solicit input and obtain background information concerning U/G natural gas storage safety.
- The public workshop 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



# Current Rulemakings in Process

## **Inflation Adjustment of Maximum Civil Penalties (IFR Stage)**

- Interim Final Rule Published 6/30/2016
- Revise references in its regulations to the maximum civil penalties for violations of the Federal Pipeline Safety Laws, or any PHMSA regulation or order issued thereunder.
- Under the “Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015,” which further amended the “Federal Civil Penalties Inflation Adjustment Act of 1990,” federal agencies are required to adjust their civil monetary penalties effective August 1, 2016, and then annually thereafter, to account for changes in inflation.
- PHMSA found good cause to amend the regulation related to civil penalties without notice and opportunity for public comment.



# Current Rulemakings in Process

## Standards Update (NPRM stage)

### □ Major Topics:

- Addresses the set of IBR standards throughout PHMSA's part 192, Part 193 and Part 195 code with updated revisions of standards from all standard organization bodies.
- This NPRM would impact approx. 20 of the 60+ standards that we currently IBR.
- Per recent statute (Section 24, revised) all IBR standards pertaining to PSR must be available for free to the public. (Most SDOs comply)
  - ANSI IBR portal – [ibr.ansi.org](http://ibr.ansi.org)
- Miscellaneous amendments to PSR
  - **GPTC petitions**
  - Agency initiative



# Current Rulemakings in Process

## State Certification (NPRM stage)

- ❑ Rulemaking would amend 49 CFR Part 198 by incorporating into PHMSA's regulations existing statutory procedures in the Federal pipeline safety laws regarding the certification of State authorities to regulate intrastate gas and hazardous liquid pipelines
- ❑ Address the process by which PHMSA and State authorities may enter into interstate-agent and other agreements for State authorities to assist PHMSA in the regulation and inspection of both interstate and intrastate pipelines.
- ❑ The proposed rule also establishes more formal procedures for suspending, modifying, or rejecting both the certification of State authorities to regulate intrastate pipelines and for terminating interstate-agent and other agreements between PHMSA



# Current Rulemakings in Process

## **PIIPES ACT of 2016**

- ❑ Signed by the President on June 22, 2016
- ❑ Contains a number of mandates - those related to rulemakings are:
  - Emergency Orders
  - Underground Storage
  - LNG – siting of small scale
  - Changes in HL HCA definition
  - 12 month assessments of certain HL lines
  - Reporting requirement for unfinished mandates



# Report on DOT Significant Rulemakings

- <https://www.transportation.gov/regulations/report-on-significant-rulemakings>
- The Significant Rulemakings Report provides a summary and the status for all significant rulemakings that DOT currently has pending or has issued recently.



# Final Rules



# Damage Prevention Final Rule

## Pipeline Damage Prevention Programs

- Effective January 1, 2016
- Affects 49 CFR Parts 196 and 198
  - Sets criteria for State damage prevention laws
  - If States can't or don't meet criteria PHMSA can take over jurisdiction
  - Exceptions are possible, however they must be approved and justified



# Damage Prevention Final Rule

*“For the reasons discussed above, PHMSA is not considering alternatives 1 and 3. Under alternative 2, PHMSA will enforce a minimum Federal safety requirement against any excavator who violates applicable damage prevention requirements in a State with an excavation damage prevention enforcement program determined to be inadequate.”*



# Advisory Bulletins



# ADB-2016-05

- **Subject: Clarification of Terms Relating to Pipeline Operational Status**
- **PHMSA regulations do not recognize an “idle” status for a hazardous liquid or gas pipelines. The regulations consider pipelines to be either active and fully subject to all parts of the safety regulations or abandoned.**



# ADB-2016-05

- The process and requirements for pipeline abandonment are captured in §§ 192.727 and 195.402(c)(10) for gas and hazardous liquid pipelines, respectively. Pipelines abandoned after the effective date of the regulations must comply with requirements to purge all combustibles and seal any facilities left in place.
- The last owner or operator of abandoned offshore facilities and abandoned onshore facilities that cross over, under, or through commercially navigable waterways must file a report with PHMSA.
- PHMSA regulations define the term “abandoned” to mean permanently removed from service.



# ADB–2016–04

- **Subject - Ineffective Protection, Detection, and Mitigation of Corrosion Resulting From Insulated Coatings on Buried Pipelines**
- **PHMSA' failure investigation of the Plains Pipeline May 19, 2015, accident in Santa Barbara, CA**
- **Operators are reminded to review their pipeline operations to ensure that pipeline segments that are both buried and insulated have effective coating and corrosion-control systems to protect against cathodic protection shielding, conduct in-line inspections for all threats, and ensure in-line inspection tool findings are accurate, verified, and conducted for all pipeline threats.**



# ADB–2016–04

- The need for coatings and CP systems to be designed, installed, and maintained so as not to foster an environment of shielding and moisture that can lead to excessive external corrosion growth rates and pipe steel cracking such as stress corrosion cracking
- Coatings for buried, insulated pipelines that may result in cathodic protection “shielding” yet still comply with 49 CFR Part 192, Subpart I or 49 CFR Part 195, Subpart H. Inadequate corrosion prevention may be addressed through any one or more methods, or a combination of methods described in ADB–2016–04



# ADB–2016–04

- Employ ILI data analysis techniques to account for the potential growth of Corrosion Under Insulation, including interaction criteria for anomaly assessment
- ILI data, subsequent analysis of the data, and pipeline excavations should:
  - Confirm the accuracy of the ILI data to characterize the extent and depth of the external corrosion and ILI tolerances and unity charts
  - Follow the ILI guidelines of API Standard 1163
  - Use additional or more frequent reassessment intervals and confirmations
  - Assess and mitigate operational and environmental conditions in shielded and insulated coatings that lead to excessive corrosion growth rates, pipe steel cracking, and all other threats.



# ADB-2016-03

- **Owners and Operators of Petroleum Gas and Natural Gas Facilities in Areas Subject to Heavy Snowfall or Abnormally Icy Weather**
- **Subject: Dangers of Abnormal Snow and Ice Build-up on Gas Distribution Systems**
- **To remind owners and operators of the need to (1) monitor the potential impact of excessive snow and ice on these facilities; and (2) inform the public about possible hazards from snow and ice accumulation on regulators and other pipeline facilities**



# ADB-2016-03

- Notify customers and other entities of the need for caution associated with excessive accumulation and removal of snow and ice
- Pay attention to snow and ice related situations that may cause operational problems for pressure control and other equipment
- Monitor the accumulation of moisture in equipment and snow or ice blocking regulator or relief valve vents which could prevent regulators and relief valves from functioning properly



# ADB-2016-03

- The piping on service regulator sets is susceptible to damage that could result in failure if caution is not exercised in cleaning snow from around the equipment
- Remind the public to contact the gas company or designated emergency response officials if there is an odor of gas present or if gas appliances are not functioning properly



# ADB–2016–02

- **Subject: To Owners and Operators of Underground Pipeline and Storage Facilities regarding the Safe Operation of Underground Storage Facilities for Natural Gas**
- **Operators of underground storage facilities used for the storage of natural gas, as defined in 49 CFR Part 192, should review their O,M & ER activities to ensure the integrity of underground storage facilities are properly maintained**



# ADB–2016–02

- In addition, operator's O&M processes and procedures should be reviewed and updated at least annually, unless operational inspections for integrity warrant shorter review periods.
- O&M processes and procedures should include data collection and integration, risk assessments, monitoring, operational limits, mitigation measures, and record keeping for any underground storage facility threat that could impact public safety, operating personnel, or the environment due to leakage, failure, or abnormal operating conditions whether above ground or underground.



# ADB–2016–01

- **Potential for Damage to Pipeline Facilities Caused by Severe Flooding.**
- **Similar to ADB-2015-01 as these events continue to occur – titled “Potential for Damage to Pipeline Facilities Caused by Flooding, River Scour, and River Channel Migration”**
- **Several ADBs on this topic, and please review them all if applicable to your operations**



# ADB 2016-01

## Events referenced include:

- July 1, 2011, ExxonMobil Pipeline Company experienced a pipeline failure near Laurel, Montana 63,000 gallons of crude oil spilled into the Yellowstone River
- July 15, 2011, NuStar Pipeline Operating Partnership, L.P. reported a 4,200 gallon (100 barrels) anhydrous ammonia spill in the Missouri River in Nebraska
- August 13, 2011, Enterprise Products Operating, LLC discovered a release of 28,350 gallons (675 barrels) of natural gasoline in the Missouri River in Iowa
- January 17, 2015, a breach in the Bridger Pipeline Company's Poplar System resulted in another spill into the Yellowstone River near the town of Glendive, Montana, releasing an estimated 28,434 gallons of crude oil into the river and impacting local water supplies



# ADB 2016-01

- ADB 2016-01 reiterates those actions that an operator should take prior to, during, and following abnormal events.
- As shown in these events, river bottom scour and channel migration may occur due to seasonal flooding, increased stream velocities, and manmade and natural river bank restrictions.
- Additionally, the safety of valves, regulators, relief sets, pressure sensors, and other facilities normally above ground or above water can be jeopardized when covered by water



# §192.613(a)

- Each operator shall have a procedure for continuing surveillance of its facilities to determine and take appropriate action concerning changes in class location, failures, leakage history, corrosion, substantial changes in cathodic protection requirements, and other unusual operating and maintenance conditions.



# §192.613(b)

- (b) If a segment of pipeline is determined to be in unsatisfactory condition but no immediate hazard exists, the operator shall initiate a program to recondition or phase out the segment involved, or, if the segment cannot be reconditioned or phased out, reduce the maximum allowable operating pressure in accordance with §192.619(a) and (b).



# PHMSA Update



# 2016: What is happening

**Rulemaking action continues**

**Covering all Congressional mandates / NTSB recommendations**

**Significant policy development underway:**

**Integrity Verification Process for HL pipelines  
LNG; small scale applications to fuel transportation**

**Reauthorization begins**

**Recruiting, developing and retaining people**



# Rulemaking

- Excavation Damage Prevention **(Final Rule Complete)**
- Miscellaneous Rulemaking **(Final Rule Complete)**
- EFV Expansion beyond Single Family Residences **(FR)**
- Safety of On-Shore Hazardous Liquid Pipelines **(FR)**
- Underground Storage Facilities for Natural Gas **(FR)**
- Operator Qualification, Cost Recovery and Other Pipeline Safety Proposed Changes **(NPRM)**
- Plastic Pipe **(NPRM)**
- Safety of Gas Transmission and Gathering Lines **(NPRM)**
- Rupture Detection and Valve Rule **(NPRM)**



# Other Regulatory Developments

- **NPMS Information Collection**
- **Integrity Verification Process for Hazardous Liquids Pipelines**
- **Advisory Bulletins:**
  - **Reversals, Product Changes, Conversions**
  - **Use of metrics in measuring IMP effectiveness**
  - **Construction Notification**
  - **Hurricane Preparation and Damage**
  - **More to come from NTSB Gas IM Safety Study**



# Safety Posture Initiative



# PHMSA Safety Posture

- **PHMSA's mission is to protect people and the environment from the risks of hazardous materials transportation. Safety is PHMSA's number one priority.**
- **The Office of the Chief Safety Officer (CSO) has initiated the PHMSA Safety Posture Initiative that supports DOT's strategic priorities, and builds upon DOT's legacy of safety.**
- **The CSO serves as the primary advocate for safety within PHMSA and is the safety conscience of the agency.**
  - **Establishes and reviews PHMSA-wide safety and security policies,**
  - **Evaluates risk and agency performance,**
  - **Coordinates and harmonizes PHMSA's emergency planning and incident response, and**
  - **Fosters continuous improvement in PHMSA's safety programs and the safety of PHMSA's employees**



# Safety Initiative Goals

**Advance priority rulemakings, including:**

- **Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines (NPRM)**
- **Pipeline Safety: Excess Flow Valves in Applications Other than Single-Family Residences in Gas Distribution Systems (Final Rule)**
- **Pipeline Safety: Enforcement of State Damage Prevention Laws (Final Rule)**
- **Underground Storage Facilities for Natural Gas (Interim Final Rule)**
- **Rupture Detection and Valve Rule (NPRM)**



# Safety Initiative Goals

- **Continue to pursue and foster non-regulatory approaches to effect continuous improvement in safety, such as Safety Management Systems, Safety Culture, and to move beyond mere compliance with regulations by adopting and institutionalizing voluntary, meaningful, comprehensive programs that will advance safety.**
- **Advance PHMSA's pipeline damage prevention program.**
- **Plan for wider adoption and shifting uses and transportation of natural gas: liquefaction, transport, distribution, export, intermodal connections**



# Safety Initiative Goals

- **Address aging pipeline infrastructure and rapid modernization and expansion (e.g., to include new construction; replacement).**
- **Continue to address pipeline operations and management (e.g., continuous improvement of integrity management; information collection on existing pipeline systems; and other operational changes such as flow reversals and conversions).**



# Safety Culture



# Moving from Compliance to Choice

- **Our world must move from a “checkbox” mentality to understanding the health of our pipeline systems by analyzing and understanding data and information and promptly acting to reduce risks**
- **Safety Culture provides a platform from which to drive continuous improvement in the safe operation and integrity of a pipeline system.**
- **Continuous improvement is a requirement to meet the minimum safety regulations for integrity management programs.**
- **Prescription may need to be added to performance based IM regulations to address inadequacies identified in inspections and accidents.**



# Underlying Principles

- **The Pipeline Operator Alone is Responsible for Safe Operations:**
  - **It is the responsibility of pipeline operators to understand and manage the risks associated with their pipelines.**
- **The Regulator Can Influence Operator Performance:**
  - **PHMSA's primary role is to establish minimum safety standards and inspect to them**
- **Regulators strive to impact operator performance beyond mere compliance with the regulations**
- **Safety culture is a critical piece of the foundation for continually improving industry's performance**
- **Safety culture is a mechanism that support compliance with the continuous improvement requirements of IM regulations**



# Assessing Maturity



# Safety Culture

**Safety Culture is described as the shared values, actions, and behaviors that demonstrate a commitment to safety over competing goals and demands. The following are critical elements of a strong safety culture:**

- 1. Leadership is Clearly Committed to Safety;**
- 2. There is Open and Effective Communication Across the Organization;**
- 3. Employees Feel Personally Responsible for Safety;**
- 4. The Organization Practices Continuous Learning;**
- 5. There is a Safety Conscious Work Environment;**
- 6. Reporting Systems are Clearly Defined and Non-Punitive;**
- 7. Decisions Demonstrate that Safety is Prioritized Over Competing Demands;**
- 8. Mutual Trust is Fostered between Employees and the Organization;**
- 9. The Organization is Fair and Consistent in Responding to Safety Concerns;**
- 10. Training and Resources are Available to Support Safety**



# Challenges for Industry

- **Develop more rigorous quantitative risk analyses including uncertainties and gaps in data**
- **Adopt more investigative approach to risk analysis**
- **Use analysis to find problems, not just display what you already know**
- **Implement robust approach(es) for Risk Reduction Measures**
- **Implement technically sound risk-based criteria**
- **Replacement of vintage pipe (pre-1970)**



# Recent Events Illustrate Weaknesses in Managing Risk

- **Effective risk analysis might have prevented or mitigated recent high consequence accidents**
- **Weaknesses identified include inadequate:**
  - **Knowledge of pipeline risk characteristics including recordkeeping**
  - **Processes to analyze interactive threats**
  - **Evaluation of ways to reduce or mitigate consequences**
  - **Process to select P&M measures**
  - **Lack of objective, systematic approach**



# Pipeline Safety Management Systems



# Safety Management Systems

- **API RP 1173 embodies the Best of a Dozen Other Approaches from Other High Hazard Industries**
- **The goal of this document is to provide pipeline operators with a framework to review an existing PSMS or develop and implement a new PSMS.**
- **The document is designed to provide a framework that allows for flexibility to meet an operator's unique operating environment and scalable from small to large systems**



# Safety Management Systems

- **Based on “Plan – Do - Check – Act” Continuous Improvement Model**
- **SMS adds Dimensions to Integrity Management**
  - **Safety Culture Elements**
  - **Emphasis on the Vital Check-Act Elements**
- **Safety Culture is defined by DOT as the shared values, actions, and behaviors that demonstrate a commitment to safety over competing goals and demands.**



# Why is Leadership the Heart of PDCA? Leadership is everywhere

**Top Management**- accountable for continuous improvement, routine review of safety performance and communications about safety

**Management**- ensures process, procedures and training to meet objectives; assess, evaluate and adjust as needed to meet objectives; foster continuous employee, public and pipeline safety when s improvement

**Employees**– identify improvements, reveal risks

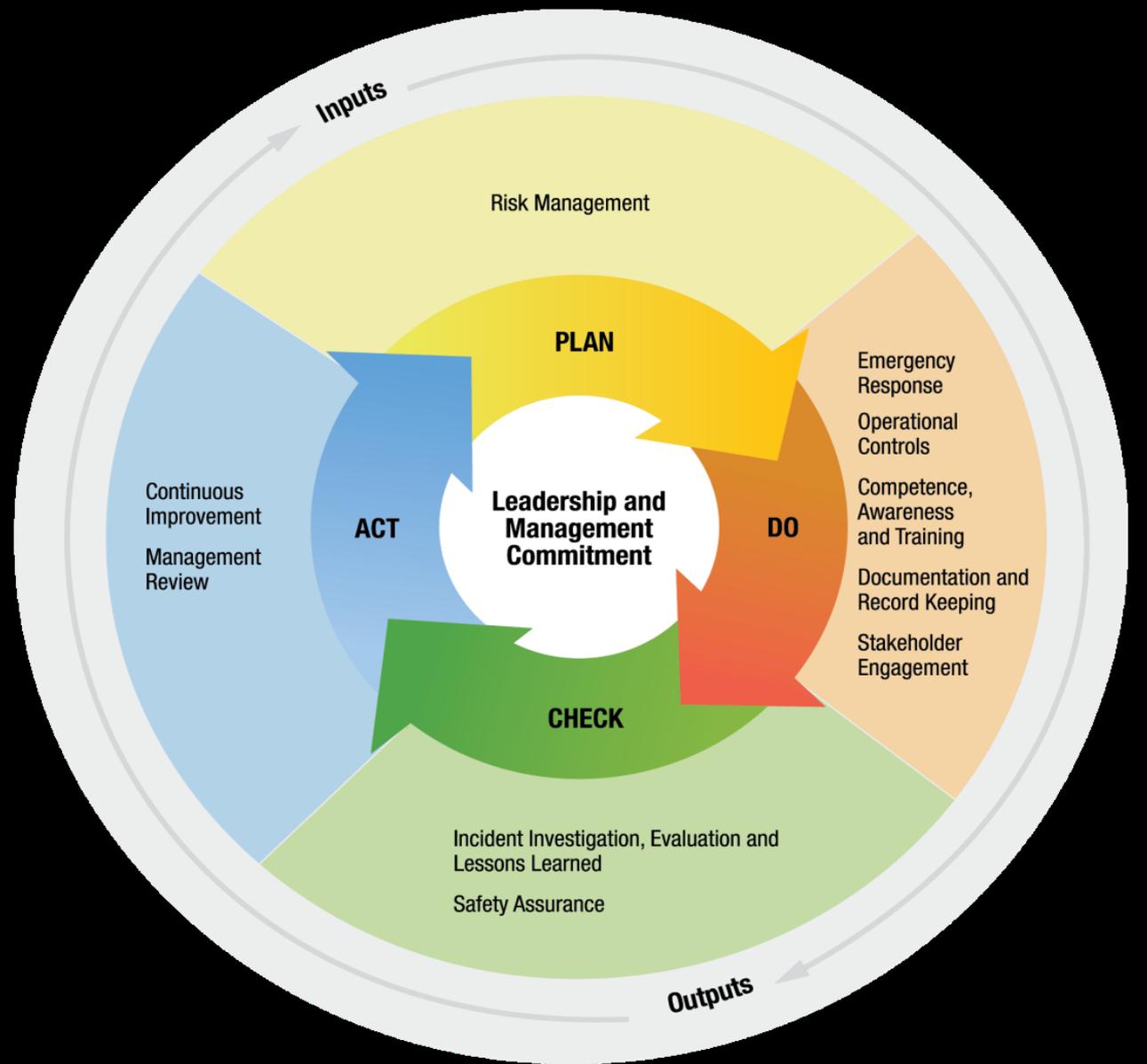
**Consider stopping work for safety concern**

**Bring rigor of employee safety to asset protection**



# Plan, Do, Check, Act The core of the standard

## Continuous Improvement is the Goal of the standard



# PSMS Meeting website

<http://primis.phmsa.dot.gov/meetings/>



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## Public Workshop on Pipeline Safety Management Systems

YOUTUBE LINK: [HTTPS://WWW.YOUTUBE.COM/PLAYLIST?LIST=PL4wHdsuQ-UkMawECLAEKqMDKIDNLEOUBO](https://www.youtube.com/playlist?list=PL4wHdsuQ-UkMawECLAEKqMDKIDNLEOUBO)

PRESENTATION FILES ARE AVAILABLE FOR DOWNLOAD BELOW.

### Meeting Information

<i>Status</i>	Completed
<i>Starts</i>	Apr 22, 2015 at 8:00 AM CDT
<i>Ends</i>	at 4:30 PM CDT
<i>Location</i>	Westin Galleria, 5060 West Alabama Street, Houston, TX 77056
<i>Virtual Information</i>	Webcast Link: <a href="http://www.onlinevideoservice.com/clients/PHMSA/042015/">http://www.onlinevideoservice.com/clients/PHMSA/042015/</a>
<i>Purpose &amp; Summary</i>	This is a one-day public workshop to discuss the recent Pipeline Safety Management Systems (PSMS) national consensus standard. The meeting will include participation from all major pipeline sectors, State and Federal regulators, and public safety advocates. This workshop will detail the development process of the SMS standard. The workshop will also emphasize the core elements of the standard including leadership and management commitment, risk management, emergency preparedness and response, competence awareness and training, management review and continuous commitment, and the critical role of safety culture.

### Results

### Additional Information

# SMS Conclusions

## SMS require More

- **Intentional and systematic actions**
- **Diligence and oversight**
- **Involvement at all levels - communications**
- **“Go and Check” attitude**

## The rewards of SMS are

- **Increased pipeline safety – risk reduction**
- **Creation/Enhanced safety oriented culture**
- **Broader organizational involvement**



# High Reliability Organizations

**Preoccupation with failure** - seeking out small faults in the system and using those to improve performance,

**Reluctance to simplify** – valuing diversity of views and resisting the temptation to jump to quick conclusions,

**Sensitivity to operations** – valuing experienced operating people who have a nuanced system understanding,

**Commitment to resilience** – using layers of protection, valuing redundancy in equipment and people, and

**Deference to expertise** – placing appropriate value on the advice of technical experts in decision making.

**ORGANISATIONAL SAFETY – A NEW RESEARCH VENTURE FOR THE AUSTRALIAN PIPELINE INDUSTRY:**  
Dr Jan Hayes, Peter Tuft, and Professor Andrew Hopkins, Australian National University, Canberra, Australia



# Safety Initiative Goals

- **Continue to pursue and foster non-regulatory approaches to effect continuous improvement in safety, such as Safety Management Systems, Safety Culture, and incentivizing regulated entities to move beyond mere compliance with regulations by adopting and institutionalizing voluntary, meaningful, comprehensive programs that will advance safety.**
- **API RP 1173**
- **Safety Culture implementation is first step**



# PHMSA Websites

**Please regularly use PHMSA websites as they are a primary form of communication with Stakeholders**

**PHMSA Office of Pipeline safety**

**<http://phmsa.dot.gov/pipeline>**

**DIMP Home Page**

**<http://primis.phmsa.dot.gov/dimp/index.htm>**

**Pipeline Safety Stakeholder Communications**

**<http://primis.phmsa.dot.gov/comm/>**

**Pipeline Replacement Updates**

**[http://opsweb.phmsa.dot.gov/pipeline\\_replacement/](http://opsweb.phmsa.dot.gov/pipeline_replacement/)**



# Any Questions??



# Thank You

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