

THAT COMPLIANCE LADY™

**EVOLVING LANDSCAPE:
PHMSA REGULATORY
PROCESS IN THE OIL AND
GAS PIPELINE INDUSTRY**



ERIN MCKAY

Anchorage, Alaska
Erin@ThatComplianceLady.com
907-351-1835



PHMSA's World

**10 Years of
Changes**

**Current
Rulemaking**

**Upcoming
Rulemaking**

**Emerging
Regulatory
Issues**

**Conclusion
and
Next Steps**

PHMSA'S WORLD

- Mission
- OIG inspection, GAO audits, and NTSB recommendations
- Transparency, Equity, Environmental Justice, and Underserved Communities
- Research and Innovation
- Oversight, Stewardship, and Workforce
- State Programs



PHMSA'S WORLD MISSION

“

TO PROTECT PEOPLE AND THE
ENVIRONMENT BY ADVANCING THE SAFE
TRANSPORTATION OF ENERGY AND
OTHER HAZARDOUS MATERIALS THAT ARE
ESSENTIAL TO OUR DAILY LIVES.

”



PHMSA'S WORLD OIG, GAO, NTSB, OH MY!

OIG Inspection

PHMSA underwent a Department of Transportation Inspector General (DOT IG) audit initiated in May 2022, focusing on the implementation of its Integrated Inspection Program with in-depth overviews and walkthroughs, including planning, training, inspection conduct, and governing policies.

GAO

GAO conducts reviews of PHMSA operations and procedures and provides recommendations. Can search GAO and PHMSA to find many examples.

NTSB

NTSB makes recommendations that PHMSA is required to implement.

P-11-010	PG&E Rupture - Equipping SCADA Systems; OAA	September 26, 2011
P-11-011	PG&E Rupture - Installing ACVs or RCVs; OAA	September 26, 2011
P-12-003	Enbridge - Engineering Assessment of Cracks; OUA	July 25, 2012
P-19-14	Require overpressure protection for low pressure natural gas distribution systems that cannot be defeated by a single operator error or equipment failure; OAA	October 24, 2019
P-21-01	Expand incident reporting requirements in 49 CFR Part 191 so that events that may meet the definition of "incident" are immediately reported to the National Response Center even when source of natural gas has not been determined; OAA	February 8, 2021
P-21-02	As of 7/8/22, Evaluate industry's implementation of the gas distribution pipeline integrity management requirements and develop updated guidance for improving their effectiveness; OAA	February 8, 2021
P-21-03	Assist the Railroad Commission of Texas in conducting the audit recommended in Safety Recommendation P-21-4; OAA	February 8, 2021
P-21-18	In collaboration with Coastal and Marine Operators and the Council for Dredging and Marine Construction Safety,	December 21, 2021

PHMSA'S WORLD

JUSTICE40 INITIATIVE

TRANSPARENCY, EQUITY, ENVIRONMENTAL
JUSTICE AND UNDERSERVED COMMUNITIES



Transportation
Insecurity



Environmental
Burden



Social
Vulnerability



Health
Vulnerability



Climate &
Disaster Risk
Burden



PHMSA'S WORLD

RESEARCH AND INNOVATION

- US Largest and oldest pipeline network in the world
- Safety Challenges
- US World Leader in LNG Export
- Research and Engineering needed to improve pipeline safety by supporting technology and innovation

R&D Forums provide PHMSA with the opportunity to conduct a technical gap analysis and establish a research-topic road map with public and private stakeholders to identify gaps in both technology and knowledge. This process helps PHMSA develop its research program funding strategy while avoiding duplicative research. It also creates a stakeholder-based justification for federal investments in pipeline-safety R&D initiatives. Finally, the forum allows PHMSA to meet the congressional requirements in Section 12, Paragraph 2, of the Pipeline Safety Improvement Act of 2002 (Public Law No. 107-355).



PHMSA'S WORLD

OVERSIGHT, STEWARDSHIP, EMPLOYEES

Industry Growth

- Roughly 169 midstream oil and gas industry projects are expected to begin operations in the United States from 2021 to 2025
- liquid pipeline incidents have fallen by 21%
- pipeline mileage and barrels delivered have increased by more than 27%
- oversight responsibilities continue to grow both in terms of the types and number of facilities regulated

Agency Collaboration

- Federal Energy Regulatory Commission, the Environmental Protection Agency, the Department of Interior, the U.S. Coast Guard, and our state partners through collaboration with the National Association of Pipeline Safety Representatives

Workforce Challenges

- special pay rates for some engineer inspectors—commensurate with similar federal special pay rates
- developing new tuition reimbursement efforts, and utilizing new online recruitment methods
- utilizing the Department of Defense's Operation Warfighter (OWF) program that matches qualified wounded, ill, and injured Service members with federal internships for veterans to gain valuable work experience during their recovery and rehabilitation
- create a pathway from the military to permanent employment
- PHMSA has kept up with the PIPES Act of 2020 hiring mandates

STATE PROGRAMS



INCREASING OVERSIGHT

New pipeline safety regulations and infrastructure developments have led to an increased need for state pipeline safety programs to expand their staff and oversight responsibilities.



WORKFORCE

State pipeline safety programs employ approximately 435 inspectors, responsible for inspecting over 85 percent of the nation's pipeline infrastructure under PHMSA's certification



FUNDING

The PIPES Act of 2020 increased federal funding from 50 percent to a maximum of 80 percent fiscal years 2019 to 2021 saw federal funding covering less than 70 percent of the actual total state program costs. In fiscal year 2022, federal funding covered approximately 60 percent of the total program costs.

For fiscal year 2023, federal funding is estimated to cover only 56 percent of the total state program costs, partially due to increasing state needs.



10 YEARS OF CHANGES

- Rulemaking - Increased Challenges and Litigation
- Control Room Management and Cybersecurity
- Public Engagement

10 YEARS OF CHANGES: RULEMAKING

RIN2 Gas Repair, IM, CP, MOC And Other Update - Effective May 24, 2023

- Aug 24, 2023 Final Rule Published
- Sept 23, 2022 Petition for Reconsideration by INGAA
- April 19, 2023 PHMSA Denies Pet. for Reconsideration
- July 10, 2023 INGAA Files in DC Court of Appeals

Valve Rule Update - Effective October 5, 2022

- April 8, 2022 Published
- Petition for Reconsideration
- PHMSA Denies
- Files in DC Court of appeals GPA API
- May 16, 2023 DC Court orders gathering lines not part of valve rule

RIN3 Gas Gathering Rule Update - Effective May 16, 2022

- December 15, 2021 Petition for Reconsideration API and GPA
- April 1, 2023 PHMSA mostly denies Petition for Reconsideration

RIN1 Gas MAOP/TVC Update - Effective July 1, 2020

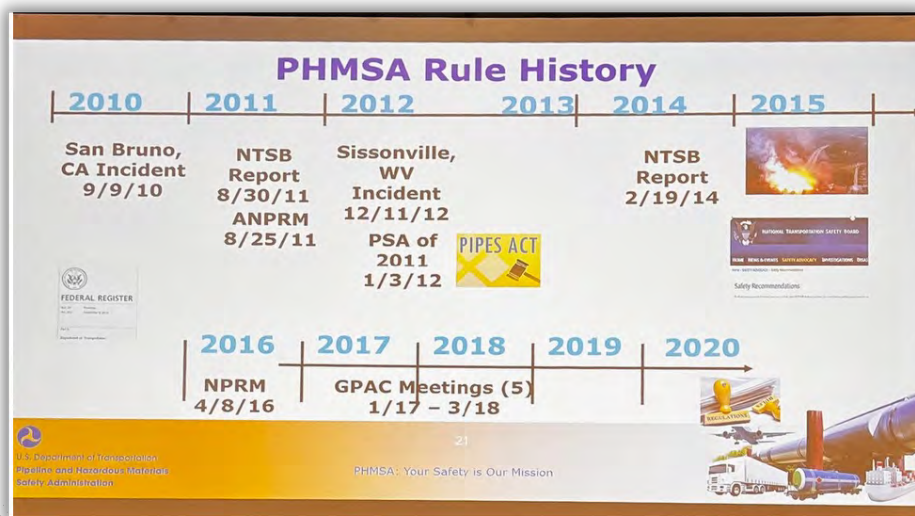
- October 31, 2019 Petition for Reconsideration filed by AGA API APGA INGAA

Liquid Rule - Effective July 1, 2020



10 YEARS OF CHANGES:

INCREASED CHALLENGES AND LITIGATION



Safety of Gas Transmission Lines (cont.)

Recent developments

- Petition for rulemaking received from AGA and INGAA/API
- PHMSA response to AGA issued 11/28/22
 - Edate/Definition of Transmission line and ILI
- PHMSA response to INGAA/API issued 4/19/23
- Stay of enforcement issued 12/06/22 for existing lines – Until 2/24/24
- Stay of enforcement issued 4/17/23 for new and replaced lines – Until 2/24/24
- ~~Correction document published 4/24/2023~~
- Lawsuit from INGAA
- ~~FAQ's under development~~

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

PHMSA: Your Safety is Our Mission

10 YEARS OF CHANGES: CONTROL ROOM MANAGEMENT AND CYBERSECURITY

- **Industry Growth and Cyber Threats:** increasing threat of cyberattacks on critical infrastructure.
- **Government Coordination:** PHMSA, TSA, and DOE work together to ensure coordinated and effective activities, CISA plays a vital role as the national coordinator for critical infrastructure security.
- **Importance of Collaboration:** The 2021 cyberattack on Colonial Pipeline underscored the need for a whole-of-government approach to safeguard critical infrastructure, emphasizing collaboration with the private sector
- **PHMSA's Role:** PHMSA is using its regulatory authority to inspect and enforce control room regulations, integrity management plan requirements, and emergency response plan regulations while incorporating cybersecurity considerations. This includes inspections that assess cyber risk and the development of emergency response plans to address cyber threats.
- **Collaboration with CISA and TSA:** PHMSA is collaborating on cybersecurity exercises for pipeline operators, enhancing preparedness and coordination in responding to cyber threats.
- **Expert Hiring:** PHMSA is in the process of hiring pipeline and cybersecurity experts to support control room management inspections and provide expertise in cyber-related issues.
- **Cybersecurity Training:** PHMSA is expanding cybersecurity training opportunities for its staff and state partners. This empowers inspectors to identify risks during routine control room inspections and collaborate effectively with colleagues in TSA.
- **Emergency Preparedness:** PHMSA is developing an adaptable emergency preparedness plan to address various types of incidents, including cybersecurity threats. This plan will establish an organizational framework, situational reporting processes, information sharing mechanisms, and coordination methods involving multiple government agencies.

10 YEARS OF CHANGES:

PUBLIC ENGAGEMENT

Heightened Public Awareness and Expectations:

- Incidents and Accidents: High-profile pipeline incidents and hazardous materials accidents have raised public awareness and concern, prompting demands for greater transparency and involvement in safety matters.
- Environmental Concerns: Growing concerns about environmental protection have led to increased public interest in the safety of hazardous materials transportation.

Technological Advancements:

- Increased Access to Information: Advances in technology have made it easier for the public to access information and data, leading to greater expectations for transparency and accountability from government agencies.
- Social Media: The rise of social media has provided new platforms for public engagement, allowing PHMSA to reach wider audiences and facilitate two-way communication.



OVERVIEW OF CURRENT REGULATORY FOCUS

PIPES Act of 2011/2020

White House Methane Reduction Action Plan

RIN2, RIN3, Valves, LDAR, GC, LNG

CO2/Hydrogen/Bio-Gas



CURRENT RULEMAKING

Leak Detection and Repair
Distribution



CURRENT RULEMAKING: LEAK DETECTION AND REPAIR

Applies to:

- Transmission
- Distribution
- Onshore and Offshore Gathering
- Hydrogen
- LNG Facilities (limited)



CURRENT RULEMAKING: LEAK DETECTION AND REPAIR

From Section 113 of PIPES Act of 2020

Published May 18, 2023

Comments through August 16, 2023

Broad proposed amendment to require gas operators to implement measures to reduce methane and other gas emissions from new and existing pipelines.

- Over 26,000 comments received
- Many form letters prompted by environmental groups
- Many operating companies provide comments
- Trade associations submit, often individually as well as joint submittals
- GPTC submitted 45 pages of comments
- Timing, potential impacts to 2024 Election so belief is will try and finalize
- GPAC meeting week after Thanksgiving to review NPRM



CURRENT RULEMAKING: LEAK DETECTION AND REPAIR PROPOSED CHANGES

NPRM Major Topics:

- New and Increased Leak Survey and Patrolling
- Advanced Leak Detection Program (New 192.763)
- Leak Grading and Repair Requirements – Definition of Hazardous Leak
- Performance Standard for LDAR equipment and programs
- Reporting and NPMS
- Minimizing O&M related Vented Gas Emissions
- Design, Configuration and Maintenance of Pressure Relief Devices
- Investigation of Failures
- Hydrogen Pipelines

Applies to: Transmission - Distribution - Onshore and Offshore Gathering -
Hydrogen - LNG Facilities (limited)



CURRENT RULEMAKING: LEAK DETECTION AND REPAIR INDUSTRY CONCERNS

1

Cost/benefit analysis is inaccurate

2

·Unrealistic Timeframes for Implementation

3

·Mandates Leak Detection methods that don't necessarily improve public or environmental safety

4

·Presumption that all leaks must be managed as Hazardous
·if everything is important, nothing is important

5

·Timing of finalization of this rule with EPA anticipated final rule on Performance Standards for Emission Sources in the oil and natural gas sector

CURRENT RULEMAKING:

LEAK DETECTION AND REPAIR

INDUSTRY CONCERNS

6

Advanced Leak Detection program not practicable, too prescriptive, does not appear to accomplish emission reductions

7

Leak Grading and Repair requirements - impractical and too prescriptive, not consistent with current practice

8

·Qualifications, expanding OQ by including “knowledge...including documented work history or training associated with those activities” in a new code section for Qualification of leakage survey, investigation, grading, and repair personnel

9

·Gathering Line NPMS Requirements, uneconomic, PHMSA previously held position they had no authority to require, onerous, does not minimize emissions

10

Modifications to established definitions some from GPTC guide and others, not adding clarity or value. Examples confined space, gas associated sub structure, hazardous leak, lower explosive limit,

CURRENT RULEMAKING

SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

September 7, 2023 Published

- Improving construction procedures designed to minimize the risk of incidents caused by system over-pressurization.
- Updating distribution integrity management programs to cover and prepare for over-pressurization incidents.
- Requiring new regulator stations to be designed with secondary pressure relief valves and remote gas monitoring, as a way to better prepare gas distribution systems to avoid over pressurizations and limit damage during incidents.
- Strengthening emergency response plans for gas pipeline emergencies, including requirements for operators to contact local emergency responders and keep customers and the affected public informed of what to do in the event of an emergency.

CURRENT RULEMAKING

SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

Updates to DIMP Plans

- Risk Identification and Minimization:
 - Operators must identify and mitigate risks from specific threats in their DIMP plans, including the use of certain materials (e.g., cast iron, other problematic piping), overpressurization in low-pressure systems, extreme weather and other geohazards.
 - Consideration of the age of the pipeline and its impact on these specific threats is required.
- Low-Pressure System Evaluation:
 - For low-pressure gas distribution systems, operators need to evaluate risks from abnormal operating conditions and potential consequences of low-probability events.
 - If no potential risks are identified for a low-probability event, operators must notify PHMSA and state regulatory authorities within 30 days, providing documentation of their findings.
- Pressure Control and Preventive Measures:
 - Operators of low-pressure systems must maintain pressure control records and identify preventive and mitigative measures tailored to their system.
 - Notification to PHMSA and state regulatory authorities is required 90 days in advance if alternative measures are to be implemented.
- Exemption for Small LPG Operators:
 - Operators of liquefied petroleum gas (LPG) distribution pipelines serving fewer than 100 customers will be exempt from DIMP requirements.
 - small LPG operators will be required to submit an annual report providing data to support PHMSA's regulatory oversight.

CURRENT RULEMAKING

SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

Codifying Use of State Inspection Calculation Tool (SICT)

PHMSA aims to update the SICT and propose regulatory amendments to enforce its use by states for ensuring an adequate number of safety inspectors in their pipeline safety programs, aligning with 49 U.S.C. 60105(b). States would need to comply by the next SICT update following final rule.

Emergency Response Communications 192.615

All Gas pipeline Operators:

Expansion of Emergency List:

- Inclusion of incidents involving a release of gas resulting in a fatality, and any other emergency deemed significant by the operator, to the list of emergencies requiring prompt and effective response procedures.
- Mandatory immediate and direct notification to emergency response officials for gas releases resulting in fatalities.

Gas Distribution Operators:

- Extended List of Emergencies:
 - Addition of unintentional gas releases and shutdown of gas service affecting 50 or more customers (or 50% of customers for operators with fewer than 100 customers) to the emergency list.
 - Requirement for immediate and direct notification to emergency response officials upon notice of such incidents.
- Enhanced Public Communication:
 - Establishment of immediate communication channels with the general public during an emergency.
 - Development and implementation of an opt-in system for informing customers about the safety status of pipelines in their community during an emergency, to be in place no later than 18 months after the final rule is published.

CURRENT RULEMAKING

SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

Emergency Response Communications 192.615 Continued

Feedback and Comments Requested:

- Incident Command System (ICS) Procedures:
 - PHMSA is soliciting feedback on the necessity of requiring gas distribution operators to develop and implement emergency response procedures based on ICS tools and practices.
- Immediate Emergency Notifications:
 - PHMSA is seeking comments on the technical feasibility, practicability, and costs associated with immediate emergency notifications to customers via text messages or mobile apps, including both opt-in and opt-out approaches.

CURRENT RULEMAKING

SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

Updates to Operations and Maintenance Procedure Manuals 192.605

- Addressing Overpressurization:
 - Mandatory Updates: Gas distribution operators must revise their O&M procedures to effectively manage and mitigate the risks of overpressurization.
 - Response Protocols: Clear guidelines and actions for identifying, responding to, and resolving overpressurization indications, including immediate pressure reduction and potential system shutdowns.
 - Investigation and Correction: Procedures must detail the steps for investigating, responding to, and rectifying the causes of overpressurization.

CURRENT RULEMAKING

SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

Updates to Operations and Maintenance Procedure Manuals 192.605

- Management of Change (MOC) Process:
 - Development and Implementation: Operators are required to establish and adhere to an MOC process for various operational changes, including installations, modifications, and introduction of new technologies.
 - Safety and Integrity Focus: The MOC process must ensure that any changes do not compromise the safety and integrity of the gas distribution system, with mandatory hazard identification, analysis, and control before resuming operations in case of introduced safety hazards
- Qualified Personnel Oversight:
 - Gas distribution operators must ensure that qualified, trained, and experienced personnel review and certify construction plans for accuracy and completeness before the initiation of work, ensuring an additional layer of safety and oversight.

CURRENT RULEMAKING

SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

Recordkeeping for Distribution Operators 192.638

Traceable, verifiable, and complete maps and records documenting the characteristics of their systems that are critical to ensuring proper pressure controls for their gas distribution pipeline systems and must be readily available to personnel

Specific Records:

- Infrastructure Documentation: Inclusion of maps, location details, and schematics of underground piping, regulators, valves, and control lines.
- Equipment Specifications: Documentation of regulator set points, design capacity, and valve-failure modes.
- System Protection: Details of the system's overpressure protection configuration.
- Operator-Deemed Critical Records: Any other records identified as critical by the operator themselves.

CURRENT RULEMAKING

SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

Recordkeeping for Distribution Operators 192.638

Lifetime Maintenance of Records:

- Operators are required to maintain these integrity-critical records for the entire lifespan of the pipeline, underlining their importance to ongoing safe operation and pressure management.

Provisions for Incomplete Records:

- If an operator lacks the comprehensive records outlined in the new requirements, they must:
 - Identify and document the missing records.
 - Develop and implement strategies to generate or collect these records, ensuring future records are created and maintained.

Opportunistic Updates:

- Operators are encouraged to update these records through normal operations, maintenance, and emergency response activities, emphasizing a continuous improvement approach

CURRENT RULEMAKING

SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

Monitoring of Gas Systems by Qualified Personnel 192.640

Requirement for Qualified Personnel:

- On-Site Monitoring: For operators lacking the ability for remote pressure monitoring and gas flow shut-off at district regulator stations, qualified personnel must be on-site for specific construction projects.
- Role of Qualified Personnel: They are responsible for monitoring gas pressure, preventing, and responding to potential overpressurization events.

Evaluation of Construction Projects:

- Identifying Potential Risks: Operators must assess their construction activities to pinpoint any that could lead to overpressurization at district regulator stations.
- Mitigating Risks: If potential for overpressurization is identified, operators are required to ensure the presence of qualified individuals during those identified activities

CURRENT RULEMAKING

SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

Monitoring of Gas Systems by Qualified Personnel 192.640

- Empowering the Qualified Personnel:
 - Access to Critical Information: These individuals must be provided with the locations of crucial shutoff valves, access to pressure control records, and stop-work authority (unless operator procedures prohibit this).
 - Emergency Procedures Knowledge: They should have a comprehensive understanding of emergency response procedures and relevant contact information.
- Timeline for Implementation:
 - One-Year Compliance Window: Operators are expected to comply with these new requirements within one year from the final rule's publication date.

CURRENT RULEMAKING

SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

New Regulator Stations 192.195 and 192.741

- Multiple Protection Methods: All new, replaced, relocated, or altered district regulator stations serving low-pressure systems must be equipped with at least two overpressure protection methods. This could include relief valves, monitoring regulators, automatic shutoff valves, or a combination thereof.
- Preventing Multi-Device Failure: Operators need to minimize the risks associated with a single event that could simultaneously jeopardize the operation of more than one overpressure protection device, ensuring the continuous safe operation of the low-pressure systems.
- Mandatory Outlet Gas Pressure Monitoring: Operators of low-pressure gas distribution systems must employ devices capable of real-time notifications to the operator in case of overpressurization, and these devices should be placed at or near the district regulator station.

CURRENT RULEMAKING

SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

Construction Inspections for Gas Transmission and Distribution Mains 192.305

- PHMSA plans to reactivate a regulatory amendment from 2015 that had indefinitely been put on hold, impacting the inspection requirements during the construction of gas pipelines.
- Understanding the potential challenges for small gas distribution pipeline operators in meeting the construction inspection requirements, PHMSA proposes an exception, allowing them to be exempt from this obligation if they would need to hire a third-party inspector to comply.
- Application to Various Pipeline Types:
 - The revised inspection requirements would be applicable to:
 - All gas distribution pipeline operators (with the noted exception for small operators)
 - All gas transmission pipelines
 - All offshore gas gathering pipelines
 - Type A gas gathering pipelines
 - Certain Types B and C gas gathering pipelines, specifically those that are new, replaced, relocated, or otherwise altered

CURRENT RULEMAKING

SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

Test Records: Amendments and Clarifications for Gas Distribution Systems—§§ 192.517 and 192.725

PHMSA proposes to amend § 192.517 to specifically identify the information that operators must record for tests performed on new, replaced, or relocated gas distribution pipelines and to ensure such records are available to operator personnel throughout the life of the pipeline.

Clarification on Testing for Disconnected Service Lines (§ 192.725):

- Each disconnected service line must undergo testing equivalent to that required for new, replaced, or relocated service lines.
- The testing procedures must adhere to the standards set out in 49 CFR part 192, subpart J.

CURRENT RULEMAKING

SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

Annual Reports

- Distribution Enhanced Data Collection :
 - Operators will be required to provide additional information in their annual reports.
 - This includes data on the number and miles of low-pressure service lines, as well as details on their overpressure protection methods.
- Small LPG Reporting Requirements:
 - Annual reports will need to include information on the number and miles of service lines.
 - Operators will also be required to report on the disposition of any leaks.

The new requirements will not apply to:

- Master meter systems.
- Petroleum gas systems excepted from 49 CFR part 192 under § 192.1(b)(5).
- Individual service lines directly connected to production pipelines or gathering pipelines, except regulated gathering pipelines as outlined in § 192.8

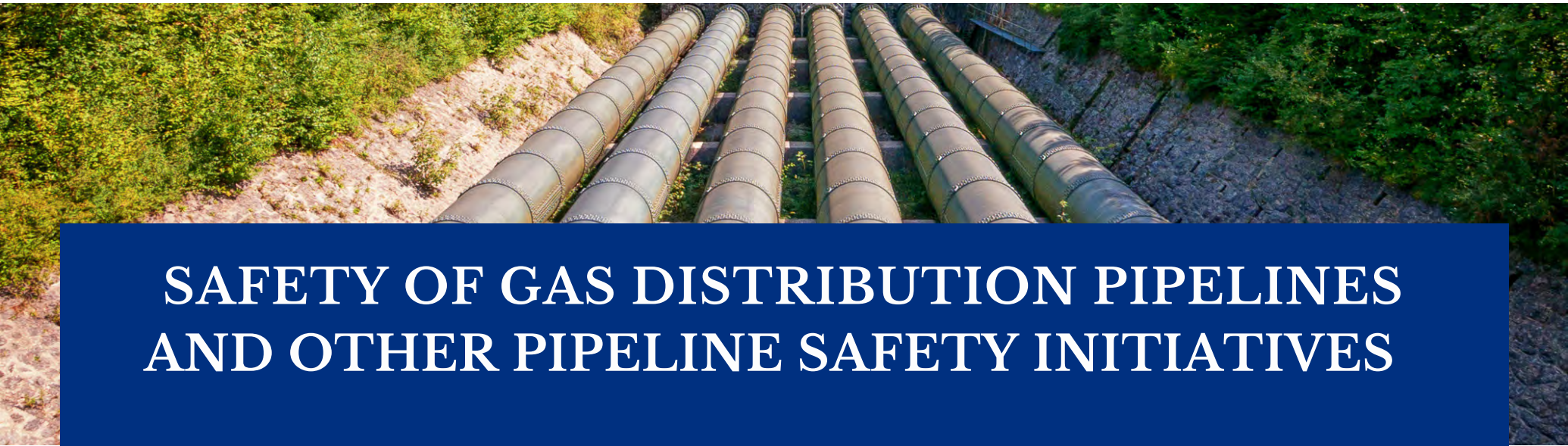
CURRENT RULEMAKING

SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

Misc. Amendments Gas Gathering????

Following a U.S. Court of Appeals decision challenging the application of requirements from PHMSA's April 2022 Valve Rule to gas and hazardous liquid gathering pipelines, PHMSA issued a technical correction to codify this decision.

- Restoration of Regulatory Amendments:
 - PHMSA is proposing to remove certain exceptions introduced in the Technical Correction.
 - The goal is to restore the application of specific regulatory amendments from the Valve Rule to certain Part 192-regulated gas gathering pipelines.
- Specific Areas Affected:
 - Definitions (§ 192.3): Amendments pertaining to definitions will be reinstated.
 - Emergency Planning and Response (§ 192.615): Application of emergency planning and response regulations will be reinstated.
 - Protocols for Notifications of Potential Ruptures (§ 192.635): The protocols for notifying authorities and stakeholders about potential ruptures will be reinstated.



SAFETY OF GAS DISTRIBUTION PIPELINES AND OTHER PIPELINE SAFETY INITIATIVES

Comments due November 6, 2023



UPCOMING RULEMAKING

<https://www.phmsa.dot.gov/legislative-mandates/pipes-act-web-chart>

CLASS LOCATION-GPAC SOON
LNG

OPERATIONAL STATUS

- NPRM IN DEVELOPMENT,
SCHEDULED FOR 10/23

CO2 & HL PIPELINES

PIPES ACT 2020 WEB CHART											
Rule Stage	Legislation	Description of Work Plan	Rulemaking Timeline (actual date)	OST Date for Completing Review (45 days)	Date(s) Sent back to PHMSA	Date(s) Sent Back to OST	Current Staff PHMSA/OST Allocation **	Resource Constraints Affecting Process in PHMSA/ OST	OMB Date for Completing Review (90 days) (crgada.gov)	Additional Details Affecting Rulemaking	
RM	PIPES Act 2020 Sec 113	Hold GPAC meeting	To OST To OMB FR Pub	10/28/22* 2/13/23* 5/18/23*	12/14/22	11/25/22 01/09/23 01/20/23	12/22/22 01/19/23 01/25/23	8 staff PHMSA 5 staff OST	YES	5/15/2023	PHMSA held 3 meetings May 2, 2021, and Feb 17, 2022.
RM	PIPES Act 2020; Leonel Rondon Act Sec 202, 203, 204, and 206	Complete NPRM	To OST To OMB FR Pub	02/14/23* 04/18/23* 08/25/23	4/10/23	02/27/23 3/15/23	3/14/23 3/21/23	8 staff PHMSA 5 staff OST	YES	7/18/2023	
RM	PIPES Act 2016 Sec 27; PIPES Act 2020 Sec 110	Complete NPRM	To OST To OMB FR Pub	09/29/23 11/14/23 2/29/24				8 staff PHMSA 5 staff OST	YES		
Final Rule	PIPES Act 2020 Sec 115	Hold GPAC meeting	To OST To OMB FR Pub	8/1/24 9/13/24 12/30/24				8 staff PHMSA 5 staff OST	YES		
RM	PIPES Act 2020 Sec 109	Complete NPRM	To OST To OMB FR Pub	10/03/23 11/16/23 2/29/24				8 staff PHMSA 5 staff OST	YES		
RM	PIPES Act 2011 Sec 15	Complete NPRM	To OST To OMB FR Pub	08/28/23 10/12/23 01/26/24				8 staff PHMSA 5 staff OST	YES		

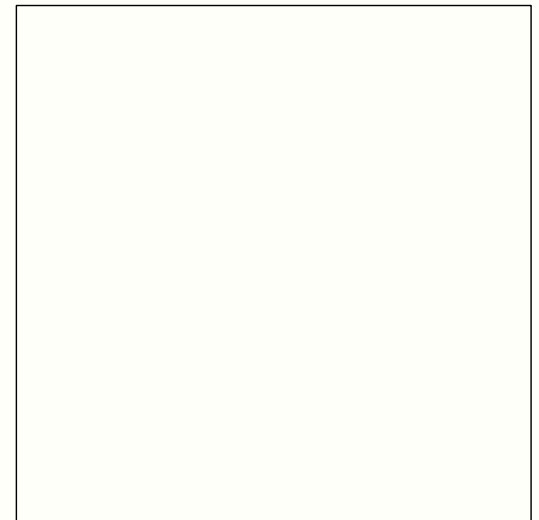
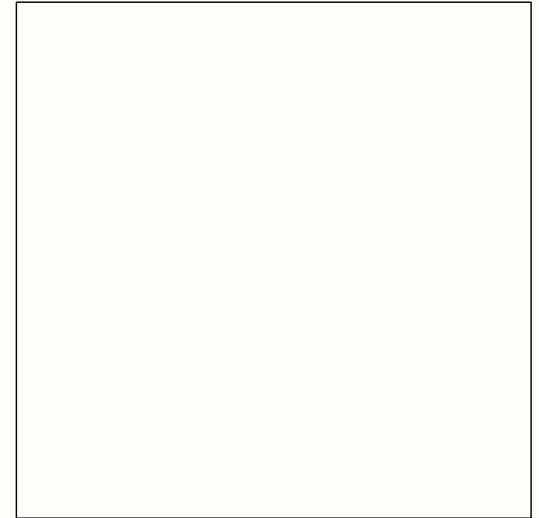
** Number of persons assigned to each rulemaking project. However, PHMSA and DOT staff are often assigned to multiple rulemaking teams and have additional tasks that prevent them from working on every available information.

FR - Federal Register; OST - Office of the Secretary of Transportation; OMB - Office of Management and Budget; IFR - Interim Final Rule; NPRM - Notice of Proposed Rulemaking; ANPRM - Advisory Pipeline Advisory Committee; FR Pub - Federal Register Publication Date.

CLASS LOCATION NPRM

Proposed Rule 12/14/20 Docket PHMSA-2017-0151

PHMSA is proposing an IM-based alternative to the existing class-location-change requirements. The NPRM addresses two main topics pertaining to the IM alternative: (1) The criteria that pipe must meet to be eligible for the alternative, and (2) the additional, IM-based safety requirements necessary for using the alternative. Both aspects serve to protect public safety when pipeline operators apply the alternative approach.



EMERGING REGULATORY ISSUES

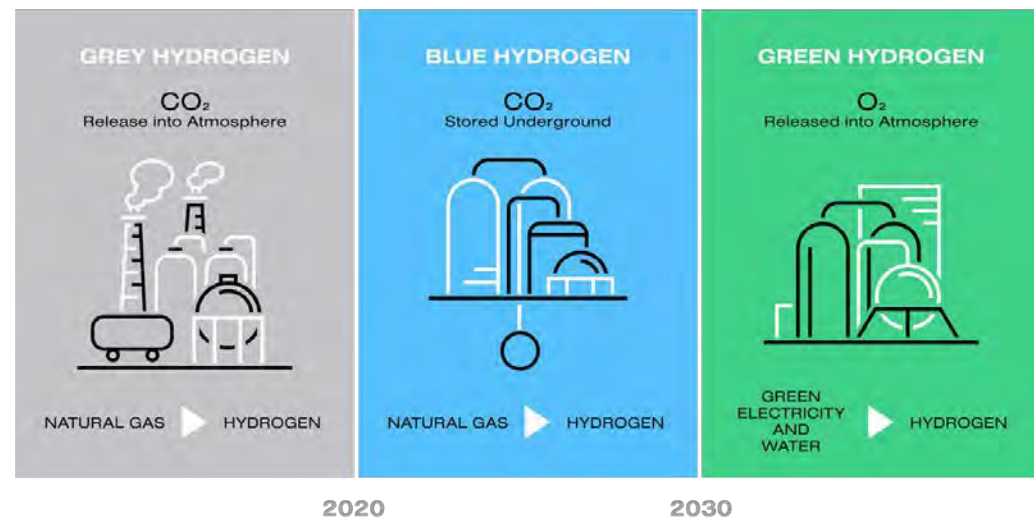
- 01.** Hydrogen
- 02.** CO₂
- 03.** LNG
- 04.** Aging Infrastructure - Grant Program
- 05.** PSMS
- 06.** Compliance Challenges - it's the Floor



HYDROGEN

- The U.S. Department of Transportation (DOT) has regulated hydrogen pipelines since 1970 via 49 CFR Part 192, Transportation Of Natural And Other Gas By Pipeline: Minimum Federal Safety Standards
- Approximately 700 miles of hydrogen pipelines are currently under PHMSA regulatory jurisdiction.
- Gas pipeline integrity management requirements were added in 2003.

TYPES OF HYDROGEN PRODUCTION



HYDROGEN

- Research Investments: In FY 2022, PHMSA allocated approximately \$6 million in research investments for hydrogen projects, emphasizing safety and infrastructure modernization.
- Competitive Academic Agreement Program: PHMSA awarded two hydrogen-related projects under this program to universities, fostering pipeline safety education and encouraging students to join the pipeline safety workforce or private sector upon graduation.
- Core Research Program: Four additional projects, receiving just over \$2 million in funding, focus on the safe transportation and storage of hydrogen, including repurposing existing natural gas infrastructure, improving leak detection, and addressing hydrogen-specific pipeline integrity threats.
- Collaborative Partnerships: PHMSA is collaborating with the Department of Energy (DOE) and other DOT modes to establish Memoranda of Understanding for research and safety in carbon dioxide and hydrogen transport via various modes, including pipelines.



CO2 PIPELINES

RIN: 2137-AF60

Carbon Capture Initiatives

Growth of CO2 pipelines, both liquid and gas

Public Meeting in Iowa earlier this year.

Next Action is to publish NPRM August 2023, publish January 2024

DOT's Federal Pipeline Safety Program:

Background and Issues for Congress

Updated March 31, 2023 - Congressional Research Service

- **Importance of CO2 Pipelines in Carbon Capture and Storage (CCS)**
- **Need for Expansion of CO2 Pipeline Network**
- **Safety Concerns with CO2 Pipelines**
- **Regulations and Safety Standards**
- **Concerns Impacting CCS Projects**
- **Congressional Action and Oversight**
- **Implications for CCS Deployment**

**May 31, 2023
Des Moines, IA
CO2 Safety Public
Meeting**



CO2 PIPELINES-DENBURY

- Feb 22, 2020. Landslide, normally vaporizes and dissipates, atmospheric conditions prevented this
- Frequent PHMSA audits, minimal civil penalties
- Based on incident, every t crossed and i dotted scrutinized
- Emergency Responders unaware of characteristics of CO2

From PHMSA Failure Investigation Report, this event demonstrated the need for:

- **Pipeline company awareness and mitigation efforts directed at addressing integrity threats due to changing climate, geohazards, and soil stability issues.**
- **Improved public engagement efforts to ensure public and emergency responder awareness of nearby CO2 pipeline and pipeline facilities and what to do if a CO2 release occurs. This is especially important for communities in low-lying areas, with certain topographical features such as rivers and valleys.**



LNG

- **Global LNG Investments:** Recent shifts in global natural gas supplies and a transition towards cleaner energy sources have led to increased investments in LNG. The United States has eight LNG export terminals with a total capacity of approximately 14 billion standard cubic feet per day (bcf/d), with five additional projects under construction, adding an estimated 11.9 bcf/d capacity.
- **PHMSA's R&D Initiatives:** PHMSA has funded 14 research and development projects related to LNG safety since 2007, with nine completed/closed and five currently active projects, totaling \$5.7 million. These initiatives focus on enhancing safety measures for LNG transportation.
- **LNG Center of Excellence:** In the Consolidated Appropriations Act, 2023, Congress allocated up to \$8.4 million to PHMSA for establishing an LNG Center of Excellence. This center aims to position the United States as a leader in LNG operations, safety, and environmental performance.
- **Center's Objectives:** The LNG Center of Excellence will enhance safety education and oversight in LNG operations, potentially leading to regulatory improvements. It will also serve as a repository of information and facilitate collaboration among stakeholders to enhance safety and environmental performance through research.



LNG

PHMSA is promulgating an LNG regulatory update – the first ever since 2000.

The updates will address:

LNG operations from import to export of LNG

updates from the National Fire Protection Association standard 59A

congressional mandates

other safety improvements.



EMERGING ISSUES



**AGING
INFRASTRUCTURE**



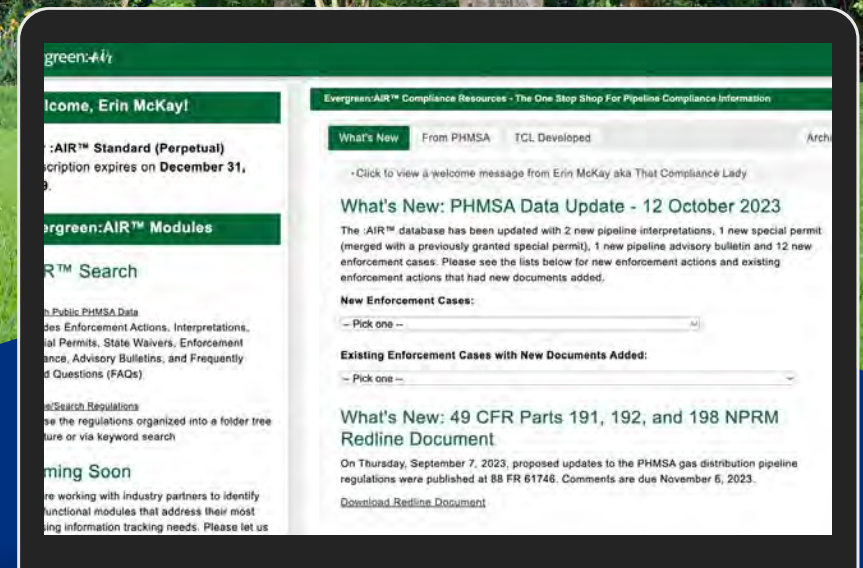
PSMS



**COMPLIANCE
CHALLENGES**

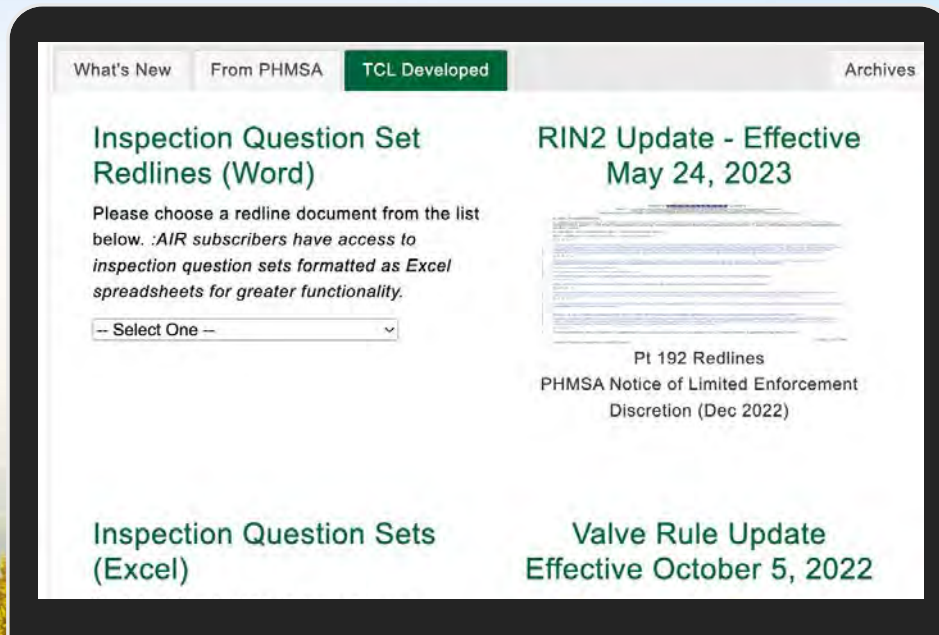
CONCLUSION AND NEXT STEPS

- R&D Meeting next week. I'll be there if you have any burning questions or info you want brought up
- GPAC on LDAR and Class Location week after Thanksgiving (thanks PHMSA!)
- Comments on Distributino NPRM due November 6, 2023
- Public and industry input, GPAC, meetings etc., please always comment, your input needed
- Pace of changes will continue to increase



THAT COMPLIANCE LADY™

THAT COMPLIANCE LADY™



HOW WE CAN HELP:

- Rulemaking Updates
- Inspection Question Sets
- Commonly Used Info Available
- Complete pipeline compliance database, intuitive user interface
- Call us, really!

Evergreen:Air™
ALWAYS INSPECTION READY

THAT COMPLIANCE LADY™

**EVOLVING LANDSCAPE:
PHMSA REGULATORY
PROCESS IN THE OIL AND
GAS PIPELINE INDUSTRY**



ERIN MCKAY

Anchorage, Alaska
Erin@ThatComplianceLady.com
907-351-1835

**Industry Commitment to GHG Emissions
Reduction**

- Since 1990 (Gas Distribution):
 - Customers ↑ 22.3 million
 - Pipeline mileage ↑ 815,100
 - Methane emissions ↓ 70%

