REGULATION OF PIPELINES

OVERVIEW OF THE FEDERAL / STATE PARTNERSHIP AND CURRENT FEDERAL AND STATE PIPELINE SAFETY REGULATION EFFORTS

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2022 Wisconsin Pipeline Safety Seminar
FEDERAL REGULATION OF PIPELINES

- Pipelines are regulated by U.S. Department of Transportation (Natural Gas Act of 1968)
- The specific office is the Pipeline and Hazardous Materials Safety Administration (PHMSA)
- PHMSA has two parts – the Office of Pipeline Safety, and the Office of Hazardous Materials Safety
- Delegation of Responsibility: US DOT (Secretary of Transportation) -> PHMSA -> States
Who is PHMSA?

U. S. Department of Transportation (DOT)

OST  Office of the Secretary of Transportation

OIG  Office of the Inspector General

Federal Aviation Administration

Federal Highway Administration

Federal Motor Carrier Safety Administration

Federal Railroad Administration

Federal Transit Administration

Maritime Administration

National Highway Traffic Safety Administration

Saint Lawrence Seaway Development Corporation

Surface Transportation Board

Pipeline and Hazardous Materials Safety Administration
  - Office of Pipeline Safety
  - Office of Hazardous Materials Safety
PHMSA ROLES AND RESPONSIBILITIES

- Inspection and oversight of regulated pipelines
- Enforcement of pipeline safety regulations
- Investigation of pipeline accidents and incidents
- Education of the public on pipelines and pipeline safety
- Conducting research on technologies and methods needed to improve standards
- Provision of pipeline safety and other grants to state in support of their pipeline safety programs
PHMSA may grant the authority to inspect and enforce the Pipeline Safety Regulations to individual states for intrastate pipelines.

States may have gas or hazardous liquid pipeline programs, or both.

Some states are “interstate agents” – i.e. they can perform field inspections on interstate pipelines. Enforcement authority for interstate pipelines remains with PHMSA.

States must enforce the minimum Federal standards; and may have laws that are more stringent.
WISCONSIN PIPELINE SAFETY PROGRAM

- Pre-1946 – Manufactured gas
- 1946 – First natural gas in Wisconsin
- 1952 – PSCW adopts gas safety rules
- 1970 – Federal gas safety rules in Part 192 go into effect
WISCONSIN PIPELINE SAFETY PROGRAM

- 11 gas utilities, 22 total operators
- >70,000 miles of gas pipelines
- 1,972,797 gas customers served
- 3 LNG facilities
- ~20 Master Meter operators
WISCONSIN PIPELINE SAFETY PROGRAM

Natural Gas Delivery System

- Producing Wells
- Gathering Lines
- Compressor Station
- Transmission Underground Storage
- 1,900 Electric Power Plants
- Transmission Pipelines: 39,000 miles in the U.S.

Downstream

- 5.5 Million Commercial Customers
  - Offices, Hospitals, Hotels and Restaurants
- 66.7 Million Households
- Supplemental Fuels
  - Liquefied Natural Gas, Propane Air for Peak Demand Days
- 192,000 Factories and Manufacturers
- Regulator/Meter
- City Gate Station
- Local Utility Regulator
- Utilities Underground Storage
- Customer Use
- CO2 & Methane Sequestration

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Wisconsin Pipeline Safety Program

- O&M Procedures & Field Reviews
  - Emergency Response Plan
  - Damage Prevention
  - Incident Investigation
- Construction & Design
- Cathodic Protection
- Plastic joining and steel welding
- Integrity management (transmission & distribution)
- Operator Qualification (OQ)
- Public Awareness Plan
- Liquefied Natural Gas (LNG) Facilities
- Control Room Management (CRM)
- Drug & Alcohol
WISCONSIN PIPELINE SAFETY PROGRAM

Alex Kirschling          Andrew Baader          Jake Boebel          Bryce Graveline

Andrew Lindquist         Alex Rodriguez        Evan Uphoff          Dagmar Vanek
PHMSA OFFICE OF STATE PROGRAMS

Evaluations of State Pipeline Safety Programs: Conducted annually

- Comprehensive records & field review of state pipeline safety programs
- Review of State damage prevention program: Conducted annually
- Review scoring may impact grant funding dollar amounts

Grant Review: Every 3 years, PHMSA will audit the state program use of grant money
NATIONAL ASSOCIATION OF PIPELINE SAFETY REPRESENTATIVES (NAPSR)

- Helps to strengthen state pipeline safety programs through promotion of improved safety standards, education, training, and technology
- Non-Profit organization. Consists of state pipeline safety Program Managers, directors, inspectors, and technical personnel
- National / Regional officers (Elected to 1-year terms; Officers in progression from National Secretary, Vice Chair, then National Chair)
- Annual meetings at the national/regional level in conjunction with PHMSA and other stakeholders focused on information sharing
Resolutions

- The NAPSR Articles of Incorporation provide a mechanism to draft and adopt NAPSR Resolutions by which NAPSR raises serious pipeline safety concerns to PHMSA at the national level.
- Resolutions are reviewed annually, voted on by members and re-submitted to PHMSA.

NAPSR Standing Committees: Grant Allocation, Legislative, and Liaison

Task Group participation

- State personnel work with PHMSA and regulatory/industry task groups to provide Subject Matter Expert support/regulatory input (examples: DIMP task group, PHMSA VIS work group, Operator Qualification Integrity Program, etc.).
- Wisconsin chairs Biogas task group.
PHMSA RULEMAKING PROCESS
**DIFFERENCE BETWEEN A LAW AND A REGULATION**

- Laws are general requirements passed by Congress.
- Congress has passed laws creating PHMSA and giving them the authority to write and enforce pipeline safety regulations.
- Regulations are specific instructions on how to comply with the law.
- Regulations are found in 40 C.F.R. 190 through 199. CFR is “Code of Federal Regulations”.
TITLE 49 — CODE OF FEDERAL REGULATIONS

- Part 190: Pipeline Safety Programs/Rulemaking
- Part 191: Reporting Requirements
- Part 192: Natural and Other Gas Pipelines
- Part 193: LNG Facilities
- Part 194: Oil Spill Response Plans (OPA)
- Part 195: Hazardous Liquid Pipelines
- Part 196: Protection of Pipelines From Excavation
- Part 198: State Grants
- Part 199: Drug and Alcohol Testing
DIFFERENCE BETWEEN A STATE STATUTE AND A RULE

- Statutes are general requirements passed by the state legislature
- State pipeline safety statutes: § 196.745
- Rules are specific instructions on how to comply with the statute
- Rules are found in PSC 135
Every four years Congress reviews the national pipeline safety program (Pipeline Safety Act). Also determines agency funding.

Process is known as a Congressional Reauthorization.

Congress may also include mandates for PHMSA to develop new rules, amend existing rules, or perform studies on the practicality of new requirements.
Federal rulemaking process steps/goals:
- Inform the public
- Review economic impact of proposed rules
- PHMSA receives and answers all public comments
- Review by Gas Pipeline Advisory Committee / Haz Liquid Advisory Committee
  - Advisory committees (GPAC/LPAC) have representatives from industry, regulators, and the general public.
- Office of Management and Budget (OMB) must review most regulations before they become final
- Congress routinely calls on PHMSA to provide updates on the status of rulemakings and mandates
PHMSA RULEMAKING PROCESS (CONTINUED)

- Advance Notice of Proposed Rulemaking (ANPRM) – PHMSA publishes intent and asks for public comment before an NPRM is published.

- Notice of Proposed Rulemaking (NPRM) – PHMSA publishes proposed rule language with a public comment period.

- Supplemental Notice of Proposed Rulemaking (SNPRM) – Issued if changes and further public comment is necessary.
PHMSA RULEMAKING PROCESS

- **Final Rule (FR)**
  - Final rule text and implementation date is published along with responses to issues raised by public comment (preamble)
  - Implementation date, 30 – 90 days depending on significance of regulation

**Direct Final Rule (DFR)**
- Used for non-controversial issues

**Interim Final Rule** — Final rules that deal with imminent safety issues or Congressional mandates that requires immediate changes. IFRs also provide the opportunity for public comment
PHMSA RULEMAKING PROCESS

• Other Federal Register Notices
  – Information Collection and Other Notices
  – Notifications such as Drug & Alcohol Testing rates
  – Announcing public meetings
  – Etc.
PSC & PHMSA RULE DEVELOPMENT SUMMARY
CURRENT RULEMAKING IN PROGRESS
(INCLUDING MANDATES FROM THE 2020 PIPES ACT)
Adopt 49 CFR 192 through 3/2021

Require construction/welding/fusion standards to be filed with the PSC prior to constructing natural gas pipelines or within 20 days of changes

Clarify leak survey requirements in PSC 135.723
  - 2nd survey in business districts not within 4 ½ months of other survey
  - Service lines surveyed 5 years not to exceed 63 months

No person may operate a segment of cast iron pipe

Numbering changes to remove conflicts with Part 192

Currently at state legislature, rule likely published February/March 2022

Full rule can be found here
SAFETY OF GAS TRANSMISSION LINES (RIN-1)

- Published in Federal Register on October 1, 2019; effective date of July 1, 2020
- Addresses MAOP Reconfirmation, use of Engineering Critical Assessment as an option, created Moderate Consequence Areas, “grandfathered” pipelines clause eliminated, mitigation methods, etc.
- Some changes immediate, others have compliance dates several years in the future
- PHMSA has published a set of Frequently Asked Questions (FAQs), Batch 1 and Batch 2
- PSC has already completed specialized inspections with most operators affected by this rule
SAFETY OF GAS TRANSMISSION LINES (RIN-2)

- Final rule stage
- NPRM published 4/8/2016
  - Comment period closed 7/7/2016
  - Split from original Gas Transmission NPRM
- GPAC meetings held January 2017; June 2017, Dec 2017, March 2018
- Major Topics under consideration include.....
- Final rule is still under development and potential for publication in 2022
SAFETY OF GAS GATHERING LINES (RIN-3)

- Published in Federal Register on November 15, 2021
- Effective Date is May 16, 2022
- Major Topics under consideration include......Reporting, Definition Changes, and regulation of large diameter HP lines
VALVE AND RUPTURE DETECTION RULE

- Final Rule Stage
- NPRM published 2/6/20
  - Comment period closed 4/6/20
- PAC Meetings held 7/22/20 to 7/23/20
- Major Proposals include…..
- In PHMSA’s 2020 Appropriations (Budget) Bill; Congress directed for this final rule to be completed by June 28, 2021. This should be published in 2022.
GAS PIPELINE REGULATORY REFORM

- Final Rule Stage
- Two Subsequent Final Rules published 3/6/21
  - 1. Delayed effective date to 3/21/21
  - 2. Made minor corrections
- Final Rule published 1/11/21
- PAC Meetings held 10/7/20
- NPRM published – 6/9/20
  - Comment period closed 8/10/20
- Major Topics in Final Rule include……
LEAK DETECTION (RIN 2137- AF-51)

NPRM stage (Two efforts required by the PIPES 2020 Act)

- Rulemaking to address Section 113 – Leak Detection and Repair
- Rulemaking will be considered based on the results of the studies and reports required by Section 114 (Study based on Inspection and Maintenance Plan Oversight and Best Technology/Practices Report to minimize NG releases)
- Major topics under consideration include leak survey frequency, repairs of leaks, use of advanced technology, etc.
- Section 114 is “Self Executing” and required changes to operator O&M Plans
- Next action: 2022 NPRM

SAFETY OF GAS DISTRIBUTION PIPELINES
(RIN: 2137-AF53)

§ NPRM Stage
§ Addresses Leonel Rondon Act within the PIPES Act of 2020; (200 series of mandates)
§ Major topics under consideration
   § Sections 202; 203; 204 and 206 – DIMP Plans, Emergency Response Plans, Records, presence of qualified employees, safety of district regulator stations, etc.

▪ Next action: 2022 NPRM
PIPEDLE OPERATIONAL STATUS (IDLED PIPELINES)
(RIN: 2137-AF52)

- NPRM Stage
- PIPES Act of 2020 defines an “idled pipeline”
  - Will not resume service in 180 days
  - Has been isolated from all sources of hazardous liquid, natural gas has been purged.
- API RP 1181; addresses idled pipelines
- Next action: 2023 NPRM
CLASS LOCATION CHANGE REQUIREMENTS

- NPRM stage
- NPRM published 10/14/20
  - Comment period ended 12/14/20
- Current Requirements when class locations change
- Major Topics under consideration include option of management type approach vs pipe replacement, examination of additional options, etc.
- PIPES Act 2020 mandate to have a GPAC meeting
- Anticipate 2022 Final Rule
LIQUIFIED NATURAL GAS (LNG) RULE

- NPRM Stage
- Major Topics under consideration include....
- PIPES Act 2020 (Section 110; PSM) requires review of the LNG regulations and for making improvements where necessary and for using risk based approaches
- Proposal due in 2023
STANDARDS UPDATE

- NPRM Stage
- NPRM published 1/15/2021
  - Comment period ends 3/16/2021
- Major Topics under consideration include…
- Standards Update II (upcoming rule)
- GPAC/LPAC meeting on October 20, 2021
2020 PIPES ACT SECTION 114 MANDATE

- See the details under the Advisory Bulletin section below
- PHMSA is currently reviewing the guidance materials and tracking methods with the Office of the Secretary of Transportation (OST)
- When OST approves, PHMSA will hold a public meeting to review the expectations with the operators and public
- Public/operator meeting February 17, 2022, from 9:30 a.m. until 5:00 p.m. CT
  - Must register no later than February 11, 2022
  - Agenda and instructions on how to attend will be available on the meeting website at https://primis.phmsa.dot.gov/meetings/MtgHome.mtg?mkey=0913558304&mtg=159
- Operators should already have the “self-executing” provisions in their manuals as this was required by the end of 2021
- Enforcement will take place as necessary and the changes to the O&M Plan are relatively easy to make, but more guidance is coming
- Will discuss further Friday during PSC update presentation
Mandated by Section 117 of the 2020 PIPES Act to find ways to eliminate duplication of inspections among contractors

NAPSR worked internally to develop a process for identifying shared contractors and to be able to share the D&A inspection results if they wish

PHMSA reviewed the process and NAPSR internal forms for documenting the shared inspections and it has been approved

The state programs still have the option to inspect the contractors as they feel they need to inspect, however the option is there for one state to either use another state’s inspection or to use PHMSA’s inspection as appropriate

The inspection sharing process was distributed to all NAPSR State Program Managers to use or not use at their discretion
PHMSA ADVISORY BULLETINS
WHAT IS AN ADVISORY BULLETIN?

• Alerts operators to safety threats and best practices.
• May also be used to request operators perform certain actions or collect data/information.
• Advisory Bulletins are published in the Federal Register and on PHMSA’s website.
WHERE CAN I FIND ADVISORY BULLETINS?

• https://www.phmsa.dot.gov/standards-rulemaking/notices-and-advisory-bulletins
ARE ADVISORY BULLETINS ENFORCEABLE?

• No. Bulletins have not gone through the rule development process and are not legally binding
• Bulletins explain how PHMSA understands and intends to enforce their regulations
• Helps your organization learn from other operator experiences and best practices.
SECTION 114 ADVISORY BULLETIN & BEYOND

- Issued in Federal Register on June 10, 2021, Docket No. PHMSA–2021–0050

- Reminds operators that the Congressional mandate from the 2020 PIPES Act, Section 114 is “self-executing” and does not require a regulation to have effect

- Operators must update their inspection and maintenance plans to address eliminating hazardous leaks and minimizing releases of natural gas (including intentional venting during normal operations) from their pipeline facilities

- Operators must also revise their plans to address the replacement or remediation of pipeline facilities that are known to leak based on their material, design, or past operating and maintenance history.

- The statute requires pipeline operators to complete these updates by December 27, 2021.

- State programs will be inspecting in 2022 to ensure these items are completed

- Operators should review the Advisory Bulletin and Section 114 to ensure these items are addressed in their O&M Plans
OVERPRESSURE PROTECTION ON LOW PRESSURE NATURAL GAS SYSTEMS — ADVISORY BULLETIN 2020-0025 — 9/29/2020

- Advisory issued due to deficiencies found surrounding the Merrimack Valley, MA overpressure condition that resulted in multiple explosions, fires, and a fatality
- One person died, 131 structures damaged, and 133 persons transported to the hospital
- Replacement/repair work was being done on a cast iron, low pressure, gas system
- Sense lines for a district regulator station were not connected and thus the system failed open, over pressurizing the entire system
- PHMSA made initial recommendations related to IMP/DIMP and knowledge of system and the risks of overpressures, having oversight by qualified personnel, procedures to mitigate potential overpressure conditions, properly identifying potential risks and using integrity management principles to mitigate risk
- NTSB report issued later reflects the causes and similar recommendations and 2020 Reauthorization also addresses similar issues in mandates to PHMSA
Advisory Bulletin issued to remind operators of the consequences of failures that could occur with inside meter sets

Prompted by the Silver Spring, MD incident which resulted in 7 fatalities and 65 persons transported to the hospital

The probable cause was a disconnected vent line on an inside meter set pressure regulator in the basement that leaked gas, collected and found a source of ignition

PHMSA reminded operators to review DIMP Plans for potential risks related to inside meter sets

PHMSA also recommends reviewing meter set locations and setting them outside if possible and/or making sure vent lines are vented to an outside location
Advisory Bulletin issued as a seasonal warning that severe flooding can cause harm to gas and hazardous liquid pipelines and systems.

Operators are encouraged to use their IMP and DIMP Plans to evaluate the risks and potential consequences of severe flooding and corresponding river scour and potential channel migration.

PHMSA also encourages identification of potential problem areas, coordination with emergency responders ahead of any event, and evaluating the system and accessibility of facilities to help ensure that any potential emergency can be controlled in a timely manner.

Other items mentioned are increased patrols, underwater inspections on pipelines submerged in rivers, and evaluation of facilities after the flooding event, etc.
Advisory issued due to potential for damage from earth movement as illustrated in 7 examples (gas and HL) outlined in the Advisory Bulletin

PHMSA reminded operators of the potential for damage to pipeline facilities that could happen especially in areas of steep terrain where pipeline movement or soil subsidence could occur

Operators must use their IMP and DIMP plans to assess the risk of pipeline movement and failure under these conditions and to mitigate such risks

A number of examples of methods, processes, and techniques were related in the Bulletin that can be used to help mitigate risks from earth movement including lowering pressure, moving the pipeline, installing retaining walls, bringing pipelines above ground, installing monitoring equipment, etc.
PHMSA
INTERPRETATIONS
WHAT IS A PHMSA INTERPRETATION?

• PHMSA will respond when someone asks them to interpret Pipeline Safety Regulations requirements.

• Generally, a scenario is presented to PHMSA with an accompanying question. Example:
  • Is my pipeline regulated?
  • Is this a covered task?
  • Did the work performed constitute full compliance?
WHAT IS A PHMSA INTERPRETATION?
(CONTINUED)

- Requests can be made for interstate or intrastate pipelines.
- Interpretations are only applicable to the exact scenario and question provided in the request.
- All parties involved must abide by the interpretation.
Anyone can request an interpretation

Requestor does not have to have a direct interest

The scenario provided in the request need not be an actual situation, a hypothetical situation will do.

PHMSA prefers to deal with specific, actual scenarios as broad interpretations may have unintended impacts
Requests for interpretation shall be made in writing to:
Director, Office of Standards and Rulemaking
USDOT Office of Pipeline Safety
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590-0001

Send by Certified Mail (or mail with tracking ability)
There is no deadline for receiving a response
WHERE CAN I FIND PHMSA INTERPRETATIONS?

https://www.phmsa.dot.gov/regulations/title49/b/2/1/list?filter=Pipelines

- Interpretations are organized by applicable code sections. Some interpretations may be found under multiple sections of code.

- Interpretations are identified by the year and order in which they are received, not by the date they are issued. Examples:
  - PI-85-0101 (101st request received in 1985)
  - PI-16-0002 (2nd request received in 2016)
WAIVERS AND SPECIAL PERMITS
A Special Permit is defined in 49 CFR 190.341.

PHMSA agrees to waive compliance with a part of the Pipeline Safety Regulations under the standards set forth in 49 U.S.C. 60118(c). PHMSA must agree the conditions in the Special Permit are “not inconsistent with pipeline safety”

PHMSA issues special permits for interstate pipelines

Most special permits issued by PHMSA are for transmission line class location changes
States issue waivers for intrastate pipelines

States may have their own rules and guidelines on what needs to be in a waiver request

Waivers may cover design, materials (i.e. – Fiberspar, Flexsteel), O&M, IBR standard editions or anything else covered by the Pipeline Safety Regulations
HOW TO APPLY FOR A WAIVER/SPECIAL PERMIT

- Basic operating information
- Specific regulation operator is seeking relief from
- Explanation of why regulation or standard is unnecessary or inappropriate
- Alternative compliance measure and how they provide an equal or greater level of safety
- Operator certification that granting of waiver would not be inconsistent with pipeline safety
- Individual States may have additional requirements
WAVER / SPECIAL PERMIT APPLICATION

- PROCESS

- Submitted in writing at least 120 days before requested effective date
  - Interstate the request goes to PHMSA
  - Intrastate the requests go to State agency

- PHMSA special permits requires public comment
  - State rules may differ

- State approved waivers still must be reviewed and accepted by PHMSA

- PHMSA has 60 days to review state-approved waivers. PHMSA may overrule the state. If they don’t the waiver is granted

- PHMSA issued special permits may require renewal
INCIDENT INVESTIGATIONS AND LESSONS LEARNED
INCIDENT AND ACCIDENT REPORTING

- Operators must give notice to the National Response Center at 1-800-424-8802 within one hour of confirmed discovery.

- Gas Pipelines have Incidents. See 49 CFR 191.3
  - (i) A death, or personal injury necessitating in-patient hospitalization;
  - (ii) Estimated property damage of $122,000 or more, including loss to the operator and others, or both, but excluding the cost of gas lost. For adjustments for inflation observed in calendar year 2021 onwards, changes to the reporting threshold will be posted on PHMSA's website. These changes will be determined in accordance with the procedures in appendix A to part 191.
  - (iii) Unintentional estimated gas loss of three million cubic feet or more

- State requirement – customer outage >100 customers must be reported
WHO IS INVOLVED IN INCIDENT/ACCIDENT INVESTIGATIONS?

- State investigators may become involved in an investigation.
  
  **Purpose:**
  - Independent documentation of facts
  - Determine if code violations caused or contributed to the incident
  - Develop recommendations to prevent future recurrences

- PHMSA has an Accident Investigation Division (AID)
  - Interstate investigations and other areas where States do not have jurisdiction.
  - May participate in State lead investigations as observers.

- National Transportation Safety Board (NTSB)
  - Reports directly to Congress
  - Has authority to investigate any transportation accident
  - NTSB investigation assesses both operator and State/PHMSA actions
INCIDENT AND ACCIDENT NATIONAL TRENDS

- PHMSA has resources on incident trends and root causes for distribution, transmission and hazardous liquid pipelines.

NATIONALLY SIGNIFICANT INCIDENTS/ACCIDENTS

- Atmos Energy, Dallas TX, 2/23/2018 NTSB report issued – One fatality, several fires related to past pipeline damage
- Enbridge Rupture – Hillsboro, KY, 5/4/2020, 30 inch line ruptured, no injuries, girth weld rupture
- Merrimack Valley, MA – 9/13/2018 – Over pressurization of low pressure system, multiple fires and explosions
WISCONSIN — REPORTABLE INCIDENTS

- 2020 & 2021 — 2 reportable incidents — both due to vehicle damage
- Last 10 years — 6 reportable incidents — 2 vehicle damage, 4 excavation damage
BIOGAS OR RENEWABLE NATURAL GAS

- Efforts in the public sector to construct new biogas facilities using landfills, cow manure, etc.
- Some installations have been completed in some states
- Gas quality and ability to be blended with existing natural gas supplies can be a critical issue and addressed in several ways
- Some biogas facilities only serve one plant (powerplants, etc.) vs being blended into a gas distribution system
- Some biogas facilities may have pipelines that may fall under the Gas Gathering Line regulations
- PHMSA continues to work with NASPR on looking at biogas issues and may issue or make available some guidance for those wishing to install biogas systems
QUESTIONS?