

PHMSA

Pipeline Safety Regulatory Update



PIPES ACT OF 2016

The **Protecting our Infrastructure of Pipelines and Enhancing Safety (PIPES) Act of 2016**, was passed by Congress and signed into law on June 22, 2016

- It authorizes funding for PHMSA from 2016 to 2019



RULEMAKING ACRONYMS

- ANPRM – Advance Notice of Proposed Rulemaking
 - Used to gather information
- NPRM – Notice of Proposed Rulemaking
 - Defines intent and scope of proposed regulations
- SNPRM – Supplemental Notice of Proposed Rulemaking
 - Additions to, or changes in, intent or scope



RULEMAKING ACRONYMS

- IFR – Interim Final Rule
 - Typically used for an identified safety issue
- FR – Final Rule
 - Implementation date, depending on significance of regulation and time to implement
- DFR – Direct Final Rule
 - Used for non-controversial issues



RULEMAKING PROCESS

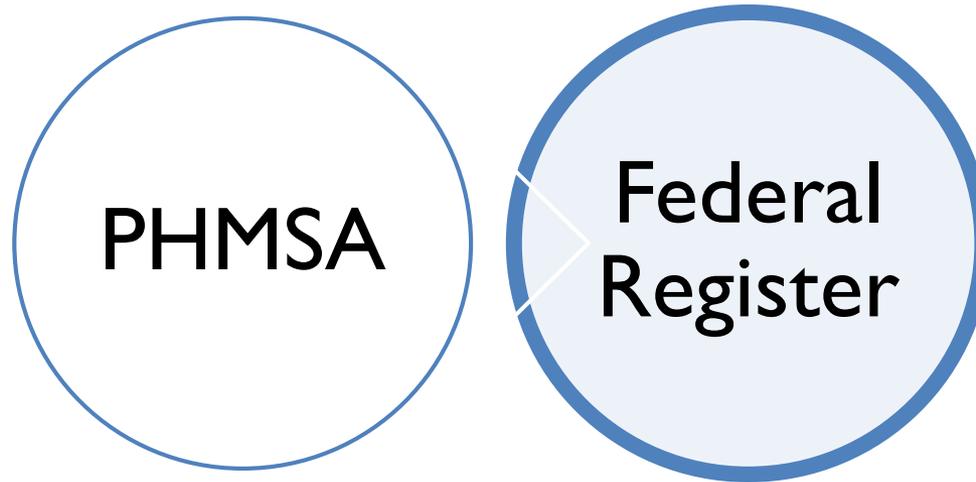
- Where can I find information on the Status of Significant rulemakings?
 - DOT
 - Report on DOT Significant Rulemakings (Monthly reports)
 - <http://www.dot.gov/regulations/report-on-significant-rulemakings>
 - OMB
 - www.reginfo.gov



Significant Rules



Non-significant Rules



OMB Determines what rules are Significant



UPCOMING RULE MAKING

The timeline for all future rulemaking is pending Departmental determinations on implementing and maintaining compliance with the applicable Executive Orders and Memorandums.



REMINDER

- The following PHMSA regulatory updates are simply an overview
- Details can be found in the Federal Register postings



(Docket No: PHMSA-2016-0016)

Interim Final Rule

Safety of Underground Natural

Gas Storage Facilities



Rationale – Aliso Canyon

October 23, 2015

- One of the largest natural gas releases in U.S. history
- 4-month-long blowout
- 5.4 BCF released (California Air Resources Board)
 - 8 MMT CO₂ equivalent
 - 20% increase to statewide CH₄ emissions
- Alleged public health impacts



RATIONALE – PIPES ACT OF 2016

- Statutory Mandate: PI 114-183, Section 13
- The Secretary “shall issue minimum safety standards for underground natural gas storage facilities” within 2 years
- Considerations
 - Consensus standards
 - Economic impacts on gas consumers and end users
 - Findings of the Aliso Canyon task force



KEY DATES

- Publication Date: December 19, 2016
- Effective Date: January 18, 2017



SUMMARY OF INTERIM FINAL RULE

- Reporting requirements
- Incorporates by reference
 - API RP 1170, “Design and Operation of Solution-mined Salt Caverns used for Natural Gas Storage” (July 2015), and
 - API RP 1171, “Functional Integrity of Natural Gas Storage in Depleted Hydrocarbon Reservoirs and Aquifer Reservoirs” (September 2015).



REPORTING REQUIREMENTS

- Four types of reports are required from operators for underground natural gas storage facilities:
 - Annual reports
 - Incident reports
 - Safety-related condition reports
 - National Registry information



API RP 1170 & 1171

- Requires Operators of UNGS Facilities to:
 - Implement construction, maintenance, risk management, and integrity-management procedures for all UNGS Facilities.



API RP 1170 & 1171

Procedures for newly constructed and existing UNGS facilities that include

- design, construction, material, testing, commissioning, reservoir monitoring, and recordkeeping.
- operations, maintenance, threat identification, monitoring, assessment, site security, emergency response and preparedness, training, and recordkeeping.



49 CFR PART 191

- Underground natural gas storage facility reporting requirements
 - § 191.1 Scope
 - § 191.3 Definitions
 - § 191.15 Incident report
 - § 191.17 Annual report
 - § 191.21 Information Collection
 - § 191.22 National Registry
 - § 191.23 Safety-related conditions



49 CFR PART 192

Underground natural gas storage facility safety

- § 192.3 Definitions
- § 192.7 Documents incorporated by reference
- § 192.12 Underground natural gas storage facilities requirements



MAJOR PROVISIONS

- Expands enforcement authority to address imminent safety hazards that exist across a subset or larger group of owners and operators.
- Applies only when PHMSA determines that an unsafe condition or practice is causing an imminent hazard.



MAJOR PROVISIONS

- Provides PHMSA authority to issue an emergency order without advance notice or opportunity for a hearing.
- Applies only to the extent necessary to abate the imminent hazard.



DAMAGE PREVENTION PROGRAMS (EXCAVATION ENFORCEMENT)

- Key Dates
 - Publication Date: July 23, 2015
 - Effective Date: January 1, 2016

Docket No. PHMSA-2009-0192)



FINAL RULE SUMMARY

The final rule creates:

- Part 198, Subpart D – Criteria for adequate state damage prevention enforcement programs and process for assessment
- Administrative procedures for states to contest a notice of inadequacy



FINAL RULE SUMMARY

- New Part 196 – Standards for excavators digging near pipelines
- Adjudication process for excavators cited by PHMSA – Same as for operators cited by PHMSA for violations of pipeline safety regulations



POLICIES – CRITERIA AND ENFORCEMENT

- The preamble outlines two policies:
 - How the state program evaluation criteria will be applied
 - How the excavator enforcement standard will be applied



FEDERAL STANDARD FOR EXCAVATORS

- Call 811 before excavating
- Wait for pipeline operators to establish and mark the location of underground pipelines before excavating
- Excavate with proper regard for the marks, take all practicable steps to prevent excavation damage
- Make additional use of one-call as necessary



FEDERAL STANDARD FOR EXCAVATORS

- Any contact with pipelines must be reported to operator at earliest practical moment
- If there is a release, excavator must call 911

NOTE: There are no exemptions in the rule. PHMSA will be considerate of exemptions in state laws when undertaking Federal enforcement action.



(Docket: PHMSA-2013-0163)

Operator Qualification, Cost Recovery, Accident and Incident Notification, and Other Changes



NOTE:

Many provisions related to OQ were discussed in the NPRM but were NOT carried through to the final rule. However, the Agency may decide to initiate a rulemaking re-proposing similar provisions at a later date.



KEY DATES

- Publication Date: January 23, 2017
- Effective Date: March 24, 2017



SUMMARY OF FINAL RULE

- Specifies an operator's accident and incident reporting time to within 1 hour.
- Sets up a cost recovery fee structure for design review of new gas and hazardous liquid pipelines.
- Provides a renewal procedure for expiring special permits.



SUMMARY OF FINAL RULE

Requires operator to contact NRC **within 48 hours** to revise or confirm the initial telephone report

- Amount of product lost
- Estimate number of fatalities and injuries
- Known significant facts that are relevant to the cause of the incident or extent of damage
- If there is no change from original report, the operator must confirm



SUMMARY OF FINAL RULE

- Requires electronic reporting of drug and alcohol testing results in part 199, and modifying the criteria used to make decisions about conducting post accident drug and alcohol tests.
- Adds a procedure to request PHMSA keep submitted information confidential.



SUMMARY OF FINAL RULE

- Adds reference to Appendix B of API 1104 related to in-service welding in parts 192 and 195.
- Provides methods for assessment tool selection by incorporating consensus standards by reference in part 195 for stress corrosion cracking direct assessment.



SUMMARY OF FINAL RULE

- Develops and clarifies requirements for team training of control center staff involved in pipeline operational decisions.
- Develops requirements for team training of control center staff involved in pipeline operations similar to those used in other transportation modes.



(Docket No. PHMSA-2011-0009)

Excess Flow Valves (EFV) for Multi-Residential and Commercial Applications



KEY DATES

- Publication Date: October 14, 2016
- Effective Date: April 14, 2017



BRIEF HISTORY OF EXCESS FLOW VALVES

- Between 1970 and 2001, NTSB issued more than 10 recommendations that dealt with using/installing excess flow valves (EFV)
- The most recent NTSB Safety Recommendation on EFVs, P-01-2, is addressed in this rulemaking
- In the past, mandatory EFV installation was not supported:



BRIEF HISTORY OF EXCESS FLOW VALVES

- EFVs were perceived as unreliable
- Concerns about unintentional EFV closure, causing pilot burners to go off
- Potential cost to relight all pilots & deal with public complaints



FINAL RULE – EFVS REQUIRED

- § 192.383(b) Operators must install an EFV on new or replaced service lines that:
 - Branch to an Single Family Residence
 - Serve multifamily residences where the known load is $\leq 1,000$ SCFH
 - Serve single, small commercial customers where the known load is $\leq 1,000$ SCFH
 - Exceptions: < 10 psig, contaminants in gas stream, interference with O&M activities, EFV unavailable



FINAL RULE – EFVS REQUIRED

- §192.383(d) Existing customers have a right to request EFV installation
- §192.383(e) Operators must notify customers of their right to request EFVs & this notice must be available for PHMSA inspection

(cont.)



FINAL RULE PROVISIONS

- § 192.385 Each operator must install either a manual shut-off valve or, if possible and based on sound engineering analysis, an EFV, on new or replaced service lines **> 1,000 SCFH**
- § 192.385 Manual shut-off valves must be installed to allow accessibility during emergencies & are subject to maintenance consistent with the valve manufacturer's specification



ALERT NOTICES & ADVISORY BULLETINS

- **Alert Notices** - a notice of a situation of immediate safety concern
- **Advisory Bulletins** - an advisory of a safety concern that an operator should follow as it applies to their facilities and operations
 - matters that have potential to become
 - safety or environmental risks



Advisory Bulletin (ADB)

ADB– 2017-02

- For operators of natural gas transmission pipelines
 - PHMSA's expectations regarding how mature IM programs should implement the training and qualification requirements included in § 192.915 and discussed in ASME B31.8S-2004.
 - PHMSA's expectations for operator implementation of each subsection in § 192.915 are outlined in the following Guidance:



Advisory Bulletin (ADB)

ADB– 2017-02

- 192.915—“What knowledge and training must personnel have to carry out an integrity management program?”
- 192.915(a)—“Supervisory Personnel”
- 192.915(b)—“Persons who Carry out Assessments and Evaluate Assessment Results”
- 192.915(c)—“Persons Responsible for Preventive and Mitigative Measures”

[Guidance on Training and Qualifications for the Integrity Management Program](#)



Advisory Bulletin (ADB)

ADB– 2017-02

PHMSA inspectors will use this Advisory Bulletin to clarify the intent of existing regulatory language when evaluating operator IM program personnel training and qualification effectiveness



Advisory Bulletin (ADB)

ADB– 2017-01

- The threats identified in ASME B31.8S-2004 may be considered active or inactive, but are never permanently eliminated.
- A threat must be considered active if any data required by Appendix A is missing, as lack of data indicating the existence of a threat is not acceptable justification for considering the threat inactive.



Advisory Bulletin (ADB)

ADB– 2017-01

Documents to support the determination of an inactive threat status must be maintained, as per the requirements of § 192.947



ADB 2017-01

- B3 I.8S-2004 - Threats
 - External Corrosion Threat
 - Internal Corrosion Threat
 - Stress Corrosion Cracking Threat
 - Manufacturing Threat (Pipe Seam and Pipe)
 - Construction Threat (Pipe Girth Weld, Fabrication Weld, Wrinkle Bend or Buckle, Stripped Threads/Broken Pipe/Coupling)



ADB 2017-01

- B3 I.8S-2004 Threats Contd.
 - Equipment Threat (Gaskets and O-Rings, Control/Relief, Seal/Pump Packing)
 - Third-Party Damage Threat [Third-Party Inflicted Damage (Immediate), Vandalism, Previously Damaged Pipe]
 - Incorrect Operations Threat
 - Weather-Related and Outside Force Threat (Earth Movement, Heavy Rains or Floods, Cold Weather, Lightning)



Advisory Bulletin (ADB)

ADB– 2016-07 High Consequence Area ID

- Inform owners and operators of gas transmission pipelines that PHMSA has developed guidance on the identification and periodic verification of HCAs, including the application of a buffer zone to the PIR, and information regarding the accuracy of class locations



Advisory Bulletin (ADB)

ADB– 2016-07 High Consequence Area ID

- A review of early PHMSA inspections has shown that many operators (28%) did not have procedures to adequately describe how to identify HCAs, using Method 1 or Method 2



Advisory Bulletin (ADB)

ADB– 2016-07 High Consequence Area ID

- PHMSA also reminds operators of the need to continually improve the accuracy of their pipeline data

Pipeline Safety High Consequence Area Identification Methods for Gas Transmission Pipelines



Advisory Bulletin (ADB)

ADB– 2016-06

- For all pipeline owners and operators
 - Importance of safeguarding and securing pipeline facilities and monitoring SCADA systems for abnormal operations and/or indications of unauthorized access or interference with safe pipeline operations.



SAFEGUARDING AND SECURING PIPELINE FACILITIES AND MONITORING SCADA SYSTEMS

- On Tuesday October 11, 2016, individuals contacted four pipeline operators informing them they would shut down the pipelines used to transport crude oil from Canada to the United States.
- The operators (Enbridge, Kinder Morgan, Spectra Energy, and TransCanada) took steps to prevent damage to the pipelines and contacted local and federal law enforcement.



SAFEGUARDING AND SECURING PIPELINE FACILITIES AND MONITORING SCADA SYSTEMS

- The individuals cut the chains and padlocks at valve sites near Leonard, Minnesota; Burlington, Washington; Eagle Butte, Montana; and Wahalla, North Dakota.
- The individuals then closed valves on Enbridge's Lines 4 and 67, Spectra Energy's Express Pipeline, and TransCanada's Keystone Pipeline. Several individuals were arrested by local law enforcement



ADB-2016-06

- Had the pipeline operators not shut down their lines in response to the threats, a pipeline rupture could have occurred.
- A pipeline rupture due to tampering with valves can have significant consequences such as death, injury, and economic and environmental harm.



Advisory Bulletin (ADB)

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.



Advisory Bulletin (ADB)

ADB– 2016-05

- If a pipeline is not properly abandoned and may be used in the future for transportation of hazardous liquid or gas, PHMSA regulations consider it as an active pipeline.



Advisory Bulletin (ADB)

ADB– 2016-04

Ineffective Protection. Detection, and Mitigation of Corrosion Resulting from Insulated Coatings on Buried Pipelines

- To remind all owners and operators of hazardous liquid, CO₂ and gas pipelines to consider the overall integrity of facilities to ensure the safety of the public and operating personnel and to protect the environment.



Advisory Bulletin (ADB)

ADB– 2016-04

- Operators are reminded to review pipeline operations to ensure that pipeline segments 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 tool findings are accurate, verified, and conducted for all pipeline threats



Advisory Bulletin (ADB)

ADB–2016-03

Owners and Operators of Petroleum Gas and Natural Gas Facilities in Areas subject to Heavy Snowfall or Abnormally icy Weather

- Advises owners and operators of the need to take appropriate steps to prevent damage to pipeline facilities from accumulated snow or ice.
- Past events on natural gas distribution system facilities appear to have been related to either stress of snow and ice or the malfunction of pressure control equipment due to ice blockage of pressure control equipment vents.



Advisory Bulletin (ADB)

ADB-2016-01

Water Crossings & Areas Prone to Flooding

- PHMSA is issuing this advisory bulletin to remind all owners and operators of gas and hazardous liquid pipelines of the potential for damage to pipeline facilities caused by severe flooding and actions that operators should consider taking to ensure the integrity of pipelines in the event of flooding, river scour, and river channel migration





QUESTIONS???



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

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



CONTACT INFORMATION

Leticia Santos

Leticia.santos@dot.gov

405-686-2349 Office

405-203-9786 Cell

