Pipeline Integrity Regulations & Standards

Lee Reynolds, NiSource
Manager Gas Standards

Objectives

- Why the Need for Integrity Management
- Define Pipeline Integrity Management
- Review Integrity Management Regulations
- Highlight Relevant Industry Standards
- What Does the Future Look Like for Integrity Management (What's Next)

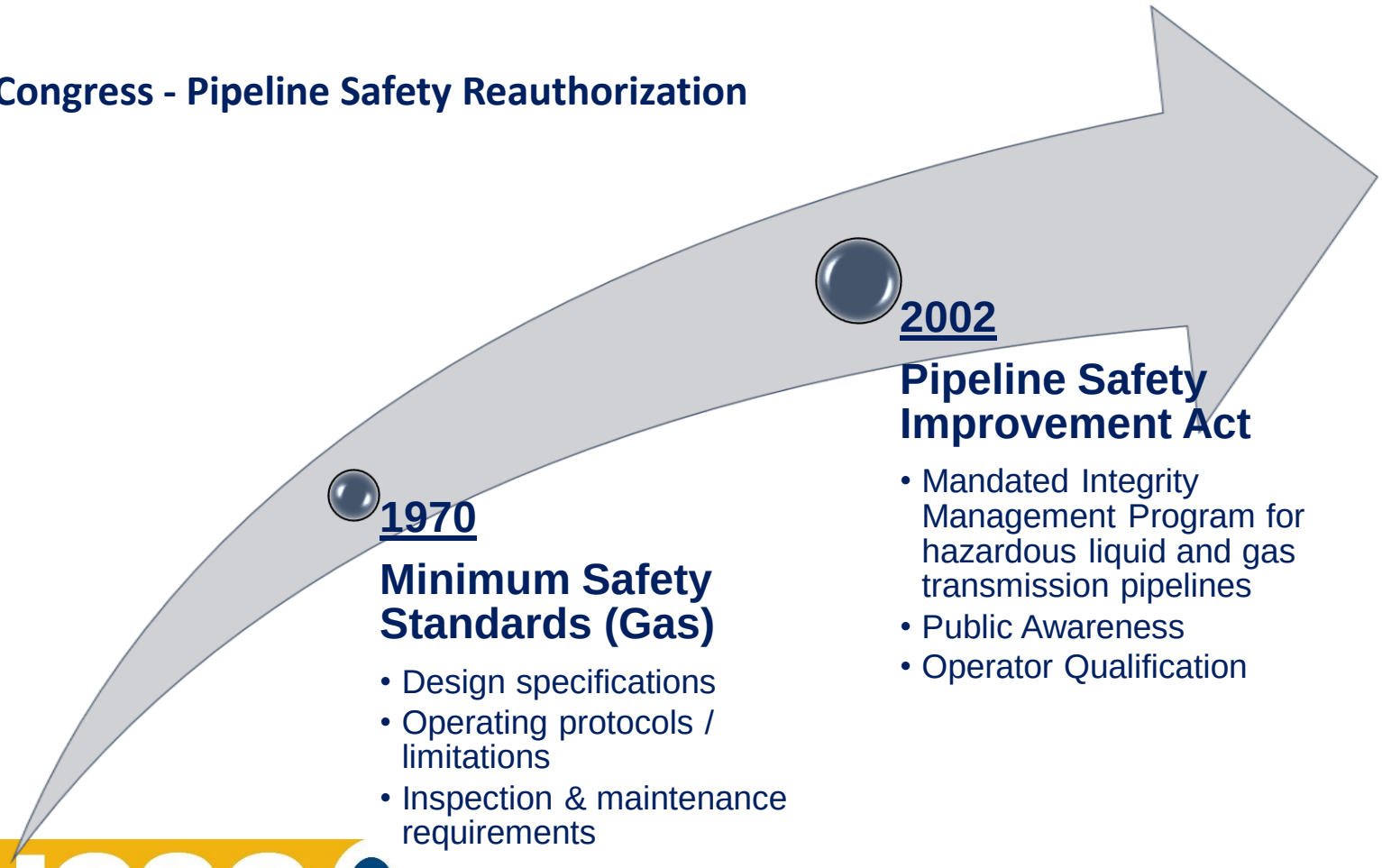
Pipelines link the nation and are largely unnoticed until…

AUCSC

Appalachian Underground Corrosion Short Course

The Need to Do More

U.S. Congress - Pipeline Safety Reauthorization



1970

Minimum Safety Standards (Gas)

- Design specifications
- Operating protocols / limitations
- Inspection & maintenance requirements

2002

Pipeline Safety Improvement Act

- Mandated Integrity Management Program for hazardous liquid and gas transmission pipelines
- Public Awareness
- Operator Qualification

AUCSC

Appalachian Underground Corrosion Short Course

What is Pipeline Integrity Management?

AUCSC

Appalachian Underground Corrosion Short Course

What is Pipeline Integrity Management?

Integrity Management is a process for identifying, assessing, evaluating and mitigating threats to the integrity of a pipeline system.

AUCSC

Appalachian Underground Corrosion Short Course

What does a Pipeline Integrity Management Program do?

AUCSC

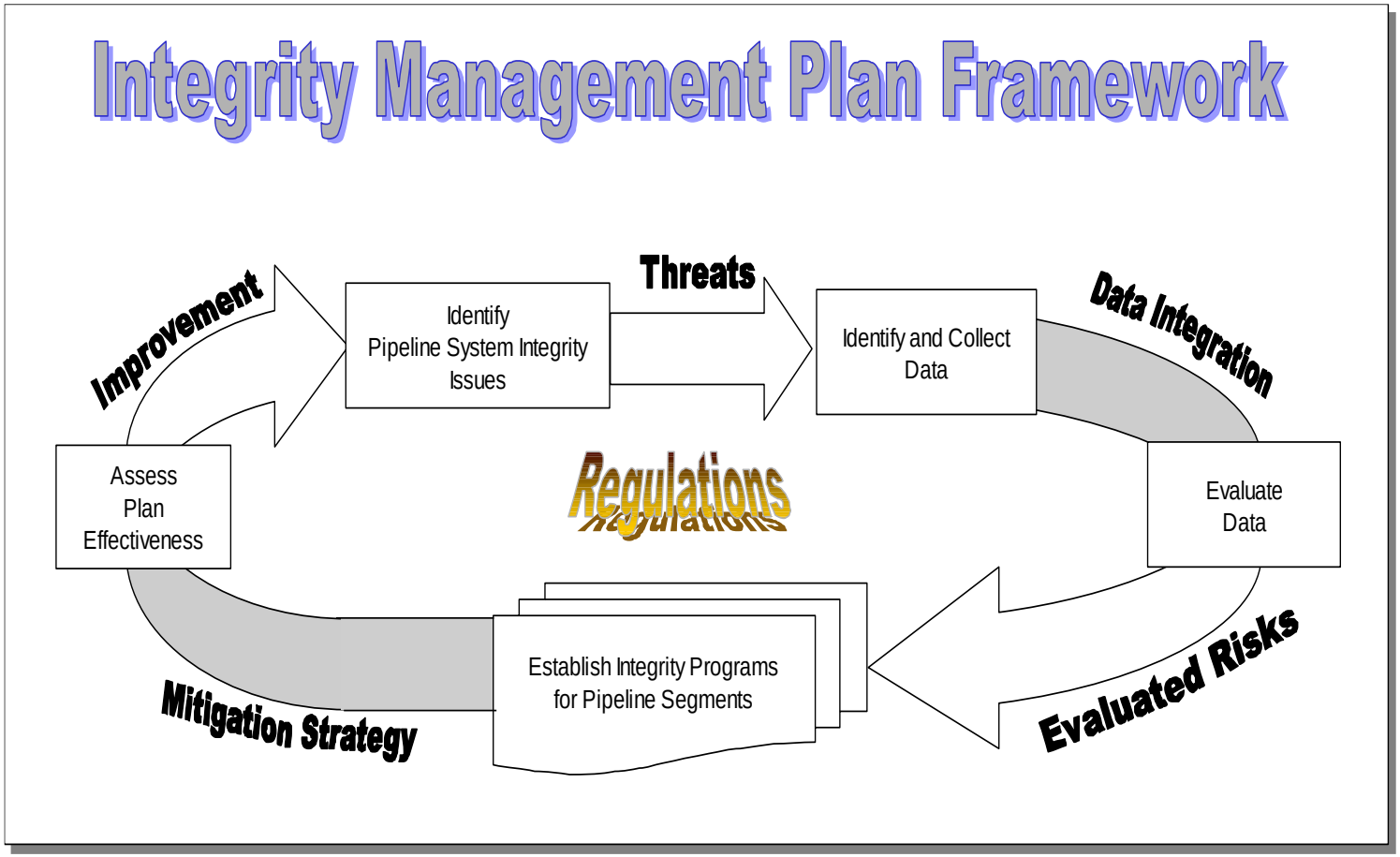
Appalachian Underground Corrosion Short Course

What does a Pipeline Integrity Management Program do?

- It helps operators comprehensively evaluate a range of threats to pipeline integrity by integrating and analyzing available information about their pipelines.

- It provides a road map for the assessment, integration and analysis of the data, and courses of action available in maintaining pipeline integrity.

Integrity Management Framework



Typical Pipeline Threat

During the installation of a housing development, a piece of excavating equipment hits and gouges a pipeline.

The pipeline operator was not notified by the excavator that the pipeline was damaged.

Data Integration Example

- A one-call (811) locate was requested, worked and documented.
- Close interval survey shows a dip in pipe to soil readings in this area, but cathodic protection levels are still adequate.
- In-line inspection indicates a small anomaly on the top portion of the pipeline.
- Each of the three activities on their own may not have raised a flag.
- However, when all of the three pieces of information are put together, we have a better picture of what is going on with this pipeline.

Pipeline Integrity Management Regulations

AUCSC

Appalachian Underground Corrosion Short Course

PHMSA
Pipeline Integrity Management Goals

- Provide for Increased Assurance to the Public
- Identify Areas Where a Pipeline Rupture Would Produce the Highest Consequence
- Accelerate Integrity Assessment of Pipelines in High Consequence Areas (HCAs)
- Improve Integrity Management Practices within Companies
- Establish a Clear Government Role in Validating Integrity Management

Federal Pipeline Safety Regulations

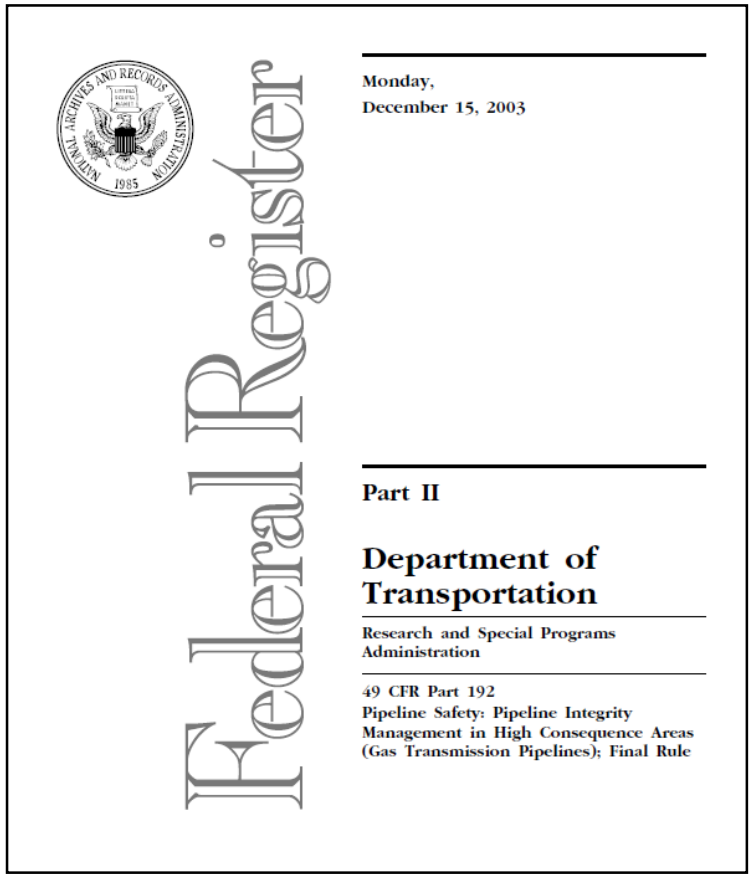
https://www.phmsa.dot.gov/phmsa-regulations

PHMSA's mission is to protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives.

AUCSC

Appalachian Underground Corrosion Short Course

Part 192 – Subpart O
Gas Transmission Pipeline Integrity Management



Operators are required to have a written plan which describes aspects (program elements) of the operator's Integrity Management efforts.

Part 192 prescribes minimum program elements that must be included.

Part 192 – Subpart O
Gas Transmission Pipeline Integrity Management

Elements of Integrity Management Program

- Identification of High Consequence Areas
- Data Integration, Identification of Threats, and Use of Risk Assessment to Prioritize Segments
- Development of a Baseline Assessment Plan
- Development of a Direct Assessment Plan
- Development of Criteria for Remedial Actions
- Continual Process of Assessment and Evaluation
- Identification of Preventative and Mitigative Measures

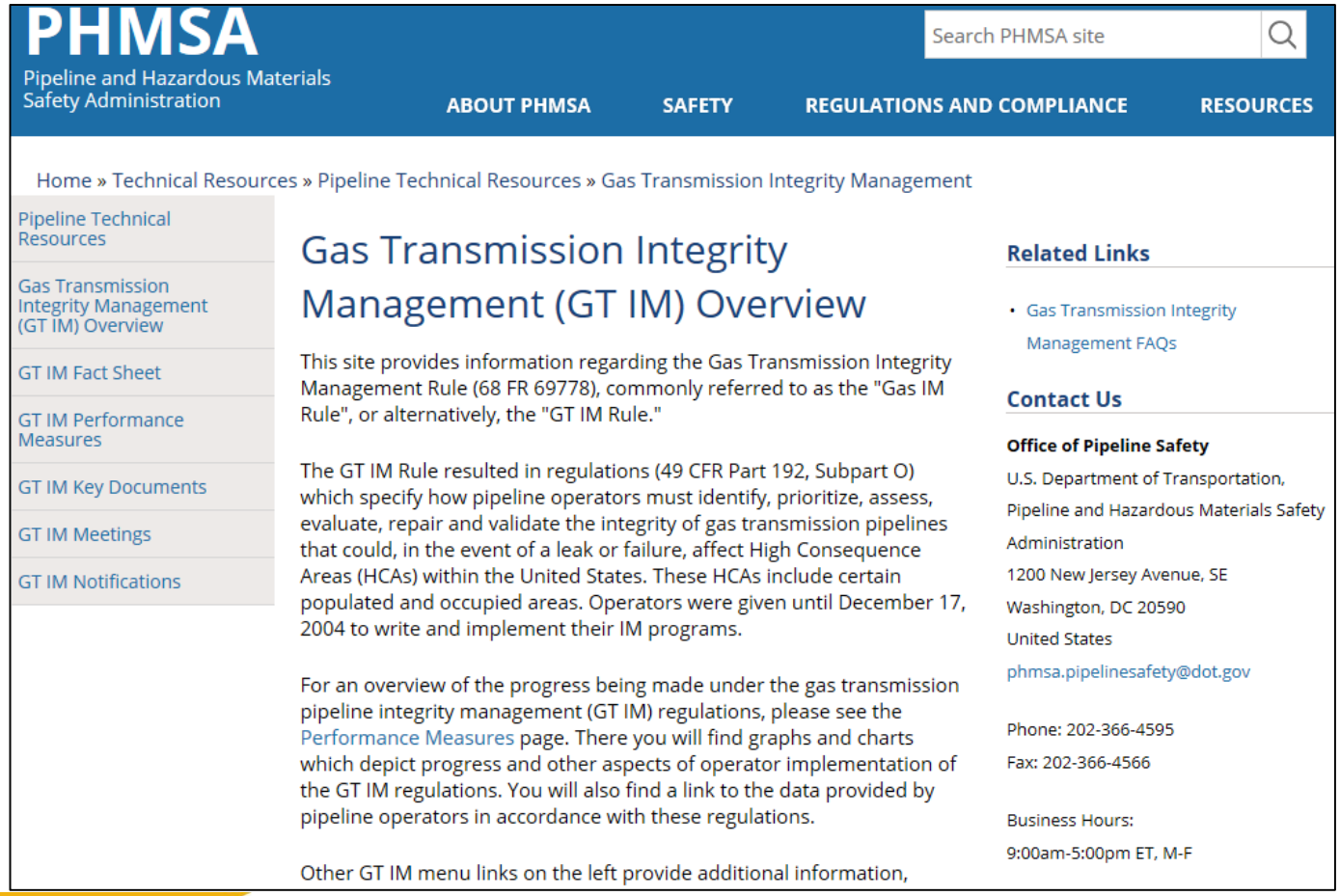
Part 192 – Subpart O
Gas Transmission Pipeline Integrity Management

Elements of Integrity Management Program

- Performance Plan
- Record Keeping Requirements
- Management of Change Plan
- Quality Assurance Plan
- Communication Plan
- Process for Providing Copy of IMP to Regulators
- Process for Ensuring Environmental Protection and Safety

PHMSA Website Gas Transmission Integrity Management

https://primis.phmsa.dot.gov/gasimp/index.htm



Pipeline Operator Resources

Office of Pipeline Safety Web Site

Gas and Liquid Integrity Management

- Frequently Asked Questions (FAQs)
- Inspection Protocols
- Enforcement Guidance

Frequently Asked Questions

https://www.phmsa.dot.gov/pipeline/gas-transmission-integrity-management/gas-transmission-integrity-management-faqs

Gas Transmission Integrity Management: FAQs

The Pipeline and Hazardous Materials Safety Administration (PHMSA) provides written clarification of the pipeline safety regulations (49 CFR Parts 190-199) in the form of frequently asked questions (FAQs) and other guidance materials. The FAQs contained on this page are intended to clarify, explain, and promote better understanding of the gas transmission pipeline integrity management (IM) regulations. These FAQs reflect PHMSA's current application of the regulations to the specific implementation scenarios presented. FAQs are not substantive rules, themselves, and do not create legally enforceable rights, assign duties, or impose new obligations not otherwise contained in the existing regulations and standards, but are provided to help the regulated community understand how to comply with the regulations. However, an operator who is able to demonstrate compliance with the FAQs is likely to be able to demonstrate compliance with the relevant regulations. If a different course of action is taken by a pipeline operator, the operator must be able to demonstrate that their conduct is in accordance with the regulations. Written regulatory interpretations regarding specific situations may also be obtained from PHMSA in accordance with 49 CFR Part 190, § 190.11.

FAQ Topical Categories

- General (12)
- Rule Basics (2)
- Rule Applicability (6)
- Time Periods (4)
- Integrity Management Programs (9)
- HCA Identification (37)
- Threat/Risk Analysis (7)
- Identification of Threats (1)
- Data Integration (4)
- Risk Analysis and Prioritization (6)
- Specific Threats (3)
- Assessment (15)
- Baseline Assessment Plan (BAP) (3)
- Assessment Methods (28)
- Continual Assessment and Evaluation (12)
- Remediation (16)
- Preventive and Mitigative Measures (5)
- Performance Measures (5)
- Record Keeping (3)
- Management of Change (MOC) (1)
- Regulatory and External Interaction (2)
- Communication Plan (1)
- Notification (7)
- Inspection (3)
- Enforcement (3)
- State Agencies and Intrastate Pipelines (2)
- Exceptional Performance Deviations (2)
- ECDA for Cased Pipe (30)

Gas Transmission IMP Inspection Protocols

https://primis.phmsa.dot.gov/gimdb/prolist.gim#files

Inspection Protocols

The PHMSA Inspection Protocols for implementing Gas Integrity Management, Revision 0, are provided below. Please note the Inspection Protocols are subject to change. Following the links for each protocol will provide additional detail and regulation references. If you would like to print the entire set of protocols for a **single** program element, navigate to that element below, and use the either the "Protocol as Offline Form" or "Protocol as Offline Document" (same, but without fillable form areas) links to display all the protocols for that element. A single downloadable Microsoft Word (.doc) version of all protocol elements as well as fishbone diagrams of the protocols are also available from the Key Documents page.

See: related downloads...

Follow links below to see protocol elements for each area:

- A. Identify HCAs [View as Form...]
  - A.01 Program Requirements
  - A.02 Potential Impact Radius
  - A.03 Identified Sites
  - A.04 Identification Using Class Locations (Method 1)
  - A.05 Identification Using Potential Impact Radius (Method 2)
  - A.06 Identification and Evaluation of Newly Identified HCAs, Program Requirements
- B. Baseline Assessment Plan [View as Form...]
  - B.01 Assessment Methods
  - B.02 Prioritized Schedule
  - B.03 Use of Prior Assessments
  - B.04 New HCAs/Newly Installed Pipe
  - B.05 Consideration of Environmental and Safety Risks
  - B.06 Changes
- C. Identify Threats, Data Integration, and Risk Assessment [View as Form...]
  - C.01 Threat Identification
  - C.02 Data Gathering and Integration
  - C.03 Risk Assessment

PHMSA IMP Enforcement Guidance

Gas Transmission Integrity Management Enforcement Guidance

Sections 192.901 through 192.951

INTRODUCTION

The materials contained in this document consist of guidance, techniques, procedures and other information for internal use by the PHMSA pipeline safety enforcement staff. This guidance document describes the practices used by PHMSA pipeline safety investigators and other enforcement personnel in undertaking their compliance, inspection, and enforcement activities. This document is U.S. Government property and is to be used in conjunction with official duties.

The Federal pipeline safety regulations (49 CFR Parts 190-199) discussed in this guidance document contains legally binding requirements. This document is not a regulation and creates no new legal obligations. The regulation is controlling. The materials in this document are explanatory in nature and reflect PHMSA's current application of the regulations in effect at the time of the issuance of the guidance. In preparing an enforcement action alleging a probable violation, an allegation must always be based on the failure to take a required action (or taking a prohibited action) that is set forth directly in the language of the regulation. An allegation should never be drafted in a manner that says the operator "violated the guidance."

Nothing in this guidance document is intended to diminish or otherwise affect the authority of PHMSA to carry out its statutory, regulatory or other official functions or to commit PHMSA to taking any action that is subject to its discretion. Nothing in this document is intended to and does not create any legal or equitable right or benefit, substantive or procedural, enforceable at law by any person or organization against PHMSA, its personnel, State agencies or officers carrying out programs authorized under Federal law.

Decisions about specific investigations and enforcement cases are made according to the specific facts and circumstances at hand. Investigations and compliance determinations often require careful legal and technical analysis of complicated issues. Although this guidance document serves as a reference for the staff responsible for investigations and enforcement, no set of procedures or policies can replace the need for active and ongoing consultation with supervisors, colleagues, and the Office of Chief Counsel in enforcement matters.

Comments and suggestions for future changes and additions to this guidance document are invited and should be forwarded to your supervisor.

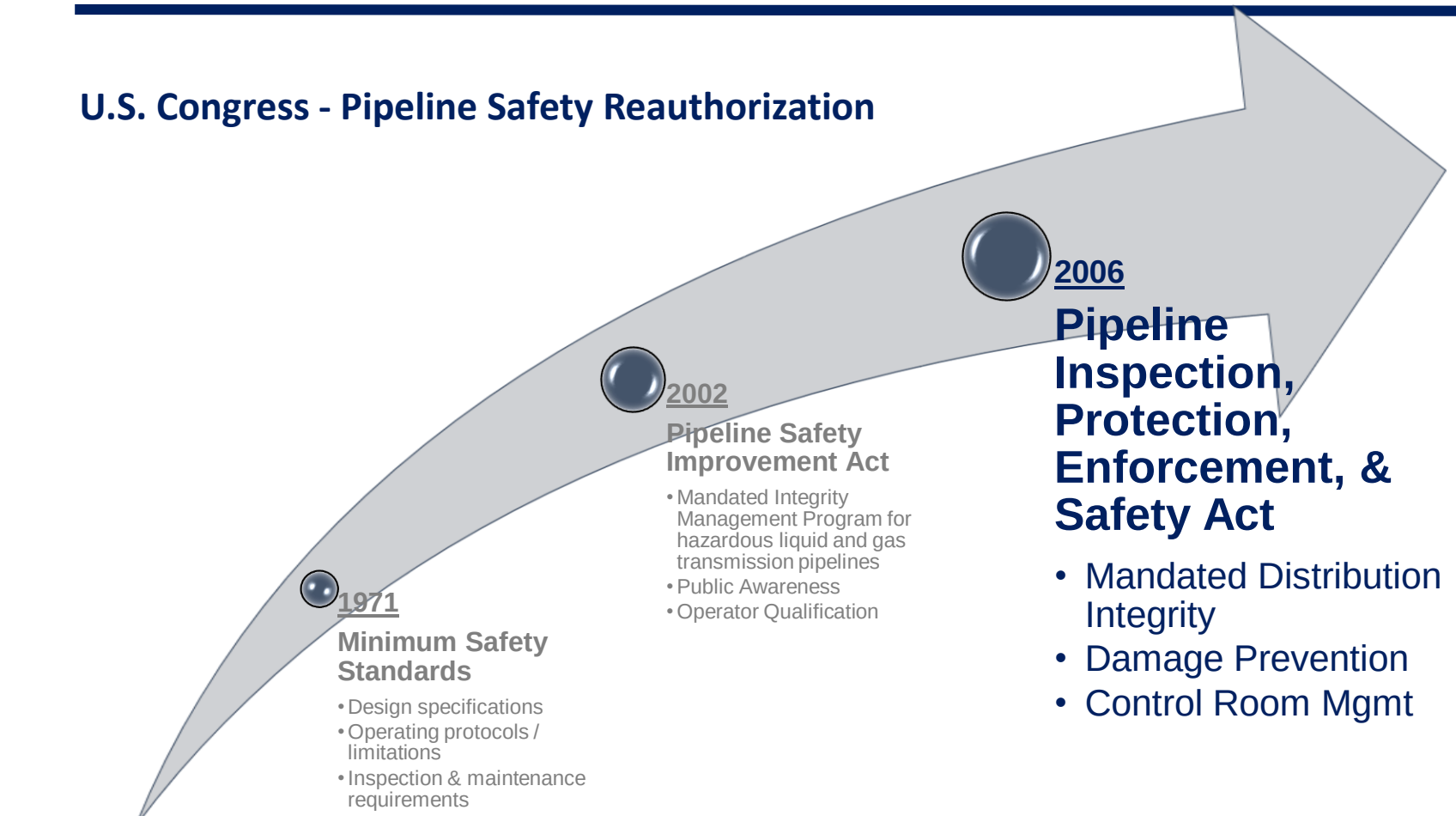
The materials in this guidance document may be modified or revoked without prior notice by PHMSA management.

Enforcement Guidance	Part 192, Gas Transmission Pipeline Integrity Management
Revision Date	12/7/2015
Code Section	§192.901
Section Title	What do the regulations in this subpart cover?
Existing Code Language	This subpart prescribes minimum requirements for an integrity management program on any gas transmission pipeline covered under this part. For gas transmission pipelines constructed of plastic, only the requirements in §§192.917, 192.921, 192.935 and 192.937 apply.
Origin of Code	Amdt. 192-95, 68 FR 69778, December 15, 2003
Last Amendment	Amdt. 192-95A, 69 FR 9307, December 20, 2003
Interpretation Summaries	
Advisory Bulletin/Alert Notice Summaries	**Advisory Bulletin ADB -12-03** **Notice to Operators of Driscopipe 8000 High Density Polyethylene Pipe of the Potential for Material Degradation** On March 6, 2012, PHMSA issued this advisory bulletin to alert operators using Driscopipe® 8000 High Density Polyethylene Pipe (Drisco8000) of the potential for material degradation. Degradation has been identified on pipe between one-half inch to two inches in diameter that was installed between 1978 and 1999 in desert-like environments in the southwestern United States. However, since root causes of the degradation have not been determined, PHMSA cannot say with certainty that this issue is isolated to these regions, operating environments, pipe sizes, or pipe installation dates. While the manufacturer has attempted to communicate with known or suspected users, PHMSA and the National Association of Pipeline Safety Representatives (NAPSR) have identified several operators currently using Drisco 8000 pipe who had not received communications about the issue. PHMSA is issuing this advisory bulletin to all operators of Drisco 8000 pipe in an effort to ensure they are aware of the issue, communicating with the manufacturer and their respective regulatory authorities to determine if their systems are susceptible to similar degradation, and taking measures to address it.
Other Reference Material & Source	ASME B31.8S-2004, Supplement to B31.8 on Managing System Integrity of Gas Pipelines Gas Piping Technology Committee (GPTC) Part 192, Appendix E.I

Distribution Integrity Management Program

The Need to Do More

U.S. Congress - Pipeline Safety Reauthorization



1971

Minimum Safety Standards

- Design specifications
- Operating protocols / limitations
- Inspection & maintenance requirements

2002

Pipeline Safety Improvement Act

- Mandated Integrity Management Program for hazardous liquid and gas transmission pipelines
- Public Awareness
- Operator Qualification

2006

Pipeline Inspection, Protection, Enforcement, & Safety Act

- Mandated Distribution Integrity
- Damage Prevention
- Control Room Mgmt

AUCSC

Appalachian Underground Corrosion Short Course

DIMP Regulation & Elements
Part 192 Subpart P

1 – Know the Distribution System & How It's Operated & Maintained

2 – Identify Threats (existing & potential)

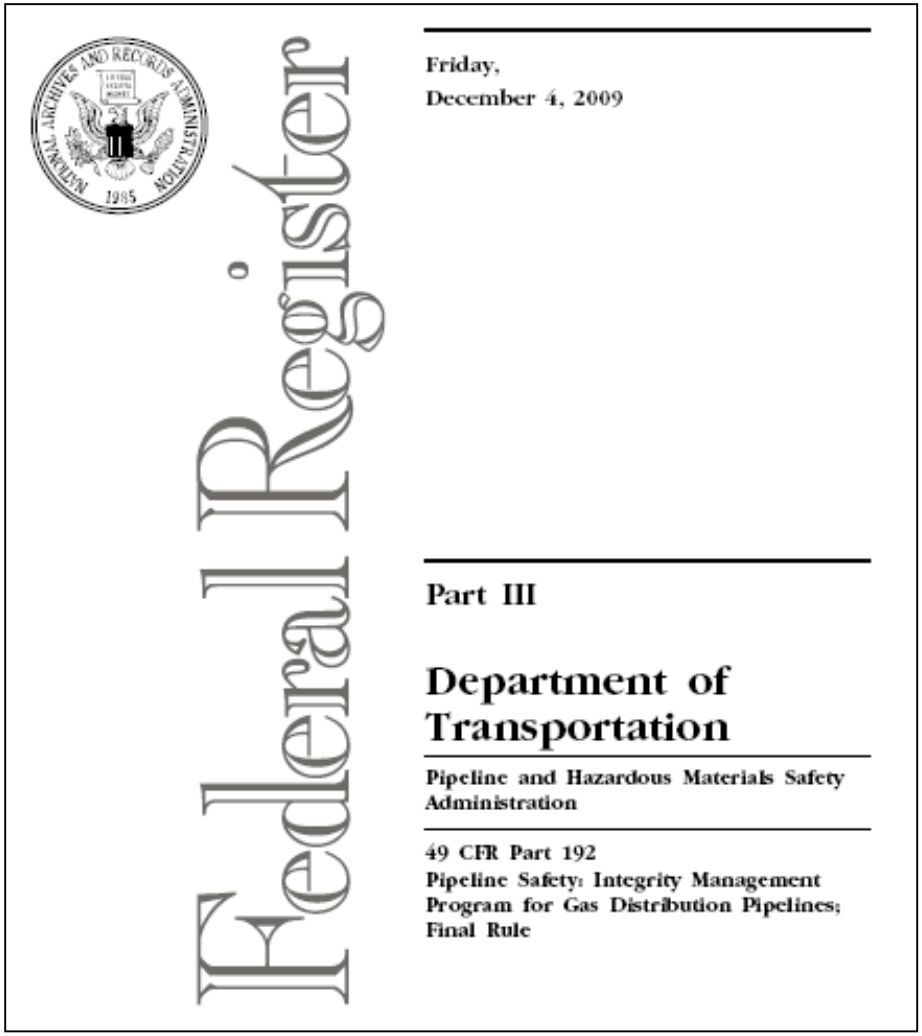
3 – Evaluate and Rank groups based on risk

4 – Identify and Implement appropriate measures to manage risks

5 – Measure performance and monitor results

6 – Periodically evaluate & improve program

7 – Make periodic reports to government agencies


Federal Register

Friday,
December 4, 2009

Part III

Department of Transportation

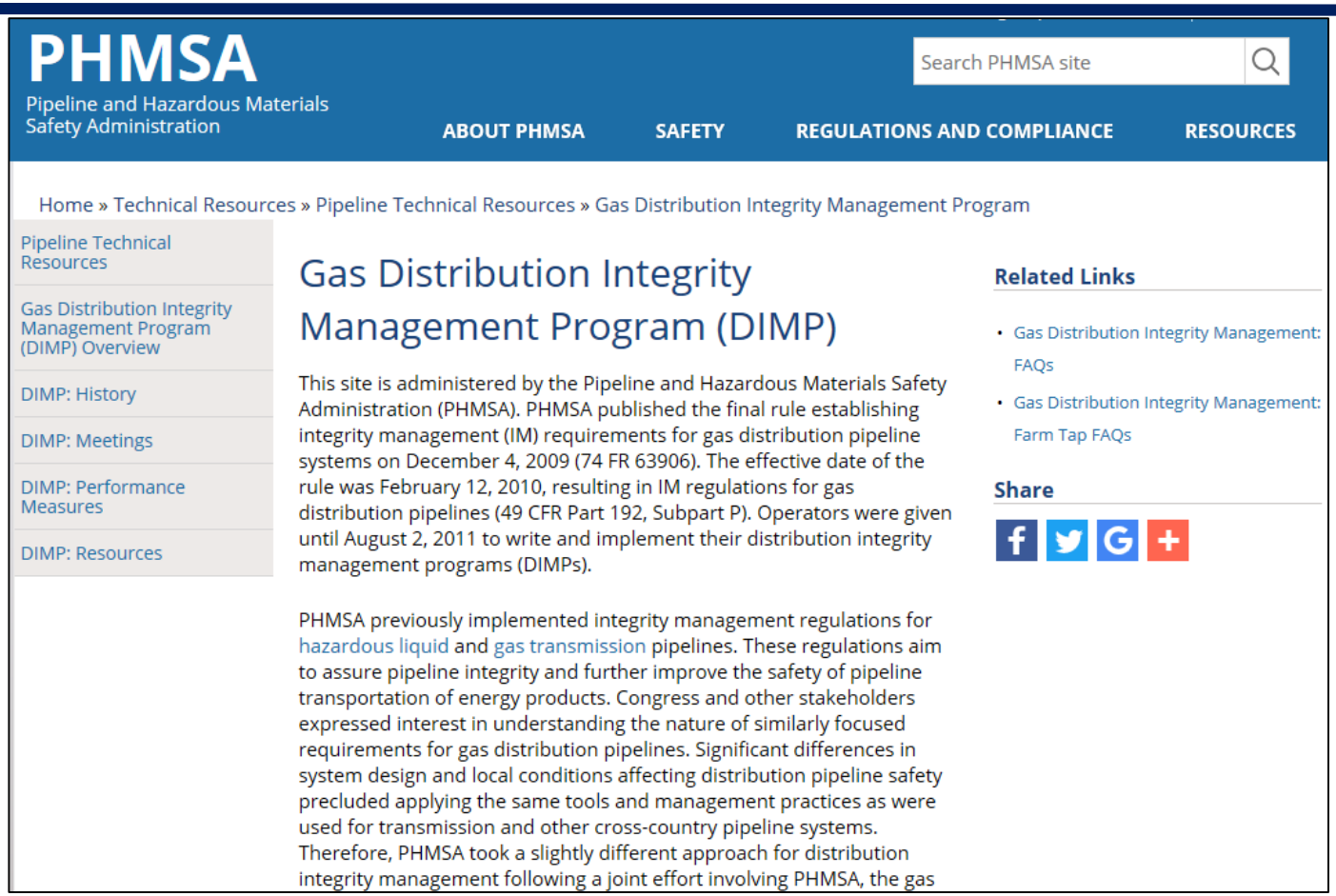
Pipeline and Hazardous Materials Safety Administration

49 CFR Part 192
Pipeline Safety: Integrity Management Program for Gas Distribution Pipelines; Final Rule

AUCSC
Appalachian Underground Corrosion Short Course

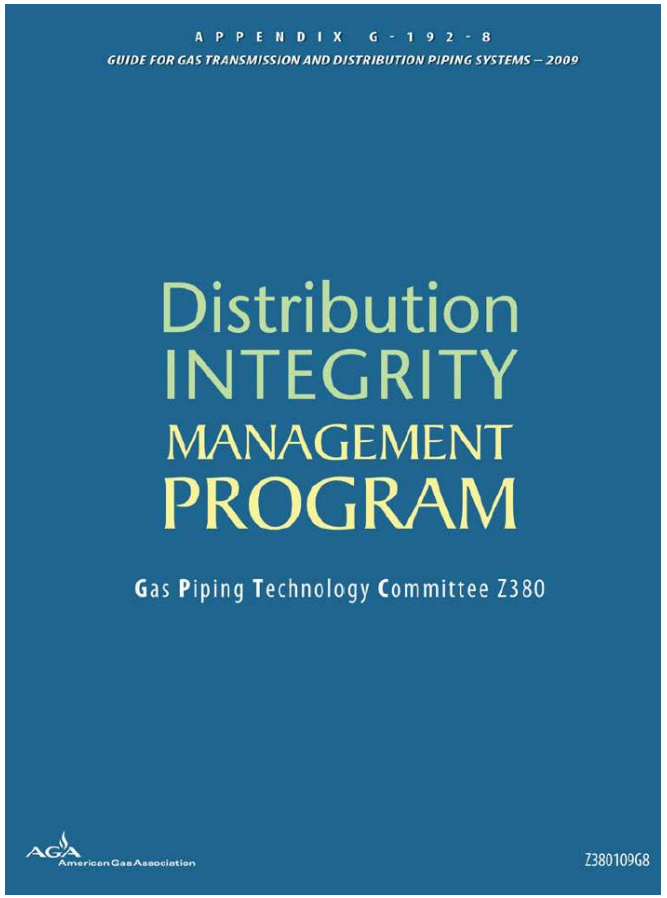
PHMSA Website Distribution Integrity Management

https://primis.phmsa.dot.gov/dimp/resources.htm



GPTC Guide Material - Appendix G-192-8

- Guide material provides examples of
  - Threat identification
  - A simple risk assessment method
  - Risk management actions
  - Performance measures
- Appendix G-192-8 is available for purchase thru American Gas Association (AGA)



Small Operators
Simple, Handy Risk-based Integrity Management Plan (SHRIMP)

Developed by the American Public Gas Association (APGA)

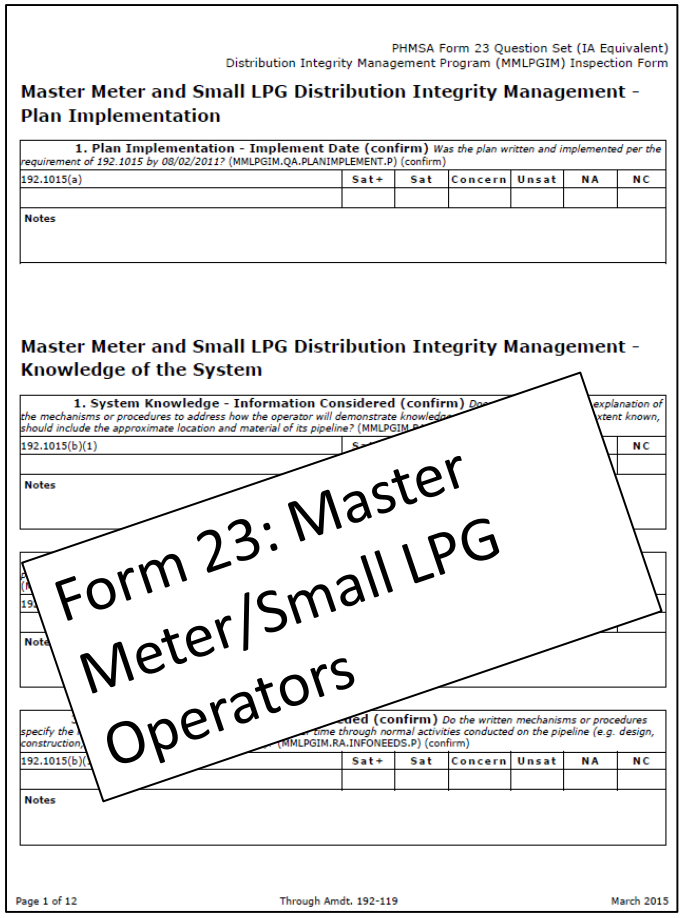
https://apgasif.org/sif-tools/shrimp-dimp/

- SHRIMP stands for “Simple, Handy, Risk-based Integrity Management Plan.” It is an on-line tool that operators of gas distribution systems may use to create a written Distribution Integrity Management Plan.

- The basic purpose of the software is to generate a written integrity management plan that is appropriate for the unique circumstances of each utility.

- It addresses the needs of small utilities that lack in-house engineering and/or risk management expertise.

DIMP Inspection – PHMSA Forms 23 & 24



PHMSA Form 23 Question Set (IA Equivalent)
Distribution Integrity Management Program (MMLPGIM) Inspection Form

Master Meter and Small LPG Distribution Integrity Management - Plan Implementation

1. Plan Implementation - Implement Date (confirm) *Was the plan written and implemented per the requirement of 192.1015 by 08/02/2011?* (MMLPGIM.QA.PLANIMPLEMENT.P) (confirm)

192.1015(a)	Sat+	Sat	Concern	Unsat	NA	NC

Notes

Master Meter and Small LPG Distribution Integrity Management - Knowledge of the System

1. System Knowledge - Information Considered (confirm) *Do... explanation of the mechanisms or procedures to address how the operator will demonstrate knowledge... extent known, should include the approximate location and material of its pipeline?* (MMLPGIM...)

192.1015(b)(1)						NC

Notes

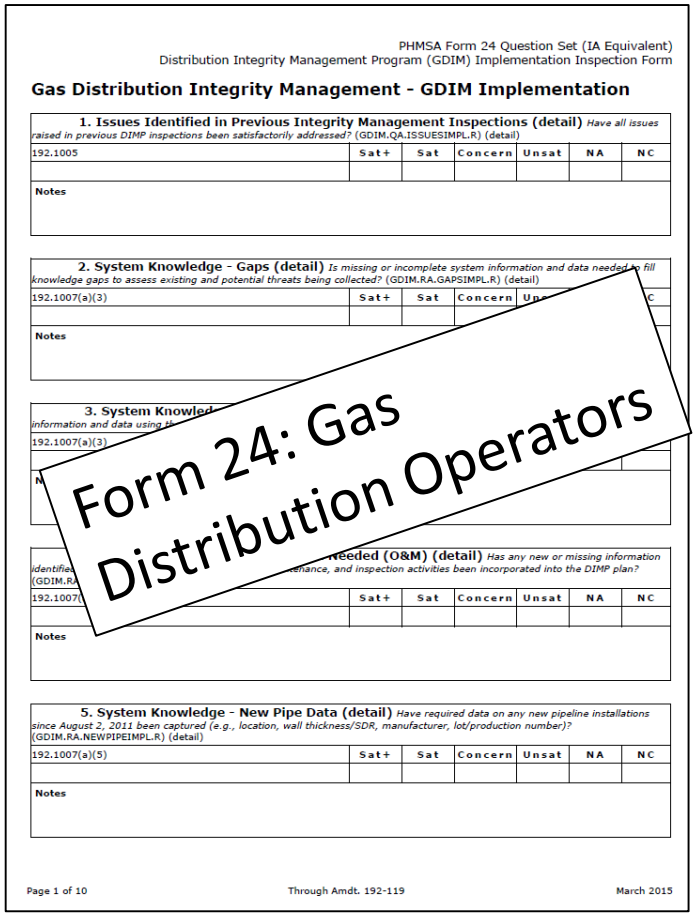
...eded (confirm) *Do the written mechanisms or procedures ... time through normal activities conducted on the pipeline (e.g. design, construction...* (MMLPGIM.RA.INFONEEDS.P) (confirm)

192.1015(b)(...	Sat+	Sat	Concern	Unsat	NA	NC

Notes

Page 1 of 12 Through Amdt. 192-119 March 2015

Form 23: Master Meter/Small LPG Operators



PHMSA Form 24 Question Set (IA Equivalent)
Distribution Integrity Management Program (GDIM) Implementation Inspection Form

Gas Distribution Integrity Management - GDIM Implementation

1. Issues Identified in Previous Integrity Management Inspections (detail) *Have all issues raised in previous DIMP inspections been satisfactorily addressed?* (GDIM.QA.ISSUESIMPL.R) (detail)

192.1005	Sat+	Sat	Concern	Unsat	NA	NC

Notes

2. System Knowledge - Gaps (detail) *Is missing or incomplete system information and data needed to fill knowledge gaps to assess existing and potential threats being collected?* (GDIM.RA.GAPSIMPL.R) (detail)

192.1007(a)(3)	Sat+	Sat	Concern	Un...	...C

Notes

3. System Knowled... *information and data using th...*

192.1007(a)(3)						

N...

Identifie... (GDIM.RA...

...eeded (O&M) (detail) *Has any new or missing information ...enance, and inspection activities been incorporated into the DIMP plan?*

192.1007(...	Sat+	Sat	Concern	Unsat	NA	NC

Notes

5. System Knowledge - New Pipe Data (detail) *Have required data on any new pipeline installations since August 2, 2011 been captured (e.g., location, wall thickness/SDR, manufacturer, lot/production number)?* (GDIM.RA.NEWPIPEIMPL.R) (detail)

192.1007(a)(5)	Sat+	Sat	Concern	Unsat	NA	NC

Notes

Page 1 of 10 Through Amdt. 192-119 March 2015

Form 24: Gas Distribution Operators

AUCSC

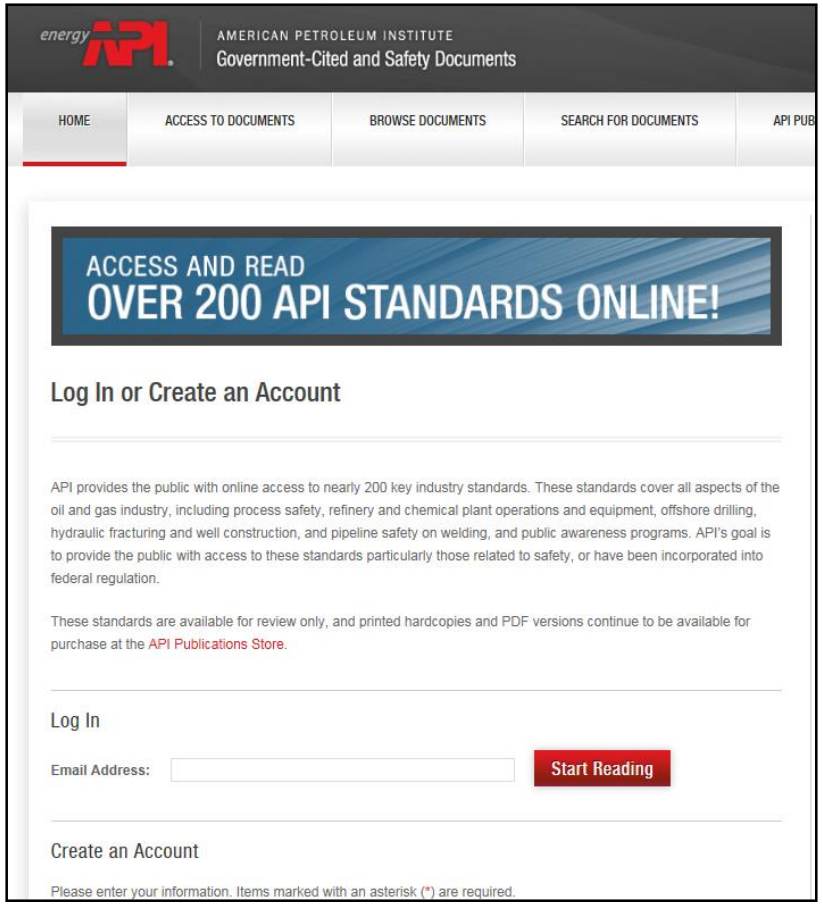
Appalachian Underground Corrosion Short Course

Pipeline Integrity Management Standards

AUCSC

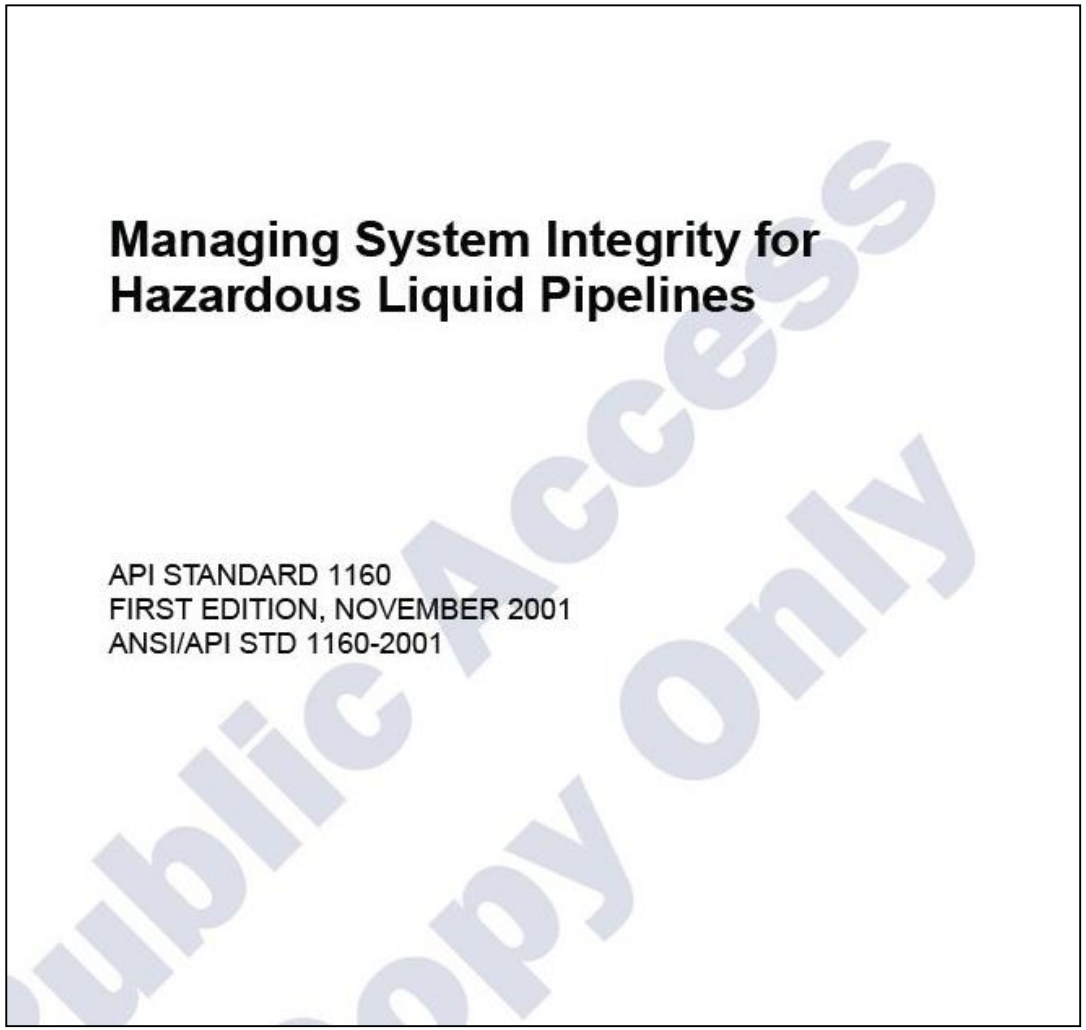
Appalachian Underground Corrosion Short Course

API Standards – Public Access – Read Only
http://publications.api.org/



- API provides online public access to key industry standards, including a broad range of safety standards, most of which were previously only available for purchase.
- These standards will be available as "Read Only" access, and API will host these documents on www.api.org.
- These documents are available for public interest purposes only, and will not be able to be edited, downloaded, printed, or shared.

ASME B31.8S 2004

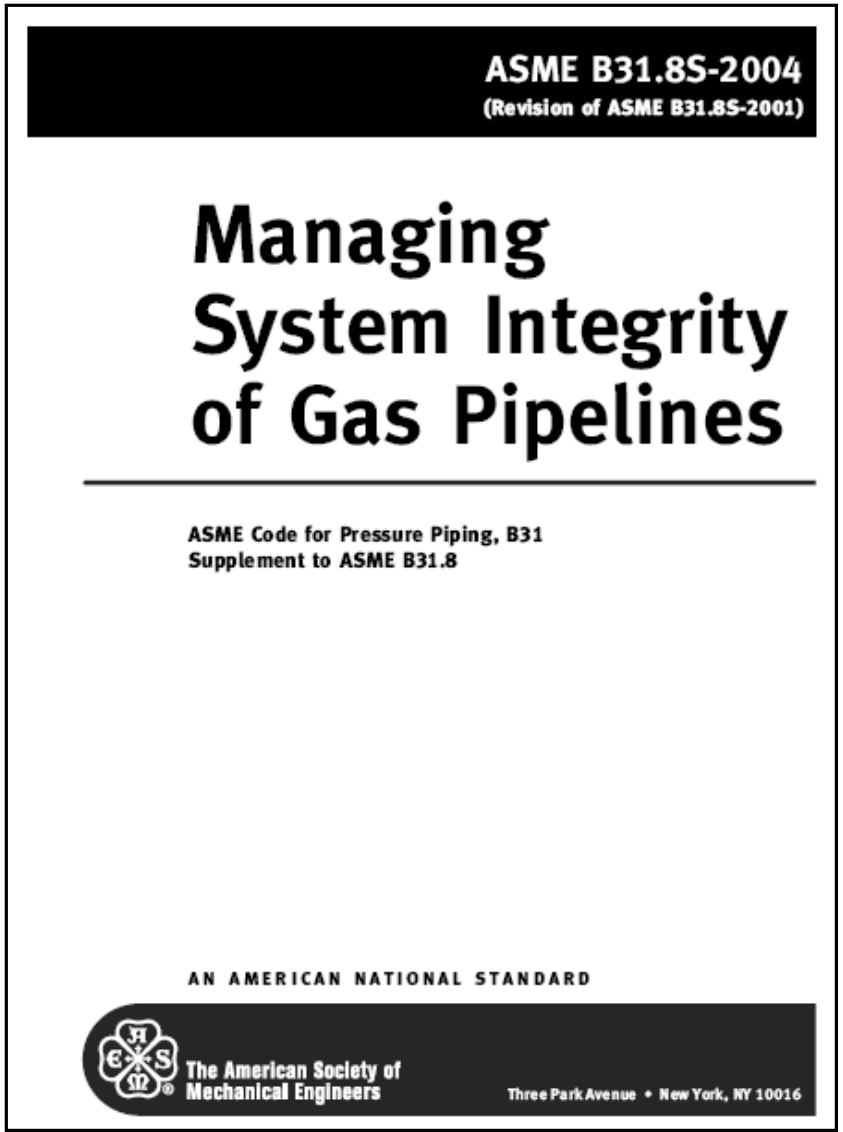


AUCSC

Appalachian Underground Corrosion Short Course

ASME B31.8S 2004

- Standard for Gas Operators of Onshore, Ferrous Materials
- Incorporated by Reference Into Part 192



AUCSC
Appalachian Underground Corrosion Short Course

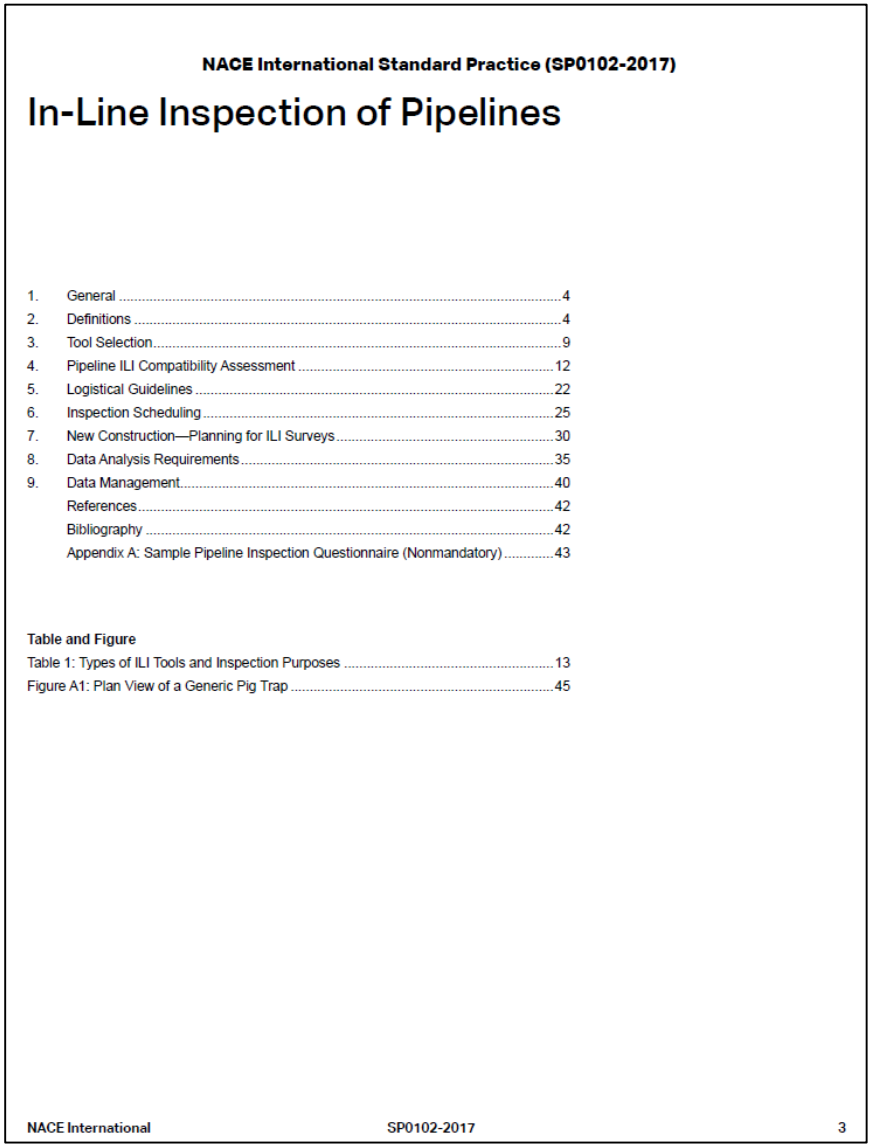
NACE International

Corrosion Threat Assessment
Integrity Standards

SP0102-2017 “In-Line Inspection of Pipelines”

- Outlines a process of related activities that an operator can use to plan, organize, and execute an ILI project.

- Companion Guide available
  - Technical Committee Report
  - “In-Line Nondestructive Inspection of Pipelines”
  - NACE Publication 35100



NACE International Standard Practice (SP0102-2017)

In-Line Inspection of Pipelines

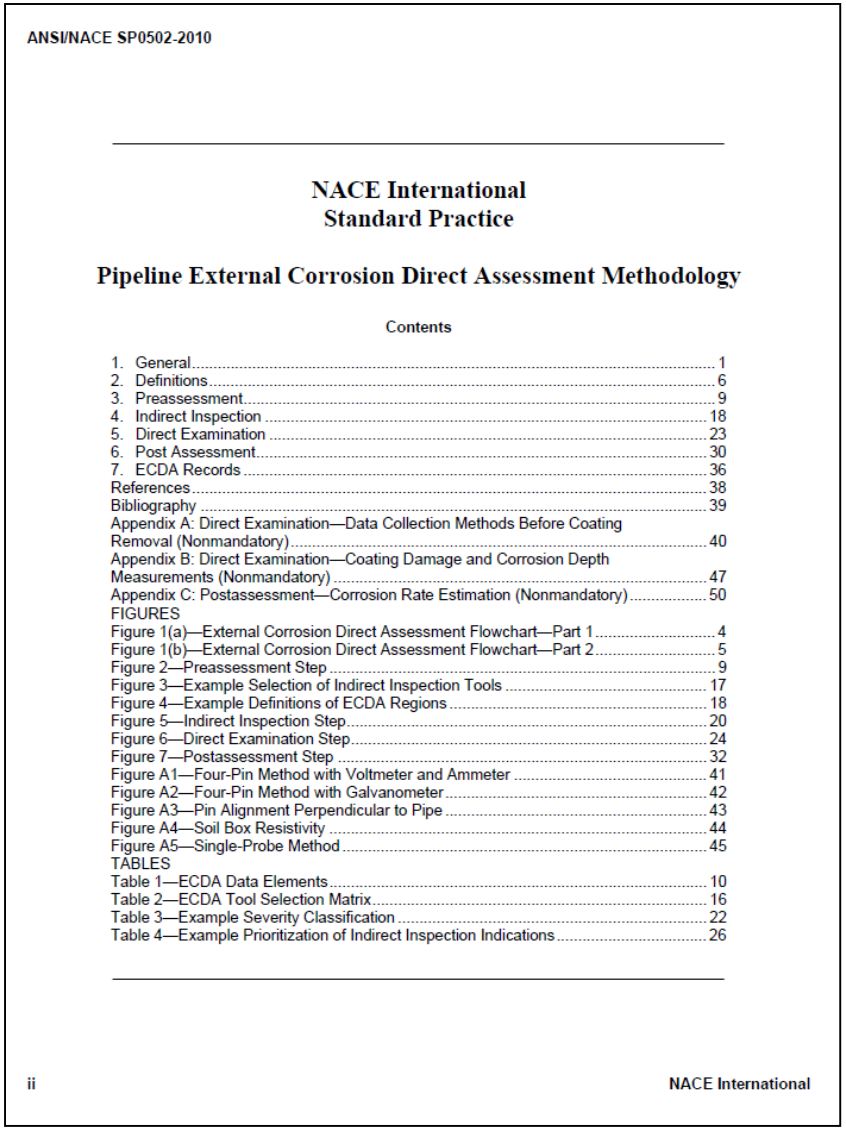
AUCSC

Appalachian Underground Corrosion Short Course

SP0502-2010 “Pipeline External Corrosion Direct Assessment Methodology”

Outlines a four-step structured process that is intended to improve safety by assessing and reducing the impact of external corrosion on the pipeline.

- Pre-Assessment
- Indirect Inspections
- Direct Examinations
- Post Assessment



ANSI/NACE SP0502-2010

NACE International
Standard Practice

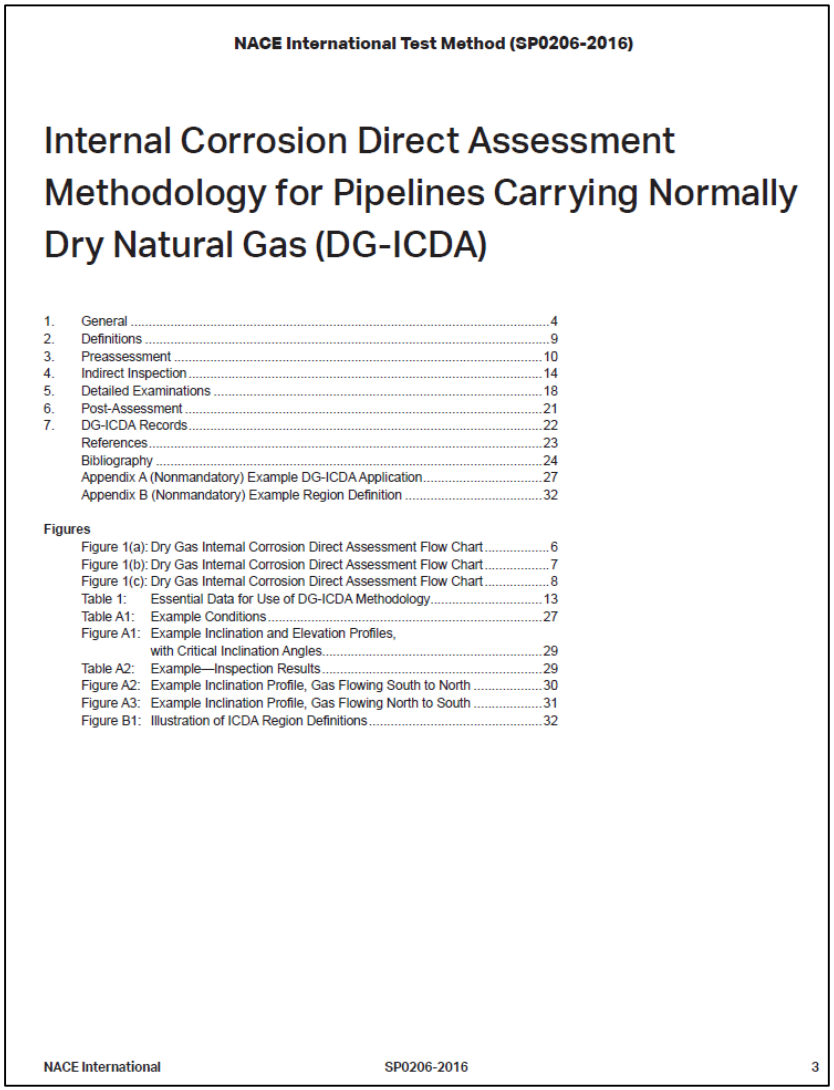
Pipeline External Corrosion Direct Assessment Methodology

Contents

AUCSC
Appalachian Underground Corrosion Short Course

SP0206-2016 “Internal Corrosion Direct Assessment Methodology for Pipelines Carrying Normally Dry Natural Gas (DG-ICDA)”

The methodology is described in terms of a four-step process and is applicable to natural gas pipelines that normally carry dry gas, but may suffer from infrequent, short-term upsets of liquid water (or other electrolyte).



NACE International Test Method (SP0206-2016)

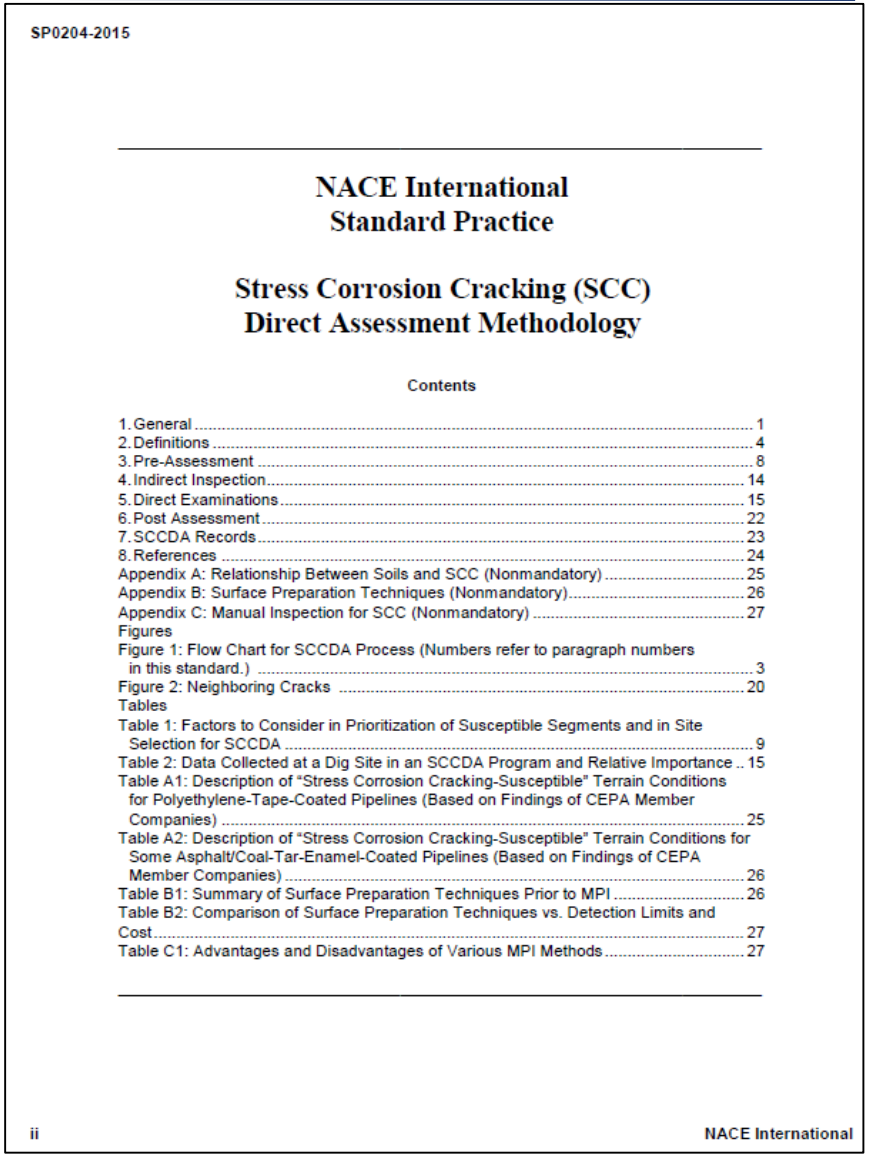
Internal Corrosion Direct Assessment Methodology for Pipelines Carrying Normally Dry Natural Gas (DG-ICDA)

AUCSC

Appalachian Underground Corrosion Short Course

SP0204-2015 "Stress Corrosion Cracking (SCC) Direct Assessment Methodology"

Outlines a four-step structured process that is intended to improve safety by assessing and reducing the impact of stress corrosion cracking on the pipeline.



NACE International
Standard Practice

Stress Corrosion Cracking (SCC)
Direct Assessment Methodology

Contents

AUCSC
Appalachian Underground Corrosion Short Course

What's Next?

Recent pipeline and underground storage incidents have called for more review, guidance, standards, and regulations to improve safety.

Liquids Pipeline Accident

AUCSC

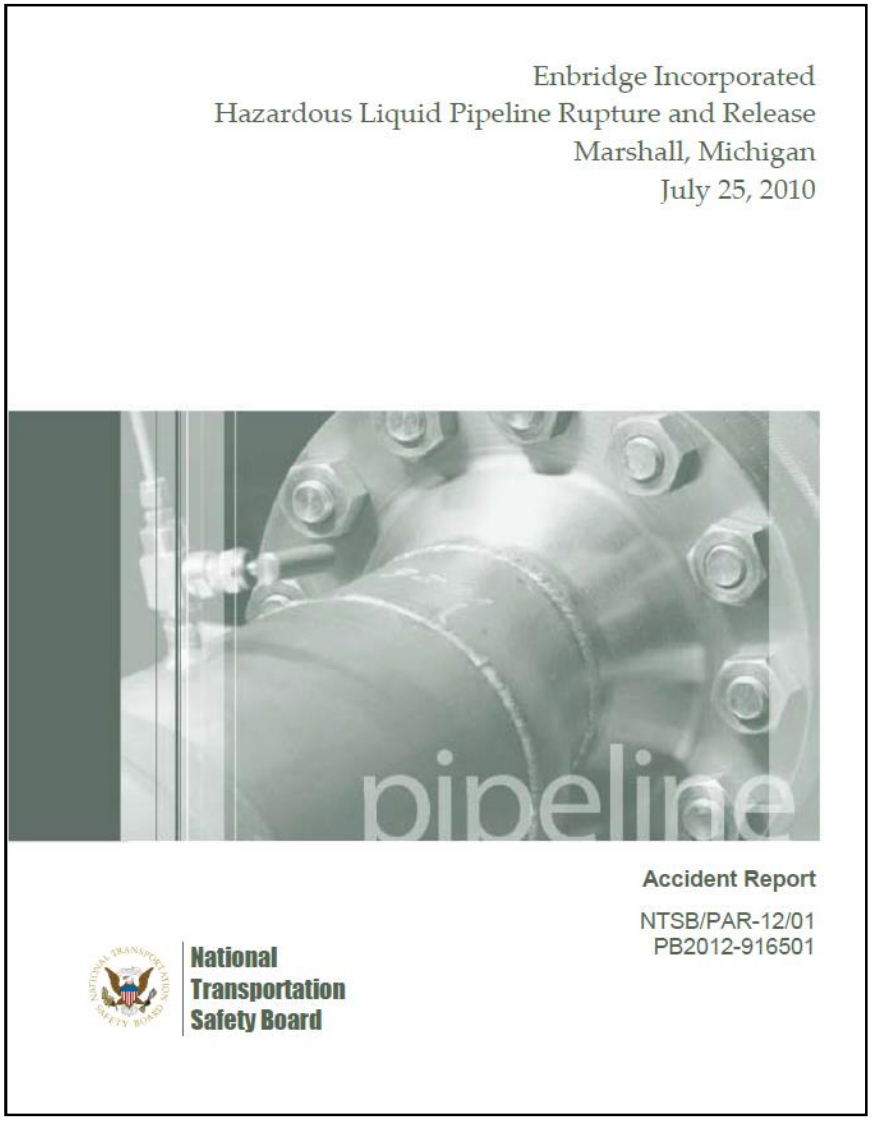
Appalachian Underground Corrosion Short Course

NTSB Recommendation
Pipeline Safety Management Systems

NTSB Recommendation P-12-17

To the American Petroleum Institute:

Facilitate the development of a **safety management system** standard specific to the pipeline industry that is similar in scope to your Recommended Practice 750, Management of Process Hazards. The development should follow established American National Standards Institute requirements for standard development.

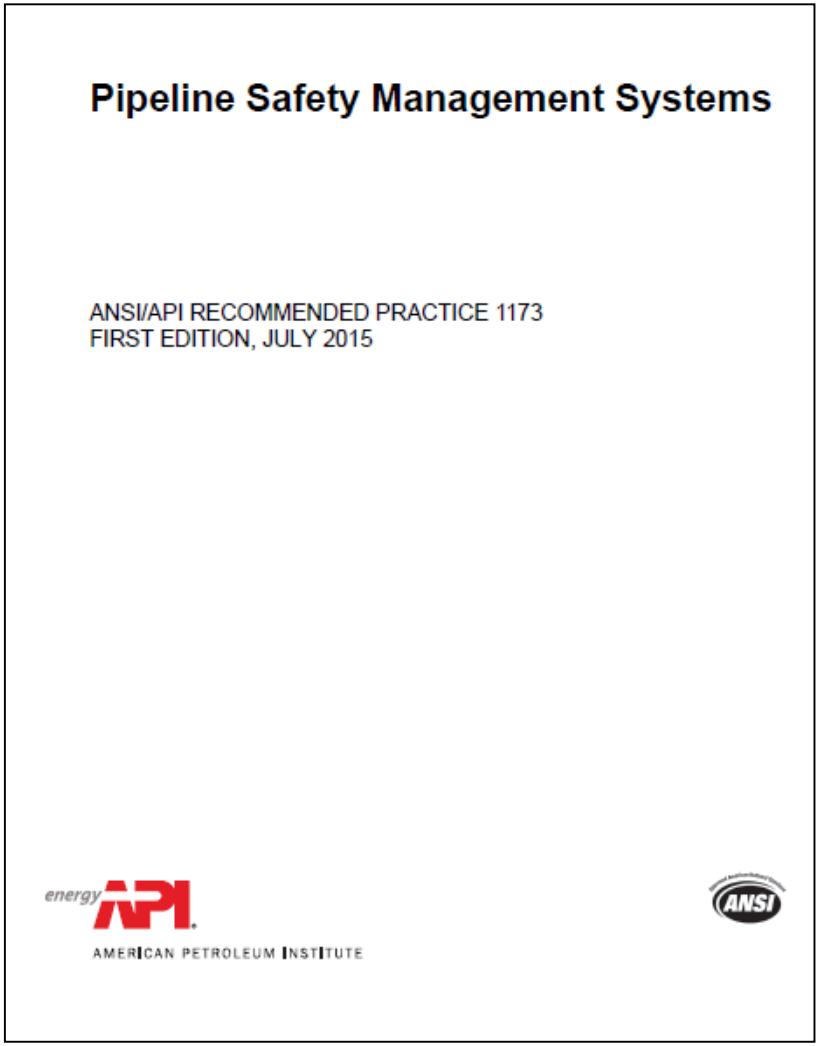


AUCSC
Appalachian Underground Corrosion Short Course

Pipeline Safety Management Systems

API Recommended Practice 1173

(Published July 2015)



AUCSC

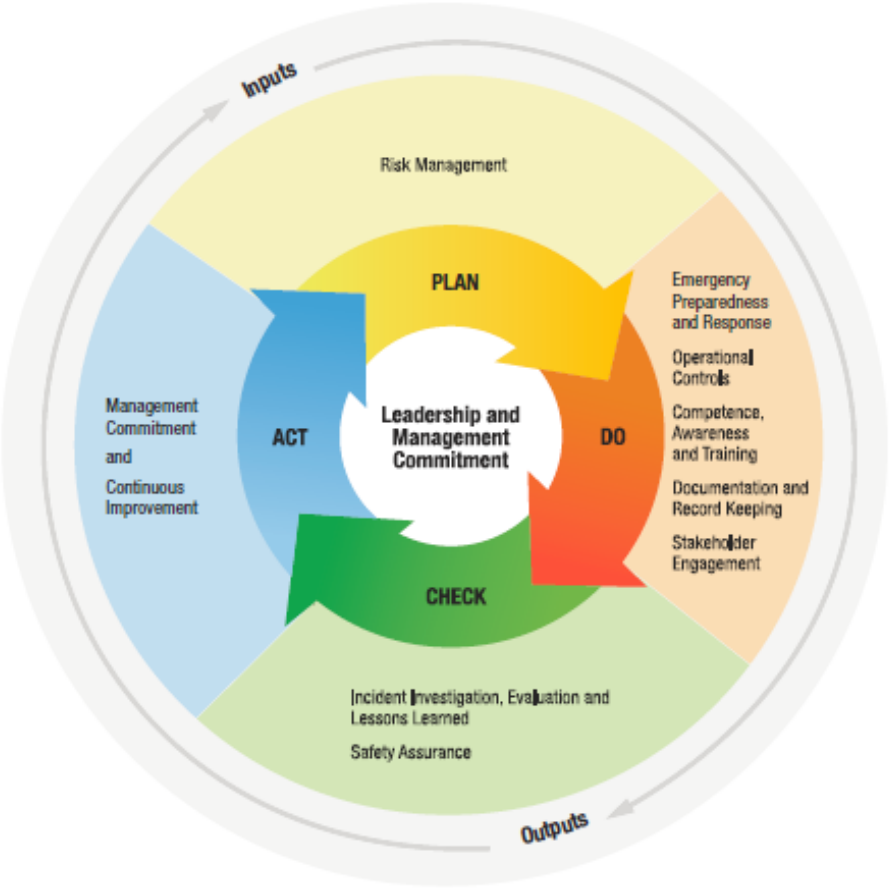
Appalachian Underground Corrosion Short Course

Elements of a Pipeline Management Safety System

- Leadership and Management Commitment
- Stakeholder Engagement
- Risk Management
- Operational Controls
- Incident Investigation, Evaluation, and Lessons Learned
- Safety Assurance
- Management Review and Continuous Improvement
- Emergency Preparedness and Response
- Competence, Awareness, and Training
- Documentation and Record Keeping

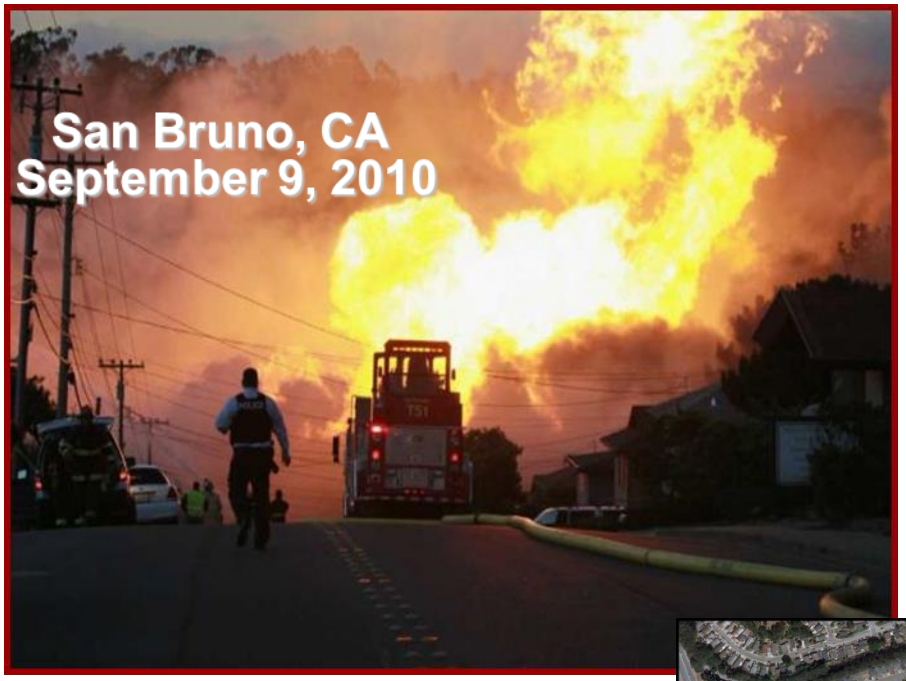
Safety Management System (SMS) "Plan-Do-Check-Act"

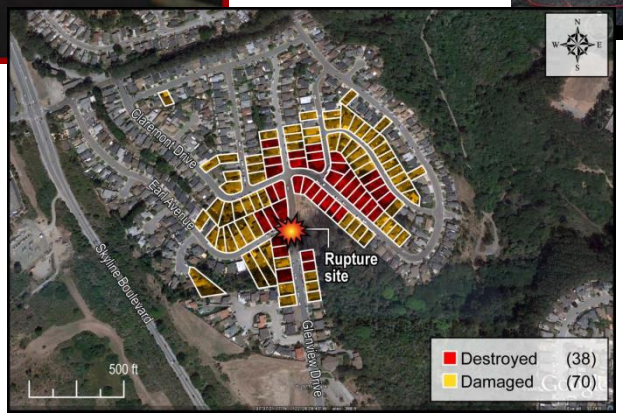
- Plan: Establish objectives and processes necessary to deliver results in accordance with the organization's policies and the expected goals.
- Do: Execute the plan designed in the previous step.
- Check: Review results and compare with established objectives. Looking for deviation in implementation from the plan.
- Act: Take action to continuously improve process performance, including corrective actions on significant differences between actual and planned results, analyzes the differences to determine their root causes, and determines where to apply changes that will include improvement.



AUCSC
Appalachian Underground Corrosion Short Course

Gas Pipeline Accident



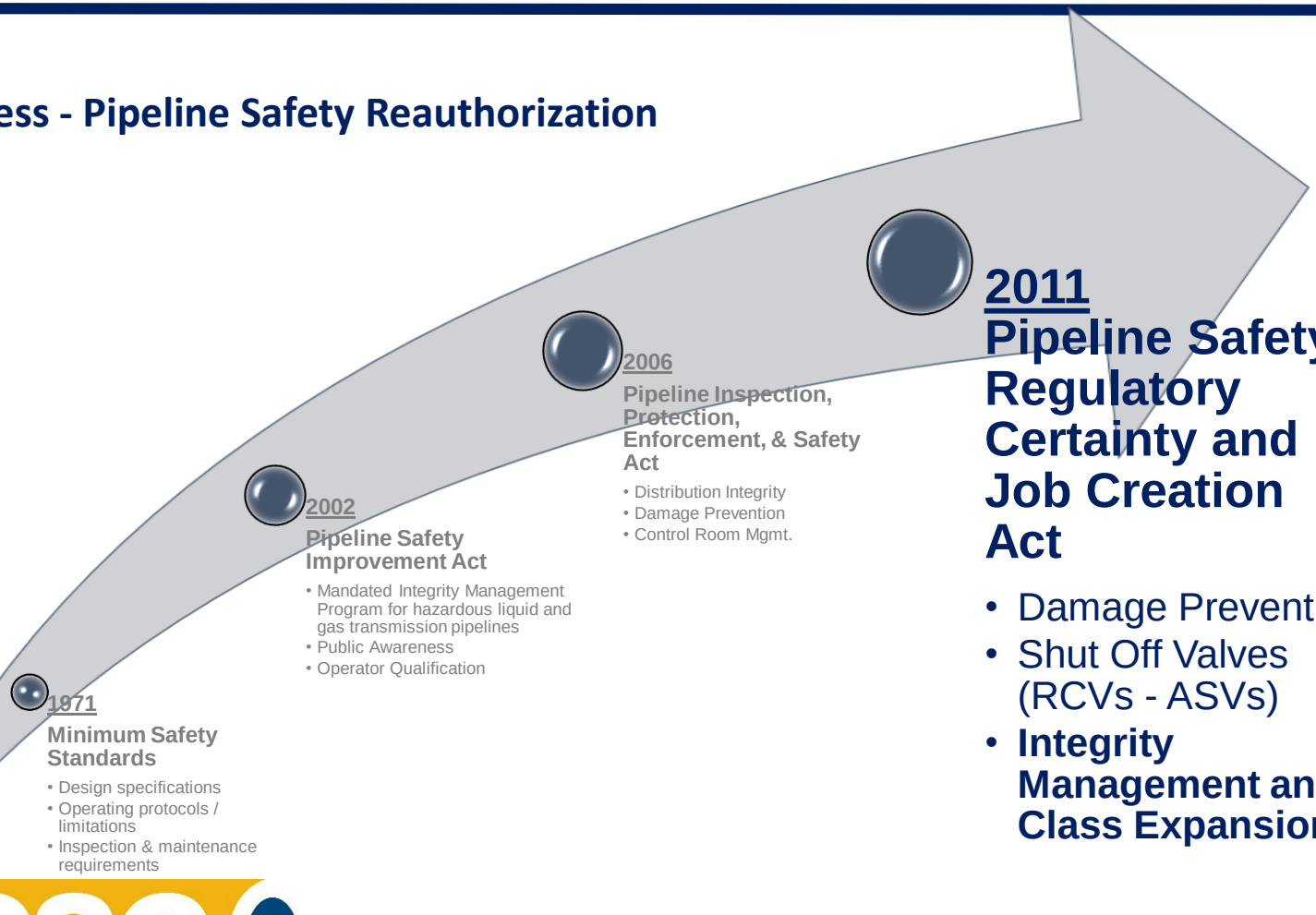


AUCSC

Appalachian Underground Corrosion Short Course

The Need to Do More

U.S. Congress - Pipeline Safety Reauthorization



AUCSC

Appalachian Underground Corrosion Short Course

The Need to Do More

- PIPELINE SAFETY, REGULATORY CERTAINTY, AND JOB CREATION ACT OF 2011
- Automatic/Remote Controlled Valves (Sec 4)
- Mandated PHMSA to evaluate whether TIMP requirements, or elements thereof, should be expanded beyond HCAs (Sec 5)
- MAOP Record Verification (Sec. 23)
- Signed into law 1/3/12

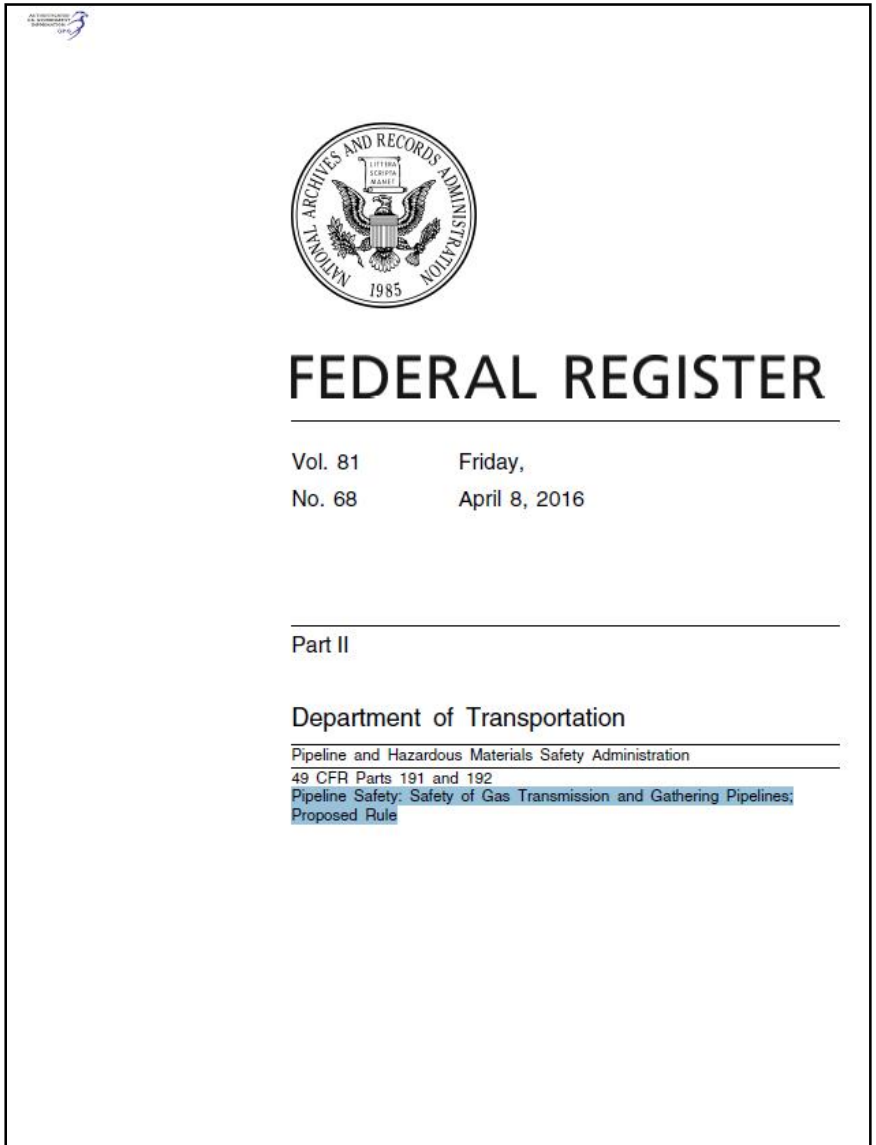
Public Law 112–90 112th Congress

PIPELINE SAFETY, REGULATORY CERTAINTY, AND JOB CREATION ACT OF 2011

Sec. 1. Short title; amendment of title 49, United States Code; definitions; tabl of contents.
Sec. 2. Civil penalties.
Sec. 3. Pipeline damage prevention.
Sec. 4. Automatic and remote-controlled shut-off valves.
Sec. 5. Integrity management.
Sec. 6. Public education and awareness.
Sec. 7. Cast iron gas pipelines.
Sec. 8. Leak detection.
Sec. 9. Accident and incident notification.
Sec. 10. Transportation-related onshore facility response plan compliance.
Sec. 11. Pipeline infrastructure data collection.
Sec. 12. Transportation-related oil flow lines.
Sec. 13. Cost recovery for design reviews.
Sec. 14. Biofuel pipelines.
Sec. 15. Carbon dioxide pipelines.
Sec. 16. Study of transportation of diluted bitumen.
Sec. 17. Study of nonpetroleum hazardous liquids transported by pipeline.
Sec. 18. Clarifications.
Sec. 19. Maintenance of effort.
Sec. 20. Administrative enforcement process.
Sec. 21. Gas and hazardous liquid gathering lines.
Sec. 22. Excess flow valves.
Sec. 23. Maximum allowable operating pressure.
Sec. 24. Limitation on incorporation of documents by reference.
Sec. 25. Pipeline safety training for State and local government personnel.
Sec. 26. Report on minority-owned, woman-owned, and disadvantaged businesses.
Sec. 27. Report on pipeline projects.
Sec. 28. Cover over buried pipelines.
Sec. 29. Seismicity.
Sec. 30. Tribal consultation for pipeline projects.
Sec. 31. Pipeline inspection and enforcement needs.
Sec. 32. Authorization of appropriations.

NPRM - Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines - Published April 8, 2016

- The Pipeline and Hazardous Materials Safety Administration (PHMSA) is proposing to change the Federal pipeline safety regulations in 49 CFR Parts 191 and 192, which cover the transportation of gas by transmission and gathering pipelines.



FEDERAL REGISTER

Vol. 81 Friday,
No. 68 April 8, 2016

Part II

Department of Transportation

Pipeline and Hazardous Materials Safety Administration

49 CFR Parts 191 and 192

Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines; Proposed Rule

AUCSC

Appalachian Underground Corrosion Short Course

NPRM - Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines - Published April 8, 2016

Specifically, PHMSA is proposing to issue new regulations and revise existing regulations to address the following topic areas:

1. Integrity Assessment and Remediation for Segments Outside High Consequence Areas (HCAs) and to re-establish Maximum Allowable Operating Pressure (MAOP)
2. Integrity Management Program Process Clarifications
3. Management of Change
4. Corrosion Control
5. Inspection of Pipelines Following Extreme Events
6. MAOP Exceedance Reports and Records Verification
7. Launcher/Receiver Pressure Relief
8. Expansion of Regulated Gas Gathering Pipelines

Gas Transmission Rule (3 Publications)

- Rule 1 – Focus on Congressional Mandates
  - MAOP reconfirmation
  - Material verification
  - Non-HCA assessments
  - Planned publication Aug 2019
- Rule 2 – Focus on Non-mandates
  - Repair Criteria (HCA and non-HCA)
  - Management of Change
  - Corrosion control
  - Planned publication Dec 2019
- Rule 3 – Gas Gathering (TBD)

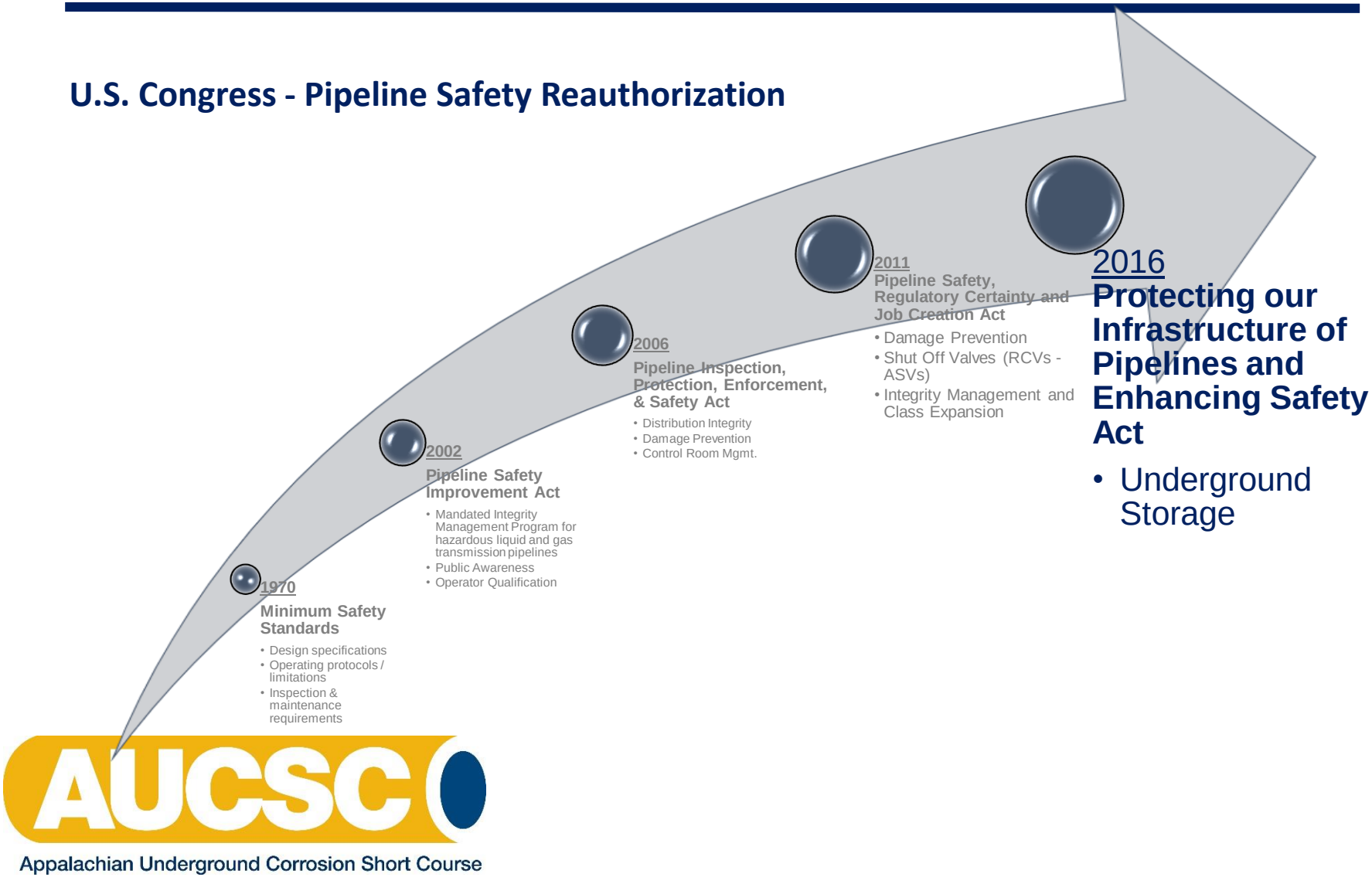
Gas Transmission Rule (Rule 2)

Subpart I Corrosion Control (Proposed)

- 192.461 Protective Coating (and 192.319)
  - 1,000 contiguous feet buried, conduct surveys to assess coating damage
  - Remediate severe coating damage within 6 months
- 192.465 Monitoring
  - Complete remedial action within 12 months or as soon as practicable after obtaining permits
- 192.473 Interference Currents
  - Increase requirements for electrical stray current surveys and remedial action

The Need to Do More

U.S. Congress - Pipeline Safety Reauthorization



AUCSC

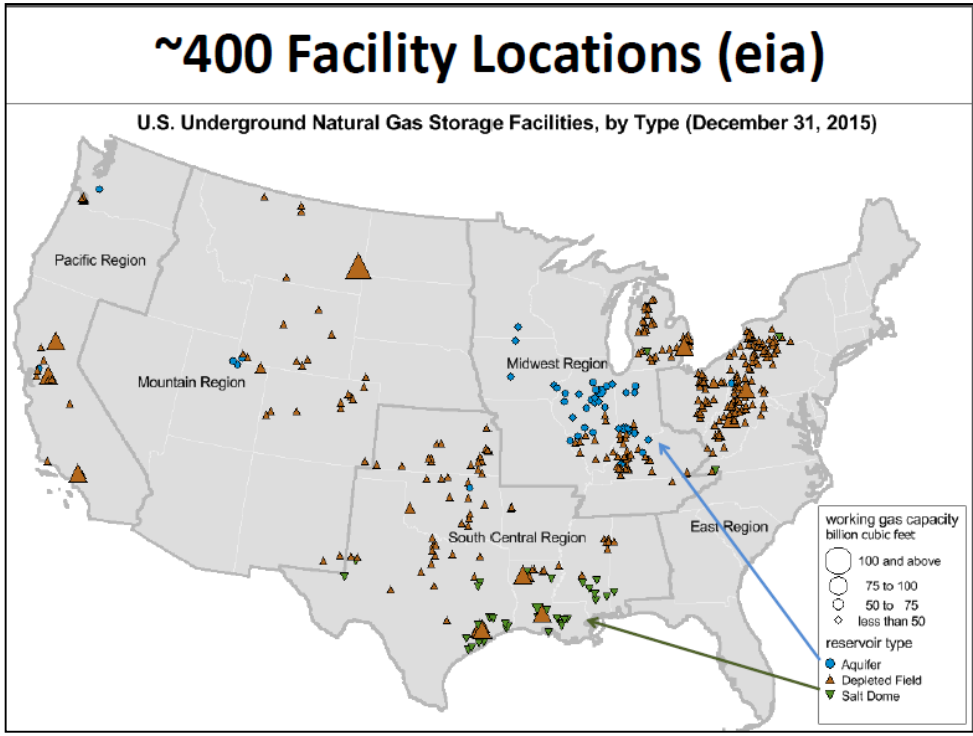
Appalachian Underground Corrosion Short Course

2016 Pipeline Safety Reauthorization "SAFE PIPES Act"

- Proposed – Requires the Secretary of Transportation to issue minimum safety standards for the operation and integrity management of underground gas storage facilities (Section 12) no later than two years after the date of enactment and establishes an underground natural gas storage facility safety account in the Pipeline Safety fund

Underground Natural Gas Storage

- There are approximately 400 interstate and intrastate underground natural gas storage facilities currently in operation in the U.S.
  - 326 depleted hydrocarbon reservoirs
  - 43 depleted aquifers
  - 31 salt caverns



Natural Gas Underground Storage

From October 23, 2015 to mid-February 2016 a natural gas leak (California) from an injection well's pipe casing seeping up through the ground received national attention.

AUCSC

Appalachian Underground Corrosion Short Course

Natural Gas Underground Storage Interim Final Rule (IFR) – 12/19/2016

- Issued in Federal Register 12/19/16
- Effective Date January 18, 2017
- Compliance Date January 18, 2018
- Final Rule – Pending 2019

its ability to provide Title X services. OPA will send a letter summarizing the change to current recipients of Title X funds and post the letter to its Web site. Language conforming to this final rule will be included in forthcoming FOAs and continuation application guidance. OPA also has other existing channels for disseminating information to stakeholders. Therefore, based on previous experience, the Department estimates that preparing and disseminating these materials will require approximately one to three percent of a full-time equivalent OPA employee at the GS–12 step 5 level. Based on federal wage schedule for 2016 in the Washington, DC area, GS–12 step 5 level corresponds to an annual salary of $87,821. The salary cost is doubled to account for overhead and benefits. As a result, the Department estimates a cost of approximately $1,800–$5,300 to disseminate information following publication of the final rule.

c. Grant Recipient Costs To Evaluate and Implement the Policy Change

The Department expects that stakeholders, including grant applicants and recipients potentially affected by this final policy change, will process the information and decide how to respond. This change will not affect the majority of current recipients and, as a result, the majority of current recipients will spend very little time reviewing these changes before deciding that no change on their part is required. For the states that currently hold Title X grants and have laws or policies restricting eligibility of Title X subrecipients based on reasons other than their ability to deliver Title X services, the final rule may implicate the state's law or policy. State agencies that currently restrict subrecipients would need to consider their current practices carefully in order to comply with this final rule if they wish to continue obtaining Title X grants and engaging subrecipients.

The Department estimates that current and potential recipients will spend an average of one to two hours processing the information and deciding what action to take. The Department notes that individual responses are likely to vary, as many parties unaffected by these changes will spend a negligible amount of time in response to these changes. According to the U.S. Bureau of Labor Statistics,[1] the average hourly wage for a chief executive in state government is $54.26, which the Department believes is a good proxy for the individuals who will spend time on these activities. After adjusting upward by 100 percent to account for overhead and benefits, it is estimated that the per-hour cost of a state government executive's time is $108.52. Thus, the average cost per current or potential grant recipient to process this information and decide upon a course of action is estimated to be $108.52–$217.04. OPA will disseminate information to an estimated 89 Title X grant recipients. As a result, it is estimated that dissemination will result in a total cost of approximately $9,700–$19,300.

d. Summary of Impacts

Public funding for family planning services has the potential to shift to providers that see a higher number of patients and provide higher quality services. Increases in the quantity and quality of Title X service utilization could lead to fewer unintended pregnancies, improved health outcomes, reduced Medicaid costs, and increased quality of life for many individuals and families. The final rule's impacts will take place over a long period of time, as it will allow for the continued flow of funding to provide family planning services for those most in need, and it will prevent future attempts to prohibit Title X funding to current and potential subrecipients for reasons other than their ability to meet the objectives of the Title X program.

The Department estimates approximate costs in the range of $11,400–$24,600 in the first year following publication of the final rule. This rule is beneficial to society in increasing access to and quality of care.

e. Analysis of Regulatory Alternatives

The Department carefully considered the option of not pursuing regulatory action. However, as discussed previously, not pursuing regulatory action would allow the continued denial of Title X funds to entities for reasons other than their ability to provide Title X services. This, in turn, means accepting reductions in access to and quality of services to populations who rely on Title X. As a result, the Department chose to pursue regulatory action.

C. Paperwork Reduction Act of 1995

The amendments in this rule will not impose any additional data collection requirements beyond those already imposed under the current information collection requirements that have been approved by the Office of Management and Budget.

Date: December 12, 2016.

Sylvia M. Burwell,

Secretary.

List of Subjects in 42 CFR part 59

Birth control, Family planning, Grant programs.

Therefore, under the authority of section 1006 of the Public Health Service Act as amended, and for the reasons stated in the preamble, the Department amends 42 CFR part 59 as follows:

PART 59—GRANTS FOR FAMILY PLANNING SERVICES

■ 1. The authority citation for Part 59 continues to read as follows:

Authority: 42 U.S.C. 300a–4.

■ 2. Section 59.3 is revised to read as follows:

§ 59.3 Who is eligible to apply for a family planning services grant or to participate as a subrecipient as part of a family planning project?

(a) Any public or nonprofit private entity in a State may apply for a grant under this subpart.

(b) No recipient making subawards for the provision of services as part of its Title X project may prohibit an entity from participating for reasons other than its ability to provide Title X services.

[FR Doc. 2016–30276 Filed 12–14–16; 8:45 am]

BILLING CODE 5140–34–P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

49 CFR Parts 191 and 192

[Docket No. PHMSA–2016–0016; Amdt. Nos. 191–24; 192–122]

RIN 2137–AF22

Pipeline Safety: Safety of Underground Natural Gas Storage Facilities

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), Department of Transportation (DOT).

ACTION: Interim final rule.

SUMMARY: This interim final rule (IFR) revises the Federal pipeline safety regulations to address critical safety issues related to downhole facilities, including wells, wellbore tubing, and casing, at underground natural gas storage facilities. This IFR responds to Section 12 of the Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2016, which was enacted following the serious

AUCSC

Appalachian Underground Corrosion Short Course

Underground Gas Storage IFR Summary

- Revises the Federal pipeline safety regulations to address critical safety issues related to downhole facilities, including wells, wellbore tubing, and casing, at underground natural gas storage facilities.
  - (§ 192.12 Underground natural gas storage facilities)

- The promulgation of minimum federal standards would, for the first time, establish safety standards under the Pipeline Safety Regulations at title 49, CFR parts 191 and 192, for the currently unregulated downhole facilities at
  - 197 interstate underground gas storage facilities, and
  - provide consistent, minimum standards for the remaining 203 intrastate facilities.

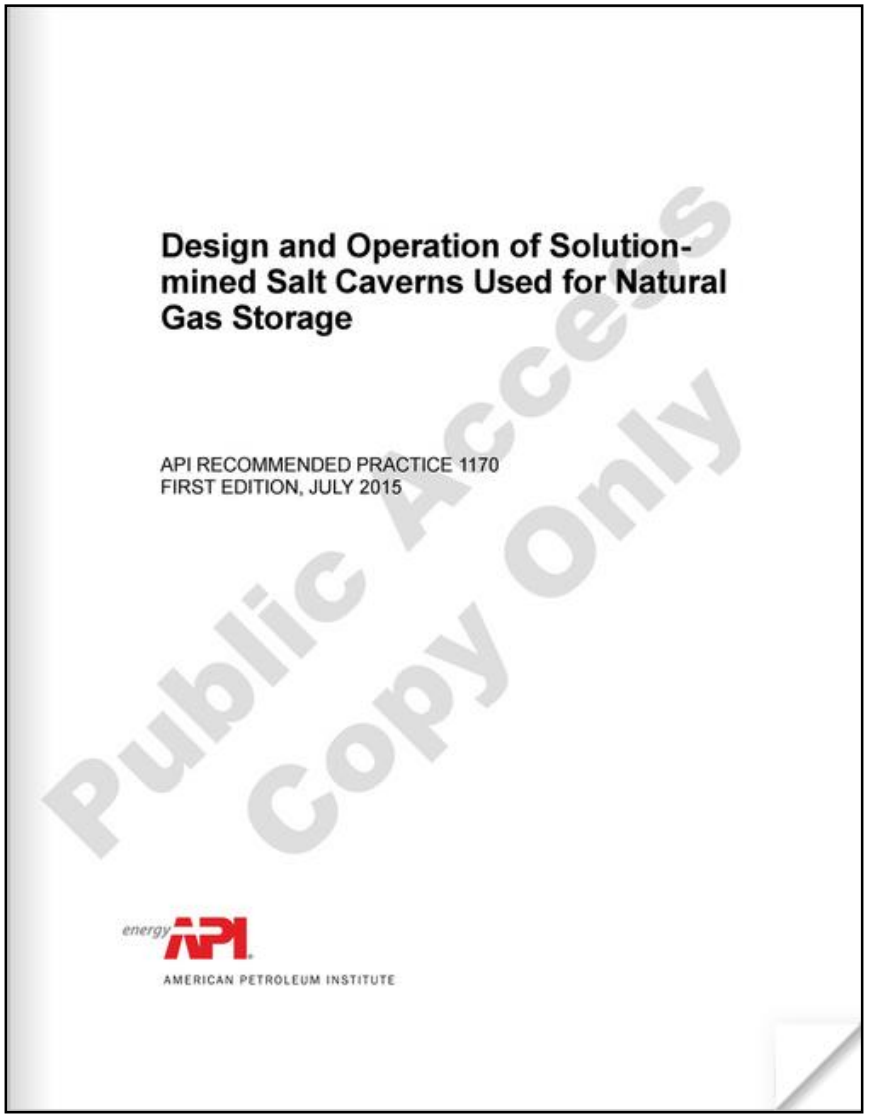
- This IFR incorporates by reference two American Petroleum Institute (API) Recommended Practices (RP)
  - API RP 1170, "Design and Operation of Solution-mined Salt Caverns used for Natural Gas Storage," issued in July 2015; and
  - API RP 1171, "Functional Integrity of Natural Gas Storage in Depleted Hydrocarbon Reservoirs and Aquifer Reservoirs," issued in September 2015.

API Recommended Practice 1170 Published September 2015

API RP 1170

Design and Operations of Solution-mined Salt Caverns Used for Natural Gas Storage

- Covers facility geomechanical assessments, cavern well design and drilling, solution mining techniques and operations, including monitoring and maintenance practices.



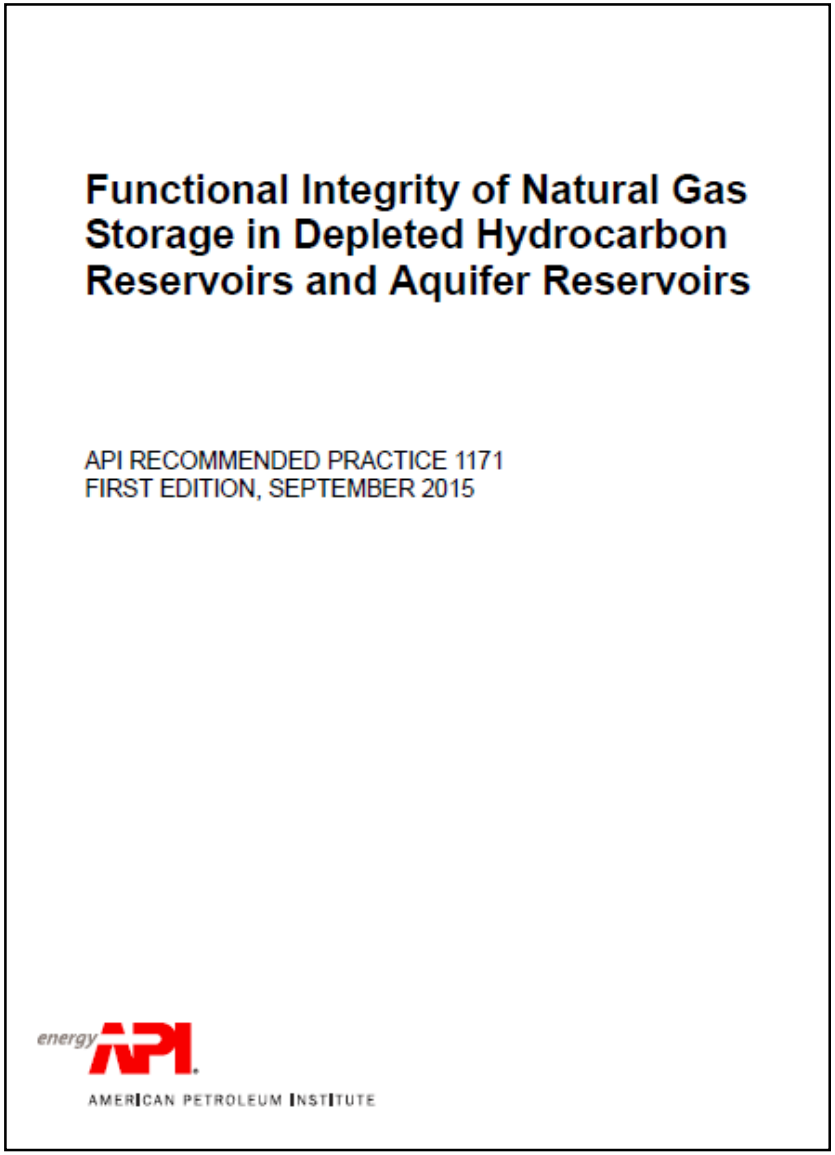
AUCSC
Appalachian Underground Corrosion Short Course

API Recommended Practice 1171 Published September 2015

API RP 1171

Functional Integrity of Natural Gas Storage in Depleted Hydrocarbon Reservoirs and Aquifer Reservoirs

- Applies to natural gas storage in depleted oil and gas reservoirs and aquifer reservoirs.
- Focuses on storage well, reservoir, and fluid management for functional integrity in design, construction, operation, monitoring, maintenance, and documentation practices.



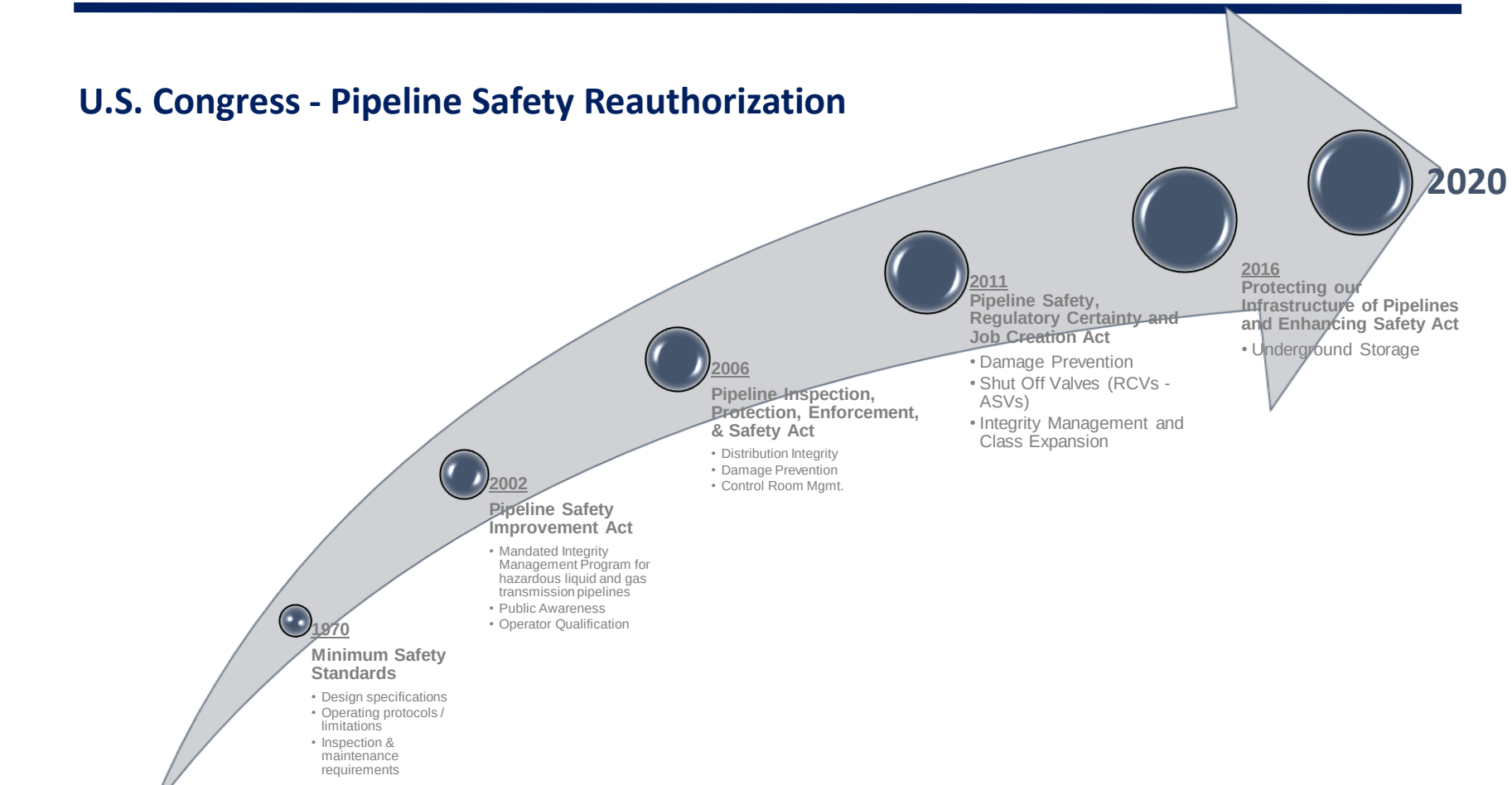
AUCSC
Appalachian Underground Corrosion Short Course

Summary PHMSA IMP ACTIONS

- Hazardous Liquid (Part 195)
  - 2001 Final Rule
  - 2015 Notice of Proposed Rulemaking (NPRM)
  - Final Rule Pending 2019
- Gas Transmission (Part 192)
  - 2003 Final Rule
  - 2011 Advanced NPRM
  - 2016 NPRM
  - Final Rule Pending 2019
- Gas Distribution (Part 192)
  - 2008 NPRM
  - 2010 Final Rule
  - 2011 Final Rule Mechanical Fitting Failure Reporting
- Underground Gas Storage (Part 192)
  - 2016 Interim Final Rule
  - Final Rule Pending 2019

The Need to Do More

U.S. Congress - Pipeline Safety Reauthorization



AUCSC

Appalachian Underground Corrosion Short Course

Objectives Discussed

- Why the Need for Integrity Management
- Define Pipeline Integrity Management
- Review Integrity Management Regulations
- Highlight Relevant Industry Standards
- What Does the Future Look Like for Integrity Management

Questions

Lee Reynolds, NiSource
Manager Gas Standards