PAPUC

2023 Safety Seminar

Safety of Gas Transmission Pipelines

RIN 1
MAOP Reconfirmation, Expansion of Assessment Requirements, and Other Related Amendments

Docket No: PHMSA-2011-0023
Amdt No 191-26, 192-125

Publication Date: October 1, 2019

Effective Date: July 1, 2020

Safety of Gas Transmission Pipelines

Major Provisions

SRC Reports: MAOP Exceedance (191.23)
MCA Identification (192.3)
Verification of Material – TVC (192.607)
MAOP Reconfirmation (192.624)
Assessment Outside HCAs (192.710)
Analysis of Predicted Failure Pressure (192.712)
Various Changes to IM Program
Various Records Retention requirements

Safety of Gas Transmission Pipelines

MCA Identification (192.3)

(1) An onshore area that is within a potential impact circle, containing either: (i) Five or more buildings intended for human occupancy; or (ii) Any portion of the paved surface, including shoulders, of a designated interstate, other freeway, or expressway,

Safety of Gas Transmission Pipelines

Verification of Material – TVC (192.607)

(a)Applicability. … operators of onshore steel transmission pipelines must document and verify material properties and attributes in accordance with this section.

(b)… Records established under this section documenting physical pipeline characteristics and attributes, including diameter, wall thickness, seam type, and grade (e.g., yield strength, ultimate tensile strength, or pressure rating for valves and flanges, etc.), must be maintained for the life of the pipeline and be traceable, verifiable, and complete. …

Safety of Gas Transmission Pipelines

Verification of Material – TVC (192.607)

(a)… If an operator does not have TVC records …, the operator **must develop and implement procedures for conducting nondestructive or destructive tests, examinations, and assessments** … of buried line pipe and components when excavations occur at the following opportunities: Anomaly direct examinations, in situ evaluations, repairs, remediations, maintenance, and excavations that are associated with replacements or relocations of pipeline segments that are removed from service.

Safety of Gas Transmission Pipelines

MAOP Reconfirmation (192.624)

Applicability. Operators of onshore steel transmission pipeline segments must **reconfirm** the (MAOP) of all pipeline segments in accordance with the requirements of this section if either of the following conditions are met:

(1)… records to establish MAOP in accordance with **§ 192.619(a)(2),** including records required by § 192.517(a), are not TVC and the pipeline is located in one of the following locations:

(i) A HCA; or

(ii) A Class 3 or Class 4 location.

(2)… established in accordance with **§ 192.619(c),** the pipeline segment's MAOP is greater than or equal to 30 percent of the specified minimum yield strength, and the pipeline segment is located in one of the following areas:

(i) A HCA;

(ii) A Class 3 or Class 4 location; or

(iii) A MCA, if the pipeline segment can accommodate … ILI … tools.

Safety of Gas Transmission Pipelines

MAOP Reconfirmation (192.624)

(b) … Operators of a pipeline subject to this section must develop and document procedures for completing all actions required by this section by July 1, 2021. …

(1) Operators must complete all actions required by this section on at least **50%** of the pipeline mileage by **July 3, 2028**.
(2) Operators must complete all actions required by this section on **100%** of the pipeline mileage by **July 2, 2035** or as soon as practicable, …

(3) Six Methods
  (1) Method 1: Pressure test.
  (2) Method 2: Pressure Reduction.
  (3) Method 3: Engineering Critical Assessment (ECA).
  (4) Method 4: Pipe Replacement.
  (5) Method 5: Pressure Reduction for Pipeline Segments with Small Potential Impact Radius.
  (6) Method 6: Alternative Technology.

Safety of Gas Transmission Pipelines

Assessment Outside HCAs (192.710)

Applicability: This section applies to onshore steel transmission pipeline segments with a maximum allowable operating pressure of greater than or equal to 30% of the specified minimum yield strength and are located in:

(1) A Class 3 or Class 4 location; or
(2) A MCA, if the pipeline segment can accommodate ILI tools.

(1)Initial assessment. An operator must perform initial assessments …no later than **July 3, 2034**, …
(2)Periodic reassessment. An operator must perform periodic **reassessments** at least once **every 10 years**, with intervals not to exceed 126 months, …
(3)Prior assessment. An operator may use a prior assessment conducted before July 1, 2020 as an initial assessment for the pipeline segment, …
(4)MAOP verification. An integrity assessment conducted in accordance with the requirements of § 192.624(c) for establishing MAOP may be used as an initial assessment or reassessment under this section.

Safety of Gas Transmission Pipelines

Analysis of Predicted Failure Pressure (192.712)
Applicability. … operators of onshore steel transmission pipelines must analyze anomalies or defects to determine the predicted failure pressure at the location of the anomaly or defect, and the remaining life of the pipeline segment at the location of the anomaly or defect, in accordance with this section.

Specifics for:
Corrosion Defects
Cracks and Crack like defects

Safety of Gas Transmission Pipelines

RIN 2
Repair Criteria, Integrity Management Improvements, Cathodic Protection, Management of Change, and Other Related Amendments

Docket No: PHMSA-2011-0023
Amdt No 192-132

Publication Date: August 24, 2022

Effective Date: May 24, 2023

Safety of Gas Transmission Pipelines

Major Provisions

Definitions—§ 192.3
Management of Change—§§ 192.13 & 192.911
Corrosion Control—§§ 192.319, 192.461, 192.465, 192.473, 192.478, 192.935 and Appendix D
Inspections Following Extreme Weather § 192.613
Repair Criteria—§§ 192.714, 192.933
IM Clarifications—§§ 192.917(a)–(d), 192.935(a)
Strengthening Assessment Methods—§§ 192.923, 192.927, 192.929

Safety of Gas Transmission Pipelines

Effective Dates

Rule Effective Date: May 24, 2023

To facilitate operator compliance and implementation efforts, PHMSA has issued notice of enforcement discretion until February 24, 2024.

Safety of Gas Transmission Pipelines

- **Amends the definition of "transmission line."**
  - Transmission lines can be a "connected series of pipelines."
  - Has MAOP of 20% or more of SMYS (previously defined as operating at hoop stress of 20% or more of SMYS).
  - Transmission lines can be voluntarily designated by the operator.
- **Adds a new definition for "distribution center."**
  - Initial point where gas enters piping used primarily to deliver gas to customers who purchase it for consumption, as opposed to customers who purchase it for resale.

Safety of Gas Transmission Pipelines

- **Adds new definitions for:**
  - Close Interval Survey
  - Dry Gas or Dry Natural Gas
  - Hard Spot
  - In-line Inspection
  - In-line Inspection Tool or Instrumented Internal Inspection Device
  - Wrinkle Bend

The definitions clarify technical terms used in part 192 or in this rulemaking.

Safety of Gas Transmission Pipelines

- **Establishes a general clause, for all GT pipelines, that invokes the requirements for the management of change process in ASME/ANSI B31.8S, section 11.**
  - **Found in 192.13(d)**
  - Previously management of change needed for High Consequence Areas (HCAs) only.
  - 18-month compliance period for non-HCAs; can request extension.
  - Evaluate and mitigate significant changes.
- **Articulates the requirements that are already incorporated by reference for a management of change process for GT pipelines.**
  - Reason for change, authority for approving changes, analysis of implications, acquisition of required work permits, etc.

Safety of Gas Transmission Pipelines

- **Installation of pipe in a ditch & External corrosion control – protective coating (192.319 & 192.461)**
  - Requires operators to perform an above-ground indirect assessment (ACVG/DCVG/“other technology”) after backfilling is completed and remediate any coating damage found.
  - In both O&M and construction sections
- **External corrosion control – monitoring/remediation (192.465)**
  - Requires remediation of Cathodic Protection (CP) deficiencies within 1 year
    - Previously were to take “prompt remedial action.”
  - Requires evaluation of areas where annual test station readings indicate CP levels below the required levels of Appendix D
    - Perform Close Interval Survey (CIS) and remediate to address systemic causes.
    - Investigate and mitigate non-systemic causes.

Safety of Gas Transmission Pipelines

- **External corrosion control – Interference currents (192.473)**
  - Specifies interference survey requirements in an operator's corrosion control program.
    - Requires interference surveys when potential monitoring indicates significant increase in stray current or when new potential stray current sources (pipelines, HVAC power lines, etc.) are introduced.
    - Analysis of results of survey to determine cause of interference and whether it could cause significant corrosion, impede safe operation, or adversely affect environment or public.
    - Development of remedial action plan and remediation within 12 to 15 months after completing survey.

Safety of Gas Transmission Pipelines

- **Internal corrosion control – Onshore transmission monitoring and mitigation (192.478)**
  - Requires operators of GT pipelines with corrosive constituents in the gas to monitor for gas quality, evaluate gas monitoring data yearly, and evaluate IC monitoring and mitigation program yearly.
- **What additional Preventive & Mitigative (P&M) measures must an operator take? (192.935)**
  - Adds additional considerations for P&M measures to address corrosion in HCAs, including recoating damaged, poorly performing, or disbonded coatings.

Safety of Gas Transmission Pipelines

- **Requires operators to perform inspections of all potentially affected onshore GT pipeline facilities after events that have the likelihood of damaging pipeline facilities and taking appropriate remedial action.**
  - **Found in 192.613(c)**
  - Inspection must commence within 72 hours after the point in time when the operator reasonably determines the affected area can be safely accessed by personnel and equipment, and such personnel and equipment are available. If unable, must notify PHMSA Region Director as soon as practicable.

Safety of Gas Transmission Pipelines

- Establishes repair criteria and pressure reductions for non-HCAs that are structured similarly to the criteria for HCAs (immediate/2-year/monitored conditions) 192.714.
- Prescribes requirements, including in-situ evaluation, for cracks and crack-like defects 192.712.
- Establishes an Engineering Critical Assessment (ECA) method for dents where the repair can be deferred if engineering analyses performed in accordance with § 192.712 demonstrate critical strain levels are not exceeded.
- Updates or specifies certain HCA repair criteria.
- Repairs must be made using pipe and material properties documented in TVC records; if documented data is not available, operators must verify per § 192.607.

Safety of Gas Transmission Pipelines

- **Designates the following types of defects as immediate conditions:**
  - Anomalies where the metal loss is greater than 80 percent of wall thickness.
  - Metal loss anomalies with a PFP ≤ 1.1 x MAOP.
  - A topside dent that has metal loss, cracking, or a stress riser (“unless” ECA in accordance w/§192.712).
  - Anomalies where there is an indication of metal loss affecting certain longitudinal seams.
  - Cracks or crack-like anomalies meeting specified criteria.
  - Indications of anomalies that require immediate action.

Safety of Gas Transmission Pipelines

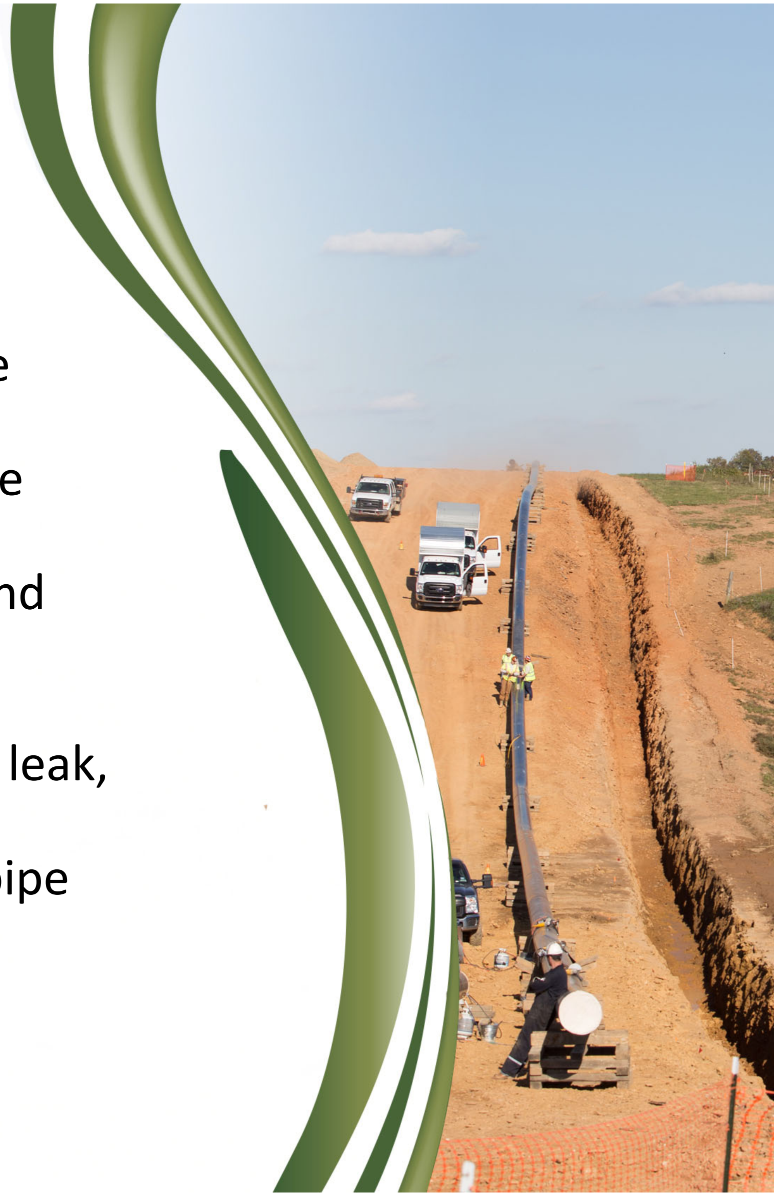
- Designates the following types of defects as 1-year / 2-year conditions:
  - Smooth topside dents with a depth greater than 6% of the pipeline diameter (“unless” ECA […]).
  - Dents greater than 2% of the pipeline diameter located at a girth weld, longitudinal, or spiral seam weld (“unless” ECA […]).
  - Bottomside dent with metal loss, cracking, or stress riser (“unless” ECA).
  - Metal loss anomalies where a calculation of the remaining strength of the pipe shows a PFP ratio ≤ 1.39 x MAOP for Class 2 locations, and ≤ 1.50 x MAOP for Class 3 and Class 4 locations. For Class 1 locations with a PFP > 1.1 x MAOP, follow B31.8S, section 7, figure 4.
  - Certain metal loss anomalies and cracks with a PFP < 1.39 x MAOP in Class 1 locations or where Class 2 locations have uprated pipe, and that has a PFP < 1.5 x MAOP in all other Class 2, Class 3, and Class 4 locations.

Safety of Gas Transmission Pipelines

- Designates the following types of defects as monitored conditions:
  - Bottomside dents with depth greater than 6% (192.714) and where ECA shows critical strain levels are not exceeded (192.933).
  - Dents with depth greater than 2% that affects pipe curvature at a girth weld or longitudinal or helical seam weld, and “where” ECA […].
  - Dents with metal loss, cracking, or a stress riser, and “where” ECA […].
  - Certain metal loss anomalies and cracks with a PFP ≥ 1.39 x MAOP in Class 1 locations or where Class 2 locations have uprated pipe, and that has a PFP ≥ 1.5 x MAOP in all other Class 2, Class 3, and Class 4 locations.

Safety of Gas Transmission Pipelines

- Inserts specific attributes from ASME/ANSI B31.8S into the regulations for risk assessments.
- Specifies operators must perform risk assessments that are adequate for evaluating the effects of interacting threats. Account and compensate for uncertainties in the model and data used.
- Requires operators use validated information and data as inputs and validate their risk models considering incident, leak, and failure history, and other historical information.
- Provides specific examples of integrity threats for plastic pipe that must be addressed.



Safety of Gas Transmission Pipelines

- Incorporates NACE SP0206-2006 into the regulations for ICDA and establishes additional requirements for ICDA for covered segments.

- Incorporates NACE SP0204-2008 into the regulations for SCCDA and establishes additional requirements for SCCDA.

Safety of Gas Gathering Lines

Safety of Gas Gathering Pipelines

Extension of Reporting Requirements, Regulation of Large, High-Pressure Lines, and Other Related Amendments

Docket No. PHMSA–2011–0023

RIN: 2137-AF38

86 FR 63296, Nov. 15, 2021

(referred to as RIN-3)

Safety of Gas Gathering Lines

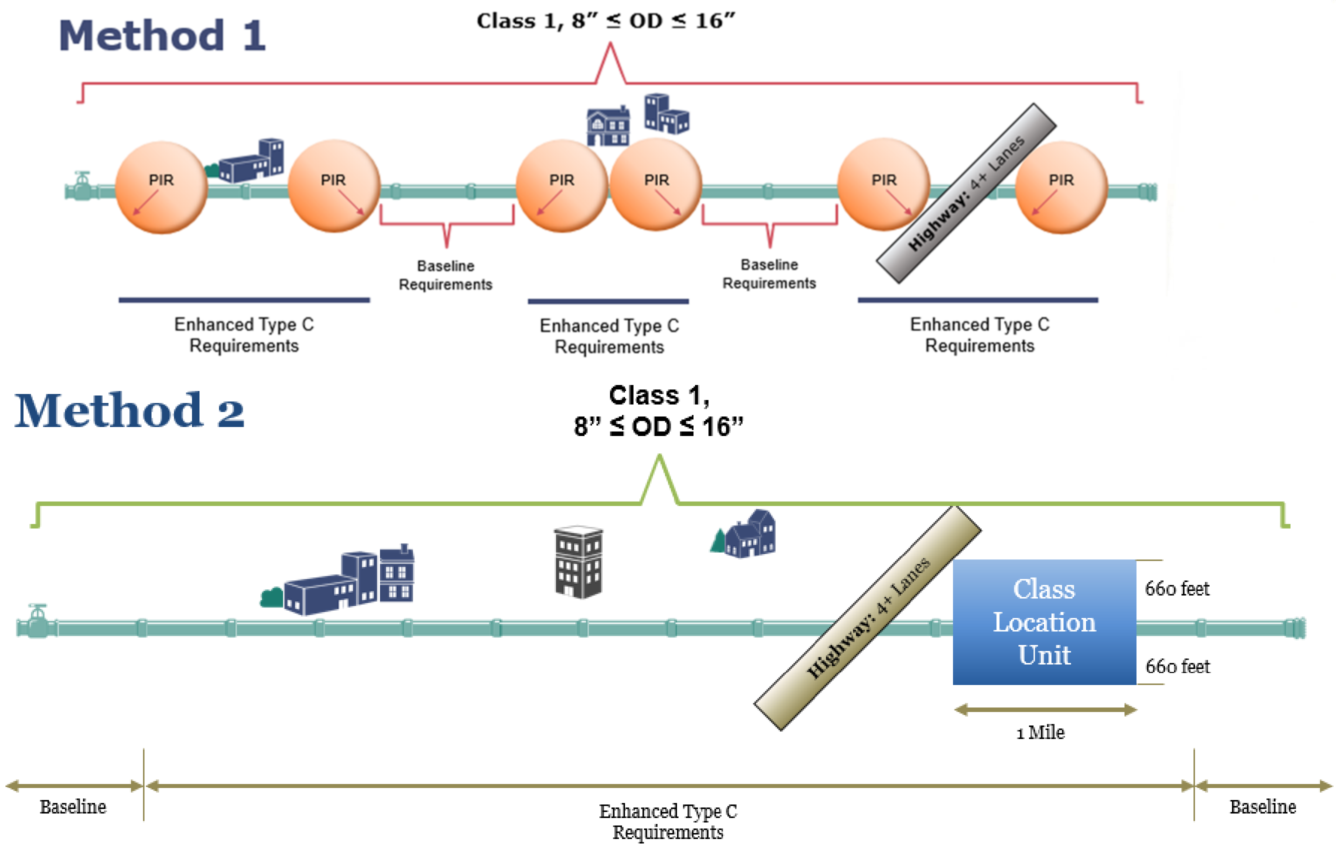
- **Final Rule Published 11/15/21**
  - Effective date: May 16, 2022
- **Major Topics**
  - New Type C category
  - Incident and annual reporting
  - Incidental gathering
- **Technical Corrections/ petition response**
  - 87 FR 26296 Correction Publication Date: May 4, 2022
  - 87 FR 35675 Second Correction Publication Date: June 13, 2022
- Limited stay of enforcement: Sec. 192.9 requirements for Type C pipelines less than or equal to 12.75” until May 17, 2024

Highlights of New Requirements

- Annual and incident reporting for all gas gathering lines, including previously unregulated lines
- Newly designated "Type C" and "Type R" gathering lines
  - **Type C** - Previously-unregulated gathering pipelines subject to safety standards in part 192 and reporting requirements in part 191
  - **Type R** - All other onshore gathering lines in Class 1 and 2 locations subject to reporting requirements in part 191.
- "Incidental Gathering" line exception limited to lines 10 miles or less from the furthermost downstream endpoint of gathering for newly constructed lines (after May 16, 2022).

<table>
<tr><th colspan="4">Type C Gas Gathering Requirements
From Final Rule, Amdt 192-129, 86 FR63266, November 15, 2021: and Amdt 192-131, FR 26296, May 4, 2022</th></tr>
<tr><td colspan="4">Type C Gas Gathering – §192.9(e)
Outside diameter ≥ 8.625 in Class 1 location
Metallic and the MAOP produces a hoop stress of ≥20% SMYS;
Metallic with unknown stress level when MAOP>125 psig; or Non-metallic and MAOP>125 psig.</td></tr>
<tr><th>Additional Criteria
Method 1 or Method 2</th><th>≥8.625” to 12.75”</th><th>>12.75” to 16”</th><th>>16”</th></tr>
<tr><td>No building intended for human occupancy or other impacted site See §192.9(f)(3)</td><td>Reporting and OPID §191
Design, Construction, Initial inspection and Testing for new lines §192 Subparts B – G and J
Damage Prevention §192.614
Emergency Plans §192.615</td><td>Reporting and OPID §191
Design, Construction, Initial inspection and Testing for new lines §192 Subparts B – G and J
Damage Prevention §192.614
Emergency Plans §192.615</td><td rowspan="2">Reporting and OPID §191
Design, Construction, Initial inspection and Testing for new lines §192 Subparts B – G and J
Damage Prevention §192.614
Emergency Plans §192.615
Corrosion Control
§192 Subpart I
Line Markers §192.707
Public Awareness §192.616
Leakage Survey and Leak Repair §§192.706 and 192.703(c)
Plastic Pipe and Components §192 Subpart B, C, D
MAOP §192.619</td></tr>
<tr><td>Building intended for human occupancy or other impacted site See §192.9(f)(3)</td><td>Reporting and OPID §191
Design, Construction, Initial inspection and Testing for new lines §192 Subparts B – G and J
Damage Prevention §192.614
Emergency Plans §192.615
+ Corrosion Control §192 Subpart I
+ Line Markers §192.707
+ Public Awareness §192.616
+ Leakage Survey and Leak Repair §§192.706 and 192.703(c)</td><td>Reporting and OPID §191
Design, Construction, Initial inspection and Testing for new lines §192 Subparts B – G and J
Damage Prevention §192.614
Emergency Plans §192.615
+ Corrosion Control §192 Subpart I
+ Line Markers §192.707
+ Public Awareness §192.616
+ Leakage Survey and Leak Repair §§192.706 and 192.703(c)
+ Plastic Pipe and Components §192 Subpart B, C, D
+ MAOP §192.619</td></tr>
</table>

Method 1 or Method 2



Compliance Dates

- Final Rule Effective Date: May 16, 2022
- Reporting
  - Incident reports: Report events occurring after May 16, 2022
  - Annual reports: 2022 reports due March 2023
- Identify Type C lines: November 16, 2022
- Section 192.9 compliance: May 16, 2023
- Section 192.9 compliance for lines that become Type C after May 16, 2022: 1 year from date they become Type C lines
- MAOP lookback: 5-year period ending May 16, 2023
- Enforcement discretion
  - Incidental gathering lines constraints: constructed after May 16, 2022
  - Part 192 requirements for Type C pipelines ≤12.75”: May 17, 2024

Frequently Asked Questions

- **Frequently Asked Questions - Posted May 8, 2023**
- **Major Topics**
  - General
  - Regulatory requirements
  - Design Requirements
  - O&M Manuals
  - Recordkeeping
  - Required Tasks
  - Compressor Stations
  - Operator Qualification
- **Posted on the Pipeline Technical Resources Gas Gathering website** https://www.phmsa.dot.gov/technical-resources/pipeline/gas-gathering/gas-gathering-regulatory-overview

Frequently Asked Questions

- **General Topics**
  - What is a gathering line?
  - Who regulates gathering pipelines?
  - Are all gas gathering lines regulated?

https://www.phmsa.dot.gov/faqs/gathering-pipelines-faqs

Gathering Pipelines FAQs

On November 11, 2021, the Pipeline and Hazardous Materials Safety Administration issued a second major rulemaking on the safety of gas gathering pipelines (86 FR 63266). In association with this rulemaking, PHMSA has developed new guidance covering the requirements for the new classifications of onshore gathering lines introduced by the final rule: Type C regulated gathering lines and Type R gathering lines subject to reporting only.

This new guidance and the prior guidance covering requirements for offshore, Type A, and Type B gathering lines are linked below.

- Onshore Gas Gathering FAQs for Type A and B Pipelines
- Onshore Gas Gathering FAQs for Type C and R

Frequently Asked Questions

- **O&M Manual Requirements Topics**
  - Am I required to have an O&M manual under § 192.605 for my Type B and C gathering line?
    - No, there is no explicit regulatory requirement for operators of Type B or C gathering lines to have § 192.605-compliant O&M manuals. Nevertheless, operators of all regulated gas gathering lines, including Types B and C gathering lines, are required to follow the statutory requirement of 49 U.S.C. 60108(a), which requires that "[e]ach person owning or operating a gas pipeline facility. . . shall carry out a current written plan (including any changes) for inspection and maintenance of each facility used in the transportation and owned or operated by the person. … *Example of § 192.616(a) procedure requirements.*

Documentation of Gathering Classification

- Does § 192.8(b) require that documentation includes the determination of "production" versus gathering? Does this need to be written documentation?

- Yes. An operator of a gathering pipeline must have written documentation of its analysis of the start and end points of gathering per Section 192.8(b), and the application of API RP 80 necessarily includes a determination of the endpoint of production operations.

192.9(f)(1) Exceptions

- Are portions of Type C pipelines using the § 192.9(f)(1) exceptions still Type C lines.

- Yes, the paragraph (f) exceptions do not change the classification of the pipeline under § 192.8. Regardless of exceptions, the pipeline remains a Type C for all other purposes, including reporting under part 191.

PIC Start and End Points

- Do gas gathering Potential Impact Circles follow the same rules/guidelines that have already been established for determinizing HCAs?

- Yes, just like HCA determination, the PIC starts at the outside edge of the PIC when the PIC first hits the "structure" and runs until the outer edge of the last PIC that hits the structure. Any pipeline within a PIC containing a building may not be excepted. See § 192.9(f).

Additional Resources and Tools

- **PHMSA Homepage, Office of Pipeline Safety**
  - **www.phmsa.dot.gov**
- **Standards & Rulemaking**
  - **http://www.phmsa.dot.gov/pipeline/regs**
- **PHMSA Technical Resources**
  - **https://www.phmsa.dot.gov/technical-resources/pipeline/pipeline-technical-resources-overview**
  - **GPAC Meeting slides for reference at "Public Meetings" tab (https://primis.phmsa.dot.gov/meetings/)**
- **PHMSA's Stakeholder Communications Site**
  - **http://primis.phmsa.dot.gov/comm**
- **For Federal Regulations (Official Version)**
  - **www.ecfr.gov**

Section 114 of Pipes Act 2020

Docket No. PHMSA–2021–0050

Publication Date: December 27, 2020
Effective Date: December 27, 2021

Methane Reduction, Gas pipeline Leak Detection and Repair NPRM

Docket No. PHMSA–2021–0039

Publication Date: May 18, 2023
Effective Date: TBD

Section 114 of Pipes Act 2020

- The PIPES Act of 2020 was signed on December 27, 2020
- Section 114 contains self-implementing requirements for operators with respect to their operation and maintenance plans.
- The Purpose of Congressional Mandate is to:
  - Reduce Natural Gas Emissions
  - Repair/Replace Leak-Prone Pipe
- Natural Gas is principally comprised of methane
  - Greenhouse Gas (GHG)
- Greater impact on climate change than carbon dioxide
- Natural Gas breaks down faster than CO_2

Section 114 Pipes Act 2020 (cont.)

- By Dec 27, 2021, operators must have updated their O&M plans to address the following:
  - Eliminating hazardous leaks of natural gas
  - Minimizing releases of natural gas
  - Replacement or remediation of all pipelines that are known to leak
    - Including cast iron, unprotected steel, wrought iron, and historic plastics with known issues
- 1 year after the date of enactment, PHMSA must issue final regulations regarding leak detection and repair for gas operators.

Methane Reduction, Gas pipeline Leak Detection and Repair NPRM

- PHMSA proposes regulatory amendments that implement congressional mandates from the Pipes Act of 2020 to reduce methane emissions from new and existing gas transmission pipelines, distribution pipelines, regulated (Types A, B, C and offshore) gas gathering pipelines, underground natural gas storage facilities, and liquefied natural gas facilities.
- The proposed rule includes amendments for part 192 and 193 regulated pipelines.

Major Topics of the NPRM

- Leakage Survey and Patrols Requirements
- Advanced Leak Detection Program Implementation
- Grading and Repairing Leaks
- Design, configuration, and maintenance of relief devices
- Minimize O&M Related Releases
- Investigating Failures
- Operator Qualification of Leakage Survey, Investigation, and Repair Personnel
- Reporting on Large releases, leaks discovered and NPMS Participation for regulated gathering

Leakage Survey: Distribution §192.723

Facility	Proposed Requirements
Outside Business Districts	3 years NTE 39 Months
Leak Prone Pipe (Cathodically Unprotected; bare steel, unprotected steel, and cast-iron system)	Annually NTE 39 Months
Inside Business Districts	Annually NTE 15 Months

- A survey of known leaks must be performed after any major environmental changes that can affect gas migration
- A survey also must be performed with 72 Hours of extreme weather events.

Leakage Survey: Transmission and Gathering §192.9 & §192.706

Facility	Existing Requirements	Proposed Requirements
Non-odorized Class 3	Twice a year not to exceed 7 1/2 months	No Change
Non-odorized Class 4	Four times a year not to exceed 4 1/2 months	No Change
All other transmission	Once a year not to exceed 15 months	No Change
HCA class 1, 2, or 3	No Specific Standard	Twice a year not to exceed 7 1/2 months.
HCA class 4	No Specific Standard	Four times a year not to exceed 4 1/2 months
Valves, flanges, pipeline tie-ins with valves and flanges, ILI launcher and ILI receiver facilities, and leak prone pipe	No Specific Standard	Same as proposed HCA frequencies.

Advanced Leak Detection Programs § 192.763

- PHMSA proposes to introduce a new § 192.763 to require operators establish written Advanced Leak Detection Programs (ALDPs) and to establish performance standards for both the sensitivity of leak detection equipment and for the effectiveness of those ALDPs
- The ALDPs will include 4 main elements that will apply to apply to operators of all gas distribution lines, gas transmission lines, offshore gathering, and Types A, B, and C regulated onshore gathering pipelines.
    1. Leak Detection Technology Standards
    2. Leak Detection Practices
    3. Leakage Survey Frequency
    4. Program Evaluation and Improvement

Advanced Leak Detection Programs § 192.763 (CONT.)

- Advanced Leak Detection Performance Standard—§ 192.763(b)
  - The ultimate benchmark for the effectiveness of an operator's ALDP would be a holistic, program-wide performance standard.
- Alternative Advanced Leak Detection Performance Standard—§ 192.763(c)
  - PHMSA to allow operators of each of gas transmission, offshore gathering, and Types A, B, and C gathering pipelines, located in Class 1 or 2 locations and outside of HCAs to request an alternative ALDP performance standard (and use of supporting leak detection equipment)

Grade and Repair All Leaks
§192.760

- Leak grading follows the Grade 1-3 framework similar to the GPTC Guide.
- Grade 1 Leaks
  - A grade 1 leak is the highest priority grade and represents an existing or probable hazard to persons, property, or a grave hazard to the environment.
  - PHMSA proposes that operators must be required to take ‘‘immediate and continuous’’ action to eliminate the hazards to public safety and the environment.
- Grade 2 Leaks
  - A grade 2 leak would be a leak which presents a probable future hazard to public safety or a significant hazard to the environment.
  - Operators must have procedures for prioritizing grade 2 leaks
- Grade 3 leaks
  - PHMSA proposes that any leak that does not meet the criteria for a grade 1 or a grade 2 leak be classified as a grade 3 leak, which would be the lowest priority leak category.

GRADE AND REPAIR ALL LEAKS §192.760 (Cont.)

Repair Timeline

- Grade 1:
  - Immediately
- Grade 2:
  - 6 months Deadline
- Grade 3:
  - 2 years

Repair Inspections

- PHMSA proposes to specify that a leak repair may only be classified as complete if the operator conducts a post-repair inspection a gas concentration reading of 0% gas by volume at the leak location.
- For leaks that are eliminated by routine maintenance—such as cleaning, lubrication, or adjustment—a post repair inspection would not be required for any leaks from aboveground facilities or for grade 3 leaks from other facilities.
- PHMSA proposes that an inspection must occur between 14 and 30 days after the date of the repair.

Grade and Repair All Leaks §192.760 (Cont.)

- Upgrading & Downgrading Leaks
  - PHMSA proposes to establish requirements for when and how a leak may be upgraded to a higher-priority grade or downgraded to a lower-priority grade.
- Extension of Leak Repair
  - PHMSA proposes to allow an extension of the repair deadline requirements for individual leaks on a case-by-case basis.
- Record Keeping Regarding Leak Grading and Repair
  - PHMSA proposes certain recordkeeping requirements for leak detection, investigation, grading and repair activity.

Patrols on Gas Transmission, Offshore Gathering and Types A, B, and C Gathering Pipelines §192.705

- PHMSA also proposes to increase the frequency of patrols on gas transmission, offshore gathering, and Types A, B, and C gathering pipelines by replacing the current, scaled approach within §192.705
  - Currently it is between one and four patrols per year based on class location and the presence of a highway or railroad crossing
  - Change to 12 patrols along the entirety of their pipelines each calendar year (at intervals not exceeding 45 days).

Design, Configuration, And Maintenance Of Pressure Relief Devices
§ 192.199 and 192.773

- PHMSA proposes to minimize emissions caused by malfunctioning pressure relief devices and other unnecessary releases from poorly designed or configured pressure relief devices.
- Below are a series of design elements will be prescribed part of 192.199:
  - Choice of design material and function
  - Configuration actuation conditions
  - Pressure relief device pipe characteristics
  - Presence of isolation valves to facilitate testing and maintenance
  - Compatibility of material and design being used

Design, Configuration, And Maintenance Of Pressure Relief Devices § 192.199 and 192.773 (Cont.)

- PHMSA proposes a New 192.773 that states operators are to develop procedures to assess the proper function of pressure relief devices
  - any malfunction devices are to be remediated or replaced
- Existing pressure relief device configurations would need to be tweaked to minimize releases, but only so far as such configurations can be changed;
  - operators whose pressure relief devices do not admit changes in configuration would not have to effectuate any change

Minimize O&M Related Releases §192.9, 192.12, 192.605, 192.770

- PHMSA proposes that operators of gas transmission, offshore gathering, Type A gathering, and part 193 LNG facilities would have to adopt specific requirements for minimizing the release of gas during non-emergency blowdowns, LNG tank boil-offs, and other vented emissions events.
- Best management Practices for reducing methane emissions from operations, maintenance, and construction:
  - Use of Valves, Reduce the volume of gas released
  - Burning off the gas reduces climate change impacts of vented emissions by converting methane gas to carbon dioxide and water via combustion.
  - Third approach, an operator would isolate the pipeline segment upstream of the vented segment and use the downstream compressor station to reduce the pressure of the affected segment
  - The fourth approach is similar except instead of the compressor station, an operator would use a mobile compressor unit to reduce the pressure of the segment by compressing gas, or diverting LNG, into adjacent facilities or a storage vessel.
  - The fifth approach transferring gas or LNG to a lower pressure pipeline segment.

Minimize O&M Related Releases

- PHMSA proposes that operators be able to employ alternative approaches not listed in § 192.770(a) and 193.2523(a) for release volume mitigation, provided that the operator can demonstrate that a proposed approach reduces the volume of released gas by at least 50% compared with taking no mitigative action.

Mobile Flare

Mobile Compressor

Investigation of Failures
§ 192.617

- PHMSA proposes a new definition of a failure by revising § 192.617 to define the term ‘‘failure’’ using language similar to that in ASME B31.8.
  - *failure: a general term used to imply that a part in service has become completely inoperable; is still operable but is incapable of satisfactorily performing its intended function; or has deteriorated seriously, to the point that it has become unreliable or unsafe for continued use.*
- The proposed definition clarifying that all leaks on pertinent gas pipelines require investigation under § 192.617 would improve safety.

Qualification of Leakage Survey, Investigation, and Repair Personnel § 192.769

- Proposed § 192.769 would require that operator personnel engaged in leakage surveys, and the investigation and repair of leaks discovered on each of gas transmission, distribution, offshore gathering, and Type A regulated onshore gathering pipelines are subject to the personnel qualification requirements at part 192 in performing those activities.
- PHMSA proposes to clarify that leakage surveys, investigation, and repair activities are ‘‘covered tasks’’ under part 192, subpart N and therefore covered by operator qualification requirements in that subpart.

Reporting and NPMS
§ 191.3, 191.9, 191.11, 191.17, 191.19, 191.23, and 191.29

- PHMSA proposes new and revised reporting requirements to collect more data on pipeline leaks and other emissions.
- PHMSA proposes to revise the gas transmission, offshore gathering, and Types A, B, and C gathering, and distribution annual report forms to include each of:
  - Estimated aggregate emissions from all leaks existing on the system within the calendar year by grade (including emissions within the calendar year from leaks discovered in prior years)
  - Other methane emissions by source category, and
  - Number of leaks detected and repaired by grade.
- Note that a count of all leaks would be reported on annual reports.
- PHMSA also proposes at § 191.19 to require a new report for intentional and unintentional releases with a volume of 1 MMCF or greater, excluding certain events that had been reported as incidents under § 191.9 or 191.15.
  - The new report must be submitted within 30 days from the date that a release known at detection

Reporting and NPMS § 191.3, 191.9, 191.11, 191.17, 191.19, 191.23, and 191.29

- PHMSA also proposes to require operators to submit geospatial data about offshore gas gathering and Type A, Type B, and Type C gathering pipelines to the NPMS.
  - The NPMS is a geographic information system (GIS) that contains the locations and related attribute data for a variety of pipeline facilities.
  - Access to gathering pipeline geospatial data on NPMS would reinforce damage prevention programs required under § 192.614.
- PHMSA expects that its proposed amendments to NPMS requirements may also improve operators' leak detection programs.

Thank you