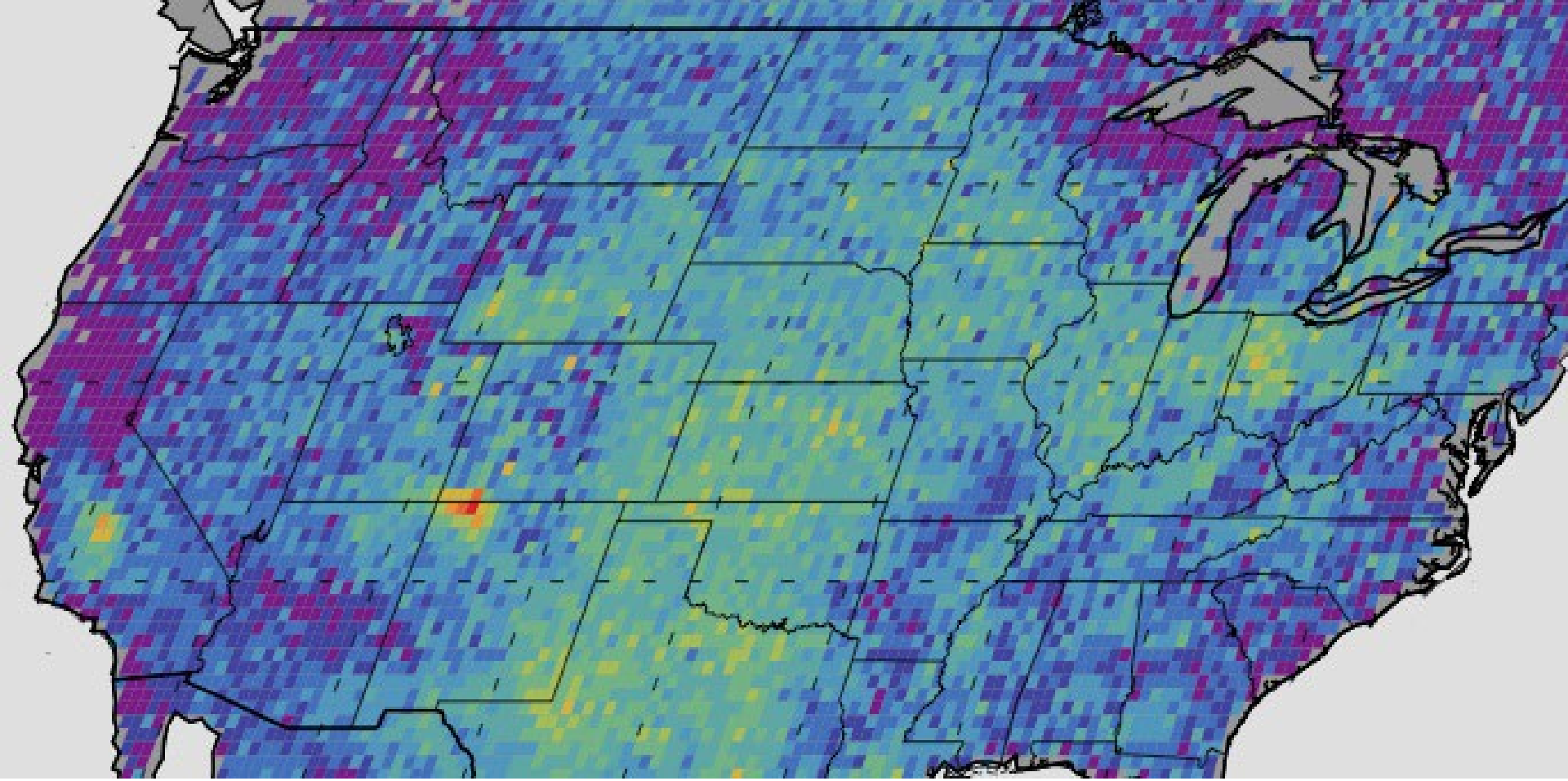
Welcome

to the

Gas Pipeline Advisory Committee Meeting

Agenda

1. Opening Remarks & Introductions
2. Operations and Maintenance and Venting
3. Leak Surveys and Patrols
4. Advanced Leak Detection Program Elements and Performance Standard
5. Leak Grading and Repair
6. Gas Gathering
7. Reporting
8. Liquefied Natural Gas (LNG) and Hydrogen
9. Compliance Deadlines
10. Operator Qualification and Miscellaneous Proposals
11. Committee Report



NASA/JPL-Caltech/University of Michigan

Pipeline Safety: Gas Pipeline Leak Detection and Repair NPRM

RIN 2137-AF51

Gas Pipeline Advisory Meeting during the Week of November 26, 2023

Opening Remarks & Introductions

Implementing the PIPES Act of 2020

On May 18, 2023, PHMSA published in the Federal Register a Notice of Proposed Rulemaking (NPRM) to reduce methane emissions from new and existing gas pipelines. This rulemaking;

- Responds to Congressional mandates in the PIPES Act of 2020.
- Plays a critical role in the U.S. Methane Emissions Reduction Action Plan by:
  - Eliminating (conservatively) 0.5 – 1.0 million metric tons of methane emissions annually,
  - Obliging operators of all part 192-regulated gas pipelines to develop and implement advanced leak detection programs for detecting, grading, and repair on prescribed schedules of all leaks $\geq$ 5 ppm.
- Enhances leak reporting requirements for gas distribution, gas gathering, gas transmission, underground natural gas storage facilities and LNG facilities.

PIPES Act of 2020

Section 113: Leak Detection and Repair Rulemaking

- This rulemaking would address Section 113 of the PIPES Act of 2020:
  - By requiring operators to adopt an advanced leak detection programs able to "identify locate and categorize all leaks" that are hazardous to human safety or the environment.
  - Including performance standards reflecting commercially available technology.
  - Requiring operators to use advanced technology in the identification of leaks.

PIPES Act of 2020

Section 114: Operations and Maintenance Procedures

- This rulemaking would address Section 114 of the PIPES Act of 2020 by requiring operators to update their Operation and Maintenance procedures to minimize the releases of natural gas and the replacement of pipelines known to leak.

Section 118: Cost-Benefit Analyses

- This rulemaking complies with the direction in section 118 of the PIPES Act of 2020 to consider environmental benefits in PHMSA's regulatory oversight alongside safety benefits.

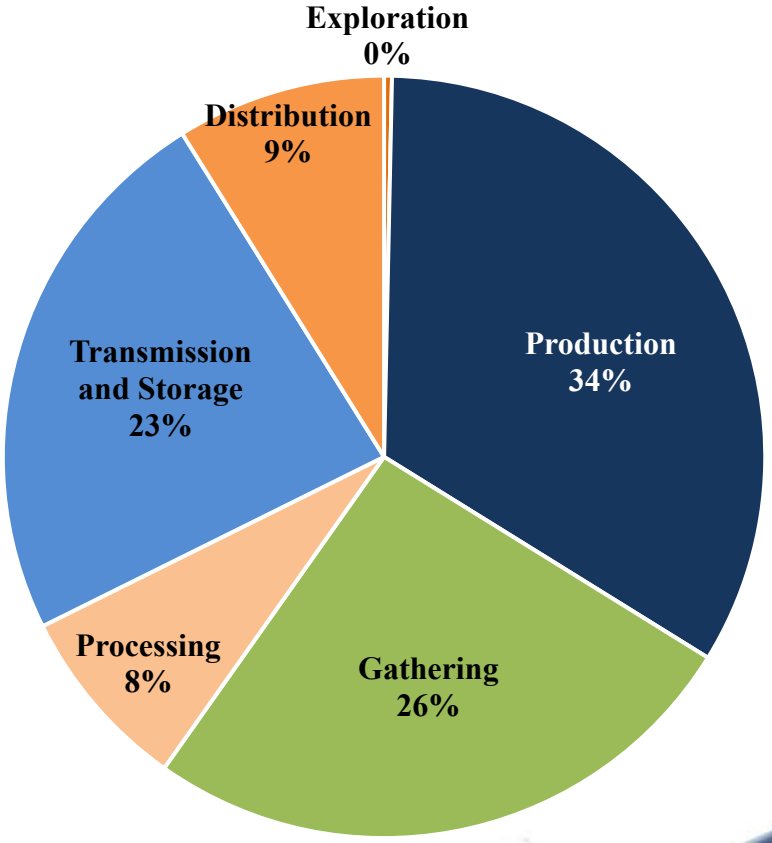
Implementing the PIPES Act of 2020

- Builds on the Nov. 2021 Gas Gathering Final Rule by improving alignment of PHMSA part 192 regulations governing gas gathering lines with the environmental and public safety risks they pose.
- Effects:
  - Eliminates 0.8–1.7 million metric tons (MT) of methane emissions over a 15-year assessment period.
  - Yields at least $1.1–2.3 billion of annualized quantified benefits.
  - Additional unquantified safety benefits.
  - Annualized net benefit of $321 million–$1.4 billion.

Natural Gas Industry Methane Emissions Estimates

U.S. Environmental Protection Agency (EPA). Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks (GHG Inventory): 1990-2021. April 2023.

Source	Kt CH4	BCF*
Exploration	7	0.4
Production*	2,642	137.2
Gathering	**1,548**	**80.4**
Processing	510	26.5
Transmission and Storage	**1,590**	**82.6**
Distribution	**552**	**28.6**
Total	**6,850**	**356.6**
Data for 2021 * Billion cubic feet 1kt CH4 = 51.9 MMCF		



Summary of Emissions Data

- Review of emission data informed the development of the NPRM.
  - **Distribution:** Virtually all emissions from distribution lines are from fugitive emissions (leaks and incidents) from pipelines that can be addressed by LDAR requirements.
  - **Transmission:** While the PIPES Act requires leak detection standards, most transmission line emissions are from compressor stations or from venting.
  - **Gas Gathering**: Gas gathering pipelines and facilities have a much higher emissions rate from pipeline leaks compared to gas transmission facilities.

Vented Emissions Sources

Most gas transmission emissions outside of compressor stations are vented emissions.

Vented emissions sources include:

- Blowdowns associated with repairs / maintenance, and replacement / construction,
- Venting from equipment such as pressure relief devices, regulators, compressor seals, emergency shut down devices,
- Venting from ruptures, upset conditions and third-party damage,
- Current facility / equipment designs, and
- Section 114(d) mandate to further study vented emissions sources.

Fugitive Emissions Sources

Most gas distribution emissions are ‘fugitive emissions.’ Pipeline fugitive emissions are also significant on gas gathering lines compared with gas transmission lines.

Fugitive emissions sources include:

- Pipeline leaks, especially from pipelines known to leak such cast iron and bare-steel systems, or plastic systems with known problems,
- Commercial/industrial meter sets,
- Compressor stations,
- Residential meter sets, and
- Excavation damage and other incidents.

NPRM Proposed Requirements

- To summarize, PHMSA's Leak Detection and Repair NPRM proposed the following:
  - More frequent leakage surveys and patrols.
  - Clarify that leak detection and investigation personnel must be qualified.
  - Extension of patrolling requirements and leak survey and repair requirements for gas gathering lines.
  - Exception to accommodate EPA's forthcoming rules for New Source Performance Standards (NSPS) for Crude Oil and Natural Gas Facilities and Emissions Guidelines.

NPRM Proposed Requirements

- Adoption of a technology-based advanced leak detection program (ALDP) requirement for gas transmission, distribution, and regulated gas gathering pipelines.
- Requirement for all segments to use leak detection equipment with few exceptions.
- Classification, prioritization, and repair requirement for *all* detectible leaks.
- Leakage surveys for LNG facilities.

NPRM Proposed Requirements

- **Operational releases:**
  - General duty to minimize releases of natural gas and replace pipelines known to leak (§ 114 statutory mandate) for gas pipelines, underground natural gas storage facilities (UNGSF) and LNG facilities.
  - Requirement to minimize emissions from routine blowdowns.
  - Design, configuration, and maintenance of relief devices.

- **Reporting:**
  - Information on emissions and leaks discovered and repaired. Currently, operators only report leaks repaired.
  - Large volume release reporting. PHMSA would require operators to report releases of gas, both intentional and unintentional, of 1 million cubic feet or more.
  - Extend NPMS reporting to gas gathering pipelines. NPMS currently does not apply to gathering or distribution lines.

NPRM

- PHMSA hosted a public meeting on gas pipeline leak repair and methane emissions reduction on May 5-6, 2021.
- NPRM published May 18, 2023 (88 FR 31890).
- PHMSA extended the comment period through August 16, 2023 (88 FR 42284).

NPRM Comment Summary

PHMSA received approximately 40,000 comments for the NPRM from a diverse group of stakeholders (only unique submissions counted below):

- **Public Safety Advocacy Groups:** 7 unique submissions
- **Environmental Advocacy Groups:** 31 unique submissions
- **Government**:
  - National Transportation Safety Board (NTSB)
  - National Association of Pipeline Safety Representatives (NAPSR)
  - 4 state regulatory agencies
  - 10 elected officials, two joint letters from several elected officials
  - Two joint letters from several State attorney generals
- **Academic groups:** 4 unique comments
- **Industry Trade groups:** 26 unique submissions. organizations include:
  - Gas pipelines generally
  - Gas gathering
  - Gas transmission
  - Liquefied petroleum
  - Hydrogen
- **Industry/Operator:**
  - 27 Gas transmission, gathering, or hazardous liquid pipeline operators
  - 26 privately owned distribution companies
  - 26 municipal owned or operated gas utilities
- **Leak detection technology providers:** 16 unique submissions.
- **Other businesses or trade associations:** 16 unique submissions
- **Form letter campaigns:** 11 campaigns with 37,932 submissions
- **Other Commenters:** 267 unique comments from individuals or anonymous commenters.

Regulatory Impact Analysis Summary

PHMSA can only issue a new pipeline standard after "a reasoned determination that the benefits of the intended standard justify the cost."

The RIA considers the costs and benefits of the proposed rule and whether its benefits justify the costs.

- Primary cost estimates range from $739.7 - $879.5 million, annualized at 3% discount rate.
- Benefits estimated at $1,081 - $2,320 million, annualized at 3% discount rate.
- Further detail on costs and benefits provided below.

Analysis Parameters

- **Pipeline mileage**: For distribution, transmission, and Type A and B gathering, PHMSA reported data, projected forward using segment-specific growth rates. For Type C Gathering, from 2021 Gas Gathering Rule projected forward using Type A & B growth rate.
- **Leak survey and leak repair costs**: Taken from operator rate cases and other filings
- **Leak frequency and emission rates**:
  - For Gathering and Transmission, leak incidence from PHMSA reported data, emissions derived from EPA GHGI.
  - For Distribution, operators do not report all leaks found, so PHMSA uses two peer reviewed studies - Lamb et al. (2015) and Weller et al. (2020) to estimate leak incidence and emissions factors.
  - Weller used AMLD survey practices and found significantly higher leak incidence and emissions than Lamb.
  - Low scenario based on Lamb et al (2015), also used in EPA GHGI, and high scenario based on Weller et al (2020) capture benefits and costs over a range of distribution operator emissions scenarios.

Analysis Parameters

Monetized Benefits:

- **Climate change benefits**: Based on social cost of methane, taken from the 2021 interim guidance from the Interagency Working Group on the Social Cost of Greenhouse Gases. Estimates include global impacts.
- **Value of lost natural gas**: Monetized using projected Henry Hub prices (Energy Information Administration).

Emissions Uncertainty:

- Recent studies have produced a wide range of natural gas emissions estimates for gathering and distribution operators. The RIA evaluates the rule over a range of emissions estimates to see how costs and benefits vary as emissions change.
- The RIA considers a higher emissions scenario for gathering lines based on a recent study (Chen et al.) showing much higher emissions in the Permian than EPA estimates in the sensitivity analysis section.
- RIA captures distribution emissions uncertainty by evaluating the proposed rule using estimates from Lamb et al. and Weller et al.

Non-Monetized Benefits

Safety Benefits:

- Better LDAR practices should detect and eliminate leaks that would otherwise turn into safety critical incidents.
- Incident descriptions in PHMSA's database describe incidents that were found via leak surveys or patrols, and a non-trivial portion of incidents list leaks as a cause.

Primary uncertainties preventing quantification of safety benefits include:

- Difficulty quantifying the relationship between LDAR practices and detection of leaks that would become safety critical
- Contribution of leak surveys vs. other means (odor complaint, third party report, system malfunction indicator, found during patrols or maintenance and repair activities, etc.) in identifying safety critical leaks that develop between surveys.
- Difficulty predicting the magnitude and consequences of safety critical leaks.

Non-Monetized Benefits

Health Benefits:

- HAP and VOC are present in unprocessed natural gas, and release of methane into the atmosphere causes ozone formation. Human exposure leads to negative respiratory health and other health impacts.

Primary uncertainties include:

- Limited data on the location of pipeline leaks relative to human populations and exposure magnitude and duration.
- Complex relationship between exposure levels/durations and adverse health impacts.

Total annualized costs of proposed requirements

Industry Segment	Requirement	Total annualized costs*	
Gathering	Patrols		$151.7
	Leakage surveys		$41.5
	Leak repairs		$15.1
	NPMS reporting		$1.7
	Other reporting and recordkeeping		$0.6
	Total[1]		**$210.6**
Transmission	Patrols		—
	Leakage surveys		$12.2
	Leak repairs		$1.5
	Other reporting and recordkeeping		$1.2
	Total[1]		**$14.9**
Distribution	**Basis of estimates[2]**	**Low**	**High**
	Leakage surveys	$292.2	$292.2
	Leak repairs and monitoring	$219.6	$359.4
	Other reporting and recordkeeping	$2.4	$2.4
	Total[1]	**$514.2**	**$654.0**
Other gas facilities	Other reporting and recordkeeping	<$0.1	<$0.1
Proposed rule total[1]		**$739.7**	**$879.5**

*(million 2020$, 3 percent discount rate)

Further Detail on Estimated Benefits and Net Benefits

Annualized benefits from avoided methane emissions and natural gas loss (million 2020$, 3 percent discount rate)*

Benefit Category	Gathering	Transmission	Distribution		Total benefits[1]	
			Lamb et al. (2015)	Weller et al. (2020)	Low	High
Climate benefits (based on the Interagency Working Group (IWG) average at 3%)	$507	$11.1	$472	$1,607	$990	$2,126
Natural gas losses	$46	$1.0	$43	$147	$90	$194
Total monetized benefits	$553	$12.1	$515	$1,754	$1,081	$2,320

***Table does not include potentially substantial non-monetized benefits.**

Comparisons of the total annualized costs and benefits of the proposed rule (million 2020$)+

Discount Rate	Item	Gathering	Transmission	Distribution		Total[1]	
				Lamb et al. (2015)	Weller et al. (2020)	Low	High
3%	Benefits	$553	$12	$515	$1,754	$1,081	$2,320
	Costs	$211	$15	$514	$654	$740	$880
	Net benefits	$343	-$3	$1	$1,100	$341	$1,440
7%[2]	Benefits	$549	$12	$512	$1,743	$1,073	$2,304
	Cost	$209	$15	$530	$677	$753	$900
	Net benefits	$340	-$3	-$18	$1,067	$320	$1,404

***Table does not include potentially substantial non-monetized benefits.**

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Topic for Discussion

Operations and Maintenance and Venting

Procedure Manuals - §§ 192.12 and 192.605

Current Requirements – Procedure manuals:

- Section 192.605 requires operators of gas transmission pipelines, gas distribution pipelines, offshore gas gathering pipelines, and Type A gas gathering pipelines to have and follow procedure manuals.
- Section 192.12(c) addresses similar requirements for underground natural gas storage facilities.
- Section 192.605 does not directly address the mandate in section 114 of the PIPES Act of 2020 to eliminate leaks and minimize the release of natural gas.

Procedure Manuals - §§ 192.12 and 192.605

NPRM Proposal – Procedure manuals:

- Update §§ 192.605 and 192.12(c) to require operators of gas pipelines and underground natural gas storage facilities to address:
  - Eliminating leaks,
  - Minimizing releases of gas, and
  - Replacing or remediating pipelines known to leak (§ 192.605 only).
- PHMSA separately proposed to require procedure manuals for Type B and Type C regulated gathering lines and LNG facilities (both discussed separately).

Transmission Blowdown Mitigation § 192.770

Current Requirements – Blowdown mitigation:

- Do not generally require operators mitigate planned, intentional emissions.

NPRM Proposal:

- Gas transmission and LNG operators must mitigate operational, non-emergency blowdowns.
  - Example methods parallel **EPA's Methane Challenge program** and industry commitments.
- A non-emergency blowdown is defined as one that does not involve the activation of an operators' emergency plans under § 192.615.

Relief Device Design, Configuration, and Maintenance §§ 192.199 and 192.773

NPRM Proposal (continued):

- Maintenance and configuration: § 192.773
  - Each operator must have written procedures for assessing pressure relief devices that activate unintentionally or fail to operate as designed.
  - When a relief device fails to operate at or above its set actuation pressure or otherwise fails to provide overpressure protection, the malfunctioning device or sensing equipment must be replaced immediately.
  - A relief device that allows gas to release at an operating pressure below the set actuation pressure range, the operator must take immediate action to prevent further releases and repair or replace the device within 30 days.

Relief Device Design, Configuration, and Maintenance §§ 192.199 and 192.773

Current Requirement – Design, configuration and Maintenance of pressure limiting, relief, and regulating devices:

- Section 192.199 defines the design requirements for pressure limiting, relief, and regulating devices.
- Section 192.739 addresses requirements for the inspection and testing of pressure limiting, relief, and regulating devices.

NPRM Proposal:

- Design: § 192.199
  - Set and reset pressures, device size, and sensing line location must be designed and configured to minimize unnecessary releases and be suitable for the operating environment.
  - Relief devices must include isolation valves to facilitate testing and maintenance.

Pressure Relief Devices - § 192.199(i)

NPRM Comments – Design of pressure limiting, relief, and regulating devices:

- NAPSR expressed general support for this provision.
- Industry trades urged PHMSA to clarify that the requirements in proposed would apply to new or replacement jobs involving relief pressure devices.
- Multiple operators requested clarification on under what circumstances does PHMSA consider a "changed pressure relief and limiting device."
- An operator asked PHMSA remove § 192.199(i)(2) as it duplicates existing requirements.

Pressure Relief Devices - § 192.199(i)

PHMSA Notes:

- Section 192.199 is in a non-retroactive subpart which would only apply to facilities installed or modified after the effective date of the rule.
- Revised design requirements are intended to apply only to the components that are replaced, relocated, or changed.
- PHMSA will clarify the non-retroactivity of these requirements and will address any duplication in the final rule.

Pressure Relief Devices - § 192.199(i)

NPRM Comments:

- An operator requested PHMSA provide further clarification on why downstream isolation valves need to be installed.
- Multiple industry trades wrote that installing unnecessary valves will increase installation and maintenance costs without discernible benefit.
- An operator urged PHMSA to reconsider the requirement for isolation valves.
- An operator stated that proposed § 192.199(i)(3) would be too restrictive and urged PHMSA to consider alternatives for isolating pressure relief devices for testing and maintenance.

Pressure Relief Devices - § 192.199(i)

NPRM Comments (continued):

- Multiple trade associations wrote the proposal does not indicate whether downstream pressure safety valves must be installed at the inlet or after the discharge of the relief device.

PHMSA Notes:

- The intent of this amendment is to ensure that relief devices are designed to facilitate testing and maintenance. The operator must have the appropriate valving to properly test the relief device.
- PHMSA will clarify and ensure that unnecessary valves are not required in the final rule.

Procedural Manuals - § 192.605

NPRM Comments – Procedure manuals:

- NAPSR expressed support for the requirement.
- An operator commented that the requirement to have procedures for "eliminating leaks" was beyond the mandate in the PIPES Act.
- GPTC and an operator commented that the amendments in § 192.605 would duplicate existing requirements addressing risk-based pipe replacement in §§ 192.613(b) 192.703(b) and DIMP leak management requirements.
- Attorney General of NY et al. said that § 192.605 would support PHMSA's cooperation with states undertaking inspection and enforcement activity in connection with the PIPES Act.
- Industry trades suggested the revised § 192.605 should require operators to "reduce" rather than "minimize" emissions.

PHMSA Notes:

- The amendment to § 192.605 codifies the requirement from Section 114 of the PIPES Act of 2020 and the term "minimize" is used in the statute.

Blowdown Emissions- § 192.770(a)

NPRM Comments – Blowdown mitigation:

- State and U.S. representatives, NAPSR, and an environmental representative expressed support for requirements aimed at reducing intentional releases.
- Attorney General of NY et al. suggested operators first prioritize methods to prevent releases, and then minimize emissions that are unavoidable.
- Multiple industry trades stated that the proposed requirements were overly prescriptive and would hurt operator flexibility.

Blowdown Emissions - § 192.770(a)

NPRM Comments – Blowdown Emissions (continued):

- Industry trades suggested that the blowdown mitigation requirement should direct operators to "reduce" rather than "minimize" emissions.
- An operator stated the "intentional release of gas" standard was too broad and that it should only include intentional releases that relate to "planned" repairs.
- Multiple operators and industry trades expressed support for limiting the applicability to planned releases that exceed a defined volume of gas and suggested the requirement should be for blowdowns that are expected to exceed 1 MMCF.
- Multiple operators and industry trades suggested expanding the exception for emergencies to include safety risks and commercial impacts.

Blowdown Emissions - § 192.770(a)

NPRM Comments – Blowdown Emissions (continued):

- Multiple operators suggested PHMSA focus on a total emission reduction across an operator's footprint instead of a specific volume or pressure reduction.
- An operator said that the "prevent or minimize" standard is ambiguous and suggested PHMSA define a threshold of 50% reduction, which is consistent with EPA's Methane Challenge.

PHMSA Notes:

- PHMSA requests Committee feedback on:
  - Scope of the blowdown reduction requirements, including consideration of a minimum release volume criteria and/or a system-wide emissions reduction target, and the applicability to planned or unplanned releases.
- PHMSA notes that the proposed large volume gas release report would be required for any gas release over 1 MMCF.

Blowdown Emissions - § 192.770(a)

NPRM Comments (continued):

- An operator said it was neither realistic nor practical to expect operators to have mobile compression on standby. Additionally, mobile compression suppliers may not be ready for increased demand.
- Multiple operators and industry trades said that PHMSA should not restrict the use of flaring.
- An individual commenter suggested venting and flaring be prohibited.
- Pipeline Safety Trust suggested PHMSA "clearly articulate" flaring be reserved for instances when other mitigation options are impractical or unsafe.

Blowdown Emissions - § 192.770(a)

NPRM Comments (continued):

- Environmental advocacy groups noted while flaring is preferable to venting gas, it should be used as a last resort after all other options have been exhausted. The commenters suggested PHMSA permit an operator to flare only if all non-flaring methods have been exhausted.
- Industry trades shared that a minimum pressure requirement or pressure reduction should not be included.

PHMSA Notes:

- PHMSA notes that flaring is one of the methods allowed for blowdown emissions reduction in EPA's voluntary programs.

Blowdown Emissions - § 192.770(c)

NPRM Comments – Methodology documentation:

- Pipeline Safety Trust expressed support for the requirement but suggested that PHMSA set standards for operators to follow for each instance of vented emission and ensure that operators mitigate 50% of their emissions using a given technology.
- Industry trades said there was no need for operators to document the methodologies associated with intentional releases, and that it should clarify requirements can be satisfied through the development and implementation of written procedures that apply to pipelines.

Pressure Relief Device Maintenance - § 192.773

NPRM Comments – Relief device maintenance:

- Industry trades and operators recommended PHMSA incorporate the proposed maintenance requirements into existing § 192.739 since they broaden the scope of inspection and testing to include requirements for maintenance and record-keeping.
- Industry trades commented that:
  - Continuous action is unnecessary, and
  - Instead of a defined timeframe PHMSA should allow operators to complete pressure relief device remediation "as soon as practicable."
- An operator and an individual commenter recommended PHMSA add "or operating knowledge and historical documentation" as an alternative to a documented engineering analysis.

Pressure Relief Device Maintenance - § 192.773

NPRM Comment (continued):

- NAPSR recommended PHMSA require records associated with relief device malfunction to be maintained for a pipeline's lifetime.

PHMSA Notes:

- PHMSA will clarify that continuous action is no longer necessary following the cessation of a release and the implementation of alternative overpressure protection measures.

Operations and Maintenance and Venting - PRIA

NPRM Comment:

- An operator said that PHMSA's cost assessment of the blowdown mitigation measures in § 192.770 was not accurate.

PHMSA Notes:

- PHMSA appreciates the comment and will update the RIA as appropriate.

Operations and Maintenance and Venting

This concludes the PHMSA response to comments on operations and maintenance and venting.

Operations and Maintenance and Venting

Specific topics raised by commenters PHMSA requesting Committee recommendations on include:

- Criteria for when blowdown mitigation is required.
- Minimum release volume criteria and/or a system-wide emissions reduction target.
- Applicability to intentional releases associated with planned and unplanned work.

Operations and Maintenance and Venting

Public Comments

Operations and Maintenance and Venting

GPAC Discussion

Operations and Maintenance and Venting

Committee Voting Slide

The proposed rule as published in the Federal Register and as supported by the Preliminary Regulatory Impact Analysis and Draft Environmental Assessment, with regards to operations and maintenance and venting is technically feasible, reasonable, cost-effective, and practicable.

Topic for Discussion

Leak Surveys and Patrols

Leakage Surveys and Patrols

NPRM Proposal:

- Increase leakage survey frequencies for pipelines known to leak, distribution lines outside of business districts, and transmission lines in high consequence areas (HCAs).
- Require leak detection equipment for all onshore gas transmission and distribution line surveys.
- Require monthly visual patrols for transmission lines.

Leakage Surveys: Distribution § 192.723

Facility	Existing	Proposed
Outside of Business Districts	5 years NTE 63 months	3 years NTE 39 months
Pipe known to leak (currently, just cathodically unprotected)	3 years NTE 39 months	Annually NTE 15 months
Inside Business Districts	Annually NTE 15 months	No change

Additional proposals:

- An investigation of known leaks must be performed after environmental changes that can affect gas migration.
- A survey must be performed within 72 hours of the cessation of an extreme weather event, defined as when the area can be safely accessed or when the facility has been returned to service.

Distribution – Requested Topics

NPRM requested comments on the following:

- **Miscellaneous definitions, PHMSA will address this topic in a later section.**
  - Potential criteria for defining the boundary of a business district.
  - Value of explicitly listing historic plastics known to leak or deleting the scope qualification "historic" from the proposed regulatory text, for the purposes of the proposed annual survey requirement or for replacement under section 114 of the PIPES Act of 2020.
- Value of more- or less-frequent leakage surveys of plastic pipe systems.
- Whether distribution mains should be required to be surveyed annually, an alternative evaluated in the PRIA.

Leakage Surveys: Transmission § 192.706

Current Requirements:

- Annual leakage surveys (NTE 15 months), except
  - Twice a year for non-odorized class 3
  - Four times a year for non-odorized class 4 locations
- Leak detection equipment only required for surveys on non-odorized class 3 or class 4 locations.

NPRM Proposal:

- Leak detection equipment required except for:
  - Submerged offshore pipelines.
  - Non-HCA Class 1 and 2 locations with § 192.18 notification.
  - **The use of human senses and the leak detection performance standard will be discussed in the discussion of ALDP in a separate section.**

Leakage Surveys: Transmission §192.706

NPRM Proposal (continued):

- Survey frequency
  - valves, flanges, pig launchers, tie-ins to valves and flanges
    - 4 times a calendar year for survey for in class 4 locations
    - 2 times a calendar years elsewhere.
  - HCAS
    - 4 times a calendar year in HCA class 4 locations
    - 2 times a calendar year in HCA Class 1, 2 or 3 locations
- Minimum annual survey frequency and survey frequencies outside of HCAs remain unchanged.

Patrols: Transmission § 192.705

Current Requirements:

- Visual right of way patrols are required between 1 to 4 times each calendar year for gas transmission lines.

NPRM Proposal:

- Require monthly patrols for gas transmission.
- Proposed requirements would apply to regulated gas gathering lines subject to patrol requirements.
- The applicability of this requirement to Type B and Type C regulated gathering lines will be discussed in a separate section.

Distribution Leak Surveys § 192.723 - General

All comments related to advanced leak detection performance standards, leak grading and repair, or applicability to gas gathering will be discussed in those topic sections.

NPRM Comments—General:

- Multiple operators expressed concern that the proposed changes would be financially challenging to comply with and could raise utility costs for consumers without creating a commensurate increase in safety.
- An operator expressed concern that it would be more difficult for smaller operators with few employees to meet the proposed requirements.
- An operator stated that the proposed changes are unnecessary for pipelines made of newer materials and should not apply to such pipelines.

Distribution Leak Surveys § 192.723 - General

NPRM Comments (continued):

- Multiple trade groups expressed that requiring more frequent leak surveys is unnecessary as the intent is achieved through the implementation of risk-based distribution integrity management program (DIMP) requirements.

PHMSA Notes:

- DIMP regulations do not currently include parameters for what constitutes an "effective leak management program." As a result, PHMSA is aware that some operators maintain a large backlog of unrepaired leaks.
- Operators would still have leeway to prioritize P&M measures within the bounds of the proposed leak detection and repair standards.

Distribution Leak Surveys § 192.723

NPRM Comments—General:

- Attorney General of NY et al. expressed support for the proposed survey intervals adding that these would prevent leaks from going undetected for longer periods of time, alleviating serious safety and environmental concerns.
- Environmental advocacy groups recommended PHMSA require annual leakage surveys with mobile leak detection equipment, or alternatively an annual survey for large-volume releases in addition to the proposed survey frequency. They further noted that many state programs and operator procedures stipulate more frequent surveys than currently required in § 192.723.
- Multiple operators expressed concern that increased survey frequencies for certain distribution lines would divert manpower, resources, and funding from other proposed requirements to monitor and repair leaks.
- A leak detection technology provider suggested PHMSA instead allow operators using Advanced Leak Detection systems to establish their own leak investigation frequencies based on field observations.

Distribution Leak Surveys § 192.723

NPRM Comments—Outside of Business Districts:

- Industry trades and operators expressed general opposition to the proposal to require distribution operators to survey outside of business districts every 3 years, stating that the 5-year minimum has proved effective and the more frequent surveys would not be justified by leak reduction projections, nor an improvement in pipeline safety.
- An operator expressed support stating that they have experienced a decrease in leak calls and after hours call outs since adopting a 3-year frequency for leakage surveys.
- A state regulator asked PHMSA to distinguish whether the proposed requirements would apply to both inside and outside piping.
- An operator proposed that PHMSA maintain the current 5-year frequency for inside service lines outside of business districts.

Distribution Leak Surveys § 192.723 (e)

NPRM Comments—Environmental changes:

- Multiple researchers at universities expressed support for investigating leaks following certain environmental changes, referencing a study that showed for leaks in rain, snow, and ice conditions, methane movement below the ground surface is faster and at higher gas concentrations than under "normal" conditions.
- An industry trade group commented that the investigation of known leaks is more appropriately addressed in the leak investigation requirements.

Distribution Leak Surveys § 192.723 (f)

NPRM Comments—Extreme weather :

- Multiple operators and trade groups expressed concern that the proposed extreme weather survey requirement would be overly broad and could require a full system leakage survey after each event.
- Multiple operators commented that this requirement would be a major burden for operators as this would require a fluctuating workforce that would be difficult to hire and maintain.
- Multiple environmental advocacy groups, a form letter campaign, individual commenters, and a Senator support the proposed extreme weather survey requirement but added that these inspections should not reset the pipelines' normal inspection interval.

Distribution Leak Surveys § 192.723(e) and (f)

NPRM Comments:

- Multiple operators requested PHMSA clarify limitations on the area that must be surveyed following an extreme weather event and provide opportunity for operators to define the requirement more specifically.
- Multiple operators and NAPSR urged PHMSA to define an extreme weather event and provide examples of such events.
- Multiple industry representatives proposed refer to existing language within § 192.613 and that § 192.613 be amended to include the significance of geohazards and environmental impact rather than create new severe weather inspection language.

PHMSA Notes:

- PHMSA concurs that investigation of known leaks following environmental changes in § 192.723(e) is more appropriately addressed in the discussion of leak grading and repair, this issue will be addressed in the discussion of § 192.760.
- PHMSA intended for extreme weather to be defined as detailed in § 192.613. PHMSA will clarify in the final rule.

Transmission Leak Surveys § 192.706

NPRM Comments—Transmission Leak Surveys:

- Multiple operators expressed general opposition to requiring more frequent leak surveys.
- NTSB, Attorney General of NY et al., an individual commenter, and multiple public and environmental advocacy groups expressed general support for the proposal.
- GPTC and an operator opposed increase survey frequency for gas transmission pipelines due to a lack of evidence that the proposed changes would improve safety to people, structures, or the environment.
- An operator stated that more frequent leakage surveys would increase operating costs without offering an advantage, especially for underground pipelines.

Transmission Leak Surveys § 192.706

NPRM Comments—Transmission Leak Surveys (continued):

- Industry trades did not recommend specific changes to the proposed leakage survey frequency except for pipelines located on the Alaska North Slope (ANS).
- Two leakage survey technology providers supported requiring more frequent leakage surveys.
- Multiple operators expressed opposition, recommending PHMSA remove the quarterly leak survey requirement in Class 4 locations.

Transmission Leak Surveys § 192.706

NPRM Comment—Transmission Leak Surveys (continued):

- Multiple industry trade groups recommended PHMSA require only annual leakage surveys of transmission pipelines on the ANS. Commenters noted that many methane detection devices are ineffective at extremely low temperatures and that EPA emissions monitoring requirements allow less frequent surveys in the ANS.

PHMSA Notes:

- For most pipelines, the transmission survey frequency is unchanged, more frequent surveys apply to HCAs, where there are potential safety risks and certain aboveground facilities that are more likely to leak.
- However, PHMSA requests GPAC feedback regarding the comments on exceptions for extreme environments with limited access.

Transmission Leak Surveys § 192.706(b) - HCAs

NPRM Comments – Survey Frequencies in HCAs:

- An operator expressed concern that proposed § 192.706(b)(2) could subject a single transmission line to three different survey frequencies.
- Multiple public advocacy groups urged PHMSA to consider natural gas composition, volatile organic compound content, and proximity of nearby populations, residences, and sensitive receptors such as schools and playgrounds when determining leakage survey frequencies.

PHMSA Notes:

- PHMSA notes that meeting the most frequent survey requirement would satisfy all applicable survey requirements.

Transmission Leak Surveys § 192.706(d) – Valves, etc.

NPRM Comments – Valves, flanges and certain other facilities:

- Multiple operators and an individual commenter request PHMSA maintain the current requirement for annual leak surveys for valves, flanges, and certain other facilities.
- Industry trades did not recommend specific changes to this requirement.

PHMSA Notes:

- PHMSA notes that these facilities are more likely to leak and generally easier for operators to survey.

Transmission Patrols § 192.705

NPRM Comments—Transmission Patrols:

- Pipeline Safety Trust, NAPSR, and an environmental group expressed general support for the proposed patrol requirements.
- Multiple operators opposed this change, stating that monthly patrols would pose an undue financial burden on operators and have limited effectiveness in detecting leaks on transmission lines.
- GPTC opposed the proposed changes to patrol frequencies as overly burdensome. The commenter suggested that "if risk warrants an increase in patrolling," that patrolling should match that of above ground inspections and be four times each calendar year.
- Multiple industry trades groups expressed that current patrol intervals are adequate and additional patrols do not promote public safety nor protect the environment.

Transmission Patrols § 192.705

NPRM Comments—Transmission Patrols (continued):

- Multiple industry trade groups and operators stated that there is no understood benefit to requiring more frequent patrols regardless of class location.
- Multiple industry representatives and an individual commenter said that increasing frequency of patrols on Class 1 and 2 lines would not increase safety or reduce emissions.
- An operator said it would be difficult to meet the proposed requirement in high alpine areas where ground access is limited to only about three months of the year.
- Multiple industry trade groups and operators recommended PHMSA establish the minimum required patrol frequency at six times per calendar year.

Transmission Patrols § 192.705

NPRM Comment—Transmission Patrols (continued):

- Multiple industry trade groups and operators recommended PHMSA establish the minimum required patrol frequency at six times per calendar year.

PHMSA Notes:

- Patrolling is an effective countermeasure for third-party damage threats which are a major cause of incidents resulting in fatalities.
- However, PHMSA appreciates the concerns raised on the practicability and cost-effectiveness of the proposed frequency for gas transmission and gathering lines.
- PHMSA requests Committee discussion on patrol frequency for transmission and regulated gas gathering lines.

Leak Surveys and Patrols - PRIA

NPRM Comments:

- Chief legal officer from the state of LA et al. and multiple operators expressed concerns that the estimated costs for the proposed changes would outweigh their expected benefits.
- Multiple industry trade groups expressed concern that PHMSA's established baseline for transmission patrols is not supported by the Office of Management and Budget's Circular A-4 or related case law.
- An operator asked PHMSA to provide specific methane emission data and cost data to support an increase in patrols and leakage surveys on transmission lines.

PHMSA Notes:

- PHMSA appreciates the comment and will update the RIA as appropriate.

Leak Surveys and Patrols

This concludes the PHMSA response to comments on leak surveys and patrols.

Leak Surveys and Patrols

PHMSA requests the Committee recommendations on the leakage survey and patrol requirements in the proposed rule as published in the Federal Register and the Draft Regulatory Evaluation and Environmental Assessment.

Specific topics raised by commenters PHMSA requests Committee recommendations on include:

- Patrol frequency for gas transmission pipelines.
- Leakage survey frequency for gas transmission lines
- Leakage survey frequency for gas distribution lines.

Leak Surveys and Patrols

Public Comments

Leak Surveys and Patrols

GPAC Discussion

Leak Surveys and Patrols

Committee Voting Slide

The proposed rule as published in the Federal Register and as supported by the Preliminary Regulatory Impact Analysis and Draft Environmental Assessment, with regards to leak surveys and patrol for the proposed rulemaking is technically feasible, reasonable, cost-effective, and practicable.

Topic for Discussion

Advanced Leak Detection Program Elements and Performance Standard

Advanced Leak Detection Program Elements § 192.763(a)

Current Requirements:

- Distribution lines, Type B and certain C gathering lines, and certain non-odorized transmission lines require leak surveys to be performed with leak detection equipment.
- No technology or performance standards for leak detection equipment or procedures are prescribed in the current regulations.

NPRM Proposal:

- NPRM proposes a new Advanced Leak Detection Program (ALDP) requirement to address the technology requirements from the PIPES Act.
- The proposed requirement applies to all distribution, transmission, and regulated gas gathering lines subject to leakage surveys.
- Program elements
  1. Leak detection equipment
  2. Leak detection procedures
  3. Leak survey frequency
  4. Periodic evaluation and improvement

Advanced Leak Detection Performance Standards/Alternative Performance Standard

NPRM Proposal:

Performance Standard - § 192.763(b)

- An ALDP must be capable of detecting all leaks large enough to produce a reading of 5 ppm or greater of gas when measured from a distance of 5 feet from the pipeline, or within a wall-to-wall paved area.
- Leak detection devices must have a minimum sensitivity of 5 ppm.

Alternative Performance Standard - § 192.763(c)

- Operators can request an alternative ALDP performance standard subject to the notification and review procedure in § 192.18 for:
  - Gas transmission, offshore gathering, and Types A, B, and C gathering pipelines located in non-HCA Class 1 or 2 locations.
  - Any gas pipeline transporting flammable, toxic, or corrosive gases other than natural gas.

LD Technology – Requested Topics

NPRM requested input on the following:

- Incorporation of technologies that may not have specified concentration sensitivities, including continuous pressure wave monitoring, fiber optic sensing, OGI, and LIDAR based detection technologies.
- The value of requirements for continuous monitoring systems through stationary gas detection systems, pressure monitoring, or other means. Additionally, is there a specific type of facility, location, or set of conditions that is most conducive to the use of continuous monitoring?
- Whether and how an alternative ALDP performance standard, such as a volumetric or flow-rate based standard, should be adopted in the final rule.

Compressor Station Exception - § 192.703(d)

Current Requirements for Compressor Stations:

- Compressor stations are covered by part 192 requirements.
- EPA published an SNPRM (RIN 2060-AV16) in December of 2022, proposing to update the standards for gas transmission compressor stations installed, reconstructed, or modified after Nov. 15, 2021.
  - The proposal builds on previous proposed requirements from a November, 2021 NPRM (86 FR 63110).
  - This proposal and existing 40 CFR § 60 OOOO-OOOOa requirements also addressed methane emissions from existing oil and gas sources.

NPRM Proposal:

- In order to eliminate unnecessary overlap in methane emissions monitoring requirements, PHMSA proposed a narrow exception from some of the proposed LDAR requirements for gas transmission and gas gathering compressor stations.
- Other part 192 requirements, would still apply.

Compressor Station Exception - § 192.703(d)

NPRM Proposal (continued):

- Exception applies to gas transmission and gathering compressor stations covered by EPA emissions monitoring standards.
- Exception for leak repair, leakage survey and patrol, leak grading and repair, ALDP, and the qualification of leak detection personnel.
- Repair records must be maintained.
- The exemption would cover the components located within the first block valve entering or exiting the facility (exclusive of that block valve)—which valves mark the boundary of station overpressure protection pursuant to § 192.167.

Compressor Station Exception – § 192.703(d)

NPRM Comments—Compressor Stations:

- A leak detection technology provider and an environmental representative expressed support for the proposed exception as it minimizes regulatory overlap.
- Pipeline Safety Trust suggested that PHMSA should adopt "more stringent" unique requirements for compressor stations.
- Industry trades supported the proposed exception but commented that the scope should include state methane emissions monitoring and repair requirements that are pending inclusion in EPA-approved plans.

Compressor Station Exception – § 192.703(d)

NPRM Comments–Compressor Stations:

- Multiple industry trades requested that PHMSA remove the requirement to keep repair records for compressor stations covered by this exception, reasoning that PHMSA has no authority over EPA's recordkeeping and additional recordkeeping should not be a condition for the exception.

PHMSA Notes:

- PHMSA will review any final rule issued in relation to EPA's NSPS SNPRM to ensure any final standards meet PHMSA's safety and environmental objectives.
- PHMSA expects operators to maintain facility design and integrity related records, which includes documentation of repairs.

ALDP Program Elements § 192.763 - Technology

NPRM Comments—Leak Detection Equipment:

- Form letter campaigns, individual commenters, and multiple public and environmental advocacy groups expressed that PHMSA should provide clear and rigorous requirements to use advanced leak detection technology and limit operators' flexibility to consider less-effective alternative options.
- NTSB recommended that "PHMSA require all operators of natural gas transmission and distribution pipelines equip their supervisory control and data acquisition (SCADA) systems with tools to assist in recognizing and pinpointing the location of leaks, including line breaks."
- NTSB also supported requiring the installation of in-home methane detectors.

ALDP Program Elements § 192.763 - Technology

NPRM Comment—Leak Detection Equipment (continued):

- An operator said PHMSA should allow soap tests in addition to handheld detection devices for pinpointing leaks.

PHMSA Notes:

- The PIPES Act directs PHMSA to establish a performance standard applicable to various, commercially available survey methods.
- PHMSA notes that soap testing is a reliable method for locating the origin of a gas leak.
- PHMSA will consider the comments in the final rule or future rulemaking.

ALDP Program Elements § 192.763 - Technology

NPRM Comments—Use of human senses:

- Pipeline Safety Trust, a Senator, and multiple public advocacy groups said PHMSA should not allow leakage surveys without leak detection equipment on transmission and gathering lines, even with prior notification and review.
- An operator requested PHMSA eliminate the requirement for use of leak detection equipment.
- A leak detection technology provider expressed that human senses are subjective, less accurate and reliable, and could lead to discrepancies and likely to miss leakage.

PHMSA Notes:

- PHMSA specifically requests Committee recommendations on when, if ever, human senses should be permitted for gas transmission and gathering leakage surveys.
- PHMSA notes that proposed § 192.706 would allow for human senses for non-HCA class 1 and 2 locations with a notification submitted under § 192.18, and for submerged offshore transmission and gathering lines.
- Section 113 of the PIPES Act requires PHMSA to define when the use of human senses is permitted for leakage surveys.

ALDP Program Elements § 192.763 - Procedures

NPRM Comments – Procedures:

- An operator said that given the minimum leakage survey frequencies prescribed in § 192.706 and 192.723, imposing additional mandates related to survey frequency within the ALDP requirements is "redundant and inappropriate."
- GPTC requested clarification that the § 192.763 ALDP would satisfy the leak management program required by DIMP.

PHMSA Notes:

- If an operator validates that they achieve the performance standard based on the minimum frequencies in §§ 192.706 or 192.723, more frequent surveys would not be required under § 192.763. This requirement was intended to address certain procedures that may require multiple surveys or more frequent surveys for reliable detection.
- PHMSA further notes that other existing regulations such as IM require actions beyond what is specified elsewhere in the code.

ALDP Program Elements § 192.763(2)(iii) – Validation

NPRM Comments – Validation procedures:

- Multiple industry representatives and an individual commenter opposed requiring operators to analyze the effectiveness of each technology. The individual commenter recommended that PHMSA state what technology they accept or reword the regulation to state "consider the use of the technologies and analyze what is chosen."
- Multiple operators stated that operators should be able to rely on testing of equipment sensitivity done by manufacturers, or if PHMSA does require additional validation, then PHMSA should perform a review of available technologies in partnership with industry.
- Sen. Heinrich et al. suggested the rule should include validation standards, developed and verified by independent entities. The commenters also suggested PHMSA require equipment manufacturers provide operators information on methane detection sensitivity, measurement time response, and cross-sensitivity to other gases.

ALDP Performance Standards – § 192.763

NPRM Comments – ALDP performance standard:

- An industry representative recommended aligning the performance standards with EPA standards.
- An industry representative said that an operator should be able to define an appropriate minimum sensitivity standard for their ALDP themselves.
- An operator expressed support for minimum performance standards and PHMSA's understanding of the importance of affording flexibility for operators. However, multiple operators said that mandating the use of the "newest" or "most sensitive" technology is unnecessary and inappropriate.

ALDP Performance Standards – § 192.763

NPRM Comments (continued):

- An operator expressed concern with "applying ALDP standards that are impractical and do not necessarily yield tangible improvements in public or environmental safety."
- A public advocacy group and leak detection equipment manufacturer said the performance standard should include standards for reading response times of leak detection equipment.

PHMSA Notes:

- PHMSA notes that later comments recommend specific changes to the ALDP performance standard.

ALDP Performance Standards – § 192.763

NPRM Comments – 5ppm within 5 feet:

- Industry trades and operators recommended removing the "5 feet" condition. They commented that defining a "universal leak" based on 5 ppm within 5 feet in a controlled environment, fails to consider real world leak scenarios which includes depth of cover, soil and atmospheric conditions, plume behavior, and probability of detection of the equipment being used.
- Industry trades continue that the 5-ppm minimum sensitivity requirement is a concentration of 0.01% of the lower explosive limit of methane gas. Imposing additional mandates of being within "5 feet of the buried pipeline is at odds with such a conservatively low sensitivity threshold and imposes burdensome prework to handheld leak survey activities."

ALDP Performance Standards – § 192.763

NPRM Comments—ALDP Performance Standards (continued):

- Industry trades were concerned with the universal application of the proposed 5 ppm minimum sensitivity criteria. Specifically, compared with traditional walking surveys, mobile, aerial, satellite, optical, infrared, or laser-based platforms are intended to be used to find gas at significantly greater distances at much higher concentrations as an initial screening survey, followed up with verification with more sensitive equipment.
- An operator requested clarification in the final rule regarding the applicability of the proposed performance standard to various types of equipment, stating that the 5 ppm within 5 feet standard is not achievable by most existing aerial survey equipment.
- A leak detection company said that concentration of gas can be highly variable even within the same plume of methane from a single source.
- A manufacturer of gas monitoring equipment suggested that a detection sensitivity of 50 ppm would remain conservative but be significantly higher than background atmospheric methane.

ALDP Performance Standards – § 192.763

NPRM Comment (continued):

- GPTC said that if PHMSA retains the 5 feet standard, then PHMSA should clarify that the threshold only applies for purposes of determining the sensitivity of the equipment and does not require the equipment to be located within 5 feet of the pipeline.

PHMSA Notes:

- The performance standard was intended to ensure that screening surveys to be able to locate leaks detectible with handheld equipment. PHMSA did not intend to require survey equipment be located within 5 feet of the pipeline after it has been validated.

ALDP Standards – Alternative Class 1 and 2 § 192.18

NPRM Comments – Alternative technology notification:

- An individual and PA State Senator Muth opposed allowing an alternative standard under § 192.18.
- Trade groups expressed concern regarding the 90-day notification and no-objection process and asked that it be reconsidered.
- Pipeline Safety Trust opposed the option for alternative performance standards. The commenter said that at the very least PHMSA should review and approve alternatives submitted, rather than allowing operators to continue if they do not hear from PHMSA.
- Pipeline Safety Trust further stated that gathering lines should not be allowed to use an alternative performance standard as they are more prone to leakage.

ALDP Standards – Alternative Class 1 and 2 § 192.18

NPRM Comments (continued):

- An operator commented that PHMSA should consider reviewing alternative methods and state in regulation those that are accepted.
- Two leak detection companies said the use of aerial or remote sensing surveys in Class 1 and 2 locations should be permitted as an alternative standard without the need for additional approval. These survey methods are logical default leak detection approaches.
- An environmental advocacy group recommended that PHMSA modify proposed § 192.763(c) to that it is flexible enough to meaningfully accommodate new, innovative, and effective leak detection technologies.
- Industry trades recommended building on EPA's proposed approach to approving alternatives.

ALDP Standards – Alternative – § 192.763

NPRM Comments – Flow-rate alternative:

- An operator opposed an alternative ALDP standard. Rather, the commenter said PHMSA should complete a study for which technologies and flowrate standards would be appropriate.
- An operator expressed support for providing an alternative methodology to the concentration-based standard and suggested working with ALD experts to define the appropriate alternative.
- A leak detection company said the concentration-based sensitivity standard conflicts with proposed EPA rules that utilize flow-based units of measurement and does not reflect the advanced leak technology landscape.

ALDP Standards – Alternative – § 192.763

NPRM Comments (continued):

- An operator and multiple leak detection companies said that leak flow-rate is a more effective criteria than concentration and should be offered as an alternative.
  - The commenter said that flow rate rather than concentration is a better characterization of performance in terms of safety and emissions quantification.
  - This would bring the requirements into alignment with EPA's approach which measures in kg/hr. with a 90% probability of detection.
- Multiple industry trades expressed a preference for flexibility suggesting that PHMSA should not rely on concentration or flow-rate alone to allow use of multiple technologies.
- In the context of leak grading, GPTC and industry representatives raised concerns about reliably measuring flowrates for leak.

ALDP Standards – Alternative – § 192.763

NPRM Comments (continued):

- An industry representative urged PHMSA to express detection limit in terms of mass emission rate with a probability of detection and wind speed parameters.
- Sen. Heinrich et al. stated that PHMSA should consider the accurate functioning of ALD technologies in realistic conditions that accommodate wind speed and direction. The rule should specify lower leak detection limits using ALD technologies. Furthermore, there should be both an emissions-rate standard and a gas concentration standard. The rule should consider specifying maximum response times of the leak detection technology to enable reliable identification of transient sources or mobile sources.

ALDP Standards – Alternatives Proposed in Comments § 192.763

NPRM Comments:

- Industry trades proposed the following:
  - 5 ppm for hand-held equipment;
  - 10 kg/hr. mass flow or 500 ppm, for infrared, laser-based, mobile, aerial, or satellite-based platforms, or using fixed continuous monitoring sensors within buildings;
  - 500 ppm sensors for handheld equipment used inside of buildings; and
  - Any optical gas imaging or equivalent that meets the requirements of EPA's emission monitoring for above ground facilities.
- Environmental advocacy groups proposed annual mobile or aerial surveys with the following performance standards based on distribution of leak emissions:
  - 0.5 kg/hr. for distribution pipelines;
  - 3 kg/hr. for gas transmission pipelines; and
  - 10 kg/hr. for regulated gas gathering pipelines.

Advanced Leak Detection Program Elements and Performance Standard

This concludes the PHMSA response to comments on advanced leak detection program elements and performance standard topic.

Advanced Leak Detection Program Elements and Performance Standard

PHMSA requests the Committee recommendations on the ALDP requirements in the proposed rule as published in the Federal Register and the Draft Regulatory Evaluation and Environmental Assessment.

- Specific topics raised by commenters PHMSA requests Committee recommendations on include:
  - Flow rate-based alternative for surveys conducted with technology other than hand-held devices.
  - The scope of the use of human senses and alternative performance standards with a § 192.18 notification.

Advanced Leak Detection Program Elements and Performance Standard

- PHMSA requests the Committee to consider the following topics raised in public comments:
  - Flow rate-based alternative for surveys conducted with technology other than hand-held devices.
  - Consideration of probability of detection in the performance standard.
  - PHMSA notes that the characteristics of emissions from leaks vary by system type. For example, distribution systems may tend to have numerous relatively small leaks while transmission and gathering systems may have a smaller number of potentially large volume leaks.
  - Consequences of a leak can also be different depending on the concentration of surrounding population and odorization status.
- PHMSA also requests the Committee consider:
  - When, if ever, human senses should be permitted for gas transmission and gathering leakage surveys.
  - Whether and how modification of the proposed performance standard should affect availability of the 192.18 notification.
- PHMSA notes that the proposed ALDP procedures require pinpointing the location of leak indications found during screening surveys.

Advanced Leak Detection Program Elements and Performance Standard

Public Comments

Advanced Leak Detection Program Elements and Performance Standard

GPAC Discussion

Advanced Leak Detection Program Elements and Performance Standard

Committee Voting Slide

The proposed rule as published in the Federal Register and as supported by the Preliminary Regulatory Impact Analysis and Draft Environmental Assessment, with regards to advanced leak detection program elements and performance standard for the proposed rulemaking is technically feasible, reasonable, cost-effective, and practicable.

Topic for Discussion

Leak Grading and Repair

Leak Grading and Repair § 192.760

Current Requirements:

- Only generally applicable repair requirement is to repair "hazardous" leaks.
- The term "hazardous" is not defined but understood to equate to Grade 1 leaks in the GPTC Guide.
- Part 192 and GPTC guidance do not require repair of leaks that are "non-hazardous" and do not include criteria for ensuring repair of leaks that are hazardous to the environment.

NPRM Proposal:

- New § 192.760 requiring investigation, classification, and repair of leaks prioritized by risk to public safety *and* the environment.
- Proposed grading standards consistent with GPTC guide recommendations with modifications for enforceability and to ensure the protection of public safety and the environment.

Background: GPTC Guide

- Proposed grading and repair criteria are derived from the framework in the GPTC Guide.
- The GPTC Guide is not incorporated by reference in part 192, but PHMSA has referenced it in guidance and several States and operators have adopted the grading framework in whole or in part.
- The GPTC guide recommends classifying leaks by grade and classifies potential hazard based on leak location and gas concentration.
- Repair timelines:
  - Grade 1 leaks are the highest-priority, hazardous leaks requiring immediate repair.
  - Grade 2 leaks are scheduled for repair within 15 months.
  - Grade 3 leaks are the lowest priority and do not have a defined repair timeline, but must be periodically monitored until eliminated.

Leak Repair

- The PIPES Act directs PHMSA to establish a timeline for repair of all leaks except those with a volume so small as to pose no potential hazard to people or the environment.

Current Requirements:

- Hazardous leaks must be repaired promptly per § 192.703. However, promptly is undefined.
- DIMP requires an "effective leak management" program but does not specify repair requirements.
- The GPTC Guide recommends timeline for the repair of grade 1 and grade 2 leaks but does not define a repair schedule for grade 3 leaks.

Grading Definitions § 192.3

Proposed New Definitions

- ***Confined space*** – means any subsurface structure, other than a building, of sufficient size to accommodate a person, and in which gas could accumulate or migrate. These include, vaults, certain tunnels, catch basins, and manholes.
- ***Gas-associated substructure*** – means a substructure that is part of an operator's pipeline but that is not itself designed to contain gas.
- ***Lower explosive limit (LEL)*** – means the minimum concentration of gas or vapor in air below which propagation of a flame does not occur in the presence of an ignition source at ambient pressure and temperature.

Grading Definitions § 192.3

Proposed New Definitions

- ***Substructure*** – means any subsurface structure that is not large enough for a person to enter and in which gas could accumulate or migrate. Substructures include, but are not limited to, telephone and electrical ducts, and conduit, gas and water valve boxes, and meter boxes.
- ***Tunnel*** – is a subsurface passageway large enough for a person to enter and in which gas could accumulate or migrate.
- ***Wall-to-wall paved area*** – an area where the ground surface between the curb of a paved street and the front wall of a building is continuously paved, excluding intermittent landscaping, such as tree plots.

Grade 1 leak - § 192.760(b)

NPRM Proposal:

- Grade 1 leak includes any of the following:
  - Any leak that, in the judgment of operating personnel at the scene, is of sufficient magnitude to be an existing or probable hazard to persons or property, or a grave hazard to the environment;
  - Any amount of escaping gas that has ignited;
  - Any indication that gas has migrated into a building, under a building, or into a tunnel;
  - Any reading of gas at the outside wall of a building, or areas where gas is likely to migrate to an outside wall of a building;

Grade 1 leak - § 192.760(b)

- Grade 1 leak includes any of the following (continued):
  - Any reading of 80% or greater of the LEL in a confined space;
  - Any reading of 80% or greater of the LEL in a substructure (including gas associated substructures of a gas pipeline or non-associated gas pipelines), from which gas would likely migrate to the outside wall of a building;
  - Any leak that can be seen, heard, or felt by human senses; or
  - Any leak reportable as an incident as defined in § 191.3.

Grade 2 leak - § 192.760(c)

NPRM Proposal:

- Grade 2 leak is any leak (other than a Grade 1 leak) that represents "a probable future hazard to persons or property or a significant hazard to the environment" including a leak with any of the following characteristics:
  - A reading of 40% or greater of the LEL under a sidewalk in a wall-to-wall paved area that does not qualify as a grade 1 leak;
  - A reading of 100% of the LEL under a street in a wall-to-wall paved area that does not qualify as a grade 1 leak;
  - A reading between 20% and 80% of the LEL in a confined space;
  - A reading less than 80% of the LEL in a substructure (other than gas associated substructures) from which gas could migrate;

Grade 2 leak - § 192.760(c)

- Grade 2 leak is any leak (other than a Grade 1 leak) with any of the following characteristics (continued):
  - A reading of 80% or greater of the LEL in a gas associated substructure from which gas is not likely to migrate;
  - Any reading greater than 0% gas on a transmission or Types A or C gas gathering pipeline that does not qualify as a grade 1 leak;
  - Any leak with a leakage rate of 10 CFH or more that does not qualify as a grade 1 leak;
  - Any leak of LPG or hydrogen that does not qualify as a grade 1 leak; or
  - Any leak that, in the judgment of operator personnel at the scene, is of sufficient magnitude to justify scheduled repair within 6 months or less.

Grade 2 leak § 192.760(c) – Requested Topics

NPRM requested input on the following:

- Proposed criteria for identifying grade 2 leaks that constitute a significant hazard to the environment and whether 10 CFH is the appropriate emissions rate for grade 2 leaks.
- Other criteria that could be used to identify leaks with significant environmental harm, including a criteria based on gas migration extent for belowground leaks.
- The preamble included a discussion of the Massachusetts "environmentally significant leak" including a leak with a "leak extent" of 2,000 square feet or greater.

Grade 3 leak - § 192.760(d)

NPRM Proposal:

- A Grade 3 is any leak that does not meet the criteria for a Grade 1 or Grade 2 leak.
- Some examples (non-exhaustive) of Grade 3 leaks include:
  - A positive reading of less than 80% LEL in gas-associated substructures from which gas is unlikely to migrate;
  - Any positive reading under a street in an area without wall-to-wall pavement where gas is unlikely to migrate to the outside wall of nearby buildings; or
  - A gas reading less than 20% LEL in a confined space.

PROPOSED REPAIR REQUIREMENTS

Timeline for Grade 1-3 Leaks

Type of Leak	GPTC Guidance	Proposal
Grade 1	Immediate	Immediate
Grade 2	15-month deadline	The repair deadline is 6 months. →Transmission/gathering HCAs or class 3 or class 4: 30 days →Operator must have procedures for prioritizing grade 2 leaks. Reevaluate leaks once every 30 days
Grade 3	Suggested no timeframe for repair. Suggested 15 months for reevaluation.	The repair deadline is 2 years. →5-year replacement deadline for leaks on pipelines scheduled for replacement. →An operator may request a delayed repair timeline with a § 192.18 notification if repair is impracticable or would release more gas to the environment, and there is no hazard to public safety. →Reevaluate leaks within 6 months.

Post-repair inspection - § 192.760(e)

NPRM Proposal—Post-repair inspection:

- A leak repair must be inspected to confirm that repair has been successful
- A leak repair may be classified as complete if the operator obtains a gas concentration reading of 0% gas by volume at the leak location, during a post-repair inspection.
- The inspection must occur between 14-30 days after the date of the repair.

Recordkeeping - § 192.760(i)

NPRM Proposal—Recordkeeping:

- Operators must retain records documenting the complete history of investigation and grading of each leak prior to completion of the repair for 5 years after the date of the final post-repair inspection.
- Records associated with the detection, remediation, and repair of each leak must be kept for the life of the pipeline.

Upgrading and Downgrading §§ 192.760(f) and (g)

NPRM Proposal—Upgrading and Downgrading:

- If an operator receives information that a higher-priority grade condition exists on a previously graded leak, the operator must upgrade the leak to that new grade.
- A leak may be downgraded but only if a temporary repair has been made or a permanent repair was attempted, but gas was still detected during the post-repair inspection.
- While a grade 3 leak cannot be further downgraded, as noted previously, the repair deadline for grade 3 leaks may be extended on a case-by-case basis.

Grading Definitions § 192.3

NPRM Comments:

- Industry trades, operators, and industry consultants expressed opposition to or concern that the proposed rule's new definition of "confined space" differs from the OSHA definition and suggested aligning the definitions or using a different term.
- If PHMSA does not adopt OSHA's definition of confined space, industry trades and an operator suggested the term "enclosure" be used instead of "confined space" to differentiate between the two definitions.
- Gas Piping Technology Committee (GPTC) said the definitions for "gas-associated substructure," "Lower Explosive Limit," "Substructure," and "Tunnel" have long been recognized as appropriate and should continue to be acceptable.

Grading Definitions § 192.3

NPRM Comments:

- Industry trades said the definition of "Gas-associated substructure" is too vague. The commenter supported the definitions for "substructure" and "tunnel." However, they noted that these terms may need to be further defined.
- An operator suggested adding additional clarity to the definition of tunnel, such as whether it is manmade, has both an entrance and exit, and whether "passageway" means entering by walking, crouching, or crawling.

PHMSA Notes:

- PHMSA intended to define confined space consistent with the GPTC guide, but will address conflicts with other Federal programs described in the comments.

Leak Grading – §§ 192.703 and 192.760

NPRM Comments—General:

- Multiple operators and industry representatives expressed opposition to the proposed leak grading criteria.
- Multiple operators and a state regulator urged reliance on GPTC leak grading guidance as this material is used broadly throughout the industry.
- An industry trade group added that state leak grading requirements do not conform with the proposed criteria.
- Multiple industry representatives urged PHMSA to allow operators and state regulators to employ alternative leak classification systems.
- Senator Cruz et al. asserted that PHMSA exceeds statutory authority by mandating the repair of all leaks.

Leak Grading – §§ 192.703 and 192.760

NPRM Comments (continued):

- Multiple industry representatives urged PHMSA to provide a "clear and technically feasible distinction between a leak that poses an existing or probable hazard to persons and property and one that represents a grave hazard to the environment." Industry trades stated that it does not recognize pipeline leakage as a "grave environmental hazard."
- NAPSR and multiple operators urged clarification of the term "significant hazard to the environment."
- Multiple industry trades and operators expressed support for limiting grading requirements to confirmed leaks "and not merely investigations of leak indications."

Leak Grading – §§ 192.703 and 192.760

NPRM Comments (continued):

- An operator requested that PHMSA clarify that within a given leak grade an operator is "permitted and in fact encouraged" to prioritize leaks that are a hazard to public safety.
- An operator is asking PHMSA to clarify the intent of "investigated immediately and continuously" as this operator uses mobile leak detection at night and operators are concerned that the literal interpretation would require deployment of "leak surveyors in driveways and yards late at night."
- Multiple industry trades and GPTC asserted that the proposed requirements should provide operator flexibility to eliminate a leak with "immediate and continuous action" without grading the leak first. Grading all leaks would delay repair and risk mitigation "solely for the purpose of record keeping at the expense of public safety."

Leak Grading – §§ 192.703 and 192.760

NPRM Comments (continued):

- A trade association stated that the leak grade should refer to percent gas instead of percent LEL as the LEL could be unique to each operator, unlike percent gas.

PHMSA Notes:

- PHMSA will clarify grading requirements for immediate repairs in the final rule.
- PHMSA notes that the introductory language was intended to be descriptive and not an actionable grading criteria.
- PHMSA does not intend to restrict an operators' ability to grade and repair leaks in a more conservative or expeditious manner. PHMSA will consider allowing operators to separately report leaks that are repaired immediately from Grade 1/hazardous leaks.

Grade 1 Leaks – § 192.760(b)

NPRM Comments—Grade 1 leaks:

- Pipeline Safety Trust expressed general support for the proposed grade 1 leak provisions.
- An operator stated that only grade 1 leaks should be considered hazardous.
- Multiple industry representatives expressed opposition to the "seen, heard, or felt" criterion. Commenters noted that as proposed it deviates from the GPTC guidance and could bump every leak up to a grade 1 classification. In addition, PHMSA failed to explain how this "serves as a proxy for "potentially significant environment or safety consequences."
- GPTC noted that PHMSA added in more conservative language, such as "could migrate," which could lead regulators to interpret any leak as a grade 1 leak.
- Industry expressed concern regarding grading leaks by "feel" is unsafe.
- NAPSR requested PHMSA clarification on how the grading criteria would apply to toxic and corrosive gases that are not flammable.

Grade 2 Leaks – § 192.760(c)

NPRM Comments—Grade 2 Leaks:

- Pipeline Safety Trust expressed general support for the proposed grade 2 leak provisions.
- A leak detection company expressed support for including a flow rate threshold in the grade 2 leak criteria.
- Multiple industry trades and operators noted the discrepancy between requiring a leak detection tool with a parts per million determination threshold and then using leak flow rate for leak grading. The commenters were concerned that the two units are not comparable or convertible.
- Environmental advocacy groups documented three operators who implemented survey programs targeting "high-emitting" leaks defined at 10 SCFH or less.

Grade 2 Leaks – § 192.760(c)

NPRM Comments (continued):

- GPTC, multiple operators, industry trades opposed the proposed 10 CFH leakage rate requirement, commenting that it is not feasible for practical application "the technology has not yet evolved to the point of accurately and consistently measuring flow rates," grading all leaks would be nearly impossible due to the number of leaks and their location (below grade).
- An operator added that the equipment used for measuring flow rate does not provide precise or instantaneous readings.
- An operator noted tools that can accurately determine a below grade leak flow rate are not widely available.

Grade 2 Leaks – § 192.760(c)

NPRM Comments (continued):

- An operator requested PHMSA consider allowing operators to estimate flow rates based on other information as most commercially available equipment will not determine a flow rate.
- An operator and industry trades said it is inappropriate for PHMSA to govern the methodologies used to calculate leakage rate or leak extent.
- An operator asserted that requiring a measurement of emissions rates during leak grading would be inappropriate.

Grade 2 Leaks – § 192.760(c)

NPRM Comments (continued):

- Industry trades proposed a grade 2 leak would meet either of the following:
  - Flow rate of 10 cubic feet per hour or greater,
  - Leak extent (land area effected by gas migration) of 2,000 square feet or greater,

PHMSA Notes:

- PHMSA notes that the preamble of the NPRM discussed an alternative based on gas migration extent which has been adopted by the Commonwealth of Massachusetts and mirrors the alternatives recommended in public comments.

Grade 3 Leaks – § 192.760(d)

NPRM Comments—Grade 3 leaks:

- Multiple trade groups and industry representatives expressed opposition to excluding transmission and Type A and Type C gathering lines from grade 3 leak classification. Noting it is inconsistent with GPTC guidance and that PHMSA does not explain why this classification is prohibited.
- Industry trade groups suggested that PHMSA allow grade 3 classification for LPG leaks either in general or specifically for above ground leaks.
- Multiple environmental advocacy groups support that all leaks on transmission lines and Type A and C gathering lines are graded at a minimum of Grade 2 due to the higher risk of rupture on higher stress level lines.

Grade 3 Leaks – § 192.760(d)

PHMSA Notes:

- PHMSA requests Committee recommendations on allowing grade 3 leak classification for gas transmission, Type A and Type C regulated gas gathering, and LPG pipelines.
- The minimum grade for gas transmission and Type A and Type C regulated gas gathering pipelines was proposed due to the higher operating stress levels of such pipelines. Additionally, for gas transmission pipelines, PHMSA understood that operators typically repaired leaks when found.
- PHMSA notes that the GPTC guidance requires pipelines operating at 30% SMYS or greater in higher consequence locations (i.e., Class 3 or 4) to be classified as grade 2.
- Grading of hydrogen will be addressed separately.

Recordkeeping - § 192.760(i)

NPRM Comment—Recordkeeping

- NAPSR contends that records associated with the complete history of the investigation and grading of each leak must be maintained for the life of the pipeline, if the repaired component is still in service.

Topic for Discussion

Repair Timelines

Leak Repair Timelines – § 192.760

NPRM Comments—General:

- Attorney General of NY et al. expressed support for the repair timeframes as the requirements "strike a middle ground" between the GPTC's recommendations and in some cases more stringent state requirements.
  - Multiple operators expressed support for retaining current leak repair requirements. An industry representative asked for current GPTC leak repair deadline guidance be used.
  - In addition, operators and industry trades expressed concern at the expedited leak repair requirements as it will move operators to "reactive leak mitigation" and would adversely impact pipeline replacement activities or other high-risk initiatives.
- A form letter campaign, senator, and multiple public and environmental advocacy groups suggested requiring leak repair within one month.

Leak Repair Timelines – § 192.760

NPRM Comments (continued):

- An elected representative expressed general support for the leak repair timeframes.
- Environmental advocacy organizations commented that emissions modelling demonstrates that the proposed repair requirements could "triple the emission reductions compared to the legacy repair rules."
- Environmental advocacy organizations listed several states with repair standards that meet or exceed the timelines proposed in the NPRM, demonstrating that the proposed standards are practicable.
- An operator anticipates the proposed requirements to repair very small leaks would be a financial burden for smaller operators with little safety or environmental benefit.

Grade 1 Leak Repair Timelines – § 192.760(b)

NPRM Comments—Grade 1 leaks:

- Pipeline Safety Trust expressed general support for the grade 1 leak provisions.
- An individual commenter alleged that PHMSA does not clarify the meaning of "promptly."
- An operator expressed PHMSA should clarify that immediate and continuous action is no longer required after the repair has been made but the post repair inspection (recheck) has not yet verified completion.

Grade 2 Leak Repair – § 192.760(c)

NPRM Comments (continued):

- An industry trade group suggested a 12-month repair timeframe as a shorter interval could be impractical to meet due to weather, resources, and other constraints. This would also allow operators the ability to bundle projects.
- An operator expressed that the 6-month proposed timeframe would present significant challenges and proposed a 36-month interval.
- An industry trade group state that the proposed grade 2 repair timeframe would disproportionately impact the Alaskan North Slope due to extreme climate conditions in the winter months.

Grade 2 Leak Repair – § 192.760(c)

NPRM Comments—Grade 2 Leaks:

- Pipeline Safety Trust and Attorney General of NY et al. supported the grade 2 leak provisions and repair timelines.
- A state regulator requested that PHMSA clarify if quantifying leak rates was necessary if an operator repaired all (grade 2 or 3) within the grade 2 repair timeframe.
- Multiple operators expressed concern about the proposed timelines to repair grade 2 leaks.
- An individual commenter suggested a 30-day repair timeline for grade 2 leaks.
- Industry trades opposed the requirement for operators to define a 30-day repair criteria for certain grade 2 leaks within their procedures.

Grade 2 Leak Repair – § 192.760(c)

NPRM Comments—Grade 2 extensions:

- An operator stated that the grade 2 repair and replacement timelines should permit extensions "to 'as soon as practicable'" for uncontrollable challenges.
- Multiple operators and industry representatives asked for extended timelines on grade 2 repairs in the event pipe segments had been scheduled for future replacement.
- Industry trades suggested extending the repair exception to grade 2 for pipelines segments where replacement is scheduled to be completed within 5-years.

Grade 2 Leak Repair – § 192.760(c)

NPRM Comments (continued):

- GPTC and 2 operators suggested extending the repair deadline for transmission lines in highly populated areas from 30 days to 90 days, with allowances for additional delay in instances where permitting, material acquisition, and system constraints prevent repair within 90 days.
- Industry trades expressed that the requirement for all known grade 2 leaks to be repaired within one year of the publication date should be changed to within 36 months of the effective date of the final rule.

PHMSA Notes:

- PHMSA requests Committee recommendations on the proposed repair timelines (repeated below) for Grade 2 leaks—
  - 6-month repair timeline for grade 2 leaks in general
  - 30-day repair timeline for operator-defined priority repair criteria
  - 30-day repair timeline for transmission lines in high population areas
  - Extending timelines for Grade 2 leaks
- PHMSA notes that the GPTC repair recommendations require that a grade 2 leaks are repaired within 15 months.

Grade 2 Leak Repair – § 192.760(c) - Weather

NPRM Comments—Grade 2: Weather conditions:

- Multiple operators, industry trades, and industry representatives stated that §§ 192.723(e) and 192.760(c)(5) are redundant regarding mitigating risks associated with environmental change.
- An operator expressed concerned with the requirement to repair grade 2 leaks ahead of an environmental change as most events are unpredictable. This requirement in essence uprates a grade 2 to grade 1.
- An operator stated that investigating grade 2 leaks in areas vulnerable to environmental changes is more "prudent."
- Industry trades comments in response to the leakage survey requirements suggested replacing the proposed repair requirement with the leak investigation proposed in § 192.723.

Grade 2 Leak Repair – § 192.760(c) - Weather

PHMSA Notes:

- PHMSA requests Committee discussion on if investigation, rather than immediate repair, of a grade 2 leak addresses the potential risks associated with environmental changes that could impact gas migration.
- PHMSA notes that uprating requirements would apply should a hazardous condition be discovered through the course of the investigation.

Grade 3 Leak Repair – § 192.760(d)

NPRM Comments—Grade 3 leaks:

- Attorney General of NY et al. and Pipeline Safety Trust expressed support for the proposed grade 3 repair timelines.
- Multiple public and environmental advocacy groups stated that the proposed 2-year timeframe is "wholly inadequate."
- An industry representative said it was "unaware" of safety rationale for requiring operators to repair grade 3 leaks. The commenter said an environmental and safety analysis should be conducted.
- Multiple industry trades said that the rulemaking should focus on larger-emitting leaks rather than repairing all grade 3 leaks. A leak detection technology provider proposed a minimum emission rate greater than 0.5 CFH.
- An operator suggests PHMSA consider allowing lower priority grade 3 leaks to be monitored instead of requiring repair.

Grade 3 Leak Repair – § 192.760(d)

NPRM Comments—Grade 3 leaks (continued):

- An operator suggested PHMSA allow grade 3 leak repair timelines to be extended to "as soon as practicable."
- Industry trades proposed that grade 3 leaks should be repaired in 36 months rather than the 24 months proposed.
- Industry trades supports the repair exception for grade 3 leaks on pipelines that are scheduled for replacement but suggested extend the deadline from 5 years to 10 years.
- Numerous public and environmental advocacy groups, including the Environmental Defense Fund, and multiple form letter campaigns urged PHMSA to remove or reduce the exemption for repairing soon-to-be-replaced pipes.
- Environmental advocacy groups commented that PHMSA should require operators consider pipe retirement, in addition to replacement or remediation, as an option for to addressing leaks that are hazardous to public safety or the environment.

PHMSA Notes:

- PHMSA requests Committee recommendations regarding the repair timeline for grade 3 leaks in general and for those scheduled for replacement.

Post Repair Inspection – § 192.760(e)

NPRM Comments—Post repair inspection:

- Multiple industry trades and operators said delayed post-repair checks were only necessary in cases where leaks permeated surrounding soil. A 0% readings can be made immediately after repairs in most other cases and should be permitted.
- Multiple operators and an individual commenter said the 14-day period would cause resource constraints, inflate operating costs, and redundancy. The commenters suggested allowing immediate repair confirmation be permitted through approved methods.
- Industry trades said that offshore gathering lines should be exempt from post-repair requirements, as post-repair checks would be challenging underwater.
- Environmental advocacy groups suggested defining a successful repair based on the proposed ALDP performance standard (discussed separately).

Post Repair Inspection – § 192.760(e)

NPRM Comments (continued):

- Industry trades said that the 0% standard was contradictory, as repairs would continue to be made even though leaks are below the proposed 5-ppm sensitivity standard. The commenters suggested § 192.760(e) be revised to account for this contradiction as well as environmental factors that may prohibit a reading of 0%, such as swamp bogs.
- Multiple industry trades and operators commented that post-repair rechecks be completed between 12 and 72 hours after the repair and not be required for leaks eliminated through routine maintenance work. They added that reinspection is needed only for completed repairs with subsurface gas indicators.
- Industry trades said that offshore transmission lines should be exempt from post-repair requirements, as post-repair checks would be challenging underwater.

Post Repair Inspection – § 192.760(e)

NPRM Comments (continued):

- Industry trades proposed the following actions in response to a recheck:
  - If a 0% reading is obtained the leak repair is considered complete,
  - If gas concentration is shown to be lower than the previous reading then a follow-up is scheduled within 30 days, repeating monthly until a 0% reading is obtained,
  - If the gas concentration reading is greater than the previous reading, the leak must be investigated and repaired.

PHMSA Notes:

- PHMSA will provide clarification in the final rule concerning recheck requirements to address comments.

Upgrading and Downgrading - §§ 192.760(f) and (g)

NPRM Comments—Upgrading and Downgrading:

- Multiple operators and industry trades suggested downgrading be permitted for leaks erroneously graded through operator error and proposed taking actions under subpart N should this occur.
- An operator added that the prohibition on downgrading ignored the fact that venting could lessen the severity of a leak.
- An industry trade referenced the prohibition on downgrading unless a temporary repair had been made but said that temporary repairs would not be allowable for grade 1 leaks. The commenter suggested clarification that temporary repairs would be allowed for grade 1 leaks.

PHMSA Notes:

- PHMSA intended for temporary repairs, pending permanent repair, to be allowed for all leak grades.

Extension of leak repair timeframe - § 192.760(h)

NPRM Comments—Repair extensions:

- Multiple industry trades and operators expressed that the ad-hoc extension for grade 3 leaks under § 192.18 should also be applicable to grade 2 leaks.
- An operator and an individual commenter stated that there should not be a notification process for extended time on grade 3 repairs.

Recordkeeping – § 192.760(i)

NPRM Comments—Recordkeeping:

- An operator said that it supported the application of the proposed requirements to buried gas pipelines but not for aboveground facilities, as it would lead to heightened administrative burden and costs.
- Absent a definition in the rule, industry trades suggested the term "leak investigation" be removed.
- Multiple operators expressed opposition to new record retention requirements, reasoning that they were confusing and contradicted other record retention requirements.
- Industry trades supported modification of the retention timeframe for transmission and distribution to 10 years to align with DIMP requirements.

Recordkeeping – § 192.760(i)

NPRM Comments (continued):

- NAPSR suggested investigation, and grading records instead be maintained for the life of the pipeline if the repaired pipeline remains in service.
- An individual commenter suggested a record retention requirement of five years or less and referenced the EPA's requirements as an example.

PHMSA Notes:

- PHMSA did not intend to impose duplicative or contradictory recordkeeping requirements and will address any overlap in the final rule.

Leak Grading and Repair - PRIA

NPRM Comments—PRIA:

- Attorney General of NY et al. commented that measures adopted by several states demonstrate the feasibility of the proposed changes to leak grading and repair criteria.
- Multiple industry trades asserted that PHMSA did not quantify the safety benefits of the proposed leak grading and repair criteria.
- Additionally, industry trades asserted that PHMSA did not consider leak grading and repair criteria alternatives in the PRIA.
- An industry trade group asserted that the description of grade 1 and grade 2 leaks is inconsistent between the NPRM and PRIA language. According to the commenter, it is not clear whether costs and benefits of the grade 1 proposal were assessed.

Leak Grading and Repair - PRIA

NPRM Comments (continued):

- Multiple operators expressed that the cost of repairing a leak at $5,650 is incorrect. Leaks depending on the system type and location can cost substantially more to repair.
- The PRIA assumes that the proposed leak grading and repair requirements "are generally consistent with existing practices of gas gathering and transmission operators" when that is clearly not the case. The proposed grade 1 criteria would include "any leak that can be seen, heard, or felt," would effectively supersede all other criteria and make every leak on a pipeline a grade 1. In addition, timing of pipeline repairs have been expedited.
- Industry trades alleged that PHMSA assumes "significant environmental benefits" without accounting for the cost and GHG emissions of fixing small grade 3 leaks.

Leak Grading and Repair - PRIA

NPRM Comment:

- Industry trades provided estimations of the costs associated with the changes to post-repair inspections. The Associations said that its estimations for annual costs far exceeds PHMSA's estimated cost.

PHMSA Notes:

- PHMSA will consider the comments and update the RIA as appropriate.

Leak Grading and Repair

This concludes the PHMSA response to comments on leak grading and repair.

Leak Grading and Repair

- Specific topics raised by commenters we are requesting Committee recommendations are:
  - General
    - Grading leaks of toxic and corrosive but non-flammable gasses.
    - Repair timing for leaks existing prior to the effective date of the rule.
  - Grade 2 Criteria
    - Grading for gas transmission and aboveground LPG pipelines.
    - 10 CF/hr. criteria and potential alternatives
  - Grade 2 Repair Timelines
    - 6-month repair timeline for grade 2 leaks in general
    - 30-day repair timeline for operator-defined priority repair criteria
    - 30-day repair timeline for transmission lines in high population areas
    - Extensions of grade 2 repairs
  - Grade 3 Repair Timelines
    - 24 months general repair timeline
    - 5-year timeline for pipelines scheduled for replacement.

Leak Grading and Repair

Public Comments

Leak Grading and Repair

GPAC Discussion

Leak Grading and Repair

Committee Voting Slide

The proposed rule as published in the Federal Register and as supported by the Preliminary Regulatory Impact Analysis and Draft Environmental Assessment, with regards to leak grading and repair requirements for the proposed rulemaking is technically feasible, reasonable, cost-effective, and practicable.

Topic for Discussion

Gas Gathering

Gathering Line Requirements - § 192.9

Current Requirements:

- Leakage Surveys
  - Type A and Offshore: Transmission line requirements
  - Type B: Transmission line requirements, except leak detection equipment is required.
  - Type C: Approximately 25% of Type C lines are subject to leakage surveys, remaining are excepted by the PIR exception.
- Right of way patrols are only required for Type A and Offshore lines.
- Emergency plans are not required for Type B lines.

NPRM Proposal

NPRM applies transmission leakage survey, advanced leak detection program, and leak repair requirements to all regulated gas gathering lines.

Offshore and Type A Gathering Lines

Gas transmission requirements apply unless excepted:

- § 192.3 Leak definition
- § 192.199 Design and configuration of relief devices
- § 192.605 Implementation of Sec. 114
- § 192.617 Failure definition
- § 192.705 revised patrol requirements
- § 192.706 Leakage survey amendments
- § 192.760 Leak grading and repair
- § 192.763 Advanced leak detection program
- § 192.769 Qualification of leak detection and investigation personnel
- § 192.770 Emissions mitigation from blowdowns
- § 192.773 Relief device maintenance

Requirements for Type B Lines

Type B Gathering Line Proposal:

- Require § 192.605 procedure manuals.
- Require § 192.615 emergency plans.
- Leakage survey and ALDP standards applicable to transmission lines (§§ 192.706 and 192.763).
- Leak grading, investigation, repair, and documentation requirements applicable to transmission lines.
- Require § 192.705 patrols.

Requirements for Type C Lines

Type C Gathering Line Proposal:

- Require § 192.605 procedure manuals.
- Leakage survey and ALDP standards applicable to transmission lines (§§ 192.706 and 192.763).
  - Leak grading, investigation, repair, and documentation requirements applicable to transmission lines.
  - Require all Type C lines comply with leakage survey requirements.
- Require § 192.705 patrols.

National Pipeline Mapping System - § 191.29

Current Requirements:

- National pipeline mapping system (NPMS) requires data for gas transmission and LNG facilities. § 191.29

NPRM Proposal:

- Require Type A, B, and C regulated onshore gas gathering lines to report data for NPMS.

NPRM requested additional input for:

- If NPMS participation should be required for Type R gathering pipelines not regulated under part 192.

Authority to Apply to Gas Gathering

NPRM Comments—Statutory Authority:

- Pipeline Safety Trust said that despite Type C and R gathering lines not existing prior to the promulgation of the PIPES Act, PHMSA has clear authority to regulate all types of gathering lines under the PIPES Act and its general authority to prescribe safety standards for pipeline facilities.
- Attorney General of NY et al. said the proposed changes to patrolling and surveying requirements for Type B and C and offshore gas gathering pipelines were consistent with section 113 of the PIPES Act.
- Multiple industry trades and operators said that Class 2, Class 3, and Class 4 locations are subject to leak detection requirements created under sections 113 of the PIPES Act, but that Class 1 locations and offshore gas gathering lines are not.

Authority to Apply to Gas Gathering

NPRM Comments—Statutory Authority (continued):

- Industry trades stated that the proposed rule contains requirements beyond its mandate under section 113, particularly through the proposed requirements for Type C pipelines, which are classified as Class 1. The commenters suggested that PHMSA withdraw proposed regulations related to Type C pipelines.
- Industry trades and an operator stated that PHMSA's assertion that section 114 of the PIPES Act contained a "self-executing mandate" that applies to regulated Type C onshore gas gathering lines in Class 1 locations was incorrect as a matter of law.
- Chief legal officer from the state of LA et al. opposed applying the new provisions in the NPRM to offshore gathering lines.
- Pipeline Safety Trust supported applying the section 114 provisions (i.e., procedure manuals) to Type C and B gathering pipelines, reasoning they are not currently subjected to many critical safety requirements.

Applicability to Apply to Gas Gathering - § 192.9

NPRM Comments—Applicability to gas gathering:

- Industry trades expressed concern that proposed § 192.9 would overlook the fact that, pursuant to proposed § 192.773, grandfathered Type C lines are not required to be equipped with relief devices.
- An industry trade group recommended excepting Type B and C gathering lines on designated and secured locations less than 10 acres in area, such as compressor or meter stations, from leakage survey and patrol requirements. Surveying short segments of pipe within these facilities is unnecessary as they are covered by surveys of pipelines entering and existing the station.
- Attorney General of NY et al. said that the proposed changes to applicability to Type B and C pipelines would fill a major regulatory gap.

Authority to Apply to Gas Gathering

PHMSA Notes:

- PHMSA has authority to regulate offshore gathering and Type C regulated onshore gathering pipelines to meet the need for pipeline safety and to protect the environment under 49 U.S.C. 60102.
- The Section 114(a) mandate is codified in 49 U.S.C. 60108, which is generally applicable to persons owning or operating a "gas pipeline facility," including operators of regulated rural gathering lines.
- PHMSA will clarify procedural manual requirements for pipelines designed without pressure relief devices.

Procedure Manuals Type B and C - § 192.605

NPRM Comments—Procedure Manuals:

- Attorney General of NY et al. expressed support for the requirement, reasoning it would support alignment with section 114 of the PIPES Act.
- Industry trades did not oppose requirements for procedure manuals in principle but raised concerns that cross reference to § 192.605 imposes additional regulatory requirements beyond those listed in § 192.9.
- An industry representative suggested that PHMSA clarify whether Type B and C operators are required to comply with continuing surveillance, investigation of failures, and control room management requirements as this was not clear and would need to be adjusted to avoid discrepancies.

PHMSA Notes:

- PHMSA will clarify procedural manual requirements in the final rule to address the comments.

Patrolling Type B and C - § 192.705

NPRM Comments – Patrolling:

- Attorney General of NY et al. appreciates new surveying and patrolling requirements for Type B and C gathering pipelines and for offshore gas gathering pipelines.
- Industry trades said that additional patrol requirements on operators of gathering lines would be onerous and should not be required without PHMSA at least considering the class location of a pipeline given gathering lines are smaller in diameter and often located in remote areas.
- An operator stated that an application of transmission-based patrol requirements to gas gathering lines was unreasonable and would add a significant burden to operators.

Patrolling Type B and C - § 192.705

NPRM Comments (continued):

- An industry trade said it would neither be reasonable nor provide value for patrols of gathering lines to be conducted monthly.
- An operator said that PHMSA did not provide an adequate explanation for why it was necessary to increase the frequency of patrols of gas gathering lines, particularly for Type C lines that just recently became regulated and whose operators are still working to set up programs. The commenter suggested PHMSA instead recommend Type A gathering lines be patrolled twice a year not to exceed 7 months, and once a year for Type B and C lines.
- An industry representative suggested excepting smaller diameter gathering lines that are not located near buildings from patrols and leak surveys (i.e., the § 192.9(f) exception).

Patrolling Type B and C - § 192.705

NPRM Comment (continued):

- An industry representative said that the concept of HCAs has never applied to Type A, B, and C gathering lines and that requiring it would be a significant regulatory expansion.

PHMSA Notes:

- PHMSA requests Committee feedback on the proposal to extend patrol requirements to Type B and C regulated gathering lines.
- PHMSA notes that the Committee had previously discussed the frequency for gas transmission pipeline and gathering pipeline patrols.
- PHMSA does not expect operators of gathering lines to identify HCAs and will clarify in the final rule.

Leak Surveys - §§ 192.9, 192.706

NPRM Comments—leakage surveys:

- An operator expressed opposition to requiring more frequent leakage surveys for gathering lines.
- Industry representatives didn't oppose leakage surveys for gas gathering lines in Class 2, 3, and 4 locations consistent with the scope of section 113 of the PIPES Act but raised concerns with the risk assessment (discussed separately).
- An industry representative suggested eliminating the requirements that PHMSA pre-approve an operator's use of human senses as a leak detection technique for Type C gathering pipelines.
- Pipeline Safety Trust said PHMSA should not allow leakage surveys without leak detection equipment on gathering lines, even with prior notification and review.

Leak Surveys - §§ 192.9, 192.706

NPRM Comment—Gathering specific frequency:

- Pipeline Safety Trust said that leakage survey and patrol frequencies and methodologies should apply to all gathering lines, but suggested leakage surveys be more frequent. The commenter recommended leakage surveys be conducted:
  - Type A and B - 4 times per year at an interval not to exceed 4 ½ months,
  - Type C - 3 times per year not to exceed 5 ½ months, and
  - Types R - 2 times per year not to exceed 7 ½ months.

PHMSA Notes:

- PHMSA notes that the Committee previously discussed survey frequencies for transmission lines.

Suggested Requirements - § 192.9

NPRM Comments—Additional requirements:

- Public and environmental advocacy groups, a form letter campaign, and an individual commenter asked PHMSA require the rulemaking to be applicable to Type R gathering pipelines.
- Pipeline Safety Trust suggested all transmission blowdown mitigation regulations apply to gathering lines.

PHMSA Notes:

- PHMSA appreciates the comments and will take them into consideration in future rulemaking.

National Pipeline Mapping System - § 191.29

NPRM Comments:

- Various corporations, a form letter campaign, and a few individual commenters said that all pipeline mileage should be reported to NPMS.
- A state representative said the requirement would expand damage prevention efforts and help ensure leaks are found and repaired.
- Industry trade group opposed requiring NPMS participation for regulated gas gathering lines. One organization commented that the NPMS requirement is not cost-justified and that PHMSA's risk assessment did not accurately take into consideration the associated costs of data collection.
- Multiple industry representatives expressed opposition to the requirement for gathering pipelines to comply with NPMS requirements, noting that the data has not historically been maintained by operators and would be costly to collect.

National Pipeline Mapping System - § 191.29

NPRM Comments (continued):

- Multiple industry representatives said that the Pipeline Safety Act and 49 U.S.C. Sec. 60132 specifically excludes distribution and gathering systems from NPMS, adding that requiring gathering operators to participate in NPMS was unlawful, unnecessary, and unsupported.
- Senator Cruz et al. wrote that circumventing Congressional direction on the scope of NPMS would waste resources and invite litigation.
- GPTC suggested PHMSA consider removing the NPMS requirement for gathering line operators and questioned the value associated with providing geospatial data because it does not appear to be correlated to emissions or leaks.
- Industry representatives said that NPMS is a large administrative burden for small or newly regulated operators and would require high-precision surveying and new data collection equipment for Type R and C operators.

National Pipeline Mapping System - § 191.29

NPRM Comments (continued):

- NAPSR proposed excluding Type B gathering lines from NPMS requirement due to their low operating pressure and typically short length.
- Pipeline Safety Trust supported the proposal and suggested also including Type R gathering lines to this requirement.
- An operator said adding gathering lines to the NPMS public viewer would be a threat to the security of such facilities. The commenter suggested that information on production facilities be redacted to reduce the risk of terroristic damage to pipelines if PHMSA maintains the requirement.
- They continued that the proposed requirements would cost the industry significant time and money without added benefit to public safety.

National Pipeline Mapping System - § 191.29

NPRM Comments (continued):

- An industry representative and an individual commenter said the costs associated with geospatial mapping of Type A, B, and C gathering pipelines would be burdensome and suggested PHMSA consider an extension for the compliance period of this section.
- GPTC said that it was PHMSA that changed positions on its "discretionary authority" to collect geospatial data from gathering operators.

National Pipeline Mapping System - § 191.29

PHMSA Notes:

- PHMSA specifically requests Committee recommendations on the proposal to require NPMS participation for Type A, B, and C gathering lines.
- While the mandate for NPMS in 49 U.S.C. 60132 does not include gathering, PHMSA separately has the statutory authority to propose the collection of information from operators, including geospatial information, through notice and comment rulemaking.
- PHMSA notes that the proposed NPMS requirement does not apply to Type R gathering lines.

Gas Gathering - PRIA

NPRM Comments:

- Industry trades stated that the regulatory impact analysis should account for the costs of excluding grade 3 leak classification from transmission pipelines and Type A or C gas gathering lines.
- Industry trades noted that since Type C gathering lines are not included in the section 113 mandate, that PHMSA needed to consider non-regulatory alternatives for such facilities in the risk assessment.
- Multiple industry trades said that the risk assessment for the regulations on Type C gathering lines failed to satisfy the requirements of the PIPES Act and Pipeline Safety Act by not including sufficient technical justification, not addressing cost-recovery mechanisms by system type, and non-regulatory options for Type C lines.

Gas Gathering - PRIA

NPRM Comments (continued):

- Operators expressed concern that costs for Type A pipelines are treated identically to transmission pipelines.
- Industry trades points out that gas gathering line operators face different fee structures than gas transmission or distribution operators.
- An operator requested a cost-effectiveness study as PHMSA didn't establish a valid baseline, accurately account for the costs, or quantify the benefits in the PRIA.
- Industry trades contends that PHMSA failed to adequately identify the costs and benefits associated with the proposed LDAR requirements for Type C lines.
- Industry trades commented that the risk assessment did not identify the benefits of requiring operators of Type C onshore gas gathering lines to remediate or replace pipelines known to leak nor does it consider the full extent of the proposed changes to the written procedures required in § 192.605 for Type B and C gathering lines.

Gas Gathering - PRIA

NPRM Comments (continued):

- An industry representative stated that PHMSA's approximations for developing and maintaining operational manuals were drastically underestimated and that the commenter was unable to reproduce the estimated life-cycle costs of developing or maintaining the plans.
- Industry trades stated that PHMSA did not identify any benefits that are fairly attributed to the significant increase in the frequency of patrolling gathering lines and thus would not meet the reasoned decision-making requirement of the Pipeline Safety Act.
- Industry trades opposed extrapolating 2010-2020 leak data to gas gathering mileage as a whole, commenting, "Small leak sample data and small aerial surveys cannot provide an accurate picture of the gas gathering pipeline industry."

Gas Gathering - PRIA

NPRM Comment (continued):

- Industry trades said that if PHMSA does not remove Type C gathering lines from the rule altogether, PHMSA must demonstrate in a cost-benefit analysis the benefits of the proposed requirements justify the costs.

PHMSA Notes:

- PHMSA will consider the comments and update the RIA as appropriate.

Gas Gathering

This concludes the PHMSA response to comments on gas gathering.

Gas Gathering

PHMSA requests the Committee recommendations on the proposed requirements applicable to regulated gas gathering lines in the proposed rule as published in the Federal Register and the Draft Regulatory Evaluation and Environmental Assessment.

- Specific topics raised by commenters we are requesting Committee recommendations are:
  - Requirements in the proposed rule for Type C gathering lines.
  - Procedure manual requirements for Type B and C gathering lines.
  - Adoption of the transmission line survey and patrol frequency for surveys and patrols of regulated gas gathering lines.
  - NPMS requirements for regulated gas gathering lines.

Gas Gathering

Public Comments

Gas Gathering

GPAC Discussion

Gas Gathering

Committee Voting Slide

The proposed rule as published in the Federal Register and as supported by the Preliminary Regulatory Impact Analysis and Draft Environmental Assessment, with regards to gas gathering for the proposed rulemaking is technically feasible, reasonable, cost-effective, and practicable.

Topic for Discussion

Reporting

Large-volume release
§§ 191.3, 191.19, and 191.23

Current Requirements:

- Incidents are reported where unintentional gas loss is estimated to be 3 million cubic feet (MMCF) or greater.

NPRM Proposal – large volume gas release:

- New reporting requirement and definition for *large-volume releases (*any release of 1 MMCF or greater*)* of gas from gas pipeline facilities. §§ 191.3 and 191.19
- Updated safety related condition (SRC) to specify that *large-volume gas releases* would be exempt from reporting as an SRC. § 191.23
- A large-volume gas release report would not be required if an incident report is submitted for the same event and total release volume when the release has ended is within 10% of the volume reported on the annual report form. § 191.19
- This report is applicable to all system types subject to part 191.

Annual Reports §§ 191.11 and 191.17

Current Requirements—Annual Reports:

- GT, GG, GD, and LNG operators complete annual report forms require information on leak repairs, but not leaks discovered. §§ 191.11 and 191.17

NPRM Proposal – Annual Reports:

- Update annual reports supporting forms to require the operator provide:
  - Number of leaks identified and repaired by grade
  - Estimated emissions by emission source
- PHMSA requested comment on the utility of requiring operators to report more granular leak data such as individual leak location, emissions, or repair timing.

Incident Reporting § 191.3

Current Requirements:

- **Incident Reporting:** operators must report any release of gas from a pipeline facility that results in:
  - A death, or personal injury necessitating in-patient hospitalization,
  - Estimated property damage of $129,300 or more, including loss to the operator and others, but excluding the cost of lost gas, or
  - An unintentional estimated gas loss of three million cubic feet or more.

NPRM Proposal – Incident Reporting:

- Proposed to exclude the cost to acquire permits and the cost to remove or replace non-operator infrastructure that was not damaged by the release from the calculation of the property damage criterion.

Reporting - General

NPRM Comments—General:

- Attorney General of NY et al. said that PHMSA has the broad authority to expand regulatory reporting requirements in the rule. The information collected is necessary to comply with congressional directives. Additionally, the changes will enhance responses to public safety and environmental concerns.

Large-Volume Gas Release § 191.3

NPRM Comment— Large-Volume Gas Release:

- Industry trades and multiple operators suggested the definition of *large-volume gas release* should specify whether an intentional flaring event constitutes a release due to the potential overlap with proposed blowdown mitigation requirements in § 192.770(a)(2).

PHMSA Notes:

- PHMSA will clarify the requirements for calculating release volumes during flaring to ensure accurate reporting of non-combusted gas.
- PHMSA notes that flaring is allowable as a methane mitigation method during blowdowns in proposed § 192.770.

Large-Volume Gas Release Report § 191.19

NPRM Comments—Large-Volume Gas Release Report:

- An industry trade group requested simplifying the exception for events reported as incidents by eliminating the 10-percent release volume limitation. Revised volume estimates for incidents are reflected in supplemental reports; therefore, the 10% limitation adds unnecessary complexity.
- An industry trade group requested an exception from the large-volume gas release reporting requirements for events that are permitted by or reported to the EPA or equivalent state programs.

Large-Volume Gas Release Report § 191.19

PHMSA Notes:

- PHMSA will address concerns with duplicative reporting in the final rule.
- PHMSA agrees that a supplemental incident report with updated, final release volume estimates would satisfy the intent of the 10% limitation.

Annual Reports

NPRM Comments—Annual Reports:

- An operator expressed concern that an "incident" would need to be reported on both a 30-day report and in the list of leaks on an operator's annual report. They suggested revising the annual report form instructions to clearly define whether incidents and safety-related conditions should be included in the leak count.
- Industry trades requested the annual report data submission deadline be moved to June 15 in order to provide more time for operators to prepare leak data from the prior calendar year.

PHMSA Notes:

- PHMSA will consider clarifications to the annual report instructions for when reportable incidents, large-volume gas releases, or safety-related conditions are or are not required to be included in counts of leaks and leak repairs on annual reports.

Reporting Safety Related Conditions § 191.23

NPRM Comments—Reporting Safety-Related Conditions:

- NAPSR expressed support for the proposed amendments to safety-related condition reporting.
- An operator had no objections to the proposed changes.
- GPTC requested the intent behind using "to public safety" in the provision be clarified, adding that it appears to narrow the scope of the safety-related condition.

PHMSA Notes:

- PHMSA intended to clarify the existing interpretation of imminent hazards rather than change the scope of SRC reports.

Large Volume Gas Release § 191.3 Alternate Reporting Thresholds

NPRM Comment—Large-Volume Gas Release Report:

- Pipeline Safety Trust, U.S. House Rep. Rick Larsen et al., public advocacy groups, CT State Rep. David Michel, and a form letter campaign, and several individual commenters expressed support for the requirements but suggested revising the 1 MMCF standard to 500,000 standard cubic feet consistent with EPA's proposed subpart W GHG reporting standard.

PHMSA Notes:

- PHMSA will take these suggestions into consideration for the final rule.

Annual Reports §§ 191.11 and 191.17 Estimating Emissions

NPRM Comments—Annual Reports:

- Industry trades suggested "any recognized emissions methodology" be available for operators when estimating emissions and that PHMSA align its approach with subpart W of the EPA's Greenhouse Gas Reporting Program.
- NAPSR suggested PHMSA clarify how operators should estimate annual emissions.

PHMSA Notes:

- PHMSA will consider additional guidance in the final rule on estimating total emissions.

Annual Reports §§ 191.11 and 191.17 Leaks Discovered/Repaired

NPRM Comments—Annual Reports:

- Industry trades requested that the categorization by cause should only apply to "Leaks Repaired" as the cause is most often not determined until the repair occurs "and maybe not even then, if the leak is eliminated through replacement or retirement."
- They continued that by maintaining two tables the data "will not be congruent" as some leaks that are assumed to be a single leak at time of discovery, upon repair, may be a cluster of multiple leaks.

PHMSA Notes:

- PHMSA acknowledges that certain attributes associated with a leak may not be known prior to repair, PHMSA will clarify in the final rule.
- However, the attributes requested for leak repairs are data elements that are necessary for an effective leak management program and understanding the overall integrity of operators' pipeline facilities.

Annual Reports §§ 191.11 and 191.17

NPRM Comments—Annual Reports:

- Pipeline Safety Trust expressed support for the proposed rule but suggested the annual report changes should cover Type R gathering lines and be available on PHMSA's website without a Freedom of Information Act (FOIA) request.
- An individual commenter suggested a complete inventory and audit of pipeline updates be available to the public.

PHMSA Notes:

- As of March 2023, Type R gathering line operators are required to complete annual reports. These submittals, along with all annual report data received are available to the public on PHMSA's website.
- PHMSA notes that Type R pipelines are not subject to leakage survey and repair requirements and therefore leak reporting on the annual report form would be incomplete if required.

Annual Reports §§ 191.11 and 191.17 Granular Data

NPRM Comments—Granular Data for Annual Reports:

- Responding to a request for comment in the preamble, Pipeline Safety Trust, multiple environmental organizations, individual commenters, and a form letter campaign expressed support for requiring operators to report additional granular including location, grade, and estimated emissions.
- Multiple trade associations stated that reporting granular data would be impractical given current resources and commercially available technology and "lack of clarity and maturity around methodologies for determining emissions from an individual leak."

PHMSA Notes:

- PHMSA notes that the proposed large-volume gas release report collects much of this information for larger releases.

Reporting - PRIA

NPRM Comments—PRIA:

- Industry trades and an operator commented that PHMSA should update the paperwork burden estimate for the annual report.
- An operator said PHMSA needs to consider whether State regulatory agencies would face different data reporting requirements and associated man-hours for compliance. The commenter added that because of the current lack of transparency, operators' costs would be substantial.

PHMSA Notes:

- PHMSA appreciates the comments and will update the RIA as necessary.

Reporting

This concludes the PHMSA response to comments on reporting.

Reporting

PHMSA requests the Committee recommendations on the reporting requirements in the proposed rule as published in the Federal Register and the Draft Regulatory Evaluation and Environmental Assessment

- Specific topics raised by commenters PHMSA requests Committee recommendations on include:
  - Adding a count of Grade 3 leaks being delayed under § 192.760(h) or scheduled pipe replacement to the annual report form.
  - The volume criteria for a large-volume gas release report
  - The collection of more granular data for individual leaks which would include data attributes, such as location, grade, and estimated emissions

Reporting

Public Comments

Reporting

GPAC Discussion

Reporting

Committee Voting Slide

The proposed rule as published in the Federal Register and as supported by the Preliminary Regulatory Impact Analysis and Draft Environmental Assessment, with regards to reporting for the proposed rulemaking is technically feasible, reasonable, cost-effective, and practicable.

Topic for Discussion

Liquefied Natural Gas (LNG) and Hydrogen

LNG
(leakage surveys, O&M, and blowdown mitigation)

Current Requirements:

- Part 193 does not generally require operators of LNG Facilities to mitigate operational emissions or perform periodic leakage surveys.

NPRM Proposal:

- LNG operators must minimize releases from operational, non-emergency blowdowns. Example methods parallel EPA Methane Challenge and industry commitments.
- Require quarterly leakage surveys for LNG facilities and repair leaks in accordance with their maintenance procedures.
- Leakage survey equipment must have a minimum sensitivity of 5 ppm, but the ALDP performance standards proposed for part 192 facilities do not otherwise apply.

Applicability to Hydrogen

Current Requirements:

- Part 192 applies generally to all flammable, toxic, and corrosive gases transported by pipeline.

NPRM Proposal:

- The proposed rule would apply to hydrogen pipelines.
- Similar to LPG, the NPRM does not allow grade 3 classification for hydrogen leaks.
- PHMSA requested comment on the value of adopting hydrogen gas pipeline-specific provisions, in lieu of or in addition to the provisions proposed in the NPRM.

LNG – General Applicability

NPRM Comments—General applicability and authority:

- Industry trades expressed that section 113 of the PIPES Act does not apply to LNG facilities and that the rulemaking should have discussed how the proposed requirements fit in to the separate statutory authority for LNG standards in 49 U.S.C. 60103(d).
- Senator Cruz et al. opposed the full scope of proposed changes to LNG facility regulations as contrary to Congressional intent.
- Attorney General of NY et al. supports LNG leakage survey requirement as it, "fills a regulatory gap by requiring surveys of methane leaks for LNG facilities for the first time.

PHMSA Notes:

- PHMSA will clarify in the final rule its statutory authority to introduce requirements for LNG facilities.
- PHMSA notes that the section 114 mandate applies to "gas pipeline facilities" as defined in 49 U.S.C. 60101, which include LNG facilities and underground natural gas storage facilities.

LNG – Minimize emissions - § 193.2523

NPRM Comments—Minimizing blowdown and boiloff emissions:

- Industry trades suggested PHMSA limit the applicability of § 193.2523 to planned releases that exceed 1 MMCF without mitigation.
- An operator requested PHMSA clarify if operators had to demonstrate the required minimization methods are not achievable before a blowdown can take place.
- Industry trades urged PHMSA to consider alternative proposals for minimizing emissions during blowdowns and boiloff operations.
- An operator discussed venting events stating that operators should have the flexibility to design their mitigation approach without restriction.
- Industry trades and an operator urged PHMSA to consider that LNG facilities need time to obtain new or modified air permits to route additional volume to flares, such actions can take years to complete.

LNG – Minimize emissions - § 193.2523

NPRM Comments—Minimizing blowdown and boiloff emissions:

- Industry trades and an operator said that a "smaller section of the piping segment" is vague, and the term "control fitting" is not defined in the rulemaking.
- Industry trades said that the text should be revised to require operators to "reduce" emissions instead of using the term "minimize."

PHMSA Notes:

- PHMSA will clarify the language for blowdown methods in the final rule to be more specific to LNG facilities.
- While the proposed regulatory language uses the term "minimize" consistent with the language in the PIPES Act, PHMSA's intent was that use of any of the proposed methods would be sufficient to demonstrate compliance.

LNG – Minimize emissions - § 193.2523

PHMSA Notes:

- PHMSA requests Committee recommendations on the scope of the requirement to reduce emissions from LNG blowdown and boiloff specifically regarding the comments on:
  - Minimum release volume criteria, and
  - Alternative methods to reduce emissions.
- PHMSA notes that the Committee discussed similar comments with regards to gas transmission requirements.

LNG – Leakage Surveys - § 193.2624

NPRM Comments—Leakage surveys:

- NAPSR expressed general support for proposed leakage survey requirements.
- Attorney General of NY et al. expressed support for requiring quarterly methane leakage surveys for LNG facilities.
- An operator suggested monitoring unsafe-to-monitor and difficult-to-monitor components no more than twice per calendar year.
- Multiple industry trades and operators asked PHMSA to provide an LNG facilities exception similar to the proposed exception for transmission compressor stations regulated under EPA.

PHMSA Notes:

- PHMSA requests Committee discussion on the extent to which LNG facilities are "compressor-affected facilities" subject to EPA emissions monitoring requirements.
- PHMSA requests Committee discussion on the proposed requirements for facilities that are subject to the aforementioned emissions monitoring requirements.

LNG – Leakage Surveys - § 193.2624

NPRM Comment—Mobile or temporary LNG facilities:

- Multiple industry trades and operators stated that it may be unnecessary to apply leakage survey requirements to mobile or temporary LNG facilities.
- Industry trades asked PHMSA to provide clarification on what the phrase "allowable environmental and operational parameters" refers to with regards to the use of leakage survey equipment.

PHMSA Notes:

- PHMSA requests Committee discussion of the proposed leakage survey requirements for mobile or temporary LNG facilities.
- PHMSA intended for operators to comply with manufacturer's instructions for conditions when leak detection equipment may be used. PHMSA will clarify this in the final rule.

LNG Leakage Surveys § 193.2624 - Repair Schedule

NPRM Comments—Repair Timelines:

- Pipeline Safety Trust expressed support for the proposal but suggested that PHMSA implement a specific repair schedule for leaks from LNG facilities. They suggested leaks at LNG facilities be repaired quarterly (within 3 months).
- Multiple environment and public safety advocacy groups, a form letter campaign, and an individual commenter suggested PHMSA consider requiring all LNG facilities to perform: continuous monitoring; quarterly inspections; and leak repairs within one month of discovery.

PHMSA Notes:

- PHMSA requests Committee discussion on repair timelines for leaks at LNG facilities.

LNG – Leakage Surveys - § 193.2624

NPRM Comments—Leak detection equipment:

- Industry trades recommended allowing OGI technology as an alternative technology consistent with EPA standards.
- An operator stated that the proposed leak detection equipment standard of 5 ppm within 5 feet is unnecessary and unreasonable as most LNG plants are continuously manned and monitored. These facilities have systems capable of detecting leaks that present a hazard to the plant, personnel, and the public. There is no justification for requiring LNG operators to detect and remediate much smaller leaks at more frequent intervals.
- Industry trades and operators asked PHMSA to consider if leakage survey requirements need apply uniformly to all components and areas within an LNG plant.

LNG – Leakage Surveys - § 193.2624

NPRM Comments (continued):

- Pipeline Safety Trust suggested that PHMSA develop a leak detection technology standard for LNG facilities that should include the "same equipment sensitivity requirement as other part 192 regulated facilities."

PHMSA Notes:

- PHMSA requests Committee recommendations regarding leak detection equipment requirements for LNG leakage surveys.
- PHMSA notes that the Committee previously discussed requirements for the capability of gas transmission leakage survey equipment.

LNG – Cost

NPRM Comments—PRIA:

- Industry trades stated that PHMSA did not identify any regulatory or non-regulatory options considered in conducting the risk assessment for the proposed safety standard. The commenter continued that the risk assessment in the PRIA is completely inadequate.
- Industry trades commented that the risk-assessment should have separately considered standards for gas pipelines under section 113 and LNG facilities under 49 U.S.C. 60103.
- Multiple operators and industry trades expressed concern that PHMSA did not calculate the full potential costs for implementing proposed § 193.2624 in its analysis.

PHMSA Notes:

- PHMSA appreciates the comments and will update the RIA as appropriate.

Hydrogen - General Applicability

NPRM Comments—General:

- An operator commented that reducing hydrogen gas emissions is not part of PIPES Act mandate.
- Environmental advocacy groups and a hydrogen pipeline equipment vendor suggested PHMSA address the safety of hydrogen gas pipelines holistically in a hydrogen-specific rulemaking.
- An industry representative opposed hydrogen gas pipeline-specific provisions.
- An operator and multiple industry trades requested that PHMSA delay the hydrogen aspects of the proposal.

Hydrogen - General Applicability

NPRM Comments—General:

- An operator said that new requirements for hydrogen pipelines should align with 49 CFR Part 192 and other standards to avoid confusion.
- NAPSR requested clarity on the applicability of the proposed rule to hydrogen pipelines.
- Attorney General of NY et al. recommended PHMSA prioritize publishing hydrogen-specific pipeline regulations.
- A town advisory committee said that separate regulations should be developed for hydrogen and other gases. Requested this rule be limited to natural gas.

Hydrogen - General Applicability

NPRM Comments—General (continued):

- Multiple industry trades and an operator said that the final rule should exclude pure hydrogen gas from emissions reductions measures due to its unique environmental attributes. The commenters also stated that aspects of the NPRM are not feasible when applied to leaks of pure hydrogen and require additional research before operators can effectively implement these technologies in an effective leak detection and repair program.
- Environmental advocacy groups urged PHMSA to increase engagement on hydrogen safety standards with the environmental justice communities and other stakeholders that are over-burdened with energy infrastructure.

Hydrogen - General Applicability

NPRM Comments (continued):

- Environmental advocacy groups stated that existing leak survey practices are of limited effectiveness as recent data from hydrogen pipeline operators reported zero leaks repaired or planned for repair in 2022.

PHMSA Notes:

- PHMSA notes that part 192 applies to hydrogen pipelines, including existing leak detection and repair requirements.
- PHMSA requests Committee feedback on the proposed rule as it applies to pipelines transporting blended or unblended hydrogen.

Hydrogen - Patrols - § 192.705

NPRM Comments:

- An operator noted that patrolling to identify leaks on a pipeline transporting hydrogen is not value-added. Hydrogen does not leave vegetation marks like natural gas and dissipates quickly. Applying these requirements to hydrogen is "wasteful, dangerous, and will not result in a safer pipeline or lower emissions of a nearly non-greenhouse gas causing product."

PHMSA Notes:

- PHMSA requests Committee feedback on hydrogen patrol frequencies.
- PHMSA notes that the Committee previously discussed the patrol frequency for transmission lines.

Hydrogen
ALDP Performance Standard - § 192.763(b)

NPRM Comments—Performance Standard:

- An industry trade group "disagrees with the NPRM's apparent premise that leak detection technologies that are effective and appropriate for methane can be applied to pipelines transporting unblended hydrogen."
  - The commenter recommended that PHMSA modify proposed § 192.763(c) so that it is "flexible enough to meaningfully accommodate new, innovative and effective leak detection technologies" that may be developed in the future for unblended hydrogen pipelines.
- An operator said there are no commercially available leak detection devices that can reliably detect hydrogen at the 5 ppm level.
- An environmental advocacy group recommended PHMSA address pure hydrogen pipelines holistically and defer applying the proposed standard to unblended hydrogen pipelines.

Hydrogen
ALDP Performance Standard - § 192.763(b)

NPRM Comments:

- Pipeline Safety Trust proposed that if hydrogen leak detection equipment is not readily available then hydrogen pipeline operators should be required to use the alternative ALD performance standard by default. This would give PHMSA insight into "current leak detection and repair practices being used by the existing industry."
- An industry trade states that unlike methane, hydrogen can be detected only when "in direct contact with a potential hydrogen leak plume." For methane surveying large distances of pipeline through remote sensing is practical, hydrogen cannot be reliably detected remotely outside of the leak plume.

Hydrogen
ALDP Performance Standard - § 192.763(b)

NPRM Comments (continued):

- A hydrogen pipeline operator suggested that leak detection equipment for pure hydrogen has a minimum equipment sensitivity of 25 ppm.

PHMSA Notes:

- PHMSA requests Committee feedback on the performance standard for the detection of leaks of blended and unblended hydrogen.
- PHMSA notes that part192 applies to hydrogen pipelines including existing leak detection and repair requirements.

Hydrogen
Leak Grading and Repair - § 192.760

NPRM Comments—Leak Grading:

- Multiple industry trades and an environmental advocacy group expressed opposition to classifying hydrogen gas leaks as "at least a grade 2." The commenters noted the National Renewable Energy Laboratory report noted in the NPRM does not support the grade 2 minimum.
- An operator added that low percentage blends should be allowed a grade 3 classification.
- Attorney General of NY et al. requested clarity regarding the grading of hydrogen and methane blends.
- A hydrogen transportation equipment vendor commented that grading and repair criteria should be applicable to pipelines that lack a secondary method of leakage capture as part of the system design (double-walled containment).

Hydrogen
Leak Grading and Repair - § 192.760

NPRM Comments (continued):

- An operator commented that transporting pure hydrogen is "very sensitive to additional cost due to lower margins and smaller markets" and that excessive compliance burdens could "reduce or eliminate the otherwise-beneficial use of hydrogen."

PHMSA Notes:

- PHMSA requests Committee recommendations regarding the comments on grade 3 leak classifications for pipelines transporting blended or unblended hydrogen.
- PHMSA notes that the Committee discussed similar comments with regards to transmission lines and LPG.

Hydrogen - Reporting - § 192.763(b)

NPRM Comment:

- Pipeline Safety Trust, multiple public and environmental advocacy groups, and an individual commenter suggested reporting on hydrogen mixing be expanded to maximize transparency and community safety.

PHMSA Notes:

- PHMSA appreciates this comment and will take it into consideration in the final rule or future information collection revisions.

LNG and Hydrogen

This concludes the PHMSA response to comments on Liquefied Natural Gas and Hydrogen.

LNG and Hydrogen

PHMSA requests the Committee recommendations on the applicability of the proposed requirements to LNG, and hydrogen facilities in the proposed rule as published in the Federal Register and the Draft Regulatory Evaluation and Environmental Assessment.

- Specific topics raised by commenters we are requesting Committee recommendations are:
  - Leakage survey requirements for LNG facilities, considering the Committee's previous discussion on leakage survey requirements applicable to gas transmission pipelines.
  - Blowdown mitigation requirements for LNG facilities.
  - Leakage survey, patrolling, leak detection, and other NPRM proposals as they apply to pipelines transporting hydrogen and/or hydrogen blends.
  - Grading of blended and unblended hydrogen leaks.

Public Comments

LNG and Hydrogen

GPAC Discussion

LNG and Hydrogen

Committee Voting Slide

The proposed rule as published in the Federal Register and as supported by the Preliminary Regulatory Impact Analysis and Draft Environmental Assessment, with regards to liquefied natural gas and hydrogen for the proposed rulemaking is technically feasible, reasonable, cost-effective, and practicable.

Topic for Discussion

Compliance Deadlines

Compliance Deadlines

NPRM Proposal—Compliance Deadlines:

- PHMSA proposed a 6-month overall effective date for the final rule.
- PHMSA proposed a the repair deadlines for leaks existing on or before the effective date as follows.
  - Grade 2 leaks: 12 months after publication of the final rule.
  - Grade 3 leaks: 36 months after publication of the final rule.
- Existing § 191.11 requires operators submit annual reports for the preceding calendar year on or before March 15.
- Large-volume gas release reports are required for releases that become reportable on or after the effective date of the rule.

Compliance Deadlines

NPRM Comments—Compliance Deadlines:

- Multiple operators requested additional time for procedure development, training, and qualification to support the proposed requirements. This also includes regrading the extensive backlog of leaks as this operator's leak grading procedure differs greatly from the proposed requirements.
- An operator urged flexibility, as requiring all companies to transition at the same time could create resource constraints.
- An operator expressed concern regarding the 6-month effective date, and discussed compliance activities that may take companies up to 18-24 months.

Compliance Deadlines

NPRM Comments—Compliance Deadlines (continued):

- Multiple operators and industry trade groups requested an effective date anywhere from 12-months to 3 years.
- Multiple industry trade groups urged PHMSA to consider the ongoing EPA actions when setting the effective date, recommending 3-years to ensure that the proposed rule goes into effect after the EPA rulemaking.
- Multiple operators recommended a phase-in approach over the span of 3 years. The commenter said that if a 3-year phase-in approach is not acceptable, then PHMSA should consider a Stay of Enforcement for 3 years following the effective date(s).

Compliance Deadlines

NPRM Comments—Compliance Deadlines (continued):

- Multiple operators said there should be differing effective dates for different portions of the rule. One operator suggested 18 months to comply with ALDP requirements if PHMSA chooses not to accept a 3-year effective date.
- One operator did not support a phased in approach.

Compliance Deadlines

NPRM Comments—Compliance Deadlines (continued):

- An operator suggested PHMSA delay compliance requirements for compressor stations until EPA's proposed standards are finalized or withdrawn.
- Multiple industry trades suggested a three-year effective date, reasoning it would minimize duplicative regulations by allowing operators to not have to comply with this rulemaking and then pivot to the EPA requirements in the future.

PHMSA Notes:

- PHMSA specifically requests the Committee recommendations on compliance deadlines for the provisions proposed in the NPRM.

Compliance Deadlines

This concludes the PHMSA response to comments on compliance deadlines.

Compliance Deadlines

PHMSA requests the Committee recommendations on the compliance deadlines of proposed rule as published in the Federal Register and the Draft Regulatory Evaluation and Environmental Assessment

- Specific topics raised by commenters we are requesting Committee recommendations are:
  - Survey frequency
  - Patrol frequency
  - ALDP compliance deadline
  - Grading and repair compliance deadline
  - Deadline for existing leaks (if not addressed earlier)

Compliance Deadlines

Public Comments

Compliance Deadlines

GPAC Discussion

Compliance Deadlines

Committee Voting Slide

The proposed rule as published in the Federal Register and as supported by the Preliminary Regulatory Impact Analysis and Draft Environmental Assessment, with regards to the compliance deadlines for the proposed rulemaking is technically feasible, reasonable, cost-effective, and practicable.

Topic for Discussion

Operator Qualification and Miscellaneous Proposals

Qualification of Leak Survey Personnel - § 192.769

Current Regulations

- Section 192.801 defines "covered task" subject to subpart N operator qualification requirements.

NPRM Proposal:

- 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, and Type A regulated onshore gathering pipelines are subject to the personnel qualification requirements at part 192 in performing those activities.
- Leakage surveys, investigation, and repair activities are "covered tasks" under the operator qualification (OQ) requirements in part 192, subpart N.

Operator Qualifications - § 192.769

NPRM Comments—Operator Qualifications:

- NAPSR and multiple operators expressed support for the provisions. It would benefit the "integrity of the department."
- An operator and industry trades said that § 192.769 is duplicative and unnecessary because leak detection and repair personnel currently meet the 4-part test for OQ and thus is "adequately addressed" in subpart N.
- Another operator added that subpart N already provides a "comprehensive framework" for qualification and that there was no reason to add leak-specific requirements to the OQ program.
- Multiple industry trades said this eliminates the ability to use the subpart N provision that allows for unqualified individuals to conduct work under the observation of qualified individuals.

Operator Qualifications - § 192.769

NPRM Comments—Operator Qualifications (continued):

- Multiple industry representatives commented that the tasks listed in § 192.769 may be separate and not an operator qualification task for every operator. For example, leak detection personnel may not participate in investigation, grading, or repair, so these personnel should not be required to be qualified for those other tasks.

PHMSA Notes:

- PHMSA did not intend to eliminate an operator's ability to perform tasks using subpart N which includes span of control.
- In addition, PHMSA did not intend to require individuals be trained in tasks they are not responsible for. PHMSA will clarify this in the final rule.

Miscellaneous Definitions § 192.3

NPRM Proposal:
PHMSA proposed to define the term *Leak or Hazardous Leak* as follows:

- Any release of gas from a pipeline that is uncontrolled at the time of discovery and is an existing, probable, or future hazard to persons, property, or the environment, or any uncontrolled release of gas from a pipeline that is or can be discovered using equipment, sight, sound, smell, or touch.
- Does not apply to UNGSF requirements or transmission or distribution integrity management

Miscellaneous Definitions §§ 192.3 and 192.617

NPRM Proposal:

Failure Definition

- Section 192.617 requires operators to perform investigations following incidents and *failures*; however, the term failure is not defined.
- PHMSA proposed to define the term *failure* as follows:
  - Failure means when any portion of a pipeline becomes inoperable, is incapable of safely performing its intended function, or has become unreliable or unsafe for continued use.
- PHMSA requested comment on whether the proposed *failure* definition should be located in § 192.3, making it broadly applicable in part 192.

Miscellaneous Definitions

NPRM Proposal:

Pipelines Known to Leak:

- The proposed rule includes language from section 114 of the PIPES Act of 2020 regarding "pipelines that are known to leak based on the material (including cast iron, unprotected steel, wrought iron, and historic plastics with known issues), design, or past operating and maintenance history of the pipeline" (hereafter "pipelines known to leak").
- PHMSA requested comment on whether to list out "historic plastics with known issues" in the regulations and whether to remove the term "historic."

Business District (§ 192.723):

- Section 192.723 requires more frequent leakage surveys of distribution lines inside of business districts. However, the term is not defined.
- PHMSA requested comment on whether to define the term "business district" for distribution leakage surveys.

Definitions § 192.3 - *Leak or Hazardous Leak*

NPRM Comments—Leak or Hazardous Leak:

- Industry trade groups expressed that the proposed combined definition of "leak or hazardous leak" would require operators to identify and "promptly repair" all leaks – regardless of the risk the leaks pose to public safety or the environment. They further commented that equating the two is contrary to language in the Section 113 of the PIPES Act of 2020, which implies some leaks have a volume so small as to pose no potential hazard, and therefore do not require a timeline for repair.
- Multiple operators said that requiring all detectable leaks to be managed as hazardous leaks would be impractical, burdensome, extremely costly, and shift resources away from necessary priorities to chase very small releases that have no potential hazard to public safety.

Definitions § 192.3 - *Leak or Hazardous Leak*

NPRM Comments—Leak or Hazardous Leak (continued):

- Multiple industry trades and operators said that leaks that may cause negligible future harm to the environment should not be evaluated at the same level of importance as leaks that might cause immediate harm to people or property and would strip the value and meaning of the "hazardous" designation.
- Pipeline Safety Trust and other public safety advocates suggested all leaks be considered hazardous.
- Industry trade groups, operators, NAPSR, and Attorney General of NY et al. believe that it is necessary that the terms *leak* and *hazardous leak* are defined separately.

Definitions § 192.3 - *Leak or Hazardous Leak*

NPRM Comments—Leak or Hazardous Leak (continued):

- Multiple industry trade groups and operators stated that having definitions for leaks and hazardous leaks that differ between integrity management and the rest of part 192 would cause confusion.
- NAPSR supported separate definitions and suggested the definition of "leak" reflect the appropriate leak term and denote the level of urgency associated with the leak.
- Multiple industry trade groups, operators, and NAPSR expressed that a hazardous leak should remain focused on the "existing or probable hazard to persons or property"(i.e., Grade 1 leak) and recommends that the existing hazardous leak definition in subpart P § 192.1001 be applicable to general Part 192.

Definitions § 192.3 - *Leak or Hazardous Leak*

NPRM Comments—Leak or Hazardous Leak (continued):

- An operator suggested including three separate definitions for "leak," "hazardous leak," and "environmentally significant leak."
- Another operator concurred that GHG emissions do not fall within the definition of "hazard" or "hazardous" and that it would introduce unnecessary confusion to define them as "hazardous."
- Industry trades cautioned PHMSA against prioritizing the environment over public safety in regulatory requirements.
- Multiple industry trade groups and operators stated that releases from relief valves, emergency shutdown devices, and other "unintended releases through intended release pathways" should not be considered leaks as they are not uncontrolled.

Definitions § 192.3 - *Leak or Hazardous Leak*

PHMSA Notes:

- PHMSA requests committee discussion on defining the term *Leak or Hazardous Leak*.
- PHMSA notes that while these terms were defined together, the NPRM does not require all leaks be repaired on the current timeline for hazardous leak in existing § 192.703.
- PHMSA notes that repair timeframes for leaks generally, and grade 1 leaks that are currently classified as "hazardous leaks," are based on the grading criteria under § 192.760 discussed previously during this meeting.

Investigation of Failures § 192.617

NPRM Comments—Failure:

- NAPSR and several industry representatives commented that implying that all leaks require failure investigation was burdensome and unnecessary. Commenters recommended the amendment be withdrawn or revised to more specifically define which leakage requires investigation in § 192.617.
- GPTC recommended PHMSA define the term failure in the general definitions section in § 192.3.
- Industry trades and an operator opposed defining the term failure.
- Transmission operators suggested PHMSA should narrow the definition to exclude leaks addressed through routine maintenance and grade 2 and 3 leaks.

Investigation of Failures § 192.617

NPRM Comments—Failure (continued):

- A State suggested that leaks that are not reportable as incidents should be excluded from the failure definition.
- Industry trades and operators suggested PHMSA align the failure definition with existing language in ASME B31.8 referenced in the preamble.

PHMSA Notes:

- PHMSA appreciates the comments and will consider the recommendations for the final rule.

Pipelines known to leak

NPRM Comments—Listing leak prone pipe:

- Pipeline Safety Trust requested PHMSA explicitly list types of plastic pipe known to leak that would be subject to the rule. The commenter also requested "historic" be removed to allow for any vintage plastic pipe known to leak be considered.
- NTSB said that explicitly listing materials known to leak would help pipeline operators identify materials known to leak.
- Multiple operators and industry trade groups stated that historic plastics are not known to leak in every service territory. An operator commented that "known to leak" is not clearly defined.
- An operator expressed agreement with requirement for annual leak surveys for pipelines constructed of cast iron, unprotected steel, and wrought iron but not for historic plastics.

Pipelines known to leak

NPRM Comments:

- Industry trades noted that vintage plastics that are more prone to brittleness and cracking is well understood by the gas industry and covered in PHMSA Advisory Bulletins and NTSB recommendations.
- Industry trades suggested removing cast iron from the listed "pipelines known to leak" in the context of distribution leakage surveys.

PHMSA Notes:

- PHMSA will consider further clarification to the list of pipelines known to leak in the final rule based on the comments.

Business District Definition

NPRM Comments—Business District Definition:

- Attorney General of NY et al. urged PHMSA to adopt a definition that is as broad as possible to minimize conflicts with existing state law and practice.
- Pipeline Safety Trust stated that the current interpretation of business districts is based on commerce and should be abandoned. Instead, a concept should be used that would "take into account densities of people, pipeline infrastructure, and buildings."
- NAPSR proposed a definition that included residential areas, where business is conducted located under predominantly continuous paving or concrete.

Distribution Leak Surveys – Business District Definition

NPRM Comments—Business District Definition (continued):

- Industry trades and operators stated that operators should continue the existing practice of defining business districts based on GPTC guidance.

PHMSA Notes:

- PHMSA appreciates the comments and will take them into consideration in future rule making.
- PHMSA is aware of action by States to recommend changes to the definition of a business district.

Misc. Topics

This concludes the PHMSA response to comments on operator qualification and other miscellaneous topics. topics.

Operator Qualification and Miscellaneous Proposals

PHMSA requests the Committee recommendations on miscellaneous definitions proposed definitions in the proposed rule as published in the Federal Register and the Draft Regulatory Evaluation and Environmental Assessment.

- Specific topics raised by commenters we are requesting Committee recommendations on include:
  - The additional clarifications to OQ requirements for LDAR tasks.
  - The definition of leak and hazardous leak.
  - The definition of failure either in general or in § 192.617.

Topic for Discussion

Committee Report

Committee Report

Committee Voting Slide

The transcript of this meeting (duly recorded and accurately transcribed), together with the presentation slides documenting the Committee's votes during this meeting, represent the report of this proceeding.

Meeting Wrap-Up

Thank You!