PHMSA Releases Proposed Rules for Gas Pipeline Leak Detection and Repair Addressing Both Pipeline Safety and Environmental Protection

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Overview

On May 4, 2023, the Department of Transportation's (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) issued a long-awaited notice of proposed rulemaking (NOPR) titled "Pipeline Safety: Gas Leak Detection and Repair" to implement congressional mandates regarding methane emissions reductions from new and existing natural gas transmission, distribution and gathering pipelines, as well as liquefied natural gas (LNG) facilities. Section 113 of the Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2020 (P.L. 114-183; PIPES Act of 2020) had directed PHMSA to reduce methane leaks as part of its traditional role as a pipeline safety regulator, and as an environmental protection measure, making this the first proposed PHMSA rule specifically focused on environmental protection as an integral component of the agency's pipeline safety mission. The NOPR would codify self-executing requirements from Section 114 of the PIPES Act of 2020 mandating that operators of gas pipeline facilities detail procedures regarding the elimination of hazardous leaks, minimization of natural gas releases, and to repair or replace certain pipelines known to leak. The NOPR acknowledges that the agency's current leak detection and repair standards, which had not been significantly updated since the 1970s, permit an operator to forgo leak repair if the operator determines that no existing or probable public safety hazard resulted regardless of environmental harms posed by the release. With a nod towards statutory amendments in Section 118 of the PIPES Act that broadened PHMSA's mission to include prescribing standards that protect the environment, the NOPR recognizes the agency's shift from focusing on the economic consequences of lost gas to the environmental consequences of gas releases. It also incorporates the current federal government-wide focus on addressing environmental justice and climate change, as found in Executive Orders 13990 and 14008.

Regulatory Provisions

The NOPR proposes several changes to Parts 191, 192 and 193 of PHMSA's regulations located in Title 49 of the Code of Federal Regulations. The following section provides a high-level overview of the proposed rulemaking's provisions.

- Defines "leak or hazardous leak" as "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 (including operating personnel), property, or the environment, or any uncontrolled release of gas from a pipeline that is detectable via equipment, sight, sound, smell, or touch."
- Compels increased frequency for leakage surveys.
  - Applies to: (1) distribution pipelines outside of business districts; (2) distribution pipelines without cathodic protection or that are known to leak due to their material, design, or operational and maintenance history; and (3) gas transmission, offshore gathering, and Types A, B and C gathering pipelines in high-consequence areas (HCAs).[1]

  - Establishes methane leakage survey requirements for LNG facilities other than tanks.
- Compels increases in minimum patrolling frequencies for gas transmission, offshore gathering, and Type A gathering pipelines and to mandate annual patrolling for Type B and Type C gathering pipelines.
- Revises Part 192 of the PHMSA regulations to implement an Advanced Leak Detection Programs (ALDP) standard for all regulated gas pipeline operators to conduct tests and analyses to demonstrate that their suite of leak detection equipment, procedures and analytics can identify all leaks above a certain minimum concentration when near the pipeline.
  - ALDP would establish a minimum sensitivity for leak detection equipment utilized in leakage surveys and investigations.
  - Suggests limiting the use of human or animal senses for leakage surveys for offshore, submerged gas transmission and gathering pipelines, but permits utilization of human senses for gas transmission and regulated gathering lines in Class 1 and Class 2 locations outside of HCAs under certain circumstances.
- Proposes to require gas transmission, distribution and Part 192-regulated gathering pipeline operators to identify, locate, classify and repair all leaks promptly. This diverges from current regulations more narrowly focused on leaks that present a public safety risk associated with ignition of large-volume, instantaneous releases and accumulated gas.
- Requires gas pipeline operators to classify and repair leaks following a schedule determined by the severity of public safety and environmental risks. Building on the Gas Piping Technology Committee's (CPTC) Guide for Gas Transmission and Distribution Piping Systems leak grading and repair criteria, PHMSA's proposal requires the classification of leaks—ranging from grade 1, grade 2 and grade 3—and prioritizes leak remediation accordingly.
- Proposes mitigation of intentional emissions such as blowdowns on gas transmission pipelines and tank boil-offs at LNG facilities, and other vented emissions, and outlines a menu of potential mitigation options related to intentional releases.
- Proposes requirements for gas transmission, distribution, offshore gathering and types A, B and C gathering pipeline operators to design and construct new and modified pressure relief and limiting devices to mitigate unnecessary releases, as well as assess and remediate any relief devices that do not operate by the operator's procedures. This seeks to reduce unintended releases of gas and prevent environmental and public safety risks associated with malfunctioning or poorly designed pressure relief devices.
- Amends regulatory reporting requirements in Part 191 to require the reporting of large-volume releases of gas from all gas pipeline facilities—including intentional releases—that are not presently contained in the regulation's definition of an "incident." In addition to requiring the reporting of unintentional and intentional releases of gas, PHMSA suggested revisions to annual report requirements for gas transmission, distribution, offshore gathering and Types A, B and C gathering pipelines to include details regarding the number and grade of all leaks detected and repair, as well as the emissions related to those leaks.
- Extends the National Pipeline Mapping System (NPMS) requirements to include offshore gas- and Types A, B and C onshore gas-gathering pipelines.
- Calls for the incorporation of explicit reference to "environmental harm" in certain Part 191 and 193 requirements, and expands "hazards" to include environmental harms that otherwise would not pertain to integrity management regulations in Part 192, subparts O and P, and other certain requirements centered on hazards to public safety.

- Requires operators of Part 193-regulated LNG facilities to engage in quarterly methane leakage surveys of non-tank equipment and components within a given facility using leak detection equipment, and to repair identified leaks per maintenance or abnormal operations procedures.

PHMSA is conscious of where its newfound environmental protection jurisdiction may overlap with other federal regulators, including the U.S. Environmental Protection Agency (EPA). For example, PHMSA proposes to exempt pipeline compressor stations from leak repair, survey, and ALDP obligations to the extent they are subject to EPA regulations under the Clean Air Act. It is also aware of the impact its proposed regulations may have on emerging energy technologies that rely on hydrogen in lieu of natural gas. Because hydrogen pipelines are regulated by PHMSA under Part 192, PHMSA seeks comments on whether to treat them differently from pipelines transporting natural gas.

Next Steps

The NOPR is not yet published in the *Federal Register*. Public comments will be permitted for 60 days following the NOPR's publication. PHMSA is seeking comments that specifically address whether its proposals would be reasonable, technically feasible, cost-effective and practicable for affected gas pipeline operators, but it is sure to receive comments that consider whether the agency has exceeded its congressional mandate as well. Akin's Environmental and Natural Resources, Government Contacts and Corporate teams are well equipped to assist clients in preparing public comments.

If you have questions about this client alert, please contact any Akin lawyer or advisor below:

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[1] HCAs are locations that are specifically defined in pipeline safety regulations as areas where pipeline releases could have greater consequences to health and safety or the environment due to higher population densities.