

GAO Highlights

Highlights of [GAO-13-577](#), a report to congressional committees

Why GAO Did This Study

About 300,000 miles of gas transmission pipelines cross the United States, carrying natural gas from processing facilities to communities and large-volume users. These pipelines are largely regulated by PHMSA. The Pipeline Safety Improvement Act of 2002 established the gas integrity management program, which required gas transmission pipeline operators to assess the integrity of their pipeline segments in high consequence areas by December 2012 and reassess them at least every 7 years.

The Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 directed GAO to examine the results of these baseline assessments and reassessments and the potential impact of making the current process more risk-based. GAO analyzed (1) PHMSA's assessment data on repairs made and the appropriateness of the 7-year reassessment requirement, (2) the impact of the 7-year reassessment requirement on regulators and operators, and (3) the potential challenges of implementing risk-based reassessment intervals beyond 7 years. GAO analyzed assessment data; reviewed legislation and regulations; and interviewed pipeline operators, federal and state regulators, and other stakeholders.

What GAO Recommends

DOT should (1) develop guidance for operators to calculate reassessment intervals and (2) collect information on the resources needed to implement risk-based reassessment intervals beyond 7 years. DOT did not agree or disagree with the recommendations, but provided technical comments.

View [GAO-13-577](#). For more information, contact Susan A. Fleming at (202) 512-2834 or flemings@gao.gov.

June 2013

GAS PIPELINE SAFETY

Guidance and More Information Needed before Using Risk-Based Reassessment Intervals

What GAO Found

Baseline assessment and reassessment data collected by the Department of Transportation's (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) since 2004 show that pipeline operators are making repairs in highly populated or frequented areas ("high consequence areas"). For example, from 2004 to 2009, operators made 1,080 immediate repairs. While operators can use assessment data to determine reassessment intervals for specific pipelines, PHMSA's data are aggregated and cannot indicate an appropriate maximum interval for all pipelines nationwide. Such a determination requires, for example, collaboration of subject matter experts and analysis of technical studies.

The current 7-year reassessment requirement provides a safeguard by allowing regulators and operators to identify and address problems on a continual basis, but is not fully consistent with risk-based practices. The 7-year reassessment requirement is more frequent than the intervals found in industry consensus standards and provides greater assurance that operators are regularly monitoring their pipelines to address threats before leaks or ruptures occur. However, this requirement—which was established in a 2002 act as part of the gas integrity management program rather than by rulemaking—is not fully consistent with risk-based management practices, which ask operators to, for example, use information to identify, assess, and prioritize risks so that resources may be allocated to address higher risks first. While operators are required to determine an appropriate reassessment interval based on the threats to their pipelines in high consequence areas, they must reassess those pipelines at least every 7 years regardless of the risks identified.

Implementing risk-based reassessment intervals beyond 7 years would require a statutory change from Congress and could exacerbate current workload, staffing, and expertise challenges for regulators and operators. For example, PHMSA is facing workload problems with inspections, which could be worsened by allowing operators to use risk-based reassessment intervals beyond 7 years; PHMSA has an initiative under way that could help address this issue. Further, some operators told us that extending reassessment intervals beyond 7 years would likely require additional data analyses over what is currently required. Operators GAO met with varied in the extent to which they currently calculate reassessment intervals and use the results of data analyses. Guidance to calculate reassessment intervals is lacking, and as a result, operators may perform a less rigorous determination of their reassessment intervals at this time. At Congress's request, in 2008 PHMSA described how it would establish and enforce risk-based criteria for extending the 7-year reassessment interval. PHMSA proposed retaining the current 7-year reassessment requirement, but establishing a process by which operators could use risk-based reassessment intervals beyond 7 years if they met certain potential criteria, such as demonstrating sound risk analysis. While PHMSA and GAO have supported the concept of risk-based reassessment intervals beyond 7 years, given the breadth of potential challenges with implementation, more information might help decision-makers better understand the resource requirements for this change. For example, PHMSA has used pilot programs to collect such information and study the effects prior to rule changes.