



Highlights of [GAO-06-588T](#), a testimony before the Subcommittee on Energy and Air Quality, Committee on Energy and Commerce, House of Representatives

## Why GAO Did This Study

About a dozen people are killed or injured in natural gas transmission pipeline incidents each year. In an effort to improve upon this safety record, the Pipeline Safety Improvement Act of 2002 requires that operators assess pipeline segments in about 20,000 miles of highly populated or frequented areas for safety risks, such as corrosion or welding defects. Half of these baseline assessments must be done by December 2007, and the remainder by December 2012.

Operators must then repair or replace any defective pipelines, and reassess these pipeline segments for corrosion damage at least every 7 years. The Pipeline and Hazardous Materials Safety Administration (PHMSA) administers this program, called gas integrity management, and inspects operators of interstate pipelines, while state pipeline safety agencies generally inspect operators of intrastate pipelines.

This testimony is based on ongoing work for this Subcommittee and for other committees, as required by the 2002 act. It provides preliminary results on the safety effects of (1) PHMSA's gas integrity management program and (2) the requirement that operators reassess their pipelines at least every 7 years. GAO expects to issue two reports this fall that will address these and other topics. This testimony also discusses how PHMSA has strengthened its enforcement program in response to recommendations GAO made in 2004.

[www.gao.gov/cgi-bin/getrpt?GAO-06-588T](http://www.gao.gov/cgi-bin/getrpt?GAO-06-588T).

To view the full product, including the scope and methodology, click on the link above. For more information, contact Katherine Siggerud at (202) 512-2834 or [siggerudk@gao.gov](mailto:siggerudk@gao.gov).

# GAS PIPELINE SAFETY

## Preliminary Observations on the Implementation of the Integrity Management Program

### What GAO Found

Early indications suggest that the gas transmission pipeline integrity management program enhances public safety by supplementing existing safety standards with risk-based management principles. Operators reported that they have assessed about 6,700 miles as of December 2005 and completed 338 repairs for problems they are required to address immediately. Operators told GAO that the primary benefit of the program is the comprehensive knowledge they acquire about the condition of their pipelines, but they raised concerns about (1) their uncertainty over the level of documentation that PHMSA requires and (2) whether their pipelines need to be reassessed at least every 7 years. State pipeline officials also agree that integrity management enhances safety, but are concerned about their ability to obtain sufficient staff and training to inspect operators' programs.

The 7-year reassessment requirement represents a midpoint between the 5- and 10-year industry consensus standard reassessment requirements for higher stress pipelines (pipelines with higher operating pressure in relation to wall strength). (However, the industry 5-year interval is less relevant to the integrity management program because it applies when not all repairs are made. PHMSA's regulations require that repairs be made as needed.) The majority of transmission pipelines in the U.S. are estimated to be higher stress pipelines. However, most operators of lower stress pipelines told GAO that the 7-year requirement is conservative for their pipelines because they have found few problems requiring reassessments earlier than the 15 to 20 years under the industry standard for lower stress pipelines. Operators GAO contacted said that periodic reassessments are beneficial for finding and preventing problems; but they favored reassessments on severity of risk rather than a one-size-fits-all standard. Operators told GAO that requiring that pipelines be reassessed more frequently than required under industry standards increases costs—which are ultimately passed to consumers—but does not increase safety. Operators did not expect that the existence of an "overlap period" from 2010 through 2012, when operators will be finishing their baseline assessments and beginning some reassessments at the same time, will create problems in finding resources to conduct reassessments.

PHMSA has developed a reasonable enforcement strategy framework that is responsive to GAO's earlier recommendations. PHMSA's strategy is aimed at reducing pipeline incidents and damage through direct enforcement and through prevention involving the pipeline industry and stakeholders (such as state regulators). Among other things, the strategy entails (1) using risk-based enforcement and dealing severely with significant noncompliance and repeat offenses, (2) increasing knowledge and accountability for results by clearly communicating expectations for operators' compliance, (3) developing comprehensive guidance tools and training inspectors on their use, and (4) effectively using state inspection capabilities.