

which the impact of an accident will be more significant than it would be in others due to greater concentrations of people who could be affected. Because of the potential for dire consequences of pipeline failures in certain areas, these areas merit a higher level of protection. RSPA/OPS is requiring this regulation to afford the necessary additional protection to these HCAs.

Numerous investigations by RSPA/OPS and NTSB have highlighted the importance of protecting the public from pipeline failures. NTSB has made several recommendations to ensure the integrity of pipelines near populated areas. These recommendations included requiring periodic testing and inspection to identify corrosion and other damage, establishing criteria to determine appropriate intervals for inspections and tests, determining hazards to public safety from electric resistance welded pipe and requiring installation of automatic or remotely-operated mainline valves on high-pressure pipelines to provide for rapid shutdown of failed pipelines.

Congress also directed RSPA/OPS to undertake additional safety measures in areas that are densely populated. These statutory requirements included having RSPA/OPS prescribe standards for identifying pipelines in high density population areas and issue standards requiring periodic inspections. The Pipeline Safety Improvement Act of 2002 requires that RSPA/OPS adopt regulations requiring operators of gas transmission pipelines in HCAs to adopt integrity management plans.

This final rulemaking addresses the target problem described above, and is a comprehensive approach to certain NTSB recommendations and Congressional mandates, as well as pipeline safety and environmental issues raised over the years.

This final rule focuses on a systematic approach to integrity management to reduce the potential for natural and other gas transmission pipeline failures that could affect populated areas. This final rulemaking requires pipeline operators to develop and follow an integrity management program that continually assesses, through internal inspection, pressure testing, direct assessment or equivalent alternative technology, the integrity of those pipeline segments that could affect areas we have defined as HCAs, *i.e.*, areas with specified population densities, buildings containing populations of limited mobility, and areas where people gather, that occur along the route of the pipeline. The program must also evaluate the segments through comprehensive information analysis,

remediate integrity problems and provide additional protection through preventive and mitigative measures.

This final rule (the fourth in a series of integrity management program regulations) covers operators of transmission pipelines for natural and other gases. RSPA/OPS chose to start the series with hazardous liquid pipeline operators because the pipelines they operate have the greatest potential to adversely affect the environment. This final rule completes the application of integrity management to all interstate (and many intrastate) pipelines.

Benefits

RSPA/OPS has made significant changes to the cost-benefit analysis since the analysis prepared to support the proposed rule. Included in these changes is full consideration of the impact of the Pipeline Safety Improvement Act of 2002. The Act significantly changed the regulatory environment in which the new rule will be implemented. The Act requires that gas transmission pipeline operators develop integrity management plans, perform risk analyses, and perform certain tests, including tests at specified intervals. These requirements forever change the regulatory landscape. The notice of proposed rulemaking was issued in January, only one month after the Act was signed into law. RSPA/OPS modified the notice to acknowledge that the law was passed and that it imposed some requirements, but RSPA/OPS had not taken time to analyze thoroughly the impacts the Act would have.

RSPA/OPS has since performed extensive analyses to consider the impacts of the Act and to evaluate ways to make the rule more cost-beneficial. RSPA/OPS has estimated the costs to implement the requirements in the Act, without modification, to be approximately \$11 billion over 20 years. By comparison, we conclude the cost of implementing this rule will be \$4.7 billion over the same period. The difference reflects changes made in this rule in the definition of HCAs (which will have the effect of reducing the amount of pipeline mileage that must be tested) and provisions for limited scope reassessments every seven years. The Act requires that pipelines be assessed every seven years. The Act further requires that these assessments be performed using one of three specified assessment methods or "an alternative method that the Secretary [of Transportation] determines would provide an equal or greater level of safety." The alternative methods included in this rule will reduce costs

significantly over the cost of performing periodic assessments using only the methods specified in the Act. There is therefore a benefit in adopting this rule of approximately \$6.2 billion in cost reduction for assuring pipeline integrity.

Benefits will also accrue in improved ability to site pipelines in certain critical markets. It is difficult to quantify this benefit, but RSPA/OPS believes it is real. Inability to site future pipelines could affect the Nation's ability to use the increased quantities of natural gas that the Energy Information Administration estimates will be needed to fuel our economy over the next 20 years.

The Energy Information Administration (EIA), in its Annual Energy Outlook 2003, estimates that total consumption of natural gas in the United States was 22.64 trillion cubic feet in 2001. EIA's Outlook projects, in its reference case, that this figure will grow to 32.14 trillion cubic feet by 2020. The EIA projection is for consumption of 34.59 trillion cubic feet by 2020 for its high economic growth scenario. These figures represent an increase of 42 and 53 percent from total 2001 consumption. Additional transmission pipeline capacity is likely to be needed to support these estimates, and to deliver the gas that the American economy will need in 2020. The increased public confidence in pipeline safety that will result from this rule will make it easier to site and construct this additional pipeline capacity. The ability to build to support the need of the U.S. economy is a principal benefit of this rule.

The rule will significantly reduce the likelihood of pipeline accidents that result in deaths and serious injuries. Based on the historical record, RSPA/OPS has estimated this benefit to be on the order of \$800 million over 20 years. It is quite likely, though, that future accidents could be worse than the historical experience. Population near pipelines is growing. This places more people at risk than in the past. While some historical accidents have resulted in several deaths and serious injuries, and significant property damage, accidents with even greater consequences could occur. RSPA/OPS has analyzed the likelihood that an accident could occur in an area along the pipeline that is more densely populated. Even though the amount of pipeline mileage along which such high population densities might be found is small (RSPA/OPS estimated 0.1% of total mileage for this analysis) the consequences of an accident are potentially large enough that the averted costs are still high. RSPA/OPS estimates