

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 that an additional \$277 million is realized by avoiding the likelihood of this more significant accident.

The rule will also result in avoiding significant costs associated with unexpected interruptions in natural gas supply. The Carlsbad accident in 2000 resulted in curtailment of supply of natural gas to California. RSPA/OPS estimates that this resulted in an impact on the California economy of \$17.25 million per day. The total benefit afforded by this rule in avoiding future economic impacts of this type is estimated to be \$1 billion over the next 20 years.

Another benefit to be realized from implementing this rule is reduced cost to the pipeline industry for assuring safety in areas along pipelines with relatively more population. The improved knowledge of pipeline integrity that will result from implementing this rule will provide a technical basis for providing relief to operators from current requirements to reduce operating stresses in pipelines when population near them increases. Regulations currently require that pipelines with higher local population density operate at lower pressures. This is intended to provide an extra safety margin in those areas. Operators typically replace pipeline when population increases, because reducing pressure to reduce stresses reduces the ability of the pipeline to carry gas. Areas with population growth typically require more, not less, gas. Replacing pipeline, however, is very costly. Providing safety assurance in another manner, such as by implementing this rule, could allow RSPA/OPS to waive some pipe replacement. RSPA/OPS estimates that such waivers could result in a reduction in costs to industry of \$1

billion over the next 20 years, with no reduction in public safety.

A more detailed discussion of how public comments were addressed in the revised cost-benefit analysis can be found in the final regulatory analysis.

The Final Rule

RSPA/OPS has created a new Subpart O in Part 192 for Pipeline Integrity Management and reformatted the rule into sections analogous to existing Part 192 rules. RSPA/OPS recognizes that a simple format and clarity are important features to assist pipeline operators in using and complying with each requirement.

Section 192.901 What Do the Regulations in This Subpart Cover?

The new Subpart O prescribes minimum requirements for an integrity management program on gas transmission pipelines that could affect an HCA. HCAs are defined in § 192.903, and § 192.905 describes how an operator identifies these areas. Section 192.905 is based on the recent guidance RSPA/OPS issued on how to identify these areas. The definitions of *gas* and *transmission pipeline* are found in § 192.3. This final rule does not apply to gas gathering pipelines or to gas distribution pipelines. Because most of the requirements are applicable to metal pipelines, not plastic, only certain requirements apply to plastic gas transmission pipelines. Requirements for a continuing threat analysis (§§ 192.917, 192.937), a baseline assessment if a threat other than third-party damage is identified (§ 192.921), and additional preventive and mitigative measures (§ 192.935) apply to plastic gas transmission pipelines.

Section 192.903 What Definitions Apply to This Subpart?

In the final rule RSPA/OPS has made changes to the definitions in the new § 192.903 based on the petition for reconsideration, written comments in the docket, comments received at post-NPRM public meetings and the recommendations given by the gas advisory committee. The proposed definitions *Potential Impact Zone*, *Threshold Radius*, and *Moderate Risk Areas* have been deleted. New definitions of *Assessment*, *Covered pipeline segment*, *Identified site*, and *Remediation* have been added.

The *High consequence area* definition was modified to allow an operator two methods to identify the areas.

In method (a) high consequence areas are—

1. Current Class 3 location;
2. Current Class 4 location;

3. Any areas outside a Class 3 or 4 location where the Potential Impact Radius is greater than 660 feet (200 meters), and the area within a Potential Impact Circle contains 20 or more buildings intended for human occupancy. However, if the radius of the Potential Impact Circle is greater than 660 feet (200 meters), the operator may identify a high consequence area based on a prorated number of buildings intended for human occupancy within a distance 660 feet (200 meters) from the centerline of the pipeline until December 17, 2006. If an operator chooses this approach, the operator must prorate the number of buildings intended for human occupancy based on the ratio of an area with a radius of 660 feet (200 meters) to the area of the Potential Impact Circle (*i.e.*, the prorated number of buildings intended for human occupancy is equal to $[20 \times (660 \text{ feet [or 200 meters] / Potential Impact Radius in feet [or meters])^2]$).

4. The area within a Potential Impact Circle containing an identified site.

In method (b) high consequence areas are—

1. The area within a Potential Impact Circle containing 20 or more buildings intended for human occupancy, (unless the exception described above in method (a) applies);

2. The area within a Potential Impact Circle containing an identified site.

When a Potential Impact Circle is calculated under either of the methods to establish a high consequence area, the length of the high consequence area extends axially along the length of the pipeline from the outermost edge of the first Potential Impact Circle that contains an identified site or 20 or more buildings intended for human occupancy to the outermost edge of the last contiguous Potential Impact Circle that contains either an identified site or 20 or more buildings intended for human occupancy. Appendix E, Figure E.I.A gives a graphic representation.

The identified site component of the high consequence area definition was also modified to distinguish between rural buildings and outside open areas and to simplify the identification process. An identified site is an area meeting one of three criteria—

1. An outside area or open structure that is occupied by twenty (20) or more persons on at least 50 days in any twelve (12) month period (the days need not be consecutive). Examples included in the definition are beaches, playgrounds, recreational facilities, camping grounds, outdoor theaters, stadiums, recreational areas near a body of water, or areas outside a rural building such as a religious facility, or