

covered under Part 192 in the high consequence areas. The definition for a transmission line is found in section § 192.3. This proposed rule does not apply to gas gathering lines or to gas distribution lines.

### Performance-Based Option

Numerous companies argued that we should allow a performance-based option because a purely prescriptive rule would not allow companies to effectively and cost beneficially address the unique features of their systems.

We are proposing a minimum set of criteria for an operator to qualify for a performance-based option. Operators who satisfy this minimum set of criteria will be eligible to deviate from certain requirements—the time frame for remediating anomalies identified during the assessment, the conditions for using direct assessment as a primary assessment method and the reassessment interval (for example, the reassessment interval for on a segment assessed by the DA method could be extended to ten years). However, even if an extended interval were allowed, the operator would still have to conduct a confirmatory direct assessment in the seventh year of the interval. We are incorporating these performance-based considerations because RSPA/OPS recognizes that improving pipeline integrity can only be accomplished through operators improving their understanding of the condition of their piping and taking appropriate action based on this understanding. Operators who excel in these aspects of integrity management should have limited flexibility in making key integrity management decisions.

The proposed conditions an operator would have to satisfy before being allowed to deviate from some of the program's requirements include—

1. The operator must have completed a baseline assessment of all covered segments and at least one other assessment. Problems identified in the second assessment must be remediated. Also the results and insights from the second assessment must be incorporated into the operator's risk model.
2. An operator must also demonstrate that it has an exceptional integrity management program. To demonstrate this an operator must show that its program meets the performance-based requirements of ASME/ANSI B31.8S, has a history of measurable performance improvement, and includes, at minimum:

- (1) A documented state-of-the-art risk analysis process;

- (2) Complete documentation of all risk factor data used to support the program;

- (3) A state-of-the-art data integration process;

- (4) A process that explicitly develops lessons learned from assessment of covered pipe segments and applies these lessons to pipe segments not covered by the Rule;

- (5) A process for evaluating all incidents, including their causes, within the operator's sector of the pipeline industry for implications both to the integrity of the operator's pipelines and to its integrity management program;

- (6) A documented performance history that confirms the continuing performance improvement realized under the performance-based program; and

- (7) The extensive set of performance measures documented in the operator's performance plan (ASME B31.8S, Section 9) are accessible to state and federal regulators. These measures would be updated by the operator on a frequency consistent with its performance plan.

### *Define the Areas of Potentially High Consequence*

In the FR notice of June 27, 2001, we said the first element of the integrity management concept involves defining the areas where the potential consequences of a gas pipeline accident may be significant or may do considerable harm to people and their property. In a rule issued on August 6, 2002, we defined these high consequence areas. (67 FR 50824). The definition of high consequence areas (HCAs) includes: (a) Current Class 3 and 4 Locations; (b) pipe segments in the area that would be impacted by a potential pipeline rupture where there is a facility housing people who are confined, have impaired mobility or are difficult to evacuate (e.g., hospital, church, school, prison, day care facility, retirement facility; and (c) pipe segments near areas where a specified number of people congregate on a specified number of days per year (e.g., camping grounds, outdoor recreational facility). The defined areas were those that would be impacted by a potential pipeline rupture, 300, 660 or 1000 feet from the pipeline depending on the diameter and operating pressure of the pipeline.

### **RSPA/OPS Decision on Using Potential Impact Radius in the HCAs**

This proposed rule presents requirements to improve the integrity of pipelines located in areas of potentially high consequences. As discussed

earlier, this proposed rule expands the current HCA definition, by presenting requirements to improve the integrity of pipelines located near people living at distances greater than 660 feet from large high pressure pipelines. This proposed expansion is based on the need to provide the same level of added protection to population groups, as the HCA definition provides to facilities that house people who are confined, difficult to evacuate, or of impaired mobility, and to areas where people congregate. The number of buildings intended for human occupancy within the potential impact circle is discussed under the proposed rule section of this preamble. The basis for identifying the physical area where concentrations of people are located so additional protective measures can be applied is discussed below.

### **The Size of the Zone That Could Be Impacted by a Gas Pipeline Rupture and Explosion**

Since existing regulations provide a basic level of protection, the primary focus of the integrity management rulemaking is on reducing the likelihood of a gas release in areas where the potential consequences are greatest. The HCA definition includes areas where a pipeline lies within 660 feet of a building housing people who would be difficult to evacuate (e.g., hospital, school, retirement facility) or where 20 or more people congregate at least 50 days in any 12-month period. The area is expanded to 1000 feet if the pipeline is greater than 30 inches in diameter and operates at pressures greater than 1000 psig. In addition, in this proposed rule we are expanding the HCA definition by proposing to include a new component of high concentration of buildings (as discussed above) intended for human occupancy beyond 660 feet. The 1000-foot limit was based on a mathematical model (developed by C-FER under INGAA funding) that describes a heat affected zone following a pipeline rupture. This heat affected zone is bounded by a "potential impact radius." This model includes numerous assumptions on the size and orientation of the pipe rupture, the physical behavior of the jet issuing from a ruptured pipeline (the pipeline is assumed to fail by a double-ended rupture), the time of ignition of the gas jet, the rate of decay in the flow of gas issuing from the pipeline, the dominant heat transfer mode, and the criterion for determining the radius within which physical damage results from the heat from a burning gas jet. Given the complexity of this analysis and the scope of assumptions needed, the only