

damage occur within ten minutes after a pipeline rupture. Although an RCV can be closed within two or three minutes to isolate a pipeline section, a safe condition is not achieved until the gas between valves has either escaped or burned off, which is almost always a longer time period than ten minutes.

These findings from the public meeting were reinforced by the results of a Gas Research Institute (GRI) study of 80 gas transmission pipeline failures over a twelve year period which showed that quick closure of valves could have prevented only one injury out of a total of 28 fatalities and 116 injuries.

We closely monitored a one year field evaluation of 90 RCVs installed by Texas Eastern Transmission Company, mostly in New Jersey and Pennsylvania. The RCVs' reliability was demonstrated by the fact that there were no unplanned closures of the valves during the year and, of the 200 plus valve cycles executed remotely, the valves closed 100 percent of the time on the first attempt.

RSPA/OPS completed a study in September 1999 titled "Remotely Controlled Valves on Interstate Natural Gas Pipelines," available in Docket RSPA-97-2879. The study shows that installing and using RCVs can effectively limit the time required to isolate ruptured pipe sections when manual valve operation is not feasible, thereby minimizing the consequences of certain gas pipeline ruptures. The study supports RCVs' effectiveness, technical feasibility, and potential for reducing risk. The study indicates that the quantifiable costs of RCV installations would almost always exceed the benefits.

However, we believe that significant risk exists at some locations as long as gas is being supplied to a rupture site, and operators currently lack the ability to quickly close existing manual valves. Any fire would be of greater intensity, and would have greater potential for damaging surrounding infrastructure, if the fire were replenished with gas over a protracted period of time. Therefore, we held another public meeting in November 1999 to consider the need for a rulemaking to establish time limits for isolating ruptured sections of gas transmission pipelines. No new data were presented at the hearing to establish critical locations where RCVs should be installed.

Consistent with the hypotheses prepared earlier, RSPA/OPS decided to incorporate a provision in the rule requiring operators to evaluate the potential value of a spectrum of preventive and mitigative measures, and to act on the results of this evaluation.

So that RSPA/OPS may understand the basis on which operator decisions are made, we will require operators to document their decision processes and decision criteria for RSPA/OPS review during inspections. Measures to be considered by operators will include those practices set forth in ASME B31.8S, as well as use of RCVs and ASVs. While these two types of valves have been analyzed generically for gas pipelines, RSPA/OPS believes that each operator should consider the merits of installing these mitigative measures at critical locations on their pipelines and make installation decisions based on pipeline-specific and site-specific evaluations.

A Process for Continual Evaluation and Assessment To Maintain a Pipeline's Integrity

The sixth element of integrity management discussed in the June 27, 2001 FR notice, related to the process for continual evaluation and assessment of pipelines to maintain their integrity. We used the following hypothesis in the notice:

Operators should continually evaluate and reassess at the specified interval each pipeline segment that could affect an area of potentially high consequence using a risk-based approach. The evaluation considers the information the operator has about the entire pipeline to determine what might be relevant to the pipeline segment.

- Managing a pipeline's integrity requires periodic reassessment of the pipeline. The time frame appropriate for this reassessment depends on numerous factors. In the current class location change regulation, gas pipeline operators are required to replace pipe segments with thicker-walled or stronger pipe (or to decrease pressure) as the near-by population increases above threshold levels. This requirement for thicker-walled or stronger pipe in areas of higher population might indicate that a longer reassessment interval would be appropriate where corrosion is the dominant threat.

- If critical risk factor data are not available to support evaluation of risks, then the reassessment interval should be appropriately shortened to reflect that absence of knowledge.

- If an operator has developed a comprehensive picture of past and anticipated threats, including detailed information on risk factors and records of multiple assessments carried out over several years, the operator might be able to justify a longer reassessment interval (see the discussion above on performance-based requirements).

- The periodic evaluation is based on an information analysis of the entire pipeline.

Comments

INGAA's comments included a discussion of the results of a Battelle analysis on assessment intervals. The analysis indicated that while the recommended reassessment interval in their report was developed based on the assumption that operators would use thicker pipe to address the Class Location requirements, the recommended interval would not be affected if operators chose to use higher strength pipe (rather than thicker pipe) to comply with changes in class location.

In addition, INGAA offered the opinion that the series of new integrity management regulations will lead to a situation in which the demand for assessment equipment and people qualified in its use and in interpretation of results will outpace the supply. This factor should be considered in determining the baseline and reassessment interval requirements.

INGAA recommended that RSPA/OPS solicit information from direct assessment service providers to evaluate the ability of the service providers to respond to the requirements for increased assessment included in the new IMP Rules.

AGA/APGA urged RSPA/OPS not to require reassessment on a prescribed interval. Intervals should be dictated by analysis using accepted risk principles along with results from the baseline assessment. If a prescriptive requirement on reassessment interval is needed, then RSPA/OPS should allow operators to deviate from that interval if it can justify such a deviation.

NYGAS commented that local distribution companies (LDCs) need greater flexibility in managing repairs and mitigative action than is implicit in the repair provisions of the liquid operator rule for operators with 500 or more miles of pipeline. The absence of such flexibility will lead to gas supply interruptions to customers.

RSPA believes that once the baseline assessment has been completed, the availability of qualified vendors and assessment equipment are no longer factors, since it is quite likely that the pipeline service industry will expand to meet the new higher level of demand. In addition, the major line modifications required to accommodate in-line inspection (ILI) equipment should be completed. Some of the factors influencing reassessment intervals are discussed above under baseline intervals. Other factors that influence