

- Static or resident threats, such as fabrication or construction defects;
- Time independent threats such as third-party damage and outside force damage; and
- Human error.

Data gathering and integration. The rule requires that to identify and evaluate the potential threats to a covered pipeline segment, an operator must gather and integrate data and information concerning the entire pipeline that could be relevant to the covered segment. Section 4 of ASME/ANSI B31.8S provides requirements for performing this data gathering and integration, and the operator must follow those requirements. At a minimum, an operator has to gather and evaluate the set of data specified in Appendix A to ASME/ANSI B31.8S, and consider both on the covered segment and similar non-covered segments, past incident history, corrosion control records, continuing surveillance records, patrolling records, maintenance history, internal inspection records and all other conditions specific to each pipeline.

Risk assessment. The rule requires an operator to conduct a risk assessment that follows Section 5 of ASME/ANSI B31.8S and considers the identified threats for each covered segment, and then use the risk assessment to prioritize the covered segments for the baseline and continual reassessments (§§ 192.919, 192.921, 192.937), and to determine what additional preventive and mitigative measures are needed (§ 192.935).

On a plastic transmission pipeline, an operator has to conduct a threat analysis to the covered segments by using data on threats unique to plastic pipe, and information in Sections 4 and 5 of ASME/ANSI B31.8S. A good source of data information may be found in plastic pipe database collection (PPDC) with AGA.

Particular threats. The rule requires that an operator take specific actions to address particular threats the operator has identified. Those threats, and the required actions, are for third-party damage, cyclic fatigue, manufacturing and construction defects, ERW or lap welded pipe, and corrosion. These threats have been identified for specific action because of their significance to pipeline integrity and because the unique operational characteristics of gas transmission pipelines dictate that they be treated uniquely. The primary difference in the operation of gas transmission pipeline related to these defects is the absence of significant pressure cycling and the associated absence of the cyclic fatigue driving

force for crack growth. The absence of significant cyclic fatigue implies that the failure of pipelines from these threats has unique causes that need to be addressed in an integrity management program for gas transmission pipelines.

An operator must utilize the required data integration and Appendix A7 of ASME/ANSI B31.8S to determine the susceptibility of each covered segment to the threat of third-party damage. If an operator identifies the threat of third-party damage, the operator—

- Must implement comprehensive additional preventive measures in accordance with § 192.935 and monitor the effectiveness of the preventive measures.

- If, in conducting a baseline assessment under § 191.921 or a reassessment under § 192.937, an operator uses an internal inspection tool, such as a caliper, geometry or magnetic flux leakage tool to address other identified threats on the covered segment, the operator must integrate data from these tool runs with data related to any encroachment or foreign pipeline crossing on the covered segment, to define where potential indications of third-party damage may exist in the covered segment.

- Have a procedure in its integrity management program addressing actions it will take in response to findings from this data integration.

The rule requires an operator to evaluate whether cyclic fatigue or other loading conditions (including ground movement, suspension bridge condition) could lead to a failure of a deformation, including a dent or gouge, or other defect in the covered segment. The evaluation must include an assumption that there are threats in the covered segment that could be exacerbated by cyclic fatigue. An operator must use the results from the evaluation together with the criteria used to evaluate the significance of this threat to the covered segment and to prioritize the integrity assessment.

The rule requires that if an operator identifies the threat of manufacturing and construction defects (including seam defects) in the covered segment, the operator must analyze the covered segment to determine the risk of failure from these mechanisms. Manufacturing and construction related defects are considered to be stable defects if the operating conditions have not significantly changed since December 17, 1998, since successful operation demonstrates that the defects do not threaten pipeline integrity. Changes in operating conditions, such as a significant increase in pressure, could

cause latent defects to grow. Therefore, if the pipeline operating conditions change such that operating pressure will be above the historic operating pressure, if MAOP increases, or if stresses that could lead to cyclic fatigue increase, the operator must treat the covered segment as a high-risk segment.

If a covered pipeline segment contains low frequency electric resistance welded pipe (ERW) or lap welded pipe that satisfies the conditions specified in Appendix A4.3 and A4.4 of ASME/ANSI B31.8 S, the rule requires an operator to select an assessment technology or technologies capable of assessing seam integrity and of detecting seam corrosion anomalies. The operator must prioritize the covered segment as a high risk segment for the baseline assessment or reassessment. If an operator finds corrosion on a covered pipeline segment that could adversely affect the integrity of the pipeline; the operator has to evaluate and remediate, as necessary, all pipeline segments (both covered and non-covered) where similar corrosion might be found (*i.e.*, with similar material coating and environmental characteristics). The evaluation and remediation, if remediation is needed, must be completed in a time frame consistent with the operator's operation and maintenance procedures under part 192 for required testing and repair.

Section 192.919 What Must Be in the Baseline Assessment Plan?

Each operator's integrity management program must contain a baseline assessment plan that has certain elements. These elements are—

(a) Identification of the potential threats to each covered pipeline segment and the information supporting the threat identification. Requirements are in § 192.917.

(b) The methods selected to assess the integrity of the line pipe, including an explanation of why the assessment method was selected to address the identified threats affecting each covered segment. The methods allowed are listed in § 192.921 and include internal inspection, pressure test, direct assessment or alternative equivalent technology. More than one method may be required to address all the threats to the covered pipeline segment;

(c) A schedule for completing the integrity assessment of all covered segments, including the risk factors considered in establishing the assessment schedule;

(d) If an operator plans to use direct assessment, a direct assessment plan that complies with the requirements in § 192.923, and depending on the threat