

INSIGHTS

Draft Pipeline Risk Modeling Report Issued for Public Comment

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As part of its integrity management regulatory scheme, the Pipeline and Hazardous Materials Safety Administration ([PHMSA](#)) [is requesting comments](#) on a [draft risk modeling report](#). In certain densely populated or environmentally sensitive areas, PHMSA integrity management rules require the continual evaluation of ways to reduce pipeline threats to minimize the likelihood and consequences of an incident. Because these rules are performance based, the methodology for analyzing and assessing risk is not prescribed and the industry employs a variety of approaches. PHMSA's draft report similarly does not dictate a particular methodology but clearly favors probabilistic and quantitative risk models that may not be practical or effective for many operators. Operators should take the opportunity to review and comment on the draft report to ensure that their experiences and insights with risk modeling are reflected prior to finalizing the document. Based on a request from industry trade groups, PHMSA recently [extended](#) the comment period an additional 30 days until October 17, 2018.

By way of background, pipeline safety regulations establish a minimum floor that operators must meet with the purpose of encouraging innovation and allowing flexibility to apply those requirements to each operator's individual system. This is particularly true with respect to the Agency's integrity management regulations. Further, risk analysis is critical to every operator's integrity management program. It informs threat identification, integrity assessments, identification of preventive and mitigative measures, calculation of integrity assessment intervals, etc. Since the inception of the integrity management rules in 2002, and in large part because of the need for flexibility, industry has developed four primary approaches for conducting risk analyses, including relative assessment/index models, qualitative models, quantitative models, and probabilistic models. Both PHMSA and the National Transportation Safety Board (NTSB) have identified general weaknesses with certain models, however, and PHMSA held a workshop in 2015 to solicit input on advancing pipeline risk models and practical ways for operators to incorporate them into their risk analyses.

As a follow up to that workshop and in response to several related NTSB recommendations, PHMSA formed the [Risk Modeling Working Group](#) to develop a pipeline risk modeling technical guidance document. The draft report is the culmination of several years of meetings and discussions, concluding that quantitative or probabilistic models are "more versatile and provide greater capabilities to provide risk insights and support decision making." According to PHMSA, relative assessment and qualitative approaches may be limited in their ability to do more "investigative oriented analyses" in order to identify specific ways to reduce risk. The

report encourages operators to select the best model approach and populate it with the best information available and improve that data over time. At the same time, the Agency admonishes that “operators planning to continue the use of qualitative and relative/index models should supplement personnel judgment with the highest degree of pipeline physical attribute data as can be reasonably acquired over time.” Further, the report states that operator models must account for interacting threats and include modeling of incorrect operations where significant. Along those lines, operators should consider the full range of scenarios—even if they have a low probability of occurring—in order to identify a high consequence outlier. Finally, the report concludes that the characteristic of the risk of pipeline *facilities* may be markedly different than that of *line pipe*, even though the same risk assessment principles apply.

Some operators have moved towards quantitative and probabilistic models over time as they have collected better data through the implementation of their integrity management and O&M programs, but even PHMSA acknowledges in the report that only a minority of operators fall into this category. The advantages and disadvantages of these risk models vary, and may depend on the practical application of risk models to each operator’s system, data software and data collection activities. An operator’s risk analysis is dependent on the quality and completeness of the data inputs that are available and employed. Many operators are still in the process of merging large and disparate amounts of operational and integrity data from diverse sources into a GIS system. Further, pipeline characteristics and operational and inspection history changes over the length of a pipeline and must be routinely updated. Operators may not maintain all of the requisite information in a format that easily lends itself to dynamic segmentation.

PHMSA’s draft risk modeling technical “guidance” document is over one hundred pages long and it favors a detailed risk model that may not be practical or feasible for all operators to implement. As operators review the conclusions and recommendations in the report, the legal effect of an administrative agency’s guidance bears repeating. The law that applies to oil and gas pipeline operators comes from three primary sources: (1) statutes (the federal Pipeline Safety Act, Natural Gas Act, state laws and sometimes local ordinances); (2) regulation (PHMSA, FERC, EPA, and some states); and (3) certain company procedures that have the force of law, by way of being incorporated into federal or state law (such as O&M and IMP manuals). Administrative agencies, such as PHMSA, issue interpretive letters, written advisories and guidance regarding application of these laws and recommendations for implementation. Agency adjudicatory decisions become legal precedent as well.

PHMSA is known for issuing numerous guidance documents, in part due to the nature of the Agency’s performance based regulations and also as it works to propose and finalize regulatory changes. Guidance documents can assist the regulated community to better understand an agency’s expectations. They do not, however, have the force of law and they are not enforceable or admissible in administrative or judicial proceedings as the basis for a claim or defense. As such, they should not be relied upon by the Agency in inspections or subsequent enforcement. This is true even where they are the product of a working group that involves various government, industry and public stakeholders and are submitted for public comment. Federal administrative agencies must issue regulations through the public notice and comment process. That process is governed by the Administrative Procedure Act and various Executive Orders. Further, the Pipeline Safety Act and Executive Orders require that the Agency evaluate and compare the costs and the benefits of certain significant rulemakings, which is also subject

to review and comment. Public review and comment, and Agency consideration of those comments, are essential to the development of sound law.