



**BILLING CODE 4910-60-W**

**DEPARTMENT OF TRANSPORTATION**

**Pipeline and Hazardous Materials Safety Administration**

**[Docket No. PHMSA-2018-0050]**

**Pipeline Safety: Gas and Hazardous Liquid Pipeline Risk Models**

**AGENCY:** Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.

**ACTION:** Notice and request for comments.

**SUMMARY:** PHMSA is publishing this notice to seek public comments on a report developed to support improvements in gas and hazardous liquid pipeline risk models titled “Pipeline Risk Modeling - Overview of Methods and Tools for Improved Implementation” (Pipeline Risk Modeling Report). Pipeline risk models are a foundational part of the assessment of operational pipeline risk. Federal pipeline safety integrity management (IM) regulations require pipeline operators to use risk assessments. Based on the results of pipeline inspections and failure investigation findings, both PHMSA and the National Transportation Safety Board (NTSB) have identified general weaknesses in the risk models often used by pipeline operators in performing risk assessments for their IM programs. The Pipeline Risk Modeling Report considers the major types of pipeline risk models, and the effectiveness of each type in supporting risk assessments, as applied to pipeline operator decisions.

**DATES:** Interested persons are invited to submit comments on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** Comments may be submitted in the following ways:

*E-Gov Web Site:* <http://www.regulations.gov>. This site allows the public to enter comments on any Federal Register notice issued by any agency.

*Fax:* 1-202-493-2251.

*Mail:* Docket Management Facility; U.S. Department of Transportation (DOT), 1200 New Jersey Avenue, SE, West Building, Room W12-140, Washington, DC 20590-0001.

*Hand Delivery:* Room W12-140 on the ground level of DOT, West Building, 1200 New Jersey Avenue, SE, Washington, DC, between 9:00 a.m. and 5:00 p.m., Monday through Friday, except Federal holidays.

*Instructions:* Identify the docket number, PHMSA-2018-0050, at the beginning of your comments. Note that all comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided. You should know that anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.).

*Docket:* For access to the docket or to read background documents or comments, go to <http://www.regulations.gov> at any time or to Room W12-140 on the ground level of DOT, West Building, 1200 New Jersey Avenue, SE, Washington, DC, between 9:00 a.m. and 5:00 p.m., Monday through Friday, except Federal holidays. If you wish to receive confirmation of receipt of your written comments, please include a self-addressed, stamped postcard with the following statement: "Comments on PHMSA-2018-0050." The Docket Clerk will date stamp the postcard prior to returning it to you via the U.S. mail. Please note that due to delays in the delivery of U.S. mail to Federal offices in Washington, DC, we recommend that persons consider an alternative method (internet, fax, or professional delivery service) of submitting comments to the docket and ensuring their timely receipt at DOT.

*Note:* Privacy Act Statement: DOT may solicit comments from the public regarding certain general notices. DOT posts these comments, without edit, including any personal information the commenter provides, to [www.regulations.gov](http://www.regulations.gov), as described in the system of records notice (DOT/ALL-14 FDMS), which can be reviewed at [www.dot.gov/privacy](http://www.dot.gov/privacy).

**FOR FURTHER INFORMATION CONTACT:**

Mr. Steve Nanney, Project Manager, PHMSA, by telephone at 713-272-2855, or by email at [Steve.Nanney@dot.gov](mailto:Steve.Nanney@dot.gov).

**SUPPLEMENTARY INFORMATION:**

PHMSA is issuing the Pipeline Risk Modeling Report to support improvements in pipeline risk models and requests public comments. Both PHMSA and NTSB have identified a need to address the risk models often used by pipeline operators in performing risk assessments for their IM programs and provide guidance where appropriate. NTSB has issued three recommendations to PHMSA in this area. NTSB Recommendation P-15-10 recommends that PHMSA update guidance for gas transmission pipeline operators and inspectors on the evaluation of interactive threats, including the listing of all threat interactions that must be evaluated and acceptable methods to be used.<sup>1</sup> NTSB Safety Recommendation P-15-12 recommends that PHMSA evaluate the safety benefits of the four risk assessment approaches currently allowed by the gas integrity management regulations; determine whether they produce a comparable safety benefit; and disseminate the results of your evaluation to the pipeline industry, inspectors, and the public.<sup>2</sup> Lastly, NTSB Recommendation P-15-13 recommends that PHMSA update guidance for gas transmission pipeline operators and inspectors on critical components of risk assessment approaches, including (1) methods for setting weighting factors,

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<sup>1</sup> [https://www.nts.gov/\\_layouts/nts.recsearch/Recommendation.aspx?Rec=P-15-010](https://www.nts.gov/_layouts/nts.recsearch/Recommendation.aspx?Rec=P-15-010)

<sup>2</sup> [https://www.nts.gov/\\_layouts/nts.recsearch/Recommendation.aspx?Rec=P-15-012](https://www.nts.gov/_layouts/nts.recsearch/Recommendation.aspx?Rec=P-15-012)

(2) factors that should be included in consequence of failure calculations, and (3) appropriate risk metrics and methods for aggregating risk along a pipeline.<sup>3</sup> PHMSA is addressing these recommendations through the Risk Modeling Report process.

PHMSA organized a Risk Modeling Work Group (RMWG) composed of representatives of state and federal pipeline regulators, pipeline operators, industry organizations, national laboratory personnel, and other stakeholders. The purpose of the RMWG was to gather information regarding state-of-the-art pipeline risk modeling methods and tools, the use of those methods and tools, and the resulting data in operator IM programs. The Pipeline Risk Modeling Report provides an overview of methods and tools for improved implementation based on the results of the RMWG. The RMWG meeting notes and presentations can be reviewed at: <https://primis.phmsa.dot.gov/rmwg/index.htm>.

The Pipeline Risk Modeling Report considers the major types of pipeline risk models, and the effectiveness of each type in supporting risk assessments, as applied to pipeline operator decisions. The four major risk model categories considered for gas and hazardous liquid pipelines are:

- Qualitative;
- Relative Assessment/Index;
- Quantitative System, and
- Probabilistic.

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<sup>3</sup> [https://www.nts.gov/\\_layouts/nts.recsearch/Recommendation.aspx?Rec=P-15-013](https://www.nts.gov/_layouts/nts.recsearch/Recommendation.aspx?Rec=P-15-013)

Each model category is characterized by the model inputs, outputs, and algorithms and was evaluated according to its ability to support pipeline risk management decisions and regulatory requirements.

The Pipeline Risk Modeling Report focuses on the applicability of the different risk model types to various risk management decisions required by the Federal pipeline safety IM regulations, including:

- Risk Priorities for Baseline Integrity Assessments;
- Identification of Preventive Measures and Mitigative Measures;
- Evaluation and Comparison of Preventive Measures and Mitigative Measures;
- Consideration of Threats and their Interactions in Risk Assessments;
- Benefit-Cost Analysis for Risk Reduction Options;
- Integrity Assessment Interval Determination; and
- Support of Continual Evaluation of Integrity and General Risk Management Decision Making.

PHMSA invites interested persons to participate by reviewing the Pipeline Risk Modeling Report on gas and hazardous liquid pipeline risk models in docket no. PHMSA-2018-0050 at <http://www.Regulations.gov>, and by submitting written comments, data, or other views. Please include any comments on potential safety and environmental impacts that may result from issuance of the Pipeline Risk Modeling Report.

Before finalizing the Pipeline Risk Modeling Report, PHMSA will evaluate all comments received on or before the comment closing date. PHMSA will consider each timely-filed, relevant comment we receive in making any changes to the final Pipeline Risk Modeling Report. Comments received after the closing date will be evaluated to the extent practicable.

Issued in Washington, DC on August 9, 2018, under authority delegated in 49 CFR 1.97.

**Alan K. Mayberry,**

*Associate Administrator for Pipeline Safety.*

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