April 30, 2012

DOT Docket Management System
West Building, Ground Floor, Room W12-140
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590-0001

VIA ELECTRONIC FILING (http://www.regulations.gov)

Re: *Pipeline Safety: Public Comment on Leak and Valve Studies Mandated by the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011*, Docket No. PHMSA–2012–0021

Dear Sir or Madam:

The Interstate Natural Gas Association of America (INGAA) submits this comment letter per the Notice of Public Comment issued in the referenced docket by the Pipeline and Hazardous Materials Safety Administration (PHMSA) on March 29, 2012, and published in the *Federal Register* on March 30, 2012 (the Notice).[1] INGAA is a non-profit trade association that represents the interstate natural gas transmission pipeline industry. INGAA's members represent over 65 percent of the mileage comprising the U.S. natural gas transmission pipeline system. The interest of INGAA's members in the matters addressed in the Notice is self-evident.

Section 8 of the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (2011 Pipeline Safety Act)[2] directs the Secretary of Transportation to conduct an analysis of:

> the technical limitations of current leak detection systems, including the ability of the systems to detect ruptures and small leaks that are ongoing or intermittent, and what can be done to foster development of better technologies; and
>
> . . .the practicability of establishing technically, operationally and economically feasible standards for the capability of such systems to detect leaks, and the safety benefits and adverse consequences of requiring operators to use leak detection systems.[3]

The Notice solicits public comment on the scope of the section 8 analysis.[4]

These comments build on INGAA's remarks offered at last month's leak detection workshop. INGAA's members work every day toward a goal of zero incidents; that is, a perfect

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1 77 Fed. Reg. 19414.

2 Pub.L.No.112-90 (2012).

3 *Id.*, § 8(a)(2)(A), (B).

4 The Notice also solicits public comment on the scope of a separate PHMSA-sponsored study, required by a different section of the 2011 Pipeline Safety Act, concerning valves and incident mitigation. INGAA is addressing the incident mitigation study in a separate filing.

record of safety and reliability. Consistent with this broadly-publicized goal,[5] INGAA members' primary focus is on preventing releases, including leaks. Significant efforts by INGAA members therefore focus on preventive measures.

Beyond these preventive measures, INGAA members recognize the importance of having risk-based processes and procedures in place for leak detection and response. Risk-based leak detection and response, like all other aspects of risk-based pipeline safety management, turns on a data-driven analysis of two factors: potential consequences and the likelihood of their occurrence.

The potential consequences of a pipeline leak vary widely depending on four key factors:

- Product (natural gas, crude oil, natural gas liquids, refined products)
- Location (proximity to and ability to impact people, property and the environment)
- Magnitude (small pinhole to full-bore opening)
- Duration (amount of product released)

Applying these four factors to natural gas transmission pipelines, the risk associated with a rupture is historically and demonstrably larger than the risk associated with a leak. Thus, a small pinhole leak in a remote, unpopulated area warrants a response commensurate with its risk, but does not merit, and should not elicit, the same response as a much larger release in a highly populated area.

Under a risk-based analysis, decisions are made based on data instead of characterization or conjecture. For example, during last month's leak detection workshop, some characterized small leaks on natural gas transmission systems as hazardous and important, while others characterized small leaks generally as not very hazardous and not a significant risk element. INGAA believes that the latter view is probably more correct. Instead of pursuing a conflict over characterization, the better course is to subject small leaks to a risk analysis, using the four criteria noted above, and act accordingly.

A reliance on data-driven risk analyses also addresses arguments that would base leak detection activities on the suggestion that leaks are precursors to ruptures. Current data does not support this suggestion, so it is not an appropriate foundation for an empirical, risk-based analysis. That said, leaks and ruptures may result from common causes, and in that case prevention, rather than detection, would be the most desirable solution.

During last month's workshop, several viewpoints were expressed that appeared, at least on the surface, to be in conflict with each other:

- One opinion was that real-time transient flow/pressure models were essential to internal leak detection systems and should be employed; another opinion was these models may be almost useless on natural gas transmission systems. INGAA believes that these leak detection models do not reduce risk or reliably detect leaks on natural gas transmission

[5] In March 2011, INGAA's board of directors adopted five "Guiding Principles for Pipeline Safety." The first guiding principle is: "Our goal is zero incidents — a perfect record of safety and reliability for the national pipeline system. We will work every day toward this goal." The Guiding Principles can be accessed on INGAA's web site at http://www.ingaa.org/File.aspx?id=13189.

systems due to the compressible nature of natural gas, the complexities of pipeline systems and transient gas flow, and the inherit, industry-available tolerances within measurement and other transducers that provide input into such models. Experience has shown that real-time models do not have the necessary capabilities to overcome the large challenges of detecting gas leaks given available technologies and therefore do not reduce risk for natural gas transmission pipelines.

- One presenter indicated that external sensors, such as fiber-optics and external clamp-on ultrasonic flow meters were extremely easy to incorporate into new pipelines and relatively inexpensive and easy to retrofit onto existing pipeline. By contrast, an operator noted that the sensors can be very expensive and difficult to impossible to retrofit onto existing lines, due to right-of-way and system design and configuration issues and complexities. INGAA believes the latter is more often the case, and the decision to install such sensors, whether initially or by retrofitting, should be based on a practical assessment of the risk reduction or safety benefit that realistically may be achieved.

It is possible that each speaker was correct within the context he had in mind at the time, but perhaps incorrect under other conditions.

These differences, and the conditions that are attached to or explain them, underscore INGAA's overall message and recommendation to PHMSA as it prepares its report to Congress and otherwise moves ahead on this subject. Natural gas transmission systems seldom are simple and typically are complex. They involve multiple lines, have or do not have open crossovers, operate at differing MAOPs, involve several levels of laterals, deliveries and inputs, and have widely varying flow rates, gas compositions, and line pack. These complexities are very difficult to model and monitor. INGAA urges PHMSA to keep in mind both this complexity and that detection of leaks likely will reduce neither the occurrence of ruptures nor the consequences of releases and to maintain focus on reducing real, demonstrable risks to people, property and the environment.

Focusing the study on risk is particularly important in two contexts. First, the NTSB has recommended that PHMSA require all operators of natural gas transmission and distribution pipelines equip their supervisory control and data acquisition (SCADA) systems with tools to assist in recognizing and pinpointing the location of leaks, including line breaks. At present, the suggested SCADA tools lack the reliability and credibility needed for a leak detection system. Applying a risk-based approach to leak detection management, the appropriate step is not immediate deployment, as NTSB recommends, but the development of systems and technology that truly and reliably can detect a gas leak amid the complexities and nature of gas pipeline systems. INGAA welcomes research and development efforts to accomplish this in a reliable, common-sense, and value-adding manner.

Second, INGAA urges PHMSA not to overemphasize widespread leak detection, setting the expectation of other stakeholders that safety will be improved, when technical analysis and experience reveals that such action neither is justified nor is likely to achieve real risk reduction. When preventive and mitigative resources are finite, as is widely acknowledged, their best use clearly is to direct them toward maximum risk reduction. At the present time, that use may not be looking for small leaks on largely rural natural gas transmission systems.

INGAA appreciates this opportunity to comment and is eager to work with PHMSA and other stakeholders to develop meaningful proposals to advance pipeline safety, leak prevention and detection.

Respectfully submitted,

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