**BEFORE THE**
**PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION**
**UNITED STATES DEPARTMENT OF TRANSPORTATION**
**WASHINGTON, D.C.**

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| Pipeline Safety: Class location Requirements | Docket PHMSA-2013-0161 |

# COMMENTS OF THE INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA ON THE PHMSA NOTICE OF INQUIRY FOR CLASS LOCATION REQUIREMENTS

November 1, 2013

# Contents

## Executive Summary

The Interstate Natural Gas Association of America (INGAA), a trade organization that advocates regulatory and legislative positions of importance to the interstate natural gas pipeline industry in North America, welcomes the opportunity to submit comments in response to the Pipeline and Hazardous Materials Safety Administration's (PHMSA) Notice of Inquiry for Class Location Requirements.[1]

In the notice, PHMSA requested comments on whether elements of the integrity management program (IM) should be applied beyond high consequence areas (HCAs), thereby mitigating the need for class location requirements for natural gas transmission pipelines.[2]

INGAA recommended this exact position during the development of the Integrity Management Program in 2002. PHMSA agreed at the time that some integrity management requirements addressed the safety concerns embedded in class location requirements. INGAA still believes there is overlap that needs to be resolved on class location pipe replacements.

INGAA believes that integrity management should be extended beyond high consequence areas. INGAA has already made a series of commitments to extend and improve integrity management. However, if PHMSA decides to extend IM, it must examine the effects of such a change on other sections of the pipeline safety regulations.

INGAA provides the following high-level concepts to address these issues.[3]

1. INGAA recommends a bifurcated approach to class locations to allow for companies to continue operating under the existing class system. Operators could either follow existing class location requirements or a new approach

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[1] PHMSA's first Federal Register notice, dated August 1, 2013, classified the request as a notice of proposed rulemaking. However, in the September 30, 2013 Federal Register Notice, PHMSA referred to the request as a Notice of Inquiry. In subsequent discussions with INGAA staff, PHMSA confirmed that the notice should have been captioned as a Notice of Inquiry. *See* "Pipeline Safety: Class Location Requirements," 78 FR 46560 (August 1, 2013) and "Pipeline Safety: Class Location Requirements," 78 FR 59907 (September 30, 2013).

[2] Integrity Management principles, the elements of an integrity management program, are defined in INGAA's Members Commitment for Expanding Integrity Management Principles Beyond High Consequence Areas.

[3] PHMSA requested responses to fifteen detailed questions. INGAA chose to provide its comments as high-level concepts as there is significant overlap between many of the questions. Since many of these concepts cover several different questions from the Notice, a table cross-referencing the PHMSA question and the associated INGAA response is provided in Appendix A.

supported by a Potential Impact Radius (PIR) calculation. INGAA's bifurcated proposal is discussed in greater detail on page 6.

2. INGAA recommends that PHMSA consider an alternative approach to the current class location regulations that may require a pipe replacement when a population density increase occurs. This new approach would utilize integrity management principles and new technology to determine if a pipeline segment requires replacement.

3. INGAA recommends that PHMSA consider adjusting certain operation and maintenance requirements that may no longer be necessary given new technology and operators' current integrity management activities.

4. INGAA recommends a reassessment of the class location design criteria for new pipelines given technological advances in design, materials, engineering and construction.

5. INGAA recognizes that the proposals outlined in these comments will require additional discussion with stakeholders. Therefore, INGAA recommends that PHMSA sponsor a workshop to discuss these issues.

## Background

In the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (PSA of 2011), Congress requested that PHMSA evaluate whether applying integrity management program requirements to non-HCAs would mitigate the need for class location requirements.[4]

Class locations were used as the first method to predict the potential impact and consequences of a pipeline failure. This allowed regulators and industry alike to prioritize segments of pipelines for additional focus. The use of class locations can be linked to the early standards that pipeline operators relied on prior to the enactment of the pipeline safety regulations. For instance, the 1942 version of the American Standards Association B31.1 standard references "divisions," which were used to describe the population density surrounding the pipeline at the time of construction.

In 1968, the American Society of Mechanical Engineers incorporated class locations into its ASME B31.8 which served as basis for the interim pipeline safety regulations. In 1970, the Hazardous Materials Regulations Board, a predecessor to PHMSA, introduced the pipeline safety regulations (Part 192) and included class location requirements in the rule. Although the agency modified the definitions as part of the public commenting process, its Part 192 class location scheme largely followed the same structure as the 1968 standard.[5]

The basis of deciding the class location for a pipeline segment rests on the number of buildings in a class location unit, which is defined as "an onshore area that extends 220 yards (200 meters) on either side of the centerline of any continuous 1- mile (1.6 kilometers) length of pipeline."[6] The following table illustrates the requirements listed in 49 C.F.R. § 192.5.

[4] Section 5 of the PSA of 2011
[5] *See* 49 C.F.R. § 192.5.
[6] *Id.*

**Table 1: Description of Class locations**

| Class location | Description – class location unit that contains: |
|---|---|
| **1** | 10 or fewer buildings |
| **2** | More than 10 but fewer than 46 buildings |
| **3** | 46 or more buildings or meets certain occupancy requirements for buildings/areas containing 20 or more people (Note: for areas with 20 or more people with specific occupancy requirements, the distance is revised to 300' of the pipeline, not 660') |
| **4** | Four or more stories are prevalent |
| *Buildings are counted if they are located within 660 feet of the pipeline centerline* | |

Another method to determine consequence is the Potential Impact Radius or PIR. The PIR methodology was designed as a screening tool to determine areas of high consequence for use in PHMSA's Integrity Management regulations (Subpart O), promulgated in 2003. It is a calculation that estimates the potential impact area of 1 percent lethality for an accumulated thermal radiation dose by persons in an open area (see GRI 00/0189 p8).[7] It is dependent on the Maximum Allowable Operating Pressure (MAOP) and the diameter of the pipeline segment.

The PIR is defined in the federal regulations as:

> ….the radius of a circle within which the potential failure of a pipeline could have significant impact on people or property. PIR is determined by the formula r = 0.69* (square root of (p*d^2 )), where 'r' is the radius of a circular area in feet surrounding the point of failure, 'p' is the maximum allowable operating pressure (MAOP) in the pipeline segment in pounds per square inch and 'd' is the nominal diameter of the pipeline in inches.[8]

INGAA's members currently use the PIR methodology to determine HCAs. It is widely recognized as an improved tool to predict potential impact, manage consequence and protect people living near the pipeline. The use of PIR also aligns well with INGAA's commitment to extend and improve IM to all interstate pipelines with population within the PIR by 2030. Such initiatives are discussed further in Appendix B: Summary of INGAA Commitments.

[7] PHMSA-RSPA-2000-7666-0049

[8] 49 C.F.R § 192.903.

# Detailed Comments

## A Bifurcated Approach to Measuring and Responding to Consequence

PHMSA requested comments on whether the extension of IM principles to non-HCA areas would mitigate the need for class locations. In response, INGAA is proposing a bifurcated approach to population risk-based management. This approach would retain the class location scheme that operators, PHMSA personnel and state partners understand (the "traditional approach") and introduce an approach using the PIR (the "alternative approach").[9]

PHMSA first introduced PIR to determine HCAs for the purposes of integrity management. INGAA believes that this use of PIR was a success and now supports the idea that PHMSA incorporate it into the determination of operation and maintenance (O&M) requirements. PIR-based consequence modeling is also consistent with INGAA's approach to the Integrity Verification Process (IVP) and to its proposal to extend and improve Integrity Management.

INGAA is proposing a bifurcated approach to population-based risk management. Two types of consequence modeling should not be used in concert or layered on top of each other. INGAA raises this issue because it is concerned that PHMSA is using both class location and PIR in its IVP. Specifically, PHMSA defines a MCA as "a non-HCA pipe in Class 2, 3, or 4 location or a Class 1 with one structure within the PIR."[10] INGAA commends PHMSA for considering the MCA concept; however, PHMSA should select one consequence model to define this term.

### *Advantages of using a traditional class location consequence modeling method.*

Operators have used the traditional method to determine a class location since 1968. Operators and regulators understand this approach. They have determined the class designation for pipe currently in the ground today based on this system. Therefore, retaining this traditional approach would provide some continuity for existing pipe.

### *Advantages of using a PIR consequence modeling method.*

The PIR is dependent on a pipeline's Maximum Allowable Operating Pressure (MAOP) and diameter. The potential impact radius adjusts as a pipeline's pressure and size change. In contrast, the class location methodology does not rely on the operating characteristics of the pipeline. Class location methodology is largely determined by an area that extends 660 feet on either side of the centerline of any continuous one-mile length of pipeline. It can overestimate or underestimate the consequences of a failure.

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[9] There are about 25 separate sections of Part 192 that directly mention class location, either in defining class location or specifying some requirement based, at least in part, on class location. It is likely that even further interdependencies exist beyond these sections. INGAA's proposal does not attempt to provide revised language for the code sections as this approach does not eliminate the existing class location requirements.

[10] PHMSA's Integrity Verification Process dated September 10, 2013.

The PIR may require operators to consider structures beyond the 660 feet used in the traditional class location approach. For instance, if a 48" pipeline had a MAOP of 1400 psi, the PIR distance would be 1240 feet, compared with only the distance of 660 feet for class location.

**Table 2: Comparison of PIR and Class location Distances**

| Class location Distance (ft.) | PIR Distance (ft.) | Diameter (inches) | MAOP (psi) |
|---|---|---|---|
| 660* | 155 | 6 | 1400 |
| 660* | 310 | 12 | 1400 |
| 660* | 620 | 24 | 1400 |
| 660* | 930 | 36 | 1400 |
| 660* | 1240 | 48 | 1400 |
| 660* | 130 | 6 | 975 |
| 660* | 259 | 12 | 975 |
| 660* | 518 | 24 | 975 |
| 660* | 776 | 36 | 975 |
| 660* | 1035 | 48 | 975 |
| 660* | 93 | 6 | 500 |
| 660* | 186 | 12 | 500 |
| 660* | 371 | 24 | 500 |
| 660* | 556 | 36 | 500 |
| 660* | 741 | 48 | 500 |
| *660', except for Class 3 areas with 20 or more people meeting specific occupancy requirements | | | |

Using PIR will also provide clarity to some ambiguous language such as the sliding mile, 'prevalent' term and the concept of clustering in the current pipeline safety regulations. Clearing up these ambiguities is in both the operators' and PHMSA's best interest.

## Population Density Increases Should Not Require a Pipe Replacement if an Operator Can Meet Certain Requirements

An operator should not have to change out pipe when a class location change occurs if the operator can prove that the pipe segment is fit for service. Currently, population increases near a pipeline can trigger a mandatory pipe replacement if the pipeline has changed class location. These pipe replacements often involve pipe that is in good condition. Replacing a line in good condition does not appreciably change the risk to the nearby affected public. The original rulemaking addressing class location upgrades based on population increases was developed in 1970 when much of the technology and processes that are common today were not utilized or envisioned. INGAA believes that if a pipeline segment meets certain criteria, it should not arbitrarily be replaced. Therefore, a revision to the existing class location change-out requirements should be considered.

### *Operators Should Not Have to Replace Pipelines that Meet Fit for Service Criteria.*

In order to be considered "fit for service" for purposes of not needing a pipe change-out, the pipeline segment must meet the following criteria:

- It has passed through the proposed INGAA MAOP validation process that was submitted as part of the INGAA IVP comments (e.g., pressure test to 1.25 MAOP),
- It has traceable, verifiable, and complete records necessary for IM implementation concepts submitted as part of the INGAA IVP comments,
- The operator has considered whether the pipeline has problematic material and construction features, and
- The line is subject to re-occurring Integrity Management processes that are included in concept in the INGAA IVP comments (e.g., In-Line Inspections (ILI)).

The proposed "fit for service" criteria would affect more pipe mileage than the current pipe change-out regulations. For example, a class location change-out under the current regulations may require an operator to replace 250 feet of pipe. However, under the fit for service criteria, the operator has to run ILI tools. It is logical that the entire valve segment, or multiple valve segments, would be included in such an ILI (ILI runs can be upwards of 80 miles from launcher to receiver). Therefore, under the "fit for service" criteria, the operator would review more than the 250 feet of pipe evaluated under a change-out process. In addition, a pressure test of a segment would likely encompass more than just the 250 feet of pipe that would traditionally be replaced, benefiting the adjacent pipe as well.

### *Advancements in IM technology and processes have superseded the need for arbitrary pipe replacement.*

Historically, a class location change resulting in a pipe replacement was logical because of the basic understanding that thicker wall pipe would take longer to corrode and more force would have to be applied (such as from an excavator) for the pipe to fail. Replacement was appropriate when the industry did not have the technology that is available today. However, given the current technology and pipe quality improvements, these threats can be mitigated without a pipe replacement. For example, the threat of corrosion can be mitigated with existing high-resolution magnetic flux leakage technology. Combined with recent developments and improvements in damage prevention (while also recognizing that today's excavation equipment is significantly more powerful), it makes sense to modify class location change-out regulations.

### *The IM rule clearly contemplated an alternative option to pipe change-outs.*

Finally, an alternative option for pipe change-outs is a logical outgrowth of the IM rule. Permitting an IM-based alternative in lieu of pipe replacement was clearly contemplated during the implementation of IM. In the preamble to the final IM rule, published on December 15, 2003, PHMSA stated:

> The rule will provide a better technical justification to support waivers from existing requirements that mandate replacement of pipeline when population increases cause a change in class location. Experience may lead to future changes in the existing requirements.[11]

PHMSA also stated in the cost-benefit analysis of the rule:

> Another benefit to be realized from implementing this rule is reduced cost to the pipeline industry for assuring safety in areas along pipelines with relatively more population. The improved knowledge of pipeline integrity that will result from implementing this rule will **provide a technical basis for providing relief to operators from current requirements to reduce operating stresses in pipelines when population near them increases.** Regulations currently require that pipelines with higher local population density operate at lower pressures. This is intended to provide an extra safety margin in those areas. Operators typically replace pipeline when population increases, because reducing pressure to reduce stresses reduces the ability of the pipeline to carry gas. Areas with population growth typically require more, not less, gas. Replacing pipeline, however, is very costly. Providing safety assurance in another manner, such as by implementing this rule, could allow RSPA/OPS to waive some pipe replacement. RSPA/OPS estimates that such waivers could result in a reduction in costs to industry of $1 billion over the next 20 years, with **no reduction in public safety**.[12]

The "fit for service" criteria can provide the safety assurance that PHMSA noted in its development of the IM rule. Therefore, PHMSA should consider INGAA's proposal to modify the change-out requirements when a population increase occurs.

[11] "Pipeline Safety: Pipeline Integrity Management in High Consequence Areas (Gas Transmission Pipelines)," 68 FR 69778, 69782 (December 15, 2003).

[12] *Id.* at 69812 (emphasis added)

### *PHMSA should use INGAA's class location change-out criteria as an alternative to class location special permits.*

In approximately 2005, PHMSA developed and published criteria for class location special permits (SPs). The agency's review of class location SPs in 2005-2008 is particularly instructive. During that period, several class location SPs were granted with conditions. Operators receiving the SPs were required to meet additional IM-related operations and reporting conditions in order to receive relief from the pipe replacement requirements.

PHMSA granted class location permits after this time period but the conditions in later permits widely varied. The inclusion of this process in a rulemaking would provide more consistency and predictability for both PHMSA and the industry. However, not all pipeline segments will be able to meet these requirements. Ineligible pipelines would continue to be subject to existing pipe replacement requirements.

## PHMSA should consider reassessing certain operation and maintenance requirements due to new technology.

PHMSA requested comments on whether the extension of IM to non-HCA areas would mitigate the need for class locations. As stated earlier, INGAA believes IM should be extended. However, PHMSA should evaluate the effect of such an extension on other portions of the pipeline safety regulations. In terms of operation and maintenance (O&M) requirements, there are at least 20 class location-based O&M practices. Many of these practices did not envision the use of ILI technology or excavation damage protection at the time they were promulgated. PHMSA should conduct a review of these requirements to determine if they are still necessary given the advances in pipeline technology.

## PHMSA also should reconsider design criteria for new pipelines given the existence of new technology and processes.

PHMSA should consider new design criteria for newly constructed pipelines. Currently, PHMSA determines the design factor for the purposes of the 49 C.F.R. § 192.105 design formula based on a segment's class location. As provided in 49 C.F.R. § 192.111, the current design factors and corresponding class locations are shown in the following table:**Error! Reference source not found.**

**Table 3: Class location and Design Factors**

| Class location | Design Factor (F) |
|---|---|
| 1 | .72 |
| 2 | .60 |
| 3 | .50 |
| 4 | .40 |

These requirements have been in place for over 60 years and do not account for technological advances, including:

- higher strength, ductile, tougher and fracture-resistant steels
- modern construction techniques including improved welding, non-destructive testing, more durable and protective coatings
- in-line inspection tools to identify metal loss, dents, gouges and strain
- above-ground tools to characterize coating condition and effectiveness of cathodic protection, among others

Advances in technology now enable the use of a single design factor. PHMSA should consider a move toward a single design factor for all new pipelines installed in the future. The one exception is for new segments in densely populated areas with a very specific risk profile where a special design factor may be necessary.

## Additional Discussion Warranted

INGAA recognizes that the proposals outlined in these comments will require additional discussion with stakeholders. Therefore, INGAA recommends that PHMSA sponsor a workshop to discuss these issues.

## Appendix A: Cross-reference between PHMSA's questions and INGAA's proposals

The table provided below provides a cross reference between PHMSA's questions provided in its Notice and the corresponding section of INGAA's comments. INGAA chose to provide its comments in this manner as there is significant overlap between many of the questions, and INGAA believes it is best to provide the high-level concepts that make up its proposal, so that all stakeholders can discuss these concepts first.

| PHMSA Question No. | Question | Sub-question | INGAA Reference providing guidance |
|---|---|---|---|
| 1 | Should PHMSA increase the existing class location design factors in densely populated areas where buildings are over four stories? | | Page 10 |
| 2 | Should class locations be eliminated and a single design factor used if IM requirements are expanded beyond HCAs? | | Page 8 |
| 3 | Should there only be a single design factor for areas where there are large concentrations of populations, such as schools, hospitals, nursing homes, multiple-story buildings, stadiums, and shopping malls, as opposed to rural areas like deserts and farms where there are fewer people? | | Page 8 |
| 4 | Should operators be allowed to increase the MAOP of a pipeline from the present MAOP if a single design factor is created for all levels of population density? | | Page 8 |
| 5 | If class locations are eliminated and a single design factor used, should that single design factor be applied to existing pipelines: | | Page 8 |
| | | a. Installed before 1970 (pre-Federal regulation)? | Page 8 |

| PHMSA Question No. | Question | Sub-question | INGAA Reference providing guidance |
|---|---|---|---|
| | | b. That use low-frequency electric resistance welded pipe, electric flash welded pipe, lap-welded pipe, or other pipe manufactured with a seam factor less than 1.0 in accordance with Section 192.11? | Page 8 |
| | | c. That include pipe without mechanical (strength) and chemical properties reports? | Page 8 |
| | | d. That include pipe that has not been tested at or above 1.25 times MAOP? | Page 8 |
| | | e. That include pipe that operates without a pressure test in accordance with the Grandfather Clause in Section 192.619(c)? | Page 8 |
| | | f. That include pipe that is presently operating above the design factor of a Class 1 location due to the Grandfather Clause in Section 192.619(c)? | Page 8 |
| | | g. That include pipe with external coatings that shield cathodic protection? | Page 8 |
| 6 | Should a pipeline that is operated with a single design factor be subject to periodic operational IM measures, similar to the criteria for HCA locations, including: | | Page 8 |
| | | a. Close interval surveys? | INGAA comments on IM portion of IVP comments |
| | | b. Coating surveys and remediation? | INGAA comments on IM portion of IVP comments |
| | | c. Stress corrosion cracking surveys (SCC) and segment replacement (if a SCC threat is found and not remediated)? | INGAA comments on IM portion of IVP comments |
| | | d. An ongoing monitoring program for DC currents and induced AC currents in high-voltage power transmission line corridors (including proper remediation plans)? | INGAA comments on IM portion of IVP comments |

| PHMSA Question No. | Question | Sub-question | INGAA Reference providing guidance |
|---|---|---|---|
| | | e. In-line tool inspections (ILI) to inspect for pipe metal loss (corrosion), cracks, hard spots, weld seams, and other integrity threats in steel pipe (ILI tool evaluations for metal loss must use specified-or-greater interaction criteria to ensure defects meet a minimum integrity criterion)? | INGAA comments on IM portion of IVP comments |
| | | f. Repairs to defects within a periodic time interval that is based on maintaining the pipeline design safety factor with a maximum pipe wall loss? | INGAA comments on IM portion of IVP comments |
| | | g. Pipe surveys of the depth of cover over buried pipelines? | INGAA comments on IM portion of IVP comments |
| | | h. Data integration of all surveys, excavations, remediation, and other integrity threats? | INGAA comments on IM portion of IVP comments |
| | | i. Pipeline remediation based on assessment and data integration findings? | INGAA comments on IM portion of IVP comments |
| 7 | Should pipelines where a single design factor is used for establishing the MAOP be required to ensure that: | | Page 10 |
| | | a. Pipe seam quality issues are assessed and those pipes with quality or integrity concerns are removed from service? | Page 10 |
| | | b. Pipe coatings on the pipeline and girth weld joints are non-shielding to cathodic protection? | Page 10 |
| | | c. Pipe in a cased crossing can be assessed for metallic and electrolytic shorts? | Page 10 |
| | | d. Pipe defects or anomalies that cause the pipeline to not meet the pipeline's MAOP are remediated based on the design factor of the pipeline with a maximum pipe wall loss? | Page 10 |
| | | e. All girth welds are nondestructively tested at the time of construction? | Page 10 |

| PHMSA Question No. | Question | Sub-question | INGAA Reference providing guidance |
|---|---|---|---|
| | | f. Minimum pipeline hydrostatic test pressures, based on MAOP and pipe yield strength, are met? | Page 10 |
| | | g. Maximum spacing for cathodic protection pipe-to-soil test stations exists? | Page 10 |
| | | h. Additional safety measures are implemented in areas with reduced depth of cover over buried pipelines? | Page 10 |
| | | i. Line-of-sight markings on the pipeline are maintained, except in agricultural areas or at large water crossings (such as lakes) where line-of-sight signage is not practical? | Page 10 |
| | | j. Monthly ground or aerial right-of-way patrols are performed? | Page 10 |
| | | k. The applicable best practices of the Common Ground Alliance are included in the operator's damage prevention program? | Page 10 |
| | | l. The pipeline is incorporated into an IM program as a ''covered segment'' in an HCA in accordance with Section 192.903, which will include seven-year maximum periodic reassessment intervals according to § 192.939? | Page 10 |
| 8 | Should a root cause analysis be required to determine the cause of all in-service and hydrostatic test failures or leaks? | | See INGAA Foundation "Technical, Operational, Practical, and Safety Considerations of Hydrostatic Pressure Testing Existing Pipelines" |
| 9 | Should pipelines without documented and complete material strength, wall thickness and seam records for pipe, fittings, flanges, fabrications, and valves, in accordance with Sections 192.105, 192.107, and 192.109 be allowed to operate at the single design factor? | | See INGAA comments on IVP |

| PHMSA Question No. | Question | Sub-question | INGAA Reference providing guidance |
|---|---|---|---|
| 10 | Should operators of pipelines that are allowed to operate at the single design factor complete hydrostatic tests as required by Part 192, Subpart J, and maintain records as required in Section 192.517? | | See Page 10 |
| 11 | Should pipelines, under a single design factor, be required to meet additional pipe manufacturing quality controls to minimize defects such as low-strength pipe, steel laminations, and pipe seam defects? | | See Page 10 |
| 12 | Should pipeline construction personnel who would work in areas subject to the single design factor be required to take a construction operator qualification program? | | See Page 10 |
| 13 | For emergency response and pipeline isolation purposes in the event of a rupture or leak, if a single design factor is allowed, what should the maximum spacing be between the mainline valves on a pipeline? | | See Page 10 |
| | | a. Should all mainline valves be remotely or automatically activated if there is a rupture or leak on the pipeline? | See Page 10 |
| | | b. If, during a rupture or a leak, the mainline valves are not remotely or automatically activated, what should the maximum time be for a pipeline crew to isolate the mainline section? | See Page 10 |
| 14 | What should pressure limiting devices be set to for a pipeline operating with a single design factor? | | See Page 10 |

| PHMSA Question No. | Question | Sub-question | INGAA Reference providing guidance |
|---|---|---|---|
| 15 | If the design factors of class locations were to be eliminated, and a single design factor used instead, what additional design, construction, and operational criteria are required to maintain pipeline safety in urban areas and in rural areas? | | See Page 10 |

# Appendix B: Summary of INGAA Commitments

In December 2010, INGAA's board of directors established a board-level task force to signal its commitment to improving the industry's safety performance and restoring public confidence in natural gas pipelines. In March 2011, INGAA members formally adopted a set of Guiding Principles for pipeline safety, which included a primary goal of zero incidents– a perfect record of safety and reliability for the nation's onshore natural gas transmission pipelines. In July 2011, INGAA members agreed to a multi-facetted action plan to achieve this aggressive safety goal. The commitments resulting from this action plan are provided below:

## Demonstrate Fitness for Service on Pre-Regulation Pipelines

INGAA members commit to a systematic validation of records and maximum allowable operating pressure (MAOP) for their pipelines in highly populated areas that pre-date federal regulation. The process will address National Transportation Safety Board (NTSB) recommendations issued in the wake of the San Bruno, California, pipeline accident to evaluate and ensure the safety of member pipelines.

- Reference:
  - White Paper: *Definition and Application of Fitness for Service to Gas Pipelines*, dated May 31, 2012
    - Docket ID: PHMSA-2013-0119-0005
  - *Fitness for Service: Defined and Explained*, dated April 2012
    - Docket ID: PHMSA-2013-0119-0006
  - Summary: *Resident Manufacturing and Construction Threats,* dated January 7, 2013
    - Docket ID: PHMSA-2013-0119-0008

## Extend and Improve Risk Management

INGAA members commit to apply integrity management principles – currently required only for the six percent of natural gas transmission pipeline located within highly populated areas – to the entire transmission system operated by INGAA members. This expansion will be focused on population within the Potential Impact Radius (PIR) along the pipeline. INGAA members will expand the program to 90 percent of the population within the PIR by 2020, and 100 percent by 2030.

- Reference
  - Summary: INGAA Members Commitment for Expanding Integrity Management Principles Beyond High Consequence Areas (HCAs)
    - Docket ID: PHMSA-2013-0119-0004

### Raise the Standards for Corrosion Anomaly Management

INGAA members commit to managing all corrosion anomalies found during inspection—both inside and outside of HCAs—in accordance with technically based consensus standards and to refine the direction on application of assessment technology.

### Shorten Pipeline Isolation and Response Time to One Hour

INGAA members commit to developing processes and technology to enhance the protection of people and property located adjacent to a pipeline, including setting a response-time goal of one hour from incident recognition to the start of valve-closure procedures in highly populated areas and improving communication with responders prior to and during an incident.

### Improve Integrity Management Communication and Data

INGAA members commit to improving data collection and analysis, converting this data into meaningful industry information and communicating it to stakeholders.

### Implement the Pipelines and Informed Planning Alliance (PIPA) Guidance

INGAA members commit to building an active coalition of INGAA member representatives to implement PIPA recommended practices and identifying selected locations for application of PIPA recommended practices. Members also commit to collaborating with PIPA stakeholders to increase awareness and adoption of PIPA recommended best practices.

### Evaluate, Refine and Improve Threat Assessment and Mitigation

INGAA members commit to enhancing threat assessment by completing a comprehensive review of consensus threat and mitigation standards, and conducting critical, in-depth reviews of significant threats and root-cause analysis of incidents.

### Foster a Culture of Continuous Improvement

INGAA members commit to raise the standard for use of management systems across the gas transmission industry to ensure better control of pipeline integrity and system reliability and provide guidance in practices and indicators to be used.

### Engage Pubic Officials and Emergency Responders

INGAA members commit to finding new and innovative ways to inform and engage stakeholders, including emergency responders, public officials, consumer and safety advocates and members of the public living in the vicinity of pipelines.