



# INGAA Foundation Spring Meeting

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## *Pipeline Safety Update*

April 5, 2013

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# Guiding Principles of Pipeline Safety



- Our goal is ZERO incidents
- We are committed to safety culture
- We will be relentless in our pursuit of improving
- We are committed to applying integrity management principles on a system-wide basis
- We will engage our stakeholders



# INGAA Members 9 Step Action Plan



1. Apply Risk Management Beyond High Consequence Areas (HCAs)
2. Raise the Standards for Corrosion Anomaly Management
3. Demonstrate Fitness for Service on Pre-Regulation Pipelines
4. Shorten Pipeline Isolation & Response Time to 1 Hour in Populated Areas
5. Improve Integrity Management Communication and Data
6. Implement the Pipeline and Informed Planning Alliance (PIPA) Guidance
7. Evaluate, Refine and Improve Threat Assessment and Mitigation
8. Implement Management Systems Across INGAA Members
9. Provide Forums for Stakeholder Engagement and Emergency Officials

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## Apply Risk Management Beyond High Consequence Areas (HCAs)

# Pipeline Safety Update

*Apply Risk Management beyond HCAs*



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*IM expansion considered in a variety of venues:*

- NTSB San Bruno recommendations
- PHMSA Advance Notice of Public Rulemaking
- Pipeline Safety Act
- Lessons learned

# Pipeline Safety Update

*Apply Risk Management beyond HCAs*



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## *Estimated statistics based on survey results:*

- 5 million people reside near our pipelines (200,000 miles)
- 100% of population lives near 33% of pipeline (67,000 miles)
- 64% of the 5 million people live in HCA (8,000 miles)
- 128,000 miles have been assessed (64%)
- 89% of total population live near these assessed pipelines

# Pipeline Safety Update

*Apply Risk Management beyond HCAs*



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## *INGAA's phased approach:*

- **Phase 1:** 90% of nearby population using IM principles by 2012
- **Phase 2:** 90% of nearby population using ASME B31.8S by 2020
- **Phase 3:** 100% of nearby population using IM principles by 2030
- **Phase 4:** Remaining ~20% of mileage with no population using IM principles beyond 2030

# Pipeline Safety Update

*Apply Risk Management beyond HCAs*



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*IM expansion will drive more program & physical work:*

- **Phase 2:** 90% of the population nearby pipelines using ASME B31.8S by 2020 – *128,000 miles*
- **Phase 3:** 100% of the population nearby pipelines using IM principles by 2030 – *32,000 miles*
- **Phase 4:** The remaining ~20% of mileage with no population using IM principles beyond 2030 – *40,000 miles*

*Technology development, tool runs, pipeline modifications, pipeline repairs/replacements/testing,...*



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## Demonstrate Fitness for Service on Pre-Regulation Pipelines

# Pipeline Safety Update

*Demonstrate Fitness for Service on Pre-Regulation Pipelines*



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*Concerns with pre-regulation pipe also considered in similar venues:*

- NTSB San Bruno recommendations
- PHMSA Advance Notice of Public Rulemaking
- Pipeline Safety Act

# Pipeline Safety Update

*Demonstrate Fitness for Service on Pre-Regulation Pipelines*



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*INGAA members commit to a systematic validation of records and MAOP for pre-regulation pipelines*

- Where records to establish MAOP are inadequate or pipe is untested, INGAA members will apply Fitness for Service (FFS)
- FFS is logical, prioritized process to evaluate and remediate pipe as/if necessary
- High priority pipe by 2020
- Medium priority pipe by 2030

# Pipeline Safety Update

*Demonstrate Fitness for Service on Pre-Regulation Pipelines*



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*FFS methodology will drive need for more physical work...*

- 125,000 miles of pre-regulation pipe – records review ongoing
- Potential FFS process for these miles could lead to:
  - Pressure test
  - Pressure reduction
  - Pipe replacement
  - Use of alternative in-line inspection

*Technology development, tool runs, pipeline modifications, pipeline repairs/replacements/testing,...*

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## Shorten Pipeline Isolation & Response Time to 1 Hour in Populated Areas

# Pipeline Safety Update

*Shorten Pipeline Isolation & Response Time*



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*Concerns with isolation and response times also considered in similar venues:*

- NTSB San Bruno recommendations
- PHMSA Advance Notice of Public Rulemaking
- Pipeline Safety Act

# Pipeline Safety Update

*Shorten Pipeline Isolation & Response Time*



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*INGAA members commit to  $\leq 1$  hour isolation and response time for  $>12$ " pipelines in populated areas*

- Focuses on consequences of incidents
- Risk-based approach ... Incident Mitigation Management (IMM)
- Will likely lead to additional valve automation/modifications
- IMM review for  $\leq 12$  pipelines

# Pipeline Safety Update

*Shorten Pipeline Isolation & Response Time*



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*Recent survey representing ~70% of INGAA mileage:*

- 29,800 valves total – 5,000 already automated – 17%

*And for >12" in populated areas:*

- 5,900 valves – 1,800 already automated – 31%

*Valve automation, communication, actuators, etc...*



# Pipeline Safety Update – Call to Action



The image is a screenshot of a Windows Internet Explorer browser window displaying the INGAA website. The browser's address bar shows the URL <http://www.ingaa.org/15901.aspx>. The website header features the INGAA logo and the text "Representing Interstate Natural Gas Pipeline Companies". A navigation menu includes links for "About", "News", "Safety", "Pipelines 101", "Reports", "Members", "Filings", and "INGAA on the Issues". A secondary menu has "Home", "Topics", "Safety", "Pipeline Safety Improvement Documents", and "Pipelines 101". The main content area is titled "Pipeline Safety Improvement Documents" and lists various resources. A large, bold, black text overlay reads "Check out INGAA's website on Pipeline Safety Improvement" and includes the URL <http://www.ingaa.org/15901.aspx>. The Windows taskbar at the bottom shows the Start button, several application icons, and the system clock indicating 12:15 PM on Thursday, 4/4/2013.

**Check out INGAA's website on Pipeline Safety Improvement**

<http://www.ingaa.org/15901.aspx>

**INGAA Website - Pipeline Safety Improvement Documents - Windows Internet Explorer**

<http://www.ingaa.org/15901.aspx>

**INGAA** Representing Interstate Natural Gas Pipeline Companies

**INGAA FOUNDATION**

About News Safety Pipelines 101 Reports Members Filings INGAA on the Issues

Home Topics Safety Pipeline Safety Improvement Documents Pipelines 101

**Pipeline Safety Improvement Documents**

Click here for INGAA's in-depth white papers on pipeline safety improvements

**INGAA's Safety Commitments**

Strategic Plan - Building Confidence in Pipeline Safety

Action Plan - Building Confidence in Pipeline Safety

Safety Culture is a Core Value

2012 Status Report - Accomplishments, Plans and Commitments

**Pipeline Safety Improvement Initiatives**

Extending Integrity Management Beyond HCA to Cover 100% of People Living Near Pipelines

Investigation Principles: Assessing Records and Linking the Integrity

Fitness for Service: Defined & Applied to Pre-Regulation Pipelines

Integrity Management Principles: Prevention, Assessment & Mitigation Practices

INGAA Recommends Operators Prepare Incident Mitigation Management Plans

INGAA Responds to NTSB Recommendation: Development of Advanced In-line Inspection Platforms

**White Papers - Information in Depth**

Prevention, Assessment, & Mitigation Practices

Safety Culture

What to Do in an Emergency

Pipeline Markers

San Bruno Pipeline Incident

PHMSA Integrity Management Program

How are Natural Gas Transmission Pipelines Regulated?

**Data and Metrics**

INGAA Members Achieve Significant Integrity Management Progress In 2011

2011 Status Report on Pipeline Leaks - Causes & Downward Trends

**Pipeline Integrity 101**

Pipeline Valve Operation Quick Facts

Maximum Allowable Operating Pressure Defined

Managing the Integrity of Older Pipeline - The Basics

start

Internet 100%

Desktop 12:15 PM Thursday 4/4/2013

INGAA Website - Pipe... INGAA Foundation Sp...

Reminder...



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**April is... National Safe Digging Month!**



**Know what's below.  
Call before you dig.**

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**Thank you for *your*  
commitment to  
Pipeline Safety...**

**Questions?**