



U. S. Department of Transportation

Pipeline and Hazardous Materials
Safety Administration

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Hazmat Safety

Maximum Allowable Operating Pressure for Class Locations

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Enhanced Safety from Technology

- **Tougher Pipe Materials**
- **Improved Pipe Fabrication**
- **Improved Construction Methods**
 - **Joining**
 - **Bedding in the Ditch**
- **Improved Testing of New Pipelines**
- **Improved Pipeline Inspection Technologies**
- **Better Practices-Integrity Management**



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Question for Meeting

Should PHMSA allow natural gas transmission lines to operate at Maximum Allowable Operating Pressures equivalent to 80% of Specified Minimum Yield Strength in Class 1 locations?



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The Challenge

- **Pipeline Crossing the U.S. Canadian Border**
 - **U.S. – MAOP at 72 % of SMYS**
 - **Canada – MAOP at 80% of SMYS**
- **Both Standards Based on ASME B31.8**
 - **Different Historical Trajectories**
- **Rationale for Continuing Differences?**



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Alaska Gas Pipeline Project

- **Route**
 - **North Slope of Alaska**
 - **Through Canada**
 - **Into Lower 48**
- **Economics Critical to Decisions – Economies of Scale**
 - **Larger Size**
 - **Higher Pressures**
 - **Higher Design Factors**



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Pipelines That Could Be Affected by Higher MAOP

- **Alaska Gas Pipeline Project**
- **Cross-Border Pipelines**
- **New Pipelines**
- **Existing Pipelines**
 - **Built with State-of-the-Art**
 - **Appropriately Tested**
 - **Well Maintained**

***Some pipelines already operate above 72% SMYS in
the Lower 48 (Grandfathered or Waivers)**



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Some Considerations

- **Pipe Toughness**
 - Resistance to Crack Initiation
 - Resistance to Crack Propagation
- **Pipe Robustness**
 - Resistance to Mechanical Damage
- **Testing and Assessments**
 - Hydrostatic Testing
 - Internal Inspections
- **Corrosion Protection**
- **Consequences of Failure**
- **Long-term Commitment to Safety**
 - Operations and Maintenance



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Some Questions

- **Can safety be maintained at the higher stress levels?**
- **Can we justify the differences in international standards?**
- **Are the benefits of higher throughput and lower fuel costs achievable without compromising safety?**
- **Has technology, fabrication and construction, testing, and maintenance improved to assure safety?**
- **Are there additional considerations?**

