



Brainstorming Session on the Benefits of Pipeline R&D

Research Drivers for the Hazardous Liquid Pipeline Industry

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Reduce Risk/Increase Safety

- The Primary Driver
 - Probability
 - Consequence
- Risk is Not Static
 - Changes in Population, Encroachments
 - Changes in Terrain, Land Use

Increase Capability

- Demand Growth in *Mature* Markets
 - Mature Pipeline System
 - Reliability of Equipment
- Demand Growth from New Markets
 - Environmentally Conscious Cost Effective New Construction





Reduce Costs/Gain Efficiency

- Variable/Transport Costs
 - Power Costs - \$/BBL-Mile
- Recurring/Capacity Costs
 - Maintenance Effectiveness
 - Personnel Effectiveness

R&D Sideboards

- Need Value
 - Tools
 - Knowledge
 - Practices/Process
- Practical Applications
- Proven Technology

