

# INTERNAL CORROSION

## Hazardous Liquid Pipelines

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Materials Safety Administration**

# WHY WE ARE HERE

- Prevention of accidents is our priority
- High-visibility events, and longer term data, have raised serious questions about the risk of internal corrosion
  - e.g. Alaska spills drove Congressional attention
- PIPES requirements: evaluate and report
- Now is our opportunity to manage the risk
- Congressional response to next event could be a requirement to take specific actions

# PIPES ACT

- Section 22:

“The Secretary ... shall review the internal corrosion regulations ... to determine if such regulations are currently adequate to ensure that the pipeline facilities subject to such regulations will not present a hazard to public safety or the environment.”

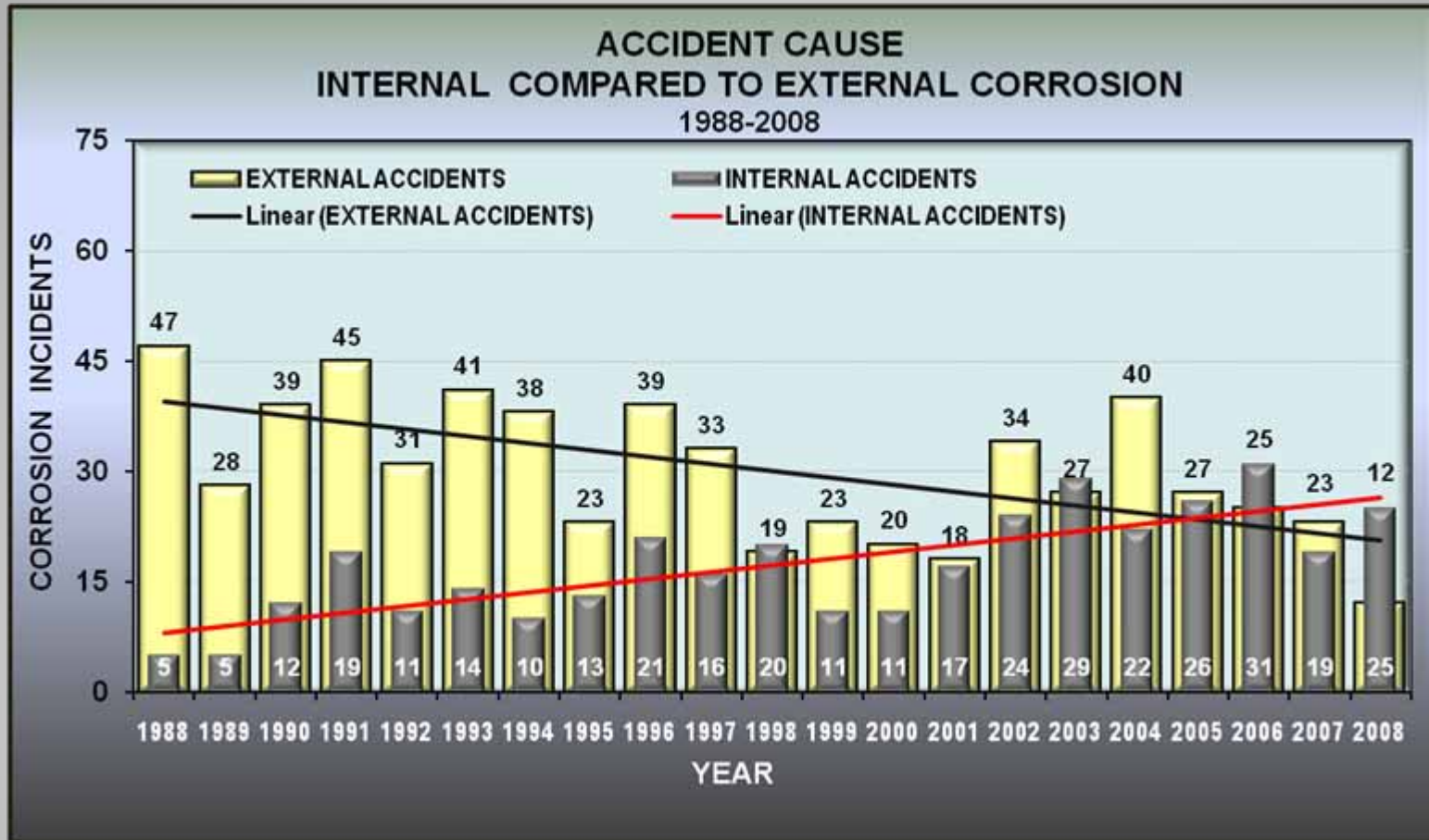
# RESPONSE TO CONGRESSIONAL MANDATE

- Thorough review of
  - Federal pipeline safety internal corrosion control regulations
  - Accident history
  - Research findings
  - Activities in consensus standards organizations
- Technical HL Pipeline Standards Committee briefing in July 2007
- Published review of key points in *Federal Register* for public comment in August 2007

# RESPONSE TO CONGRESSIONAL MANDATE

- Report submitted June 23, 2008
  - PHMSA web site [link: "Reports to Congress"]
  - Summarized regulations, accident history, research, standards development activities
- Committed to Congress
  - Advisory Bulletin (ADB-08-08)
  - Public Workshop (This Event)
  - Evaluate opportunities to improve best practices
  - Evaluate adoption of consensus standards
  - Consider Need for Rulemaking

# ALL CORROSION ACCIDENTS INTERNAL VS EXTERNAL 1988-2008



# PHMSA EXPECTATIONS

195.579 Says “investigate the effects” of  
corrosive material

# INVESTIGATE!



# PHMSA EXPECTATIONS

- Consideration of factors in Advisory Bulletin
- Periodic product quality sampling
- Periodic review and evaluation of corrosivity
- Periodic use of cleaning pigs
- Appropriate use and monitoring of inhibitors
- To identify corrosion products, analysis of fluids from low-point drains and fluids removed by cleaning pigs



# PHMSA EXPECTATIONS

- Periodic inspection of locations susceptible to IC
- Apply Consensus Industry Standards
- Implement other suggestions found in report to Congress
- Look beyond the requirements of 195

# TODAY'S OPPORTUNITY

- Candidly evaluate internal corrosion assessment and management practices
  - Upgrade evaluation of IC susceptibility
  - Application of consensus standards
  - Develop lessons learned for application back home
- Critically review adequacy of existing regulations
  - Near term: Stronger emphasis on existing rules, as clarified by ADB-08-08
  - Long term: Identify prudent and reasonable improvements