

Pipeline and Hazardous Materials Safety Administration

2015 BSEE Domestic and International Standards Workshop Houston, Texas



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What We Regulate – Most Onshore

Pipeline Facilities by System Type – data as-of 2/2/2015			
System Type	Miles	% Miles	# Operators
Hazardous Liquid	192,388 6,970 Tanks	7%	442
Gas Transmission	302,811	11%	993
Gas Gathering	17,437	1%	357
Gas Distribution (Mains & Services)	2,149,291	81%	1,371
Total	2,661,927	100%	Some Operators have multiple System Types
Liquefied Natural Gas	133 Plants	203 Tanks	83



We are beginning to see a potentially troubling safety trend emerge.



Gas Gathering Significant Incidents

CY 2014 Leading Causes:

Corrosion

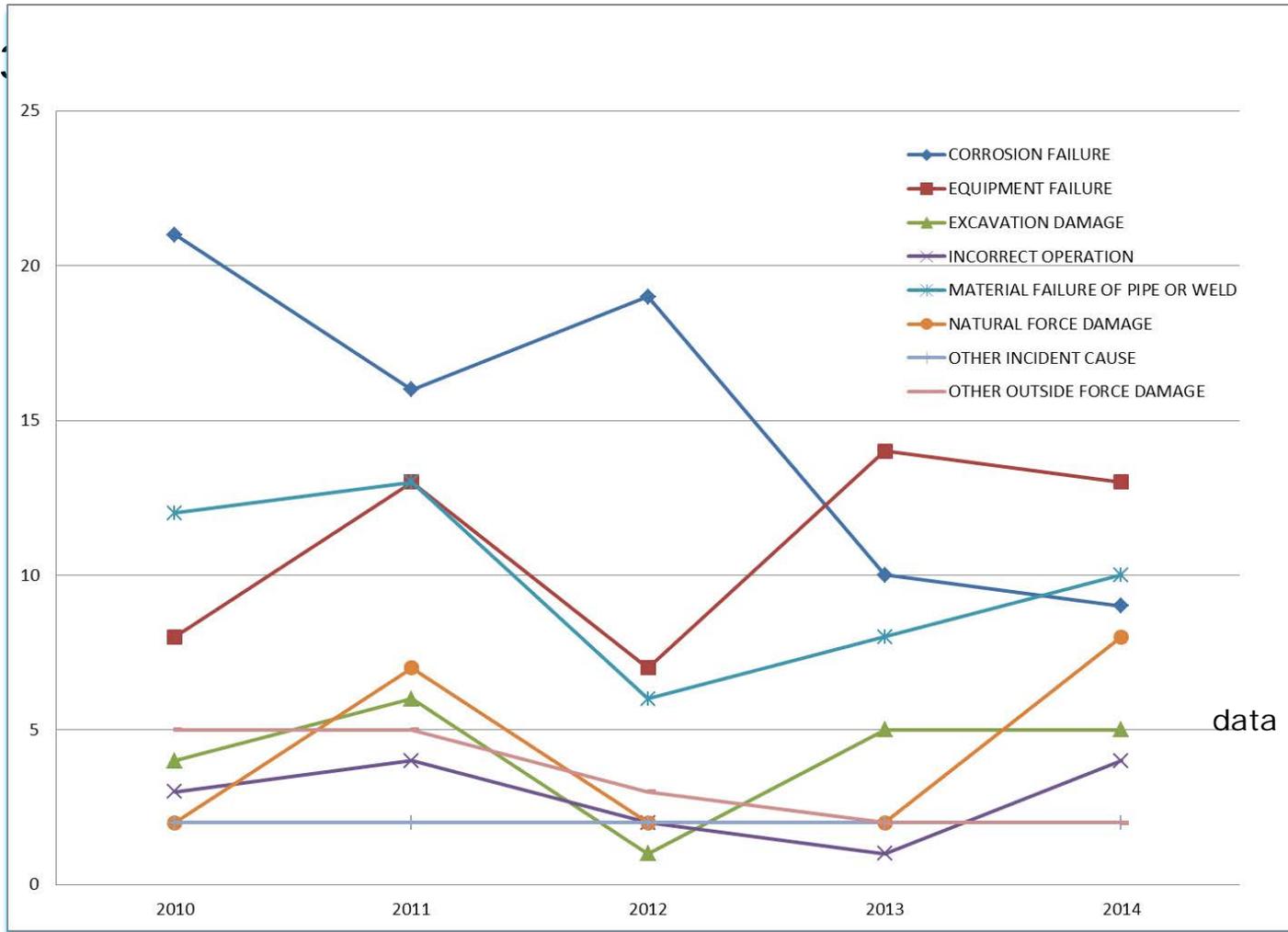
Material/Weld/Equipment Failure

Other



Interstate Gas Transmission Significant Incidents

Top 5

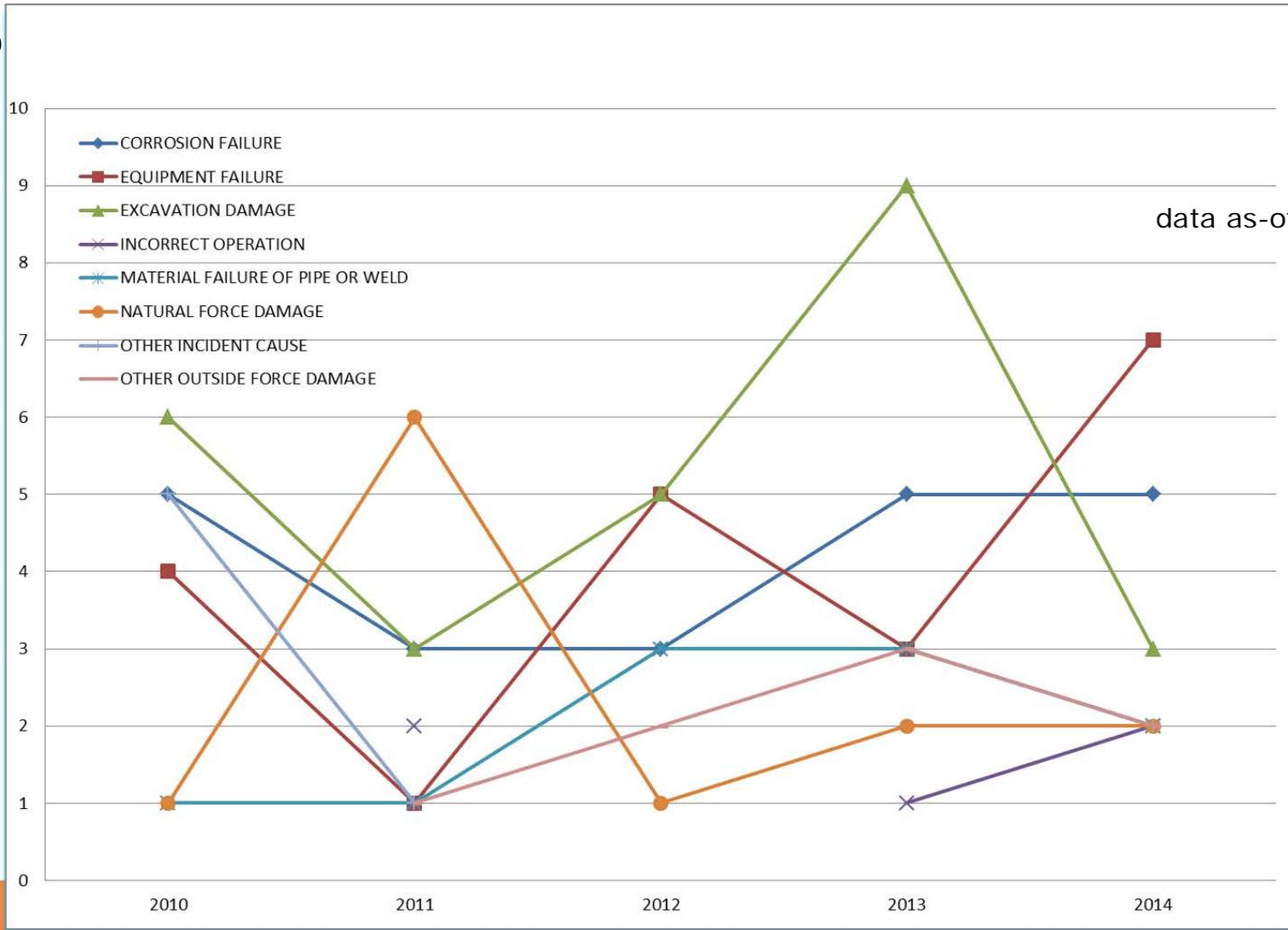


data as-of 2/27/2015



Intrastate Gas Transmission Significant Incidents

Top

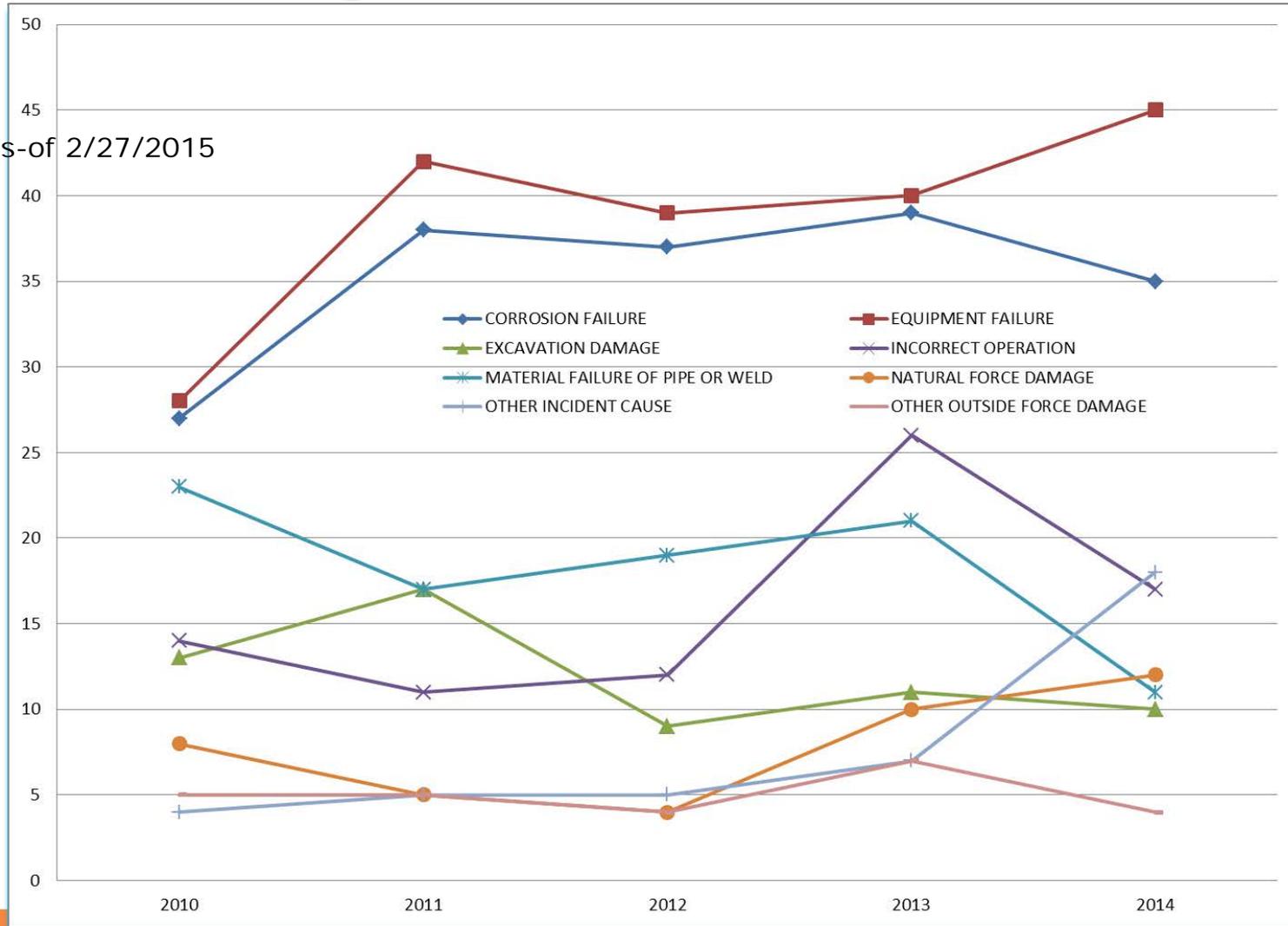


data as-of 2/27/2015



Hazardous Liquid and Carbon Dioxide Significant Incidents

data as of 2/27/2015



It is unclear whether the increase in the percentage of “equipment related” failures is because traditional integrity management targeting is effective or if less attention is being paid to QMS for all components.



PHMSA does not currently require near miss reporting

However, we do believe it is an extremely valuable practice and can help identify emerging challenges. We support non-punitive reporting practices.



What Can We Learn When Things Go Wrong...



API 1173 SMS Investigation

- (Shall) Develop a procedure for investigating incidents AND **near-misses** that could have lead to an incident with serious consequences.
 - Identification of Cause(s) and Contributing Factors;
 - Findings and Lessons Learned;
 - Evaluation/Review of Effectiveness of Emergency Response Procedures and Processes;
 - How did the process fail us?
 - Recommendations for Improvement; and
 - **Recommendations for Transferring Lessons Learned to the Risk Assessment and Control Processes.**



9.2 Follow-up and Communication of Lessons Learned

- (Shall) Develop a procedure to track the response and completion of each finding and lesson learned – including actions to implement risk assessment and performance improvement recommendations.
- (Shall) Communication to appropriate personnel.
- (May) **Share lessons learned externally through peer-to-peer interactions.**
- (Shall) **Keep records for use in later risk assessments.**



9.3 Learning from Past Events

- (Shall) Develop a procedure to periodically reevaluate past investigations of high consequence and significant near-miss events.
 - **Can new lessons be learned?**
 - SCC
 - Surprise SMYS
 - How effective was organizational learning from known lessons learned?



9.4 Learning from External Events

- (Shall) Develop a process to evaluate external events for lessons learned.
 - Sources: Peers, regulators, public, landowners, public officials, emergency planning and response personnel.
 - PHMSA and NTSB incident reports, Advisory Bulletins, Common Ground Alliance Damage Incident reporting Tool System Reports



We Continue To See A Specific Need for Quality Management Systems in Construction and Repair



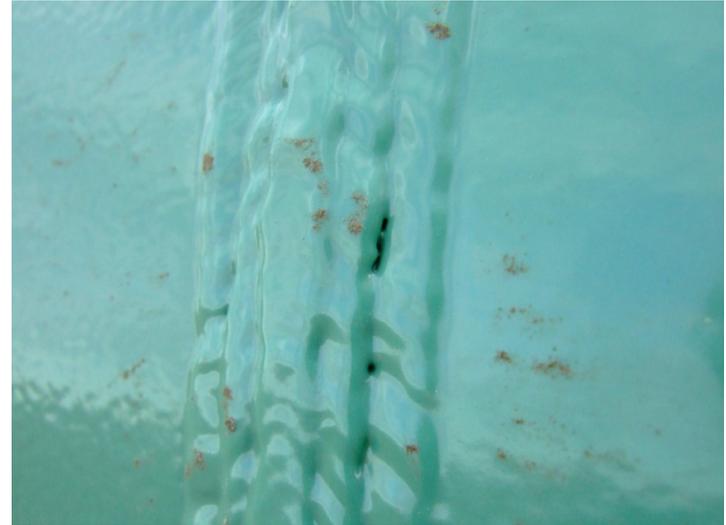
Damage During Installation

- Who is watching to make sure the pipe is not damaged?
- What happens if this goes unrepaired?



Weld Inspection Issues

- Inadequate Visual Inspection
- Poor Weld Repairs



New Pipeline Quality



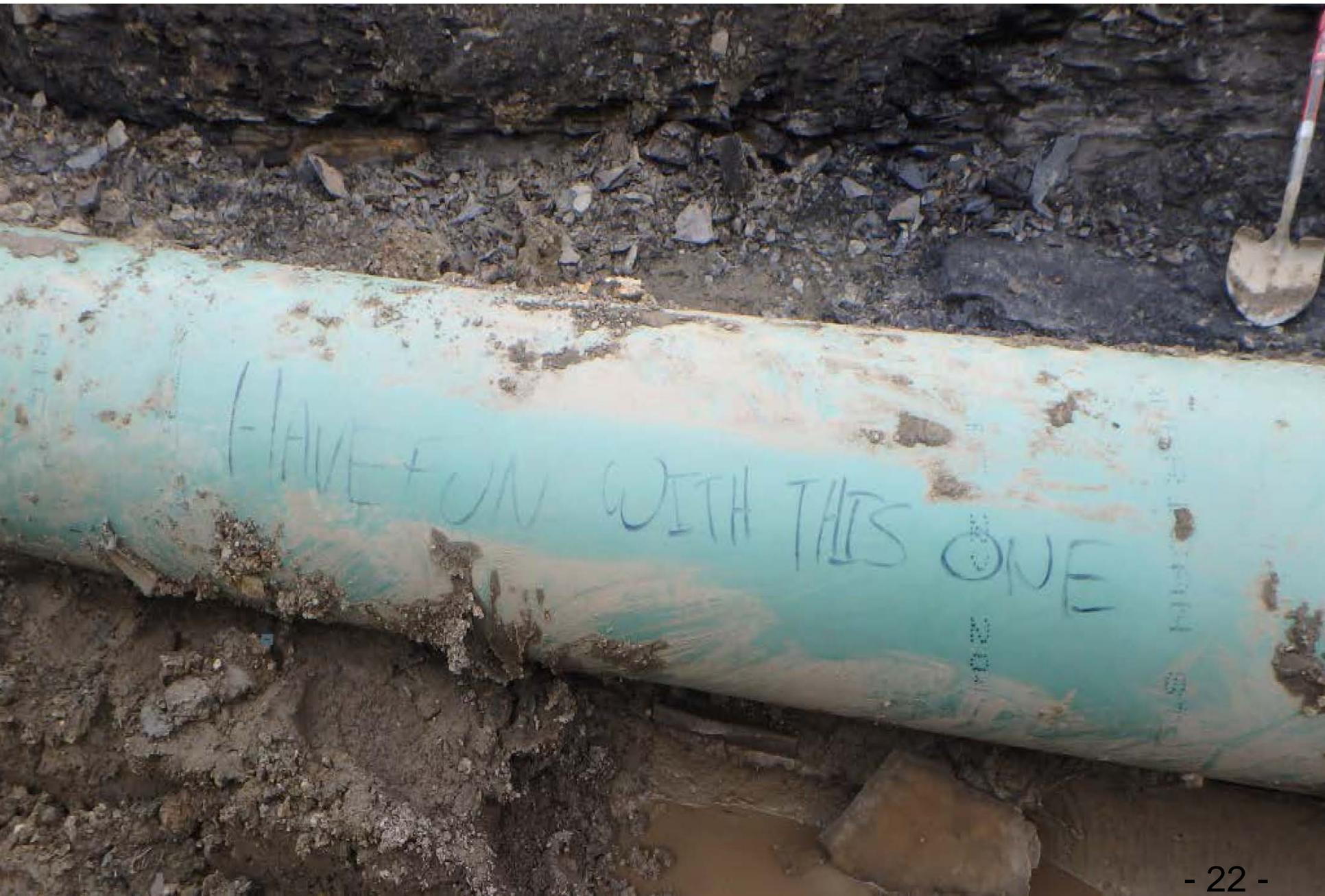
- **24-inch Fitting**
 - Hydrotest – 2160 psi
 - Failed at – 1740 psig



1/2015 Girth HAZ Failure









Is the Answer Regulated Quality Management Systems?

The oil and gas business is potentially too hazardous to not take extra care to do things right from the start, to assure quality materials and to take timely action when pipe components and equipment show signs of wear.



Thank you



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



U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration

To Protect People and the Environment From the Risks of
Hazardous Materials Transportation

