

Pipeline Safety
Compliance in an Age of
Changing Expectations
November 29, 2012

Energy Bar Association
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Overview

- Introduction
- Foundation: The Present Situation
 - Future Development (Shale Plays/Markets and Projects to Come)
 - Current Influences on Pipeline Safety (Record, Incidents, PSA 2011)
- Expectations Are Changing
 - Pipeline Safety Act of 2011
 - Regulatory Initiatives
 - Public Discourse
- Perspectives on Changing Expectations
 - Pipeline and Hazardous Materials Safety Administration
 - Lawyers
 - Operators
 - Industry

Foundation: The Present Situation

- North American “Renaissance” in Crude Oil and Natural Gas Liquids Pipeline System Development
- Shale Development
- Logistics Bottlenecks
- Oil / Gas Value Differential
- Refinery Feedstocks and Process Modifications

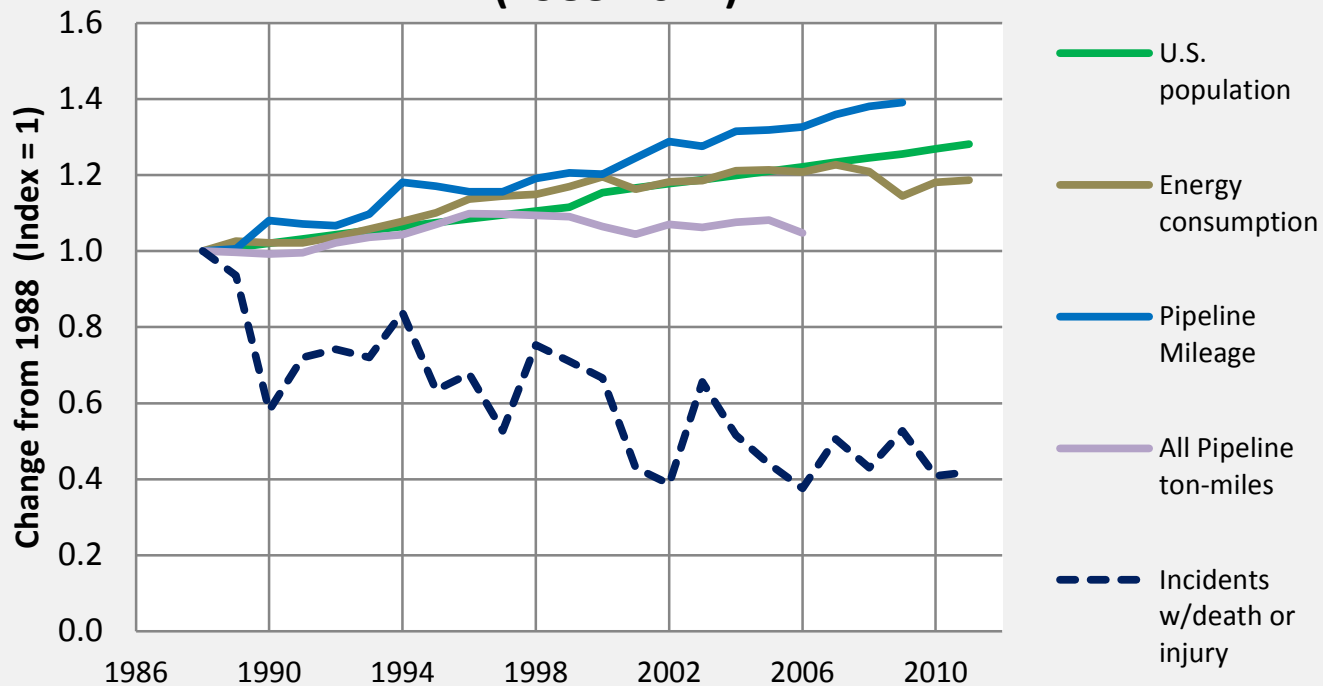


Foundation: The Present Situation



Recent Trends

Pipeline Safety: Context Measures (1988-2011)



Data Sources: Census Bureau, Energy Information Administration, PHMSA Annual Report Data, BTS ton-mile estimates, PHMSA Incident Data - as of Jan. 18, 2012

Chart Source: Groundhog Day, J.

● Weise, Office of Pipeline Safety, July 11, 2012

Recent Trends

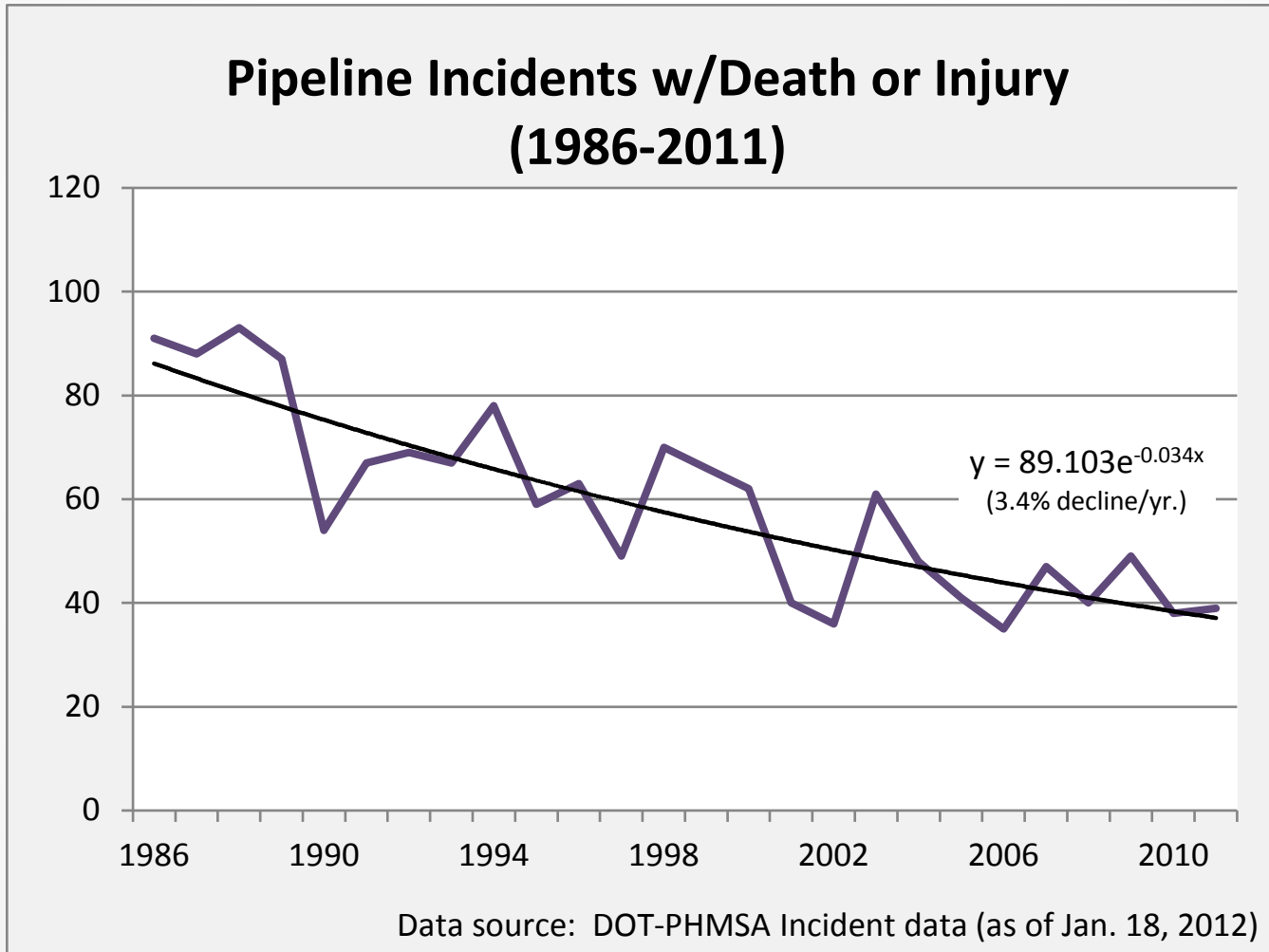


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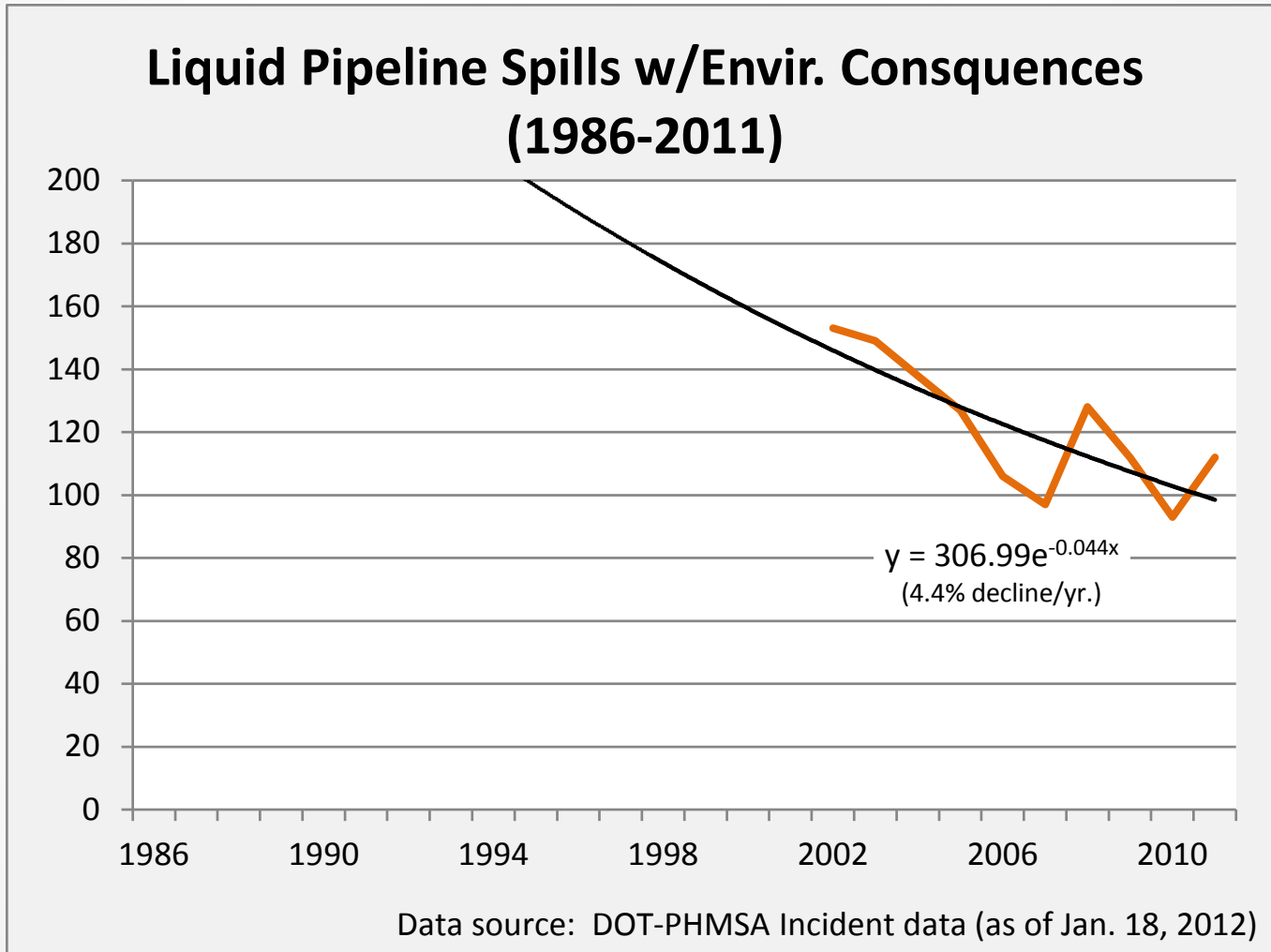


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Recent Events

Recent Pipeline Accidents Raised Questions For The Public, Regulators and Legislators About Pipeline Safety

- Marshall, MI Crude Release – NTSB Findings and Recommendations
- Salt Lake City, UT Crude Release (I & II) – release to water
- San Bruno, CA Gas Transmission Explosion and Fire – fatalities/property loss
- Allentown, PA Gas Distribution – fatalities/property loss
- Laurel, MT – Release to Water

DOT Secretary LaHood Call To Action -

- April 18, 2011 Pipeline Safety Forum
- Secretary's Report to the Nation on Pipeline Safety



Expectations are Changing

Pipeline Safety Act of 2011 – Key Provisions

- Civil Penalty Authority – Doubled to \$200,000 per violation, \$2 million maximum
- Enforcement Procedures – New separation of functions, presiding official, etc.
- Damage Prevention – Elimination of exemptions for states and municipalities
- Valves – Authority to require automatic or remote-controlled valves
- Integrity Management – Study potential expansion of program
- Cost Recovery for Design Reviews - \$2.5 B or “new or novel technology”
- Onshore Facility Response Plans – New PHMSA enforcement authority, Public may obtain a copy (liquids only)
- Maximum Allowable Operating Pressure – Verify records in support of MAOP, report pipelines with inadequate records, authorizes new testing regulations (gas only)

Expectations are Changing

Pipeline Safety Act of 2011 – Key Provisions, Cont.

- National Pipeline Mapping System – New authority and requirements
- Accident and Incident Notification – 1 hour reporting and review of regulations
- Incorporation by Reference – Limits future incorporation of industry standards unless they are made available on the web
- Studies, Analyses, and Reports
 - Diluted Bitumen – Does it bring increased risk of release? (liquids only)
 - Leak detection system utilization, technical limitations, reliability, and safety benefits / adverse consequences of using leak detection systems (liquids only)
 - Extent of non-petroleum hazardous liquids transportation by pipeline (liquids only)
 - Depth of cover as a factor in water crossing incidents
 - Pipeline construction permitting issues (GAO)
 - Gathering Lines – Review existing requirements, consider removal of exemptions

Expectations are Changing

Key NTSB Recommendations from San Bruno, CA (*Gas Pipeline*)

- Pipeline and Hazardous Materials Safety Administration
 - Require pipeline operators to provide system specific information to emergency responders and directly notify 911 call centers for all potentially affected areas in the event of a possible release
 - Require operators to install automatic or remote-controlled shutoff valves in certain areas and equip SCADA systems with leak detection tools
 - Amend the regulations regarding drug testing and manufacturing threats, and remove the grandfather clause exempting certain historic infrastructure from pressure test requirements
 - Require all gas transmission lines to be modified to accept internal in-line inspection tools
 - Update integrity management inspection protocols and develop performance metrics for performance-based programs
 - Work with state partners to assess their pipeline safety oversight and correct any deficiencies
- U.S. Department of Transportation
 - Audit PHMSA's oversight and enforcement of performance-based regulations
 - Audit PHMSA's state pipeline safety certification program and ensure PHMSA amends the program as necessary
- American Gas Association and the Interstate Natural Gas Association of America
 - Report on efforts to develop and introduce advanced in-line inspection tools

Expectations are Changing

NTSB Recommendations from Marshall, MI Incident (*Liquids Pipeline*)

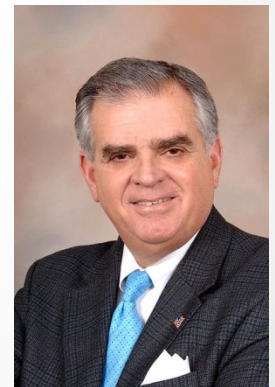
- Pipeline and Hazardous Materials Safety Administration
 - Revise integrity management regulations to address assessment of cracks, including environmentally assisted cracks (SSC)
 - Revise integrity management regulations to address “discovery of condition,” and timing of receipt of adequate information to make a determination of a threat to integrity
 - Issue Advisory Bulletins about deficiencies in Integrity Management Programs and facility response planning
 - Require team training of control center staffs
 - Harmonize Part 194 Facility Response Plan requirements with Coast Guard and EPA regulations
- U.S. Department of Transportation
 - Audit PHMSA’s Facility Response Plan program business practices, including plan reviews and drill programs
 - Allocate resources for program to pass muster under OPA ‘90
- American Petroleum Institute
 - Develop safety management system standard
- Pipeline Research Council International
 - Develop model procedures for evaluating interacting corrosion and cracks

Expectations are Changing

- “We will continue to conduct rigorous inspections to meet even more safety achievements in the future.”
PHMSA Administrator Cynthia Quarterman



- “Safety is our top priority, and through better enforcement, we can help prevent accidents before they occur.” *Transportation Secretary Ray LaHood*



Expectations are Changing

Verification of Records Establishing Maximum Operating Pressures (MOP / MAOP)

- San Bruno incident raised issue of reliability/accuracy of records
- National Transportation Safety Board recommendation
- Advisory Bulletin January 2011 – MOP records must be reliable, traceable, verifiable and complete
- Advisory Bulletin May 2012 – Defined traceable, verifiable and complete
 - Traceable: Can be linked to original information about a pipeline/facility
 - Verifiable: Information confirmed by separate documentation?
 - Complete: Record is "finalized" by a signature, date, or other marking
- More to come – Stay tuned....



Agency's Perspectives

Sec. 24 – Consensus Standards

LIMITATION ON INCORPORATION OF DOCUMENTS BY REFERENCE

“Beginning 1 year after the date of enactment of this subsection, the Secretary may not issue guidance or a regulation pursuant to this chapter that incorporates by reference any documents or portions thereof unless the documents or portions thereof are made available to the public, free of charge, on an Internet Web site.”

Agency's Perspectives

PHMSA July 13 Workshop

- Financial
- Legal
- Policy
- Practical
- International
- Constituents – Small business, Safety, Disability communities

Agency's Perspectives

Expectations are Changing

- Implementation of Sec. 20 - Part 190
 - Presiding official definition and responsibility
 - Hearing transcript availability
 - Separation of functions
 - Prohibition on ex parte communication
 - "Expedited review" of corrective action orders
- Civil penalties maximum and criteria
- New enforcement for Part 194 & obstructing an investigation
- Use of NOPVs and consent orders
- Use of telephonic and video conference hearings
- General housekeeping
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Agency's Perspectives

Case Referrals

- Egregious or criminal behavior
 - Office of Inspector General
 - Department of Justice
 - Other federal agencies
- Referral Evaluation Process and Coordination

Lawyer's Perspectives

Areas of Involvement in Pipeline Safety Regulation

- Jurisdictional Determinations – Is It Regulated or Is It Not?
- Compliance Counseling –
 - Is What We're Doing...?
 - Must We ... Should We ... How Do We ...?
- Reporting – Occurrences and Annual
- Enforcement –
 - Allegations of Violation
 - Civil Penalties
 - Compliance Orders / Safety Orders / Emergency Orders
- Industry-Wide – API/AOPL
 - PSA Reauthorization
 - Rule Making
 - Voluntary Initiatives

Lawyer's Perspectives

Influencing Factors

- The Agency: Answering to the Secretary
- The Secretary: Answering to the President
- Congress: Answering to the Public
- The Public:
 - Concerned ... if not Distrustful ... if not Opposed
 - Yet Almost Always Vocal
- Customers
- Investors
- Insurers
- Employees
- Other Agencies
- The Industry

Lawyer's Perspectives

- They Fined Us How Much? For That?!
- Requirements vs. Recommendations
- But Those Are the Same Folks Who Will Inspect Us Next Year
- But Interpretation XYZ Says....
- You Billed Us How Much for What?

Operator's Perspectives

New Construction – Doing It Right

- Avoidance /Minimization of Risk
- Facility Design
- Materials
- Construction Practices
- Stakeholder Practices
- Agencies With Authority
- Agencies Lacking Authority
- Inspection / Investigation
- Public Scrutiny / Opposition

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Operator's Perspectives

Control Center Operations and CRM Regulations

- Expectation of Perfect Operations
- Proactive Management of Fatigue Issues
- Clear Operational Authority for Pipeline Controllers
- Direct PC Involvement in Operations Design
- Implement and Document CRM
- Proof of Compliance After Every Event
- Annual Reviews and Improvement
- "Compliance" Means Exceeding Requirements

Operator's Perspectives

Managing Existing Systems

- Year of Construction
- Maintenance History
- Operating History
- Physical Environment
- Release / Incident History

Operator's Perspectives

Managing Existing Systems

- Integrity Management
- Maintenance
- MOP / MAOP
- Repair vs. Replacement
- Re-Purposing

Industry Perspectives

Significant Decline in Hazardous Liquids Spills from 1999 to 2011

- Driven by Industry Performance Improvement Processes
 - Pipeline Performance Tracking System (1999)
 - Data Mining Team & Lessons Learned (PPTS Advisories)
 - What does our history tell us?
 - Performance Excellence Team (2001)
 - How can we do better in the future?
 - PIX: Pipeline Information exchange (2008)
- Integrity Management Regulations
 - Focus on Integrity Management Programs has had benefits for HCA “could affect” segments as well as non-HCA segments

Industry Perspectives

API-AOPL Leadership Safety Initiatives

- Leak Detection
- Damage Prevention
- Enhanced Data Integration
- Sharing Practices
- External Communications
- Strategic Planning
- Research & Development/Enhanced Technology
- Emergency Response (new in 2012)

Purpose: Undertake significant near-term and long-term actions that will make real improvements in industry performance

Industry Perspectives

AOPL & API Pipeline Safety Principles

- Zero Incidents
- Organization-Wide Commitment
- A Culture of Safety
- Continuous Improvement
- Learn from Experience
- Systems for Success
- Employ Technology
- Communicate with Stakeholders

Industry Perspectives

NTSB Recommendation

To the American Petroleum Institute:

- Facilitate the development of a safety management system standard specific to the pipeline industry that is similar in scope to your Recommended Practice 750, *Management of Process Hazards*. The development should follow established American National Standards Institute requirements for standard development. (P-12-17)

Industry Perspectives

Development of Safety Management System Standard

- Stakeholders
 - API/AOPL Performance Excellence Team
 - API/AOPL Leadership
 - INGAA, et al
 - PHMSA
 - NTSB
 - Public Interest / Safety Advocates
 - And More
- Status: Formative / Resource Identification / SME / Strategy / Process Development Stages
- Ongoing