



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



Organization and Regulatory Overview



U.S. Department of Transportation
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Safety Administration



PHMSA ITQ

Oklahoma City, OK





Strategic Focus

- Improve the safety of the Nation's pipelines
 - Reduce the number of serious incidents causing death & injury
 - Reduce the likelihood of incidents in high consequence areas
 - Reduce the potential for hazardous liquids spills into unusually sensitive areas
- Provide the basis for increased public confidence in pipeline safety



Pipeline Safety Challenges



- [September 14, 2008 Appomattox, VA](#)
- 30'' 1955 Vintage Natural gas transmission line ruptured, ignited, and burned, for 45 minutes
- 32'ft section of pipe ripped from the ground at the failure site
- 5 people were injured and 23 families were evacuated.
- 2 homes destroyed and 4 others damaged
- Investigation found 40% pipe wall loss due to external corrosion.
- Property and other losses totaled over \$3 million dollars



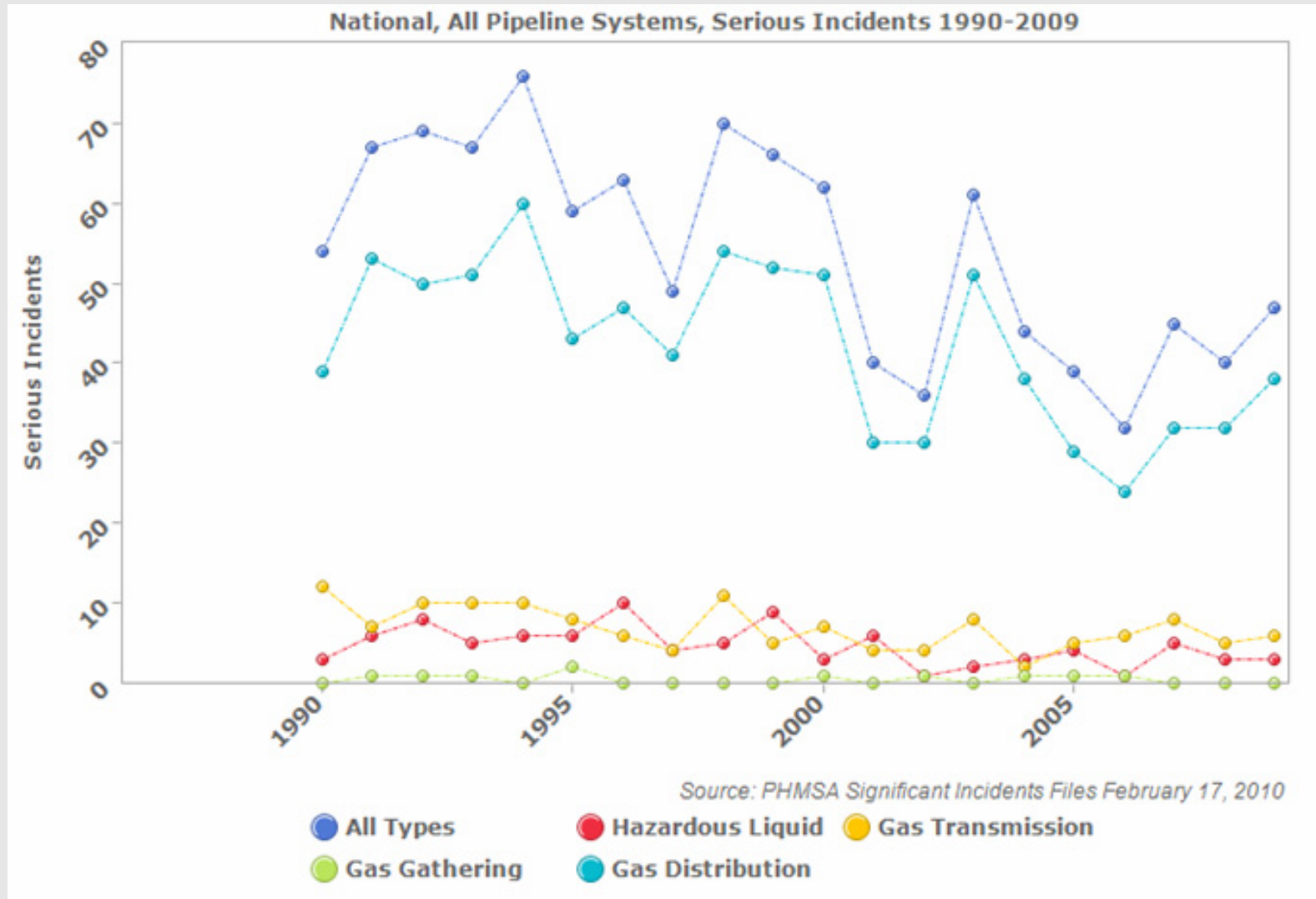
Pipeline Safety Challenges



- [September 09, 2010 San Bruno, CA](#)
- 30'' 1956 Vintage Natural gas transmission line ruptured, ignited, and burned, for approx. 90 minutes
- 28'ft section of pipe ripped from the ground at the failure site
- Rupture created a crater approx. 72' ft long and 26' ft wide
- 8 fatalities and multiple people injured.
- 37 homes destroyed and 18 others damaged
- **Still Under Investigation**



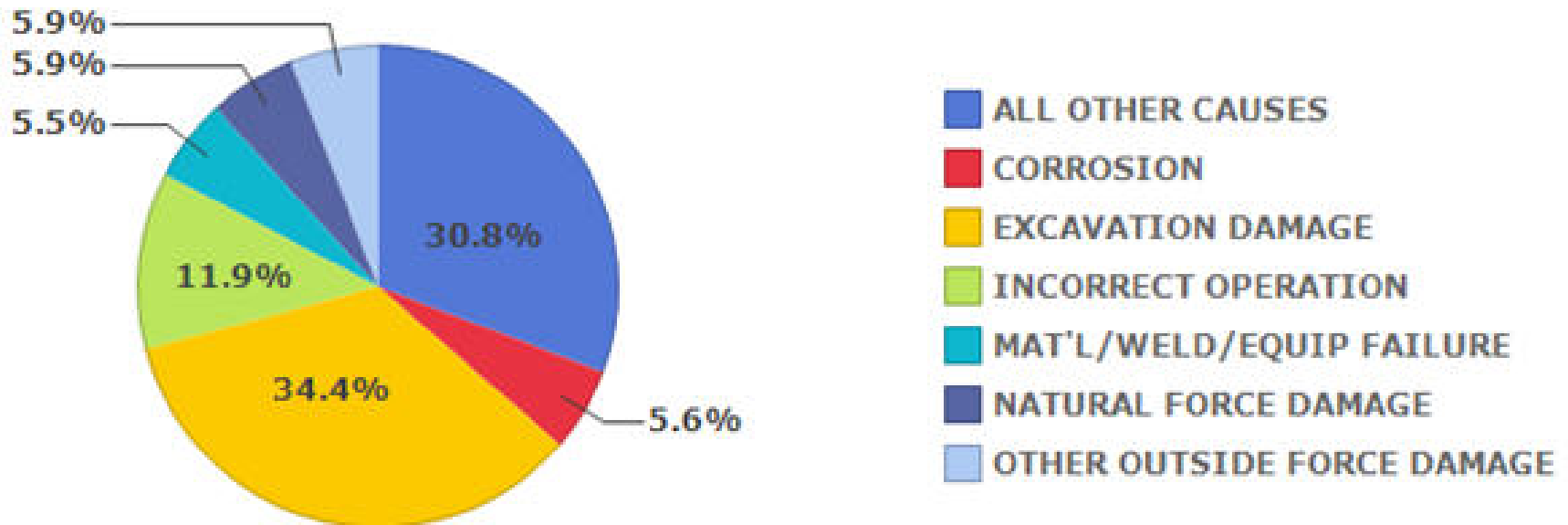
Good News on Serious Incidents





Causes of Serious Incidents

Serious Incident Cause Breakdown
National, All Pipeline Systems, 1990-2009



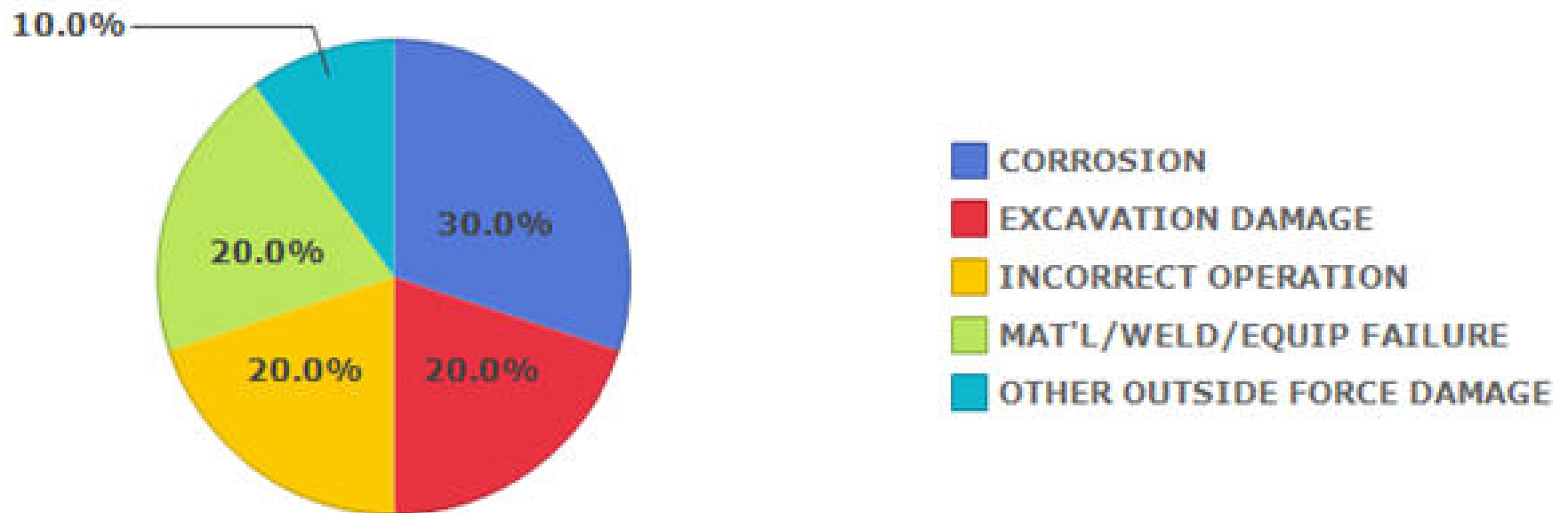
Source: PHMSA Significant Incidents Files February 17, 2010

National, All Pipeline Systems, Serious Incidents 1990-2009



Causes of Serious Incidents (Gas Gathering)

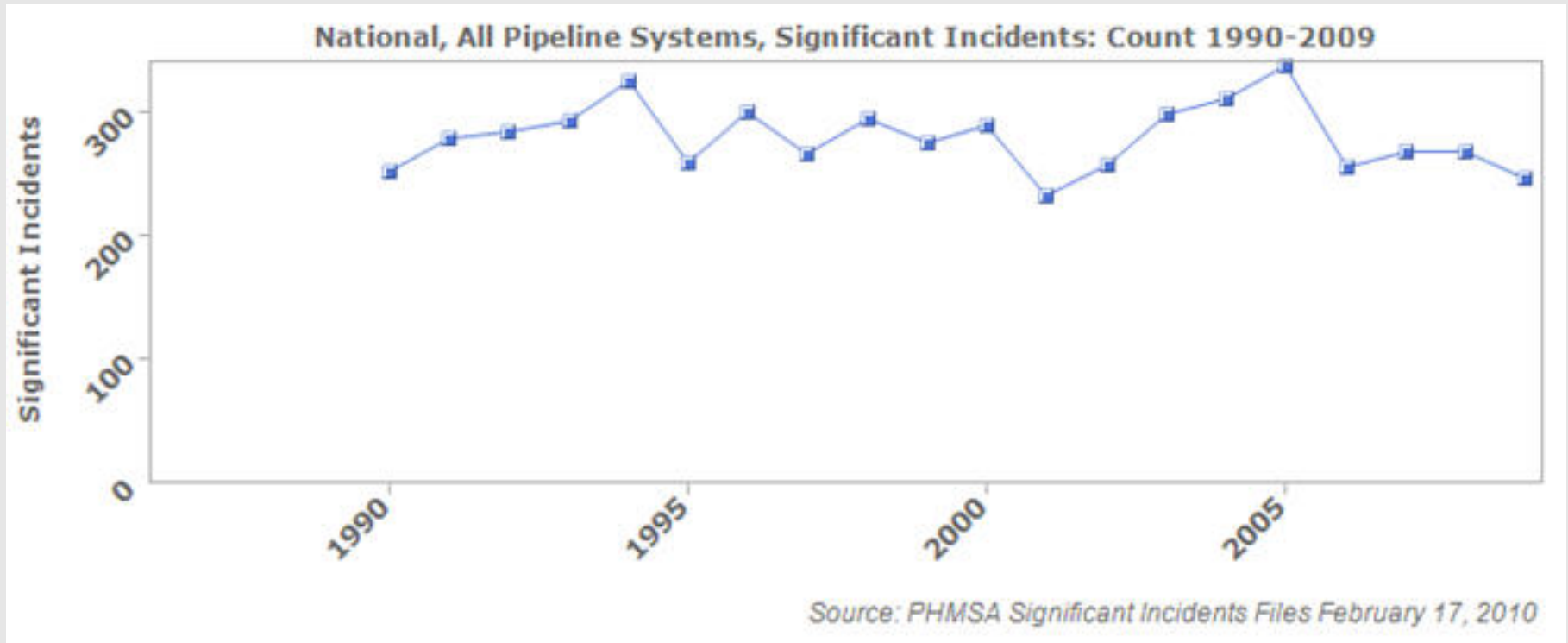
**Serious Incident Cause Breakdown
National, Gas Gathering, 1990-2009**



Source: PHMSA Significant Incidents Files February 17, 2010



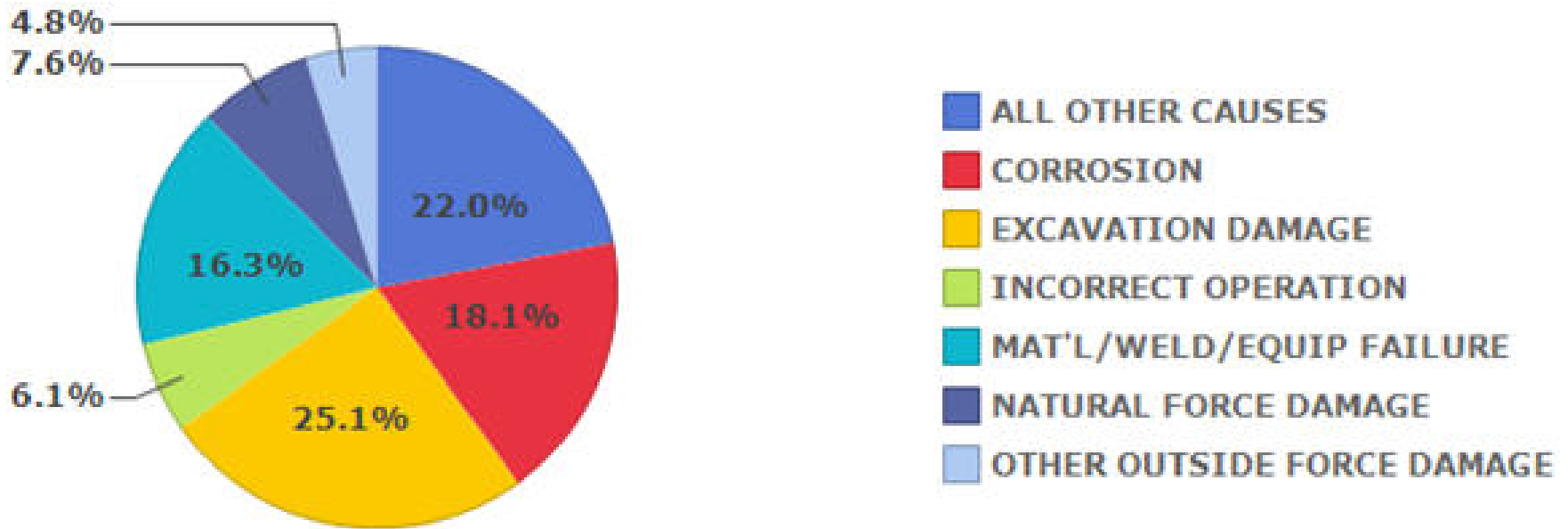
Significant Incidents Rather Flat





Significant Incidents by Cause

**Significant Incident Cause Breakdown
National, All Pipeline Systems, 1990-2009**



Source: PHMSA Significant Incidents Files February 17, 2010



PIPES Act Themes

- Damage Prevention
- Managing System Risk – Integrity Management
- Infrastructure, People, and Procedures, integrated to attain performance
- Operator Qualification for damage prevention tasks



Data Driven Organization

- More focus on root cause analysis of incidents
- Integration of inspection findings across regions
- Significantly improve availability of information through OPS web site:



Enforcement Transparency

- PHMSA Website will display Enforcement data
- Statistical summaries starting in 2002
- Enforcement documents from 2007 onward
 - Initial OPS Letter
 - Operator Response (optional)
 - Final OPS Letter
 - Warning Letters, Notices of Probable Violation, Corrective Action Orders



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PHMSA Rule Update



Advisory Bulletin No. ADB-09-04

Issued Jan 19, 2010

Pipeline Safety: Natural Gas and HL Pipeline Operators

- PHMSA advises operators, beginning with MIS reports due by March 15, 2010, OPS will begin collecting annual drug and alcohol testing data for contractor employees. **Contractors will be identified both by name and business tax identification number (BTIN) in the MIS report.** The inclusion of the BTIN will ensure employees of the same contractor are only counted once when OPS calculates the required random testing rate.



Advisory Bulletin No. ADB-09-04

Issued Jan 19, 2010

Pipeline Safety: Natural Gas and HL Pipeline Operators

- The total number of covered employees is **not** limited to those who physically worked in a maintenance, operations, or emergency response role during the previous calendar year. **The definition of "performs a covered function" in Part 199.3 includes actually performing, ready to perform, or immediately available to perform a covered function.** Operators need to be aware of this definition when calculating the number of covered employees for both the operator and contractors. **Employees who "perform a covered function", are required to be included in the random drug testing pool.** The average size of a properly maintained random drug testing pool defines the number of covered employees.



Advisory Bulletin No. ADB-10-03

Issued March 04, 2010

Pipeline Safety: Natural Gas and HL Pipeline Operators

- Owners and operators of recently constructed large diameter pipelines should evaluate these lines for potential girth weld failures due to misalignment and other issues by reviewing construction and operating records and conducting engineering reviews as necessary. The assessments should cover all 20-inch or greater, high strength line pipe transitions and cut factory bends or induction bends installed during 2008 and 2009.
- Evaluations should include material specifications, field construction procedures, caliper tool results, deformation tool results, welding procedures including back welding, NDT records, failures or leaks during hydrostatic testing, or in-service operations to identify systemic problems with pipe girth weld geometry.



Advisory Bulletin No. ADB-10-03

Issued March 04, 2010

Pipeline Safety: Natural Gas and HL Pipeline Operators

- Even if no girth weld concerns are identified by reviewing construction records, if an operator has any knowledge, findings or operating history that leads them to believe that their line pipe segments contain these type girth weld transitions, the operator should conduct engineering reviews to ensure that material, engineering design, and field construction procedures were in compliance with 49 CFR Parts 192 and 195. Failure to conduct engineering reviews and to remediate findings may compromise the safe operation of the pipeline.



Advisory Bulletin No. ADB-10-04

Issued April 22, 2010

Pipeline Safety: Natural Gas and HL Pipeline Operators

- Advises operators that the new electronic incident/accident reporting system is available online at <http://pipelineonlinereporting.phmsa.dot.gov>. The new online system can also be accessed through the old system at <http://opsweb.phmsa.dot.gov> and click on "Incidents on or after Jan 1, 2010". Each operator may use their current operator ID and PIN from the old system to access the new system. **The new online system is for incidents/accidents occurring on or after January 1, 2010**. The old online system is still available for filing supplemental reports for incidents/accidents that occurred prior to January 1, 2010, and is still the system for filing annual reports and Gas Integrity Management Program (IMP) reports.



Advisory Bulletin No. ADB-10-06

Issued August 03, 2010

Pipeline Safety: Natural Gas and HL Pipeline Operators Personal Electronic Device Related Distractions

- Remind owners and operators of natural gas and hazardous liquid pipeline facilities of the increased risks associated with the use of personal electronic devices (PEDs) by individuals performing operations and maintenance activities on a pipeline facility
- Recommends that operators integrate into their written procedures for operations and maintenance appropriate controls regarding use of PEDs, and provide guidance and training about the risks associated with PEDs



Advisory Bulletin No. ADB-10-08

Issued October 28, 2010

Pipeline Safety: Natural Gas and HL Pipeline Operators Emergency Preparedness Communications

- PHMSA reminds pipeline operators of the need to share the operator's emergency response plans with emergency responders to ensure a prompt, effective, and coordinated response to any type of emergency involving a pipeline facility. Pipeline operators are required to maintain an informed relationship with emergency responders.
- PHMSA recommends that operators provide such information to emergency responders through the operator's liaison and public awareness activities, including during joint emergency response drills. PHMSA intends to evaluate the extent to which operators have provided local emergency responders with their emergency plans when performing future compliance inspections.



Advisory Bulletin No. ADB-11-01 Issued January 10, 2011

Pipeline Safety: Natural Gas and HL Pipeline Operators Establishing MAOP / MOP Using Record Evidence, and Integrity Management Risk Identification, Assessment, Prevention, and Mitigation

- PHMSA reminds operators of their responsibilities under Federal Integrity Management Regulations, to perform detailed threat and risk analyses that integrate accurate data and information from their entire pipeline system, especially when calculating MAOP or MOP, and to utilize these risk analyses in the identification of appropriate assessment methods, and preventative and mitigative measures.



Advisory Bulletin No. ADB-11-02

Issued February 03, 2011

Pipeline Safety: Natural Gas Pipeline Operators Dangers of Abnormal Snow and Ice Build-Up on Gas Distribution Systems

- PHMSA is advising operators whether those facilities are regulated by PHMSA or state agencies, to consider the following steps to address the safety risks from accumulated snow and ice on pipeline facilities:
- **1.** Notify customers and other entities of the need for caution associated with excessive accumulation and removal of snow and ice. Notice should include the need to clear snow and ice from exhaust and combustion air vents for gas appliances to:
 - (a)** Prevent accumulation of carbon monoxide in buildings; or
 - (b)** Prevent operational problems for the combustion equipment.
- **2.** Pay attention to snow and ice related situations that may cause operational problems for pressure control and other equipment.



Advisory Bulletin No. ADB-11-02

Issued February 03, 2011

Pipeline Safety: Natural Gas Pipeline Operators Dangers of Abnormal Snow and Ice Build-Up on Gas Distribution Systems

- **3.** Monitor the accumulation of moisture, snow, or ice blocking regulator or relief valve vents which could prevent proper function.
- **4.** Service regulator sets are susceptible to damage and failure if caution is not used when cleaning snow from around the equipment.
- **5.** Remind the public to contact the gas company or designated emergency response officials if there is an odor of gas present or if gas appliances are not functioning properly. Also, they should leave their residence immediately if they detect a gas or propane odor and report it to their gas operator, propane operator, or designated emergency response officials.



Final Rule Issued December 03, 2009

49 CFR Part 192, 195

Docket ID: PHMSA-2007-27954

Pipeline Safety: Control Room Management/Human Factors

- **Control Room Management:** Requires operators of natural gas pipelines, and hazardous liquids pipelines to amend their existing written operation and maintenance procedures, OQ programs, and emergency plans to assure controllers and control room management practices and procedures are used to maintain pipeline safety and integrity.

(Effective Date: February 01, 2010)



NPRM Issued September 10, 2010 49 CFR Part 192, 195

Docket ID: PHMSA-2007-27954

Pipeline Safety: Control Room Management/Human Factors

- **Control Room Management:** PHMSA published the Control Room Management/Human Factors final rule in the Federal Register on December 03, 2009, which became effective on February 1, 2010. The final rule established an 18-month program development deadline of August 1, 2011, and a subsequent 18-month program implementation deadline of February 1, 2013. **This proposed rule proposes to expedite the program implementation deadline to August 1, 2011, for most of the requirements, except for certain provisions regarding adequate information and alarm management, which would have a program implementation deadline of August 1, 2012.**

(Comments closed November 16, 2010)



Final Rule Issued Dec 04, 2009

49 CFR Part 192

Docket ID: PHMSA-2004-19854

**Pipeline Safety: Integrity Management Program for Gas
Distribution Pipelines**

- **Distribution Integrity Management:** The final rule revises 49 CFR Part 192 to add a new “Subpart P”, and adds new integrity management requirements applicable to distribution pipelines.
- This addresses statutory mandates and builds on previous similar requirements established for gas transmission pipelines. The final rule also adds a requirement that operators install excess flow valves (EFV) on all new and replaced residential service lines serving single residences, as required by the 2002 PIPES Act.
- Rule is applicable to master meter and LPG operators as well, with fewer requirements. **(Effective Date: February 12, 2010)**



Final Rule Issued August 11, 2010

49 CFR Part 192, 193, 195

Docket ID: PHMSA-2008-0301

Pipeline Safety: Updates to Referenced Tech Std's and Misc. Edits

- **Referenced Std. Updates:** Incorporate by reference (IBR) all or parts of new editions of voluntary consensus standards to allow pipeline operators to use current technology, new materials, and other industry and management practices. Also makes non-substantive edits and clarify regulatory language in certain provisions.

(Effective Date October 01, 2010)



Final Rule Issued August 11, 2010
49 CFR Part 192, 193, 195
Docket ID: PHMSA-2008-0301

Pipeline Safety: Updates to Referenced Tech Std's and Misc. Edits

- **Part 192 Updates:** PHMSA **did not** incorporate by reference the following updated ASTM International standards:
- ASTM D638; Standard Test Method for Tensile Properties of Plastics (2008 edition)
- ASTM D2513; Standard Specification for Thermoplastic Gas Pressure Pipe, Tubing and Fittings (2007 edition)
- ASTM D2517; Standard Specification for Reinforced Epoxy Resin Gas Pressure Pipe and Fittings (2006)
- ASTM F1055; Standard Specification for Electrofusion-Type Poly Fittings for O.D. Controller Poly Pipe and Tubing (2006)



Final Rule Issued August 11, 2010
49 CFR Part 192, 193, 195
Docket ID: PHMSA-2008-0301

Pipeline Safety: Updates to Referenced Tech Std's and Misc. Edits

- **Part 192 Updates:** PHMSA has determined that the following updated National Fire Protection Association (NFPA) standards **will not** be incorporated by reference at this time.
- NFPA 58; Liquefied Petroleum Gas Code (LP-Gas Code) (2008 edition)
- NFPA 59; Utility LP-Gas Plant Code (2008 edition)
- PHMSA **did not adopt** the proposed requirement that Part 192 would prevail if there is a conflict between Part 192 and NFPA 58 or NFPA 59.



Final Rule Issued August 11, 2010
49 CFR Part 192, 193, 195
Docket ID: PHMSA-2008-0301

Pipeline Safety: Updates to Referenced Tech Std's and Misc. Edits

- PHMSA continues to have concerns regarding the level of safety required in NFPA 58 and 59 standards in certain subject areas. PHMSA believes that the NFPA 58 and 59 committees should analyze the following topics in consideration of public safety: Internal valves on tank penetrations transporting propane, relief valves, equipment separation and location distances, facility cathodic protection, and requirements for "retroactive" application of the standards.
- **PHMSA will address the subject of NFPA 58 and 59 primacy under a separate rulemaking. When a conflict exists, NFPA 58 or 59 continue to prevail.**



Final Rule Issued August 11, 2010

49 CFR Part 192, 193, 195

Docket ID: PHMSA-2008-0301

Pipeline Safety: Updates to Referenced Tech Std's and Misc. Edits

- **Part 192 Updates:** In §192.3, added definitions for "Active corrosion", "Electrical survey", and "Pipeline environment". (Moved from 192.465 (e))
- On April 14, 2009 (74 FR 17099), PHMSA published a Direct Final Rule that incorporated by reference the 2007 editions of API Specification 5L "Specification for Line Pipe" and API 1104 "Welding of Pipelines and Related Facilities." PHMSA has eliminated the use of the previous editions of these standards.



Final Rule Issued August 11, 2010

49 CFR Part 192, 193, 195

Docket ID: PHMSA-2008-0301

Pipeline Safety: Updates to Referenced Tech Std's and Misc. Edits

- **Part 192 Updates:** Revised **192.711** to make clear that repair time conditions for Pipeline Integrity Management in High Consequence Areas (HCA), for pipelines covered by §192.711 pertain only to non-integrity management repairs.
- **Subpart K** does not require a new pressure test be conducted at the time of uprating unless the old pressure test cannot justify the uprated pressure. 192.555(c) explicitly allows the use of a previous pressure test as the basis for establishing a higher MAOP in higher stress pipelines. Since §192.555(c) allows a previous pressure test, PHMSA will now allow a previous pressure test for pipelines under 192.557 for steel pipelines and in plastic, cast iron, and ductile iron pipelines.



API Expands Access to its Safety Standards

- The American Petroleum Institute (API) announced it would provide free online public access to a large group of key industry standards, including a broad range of safety standards.
- Once changes to the API website are complete, 160 standards will be available online, and represent almost one-third of all API standards.
- Will include all that are safety-related or have been incorporated into federal regulation.

<http://publications.api.org/Pipeline-Operation.aspx>



Information Available from PHMSA

- Latest News
- Training Calendar
- Joint Industry Training
- Operator Qualification
- Resource Links
- Regulatory Information
- Codes
- Pipeline Safety Laws
- Federal Regulatory Information



PHMSA Information Websites

PHMSA Inspector Training and Qualifications

<http://www.phmsa.dot.gov/pipeline/tq>

PHMSA Pipeline Safety Regulations

<http://www.phmsa.dot.gov/pipeline/tq/regs>

PHMSA Rulemaking

<http://www.phmsa.dot.gov/pipeline/regs/rulemaking>