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# PHMSA Regulations on Natural Gas & Hazardous Liquid Pipelines

## Utah Public Service Commission Pipeline Safety Seminar

August 3 – 4, 2010

Tom Finch

Western Region CATS (former State Liaison)

PHMSA Office of Pipeline Safety

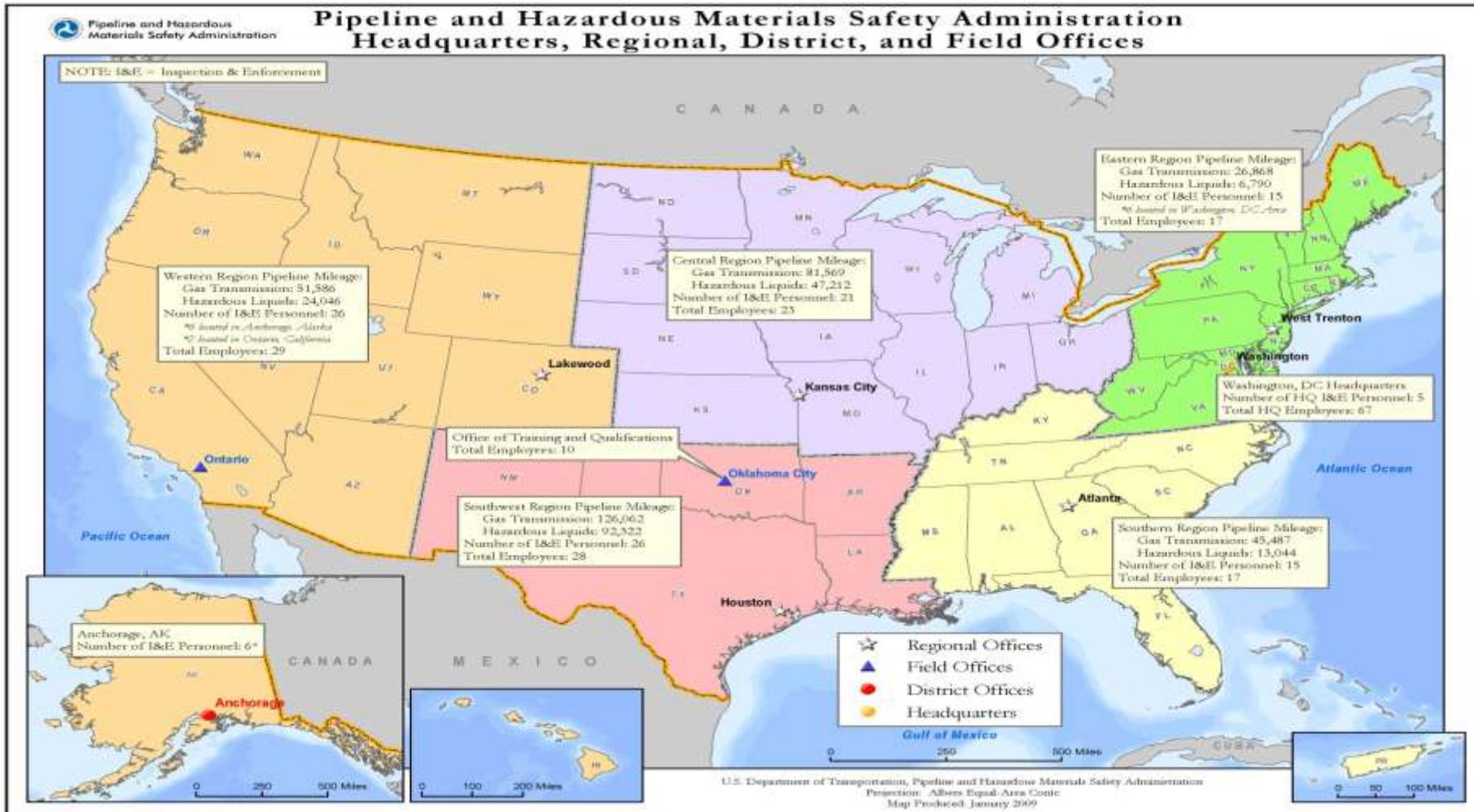


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# PHMSA Regions





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# Staff Changes

- PHMSA Administrator Cynthia Quarterman was sworn in last January (2010)
- Chief Safety Officer Cynthia Douglas selected and started January 20, 2009
- Jeff Wiese is heading up PHMSA's Pipeline Safety Office as our Associate Administrator



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# Objectives of Recent Rulemaking

- Outgoing Administration focused on resolving many of our rulemaking mandates from Congress and Pipeline Safety Reauthorizations of 2002 and 2006 (PIPES Act).
- NTSB recommendations addressed.
- Recurring special permits requests are now codified into regulations.
- Collecting better data to aid agency decisions.



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# Final and Upcoming Key Rulemakings

## Final Rules Issued:

- Standards for Increasing the Maximum Allowable Operating Pressure (MAOP) for Gas Transmission Pipelines (**Effective 12/22/08**)
- Low Stress Hazardous Liquid Pipelines – Phase 1 (**Eff. 7/3/08**)
- Safety Orders (**Eff. 2/17/09**)

## Notices of Proposed Rulemaking that just became final rules:

- Distribution Integrity Management (DIMP) (**Eff.02/02/10**)
- Control Room Mgmt. (Prevention Through People) (**Eff.02/01/10**)
- Standards Update – API 1104 and API 5L ( Incorporated 04/14/09)

## Out soon:

- Low Stress - Phase 2
- “One Rule” – Better Data Collection



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# Alternate MAOP Rule

- Allows for an increase of maximum allowable operating pressure (MAOP) over that currently allowed (up to 80% of Specified Minimum Yield Strength in Class 1 areas)
- Applies to gas transmission lines
- Increases energy capacity while maintaining safety
- Requires additional design and construction considerations
- Requires higher level of maintenance and assessment
- Requires 180 day notice to Region about intent to use alternate MAOP level



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# Timeline

- Special permits were granted on a case by case basis
- Proposed rule developed to codify Special Permit conditions
- Notice of Proposed Rulemaking (NPRM) published March 12, 2008
- Final rule published October 17, 2008
- Final rule was effective 60 days from date of publication...December 22, 2008



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# Comparison of Material and Construction Control

	Existing Requirements	MAOP Rule Requirements
Materials	General	Prescriptive
Mill Hydrotest	90% SMYS, 10 sec	95% SMYS, 10 sec
Coating Type	General	Non-shielding



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# Comparison of Damage Prevention & Emergency Response

	Existing Requirements	MAOP Rule Requirements
ROW patrols	Based on class	12 times per year
Pipeline Markers	Not specified	Line of Sight
Depth of Cover	Not required beyond original installation	Conduct depth of cover surveys and restore as needed
Automatic Valves	Not Required	Needed when response > 1 hour



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# Comparison of Corrosion Control

	Existing Requirements	MAOP Rule Requirements
Confirming Adequacy of CP	CIS feasibility	Within 6 months conduct CIS <b><u>and</u></b> Coating Survey
Interference Current Surveys	Not specified	Within 6 months of operation
Test Station Spacing	Not Specified	Maximum 1/2 mile spacing in HCA's
Time to Remediate	Not specified	Within 6 months



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# Comparison Other Requirements

	Existing Requirements	MAOP Rule Requirements
ILI assessment	HCA areas only	Prescriptive Requirements on Entire Segment
Operator Qualifications	Not req'd for construction	Required for construction
Overpressure Protection	Limits to 110% of MAOP	Limits to 104% of MAOP



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# Regulatory Project for Low Stress Pipelines

- Phase 1 – final rule published June 3, 2008
- Phase 2 – additional proposed rulemakings

For additional information, see Docket 15864 at

<http://dms.dot.gov/>



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# Low Stress Liquid Gathering Rule - Phase 1

- Extends **all of Part 195** requirements to the low stress hazardous liquid pipelines.
- Defines the low stress pipelines per 49 CFR 195.12(a) as follows:
  - 8 5/8 inches or more in diameter
  - with a maximum operating pressure less than or equal to 20% SMYS or less than or equal to 125 psig
  - whose failure could affect an Unusually Sensitive Area.



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## Phase II

- Extends the regulation to those low stress pipelines not addressed in Phase I, i.e., those less than 8 5/8 inches in diameter. This will require an additional NPRM.



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# Safety Orders

- New administrative (enforcement) tool that would allow PHMSA to direct immediate remedial action without calling the facility hazardous (CAO)
- Operator still has right to hearing.
- Effective February 2/17/09



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# Incorporation of API 5L and 1104

- 44<sup>th</sup> Edition of API 5L includes higher toughness standards, dimension tolerances, and more comprehensive inspection methods.
- 20<sup>th</sup> Edition of API 1104 contains more conservative acceptance criteria.
- PHMSA will practice stay of enforcement regarding the older versions in order to promote greater public safety until new references are published in our regulations.



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# Gas Distribution Integrity Management Programs (DIMP)

- Concern about Trends in Distribution Incidents
- Visibility of Major Incidents
- Guidance from the DOT Inspector General
- Stakeholder Confidence in Integrity Management
- Final Rulemaking Issued December 4, 2009 (Eff. 02/02/10)





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# DIMP Requirements

- Similar to gas transmission IMP but tailored to distribution systems.
- Excess Flow Valves required on new or repaired service lines.
- Risk-based leak inspection intervals
- Simplified procedures for master meters & small LPG operators



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# Control Room Management Overview

- Final Rule issued Dec. 3, 2009 (Effective 02/01/10)
- Applies to operators of hazardous liquid pipelines, gas pipelines and LNG facilities.
- Comment period ended November 12, 2008
- Technical Advisory Committee reached consensus on December 12, 2008



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# Control Room Management - Some Project Drivers

- Project drivers:
  - Controller Certification Project
  - NTSB SCADA Safety Study
  - PIPES Act of 2006 (Sections 12, 19, 20)



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# Enhancement Areas Identified

- Roles & Responsibilities
- Controller Qualifications
- Fatigue Awareness & Mitigation
- Shift Change
- SCADA Displays
- Alarm Management
- Operating Experience
- Change Management
- Validation



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# One Rule

- NPRM in 2009
- Improve the quality and quantity of the information collection for annual, accident, incident, and safety related condition forms
- Potential actions:
  - Make all forms available for electronic submission
  - Propose change to reporting criteria to clarify causes such as “other”



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# High Profile Corrosion Accident in Alaska

- March 2, and August 6, 2006
  - Internal corrosion caused a 5,000 barrel crude oil spill onto the Arctic Tundra on March 2nd.
  - Issued a CAO on a 34” diameter, low stress crude oil transmission pipeline NOT regulated by DOT.
  - Following mandated smart pigging and a second leak discovered on August 6th, the operator shut down their entire Prudhoe Bay crude oil system until interim safety could be assured. Full line replacement occurred.
  - This spill catapulted rulemaking on low stress pipelines in USA areas, i.e. The Low Stress Liquid Gathering Rule to the head of the rulemaking list.



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Thank you!!  
Questions??