Beyond Compliance PSMS
Northeast Gas Association (NGA)
Engineering Design Review Workshop

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PHMSA's Mission

To protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives.
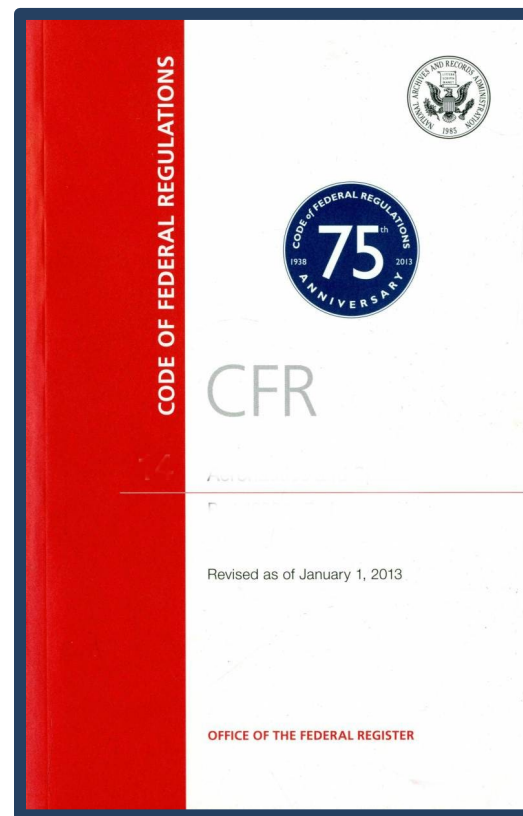
Regulations represent the

MINIMUM STANDARD

It is the responsibility of operators to understand and manage pipeline safety risks.

Current Expectations

- **PHMSA:** Expectation of adoption of Pipeline Safety Management Systems (PSMS) by the industry; however, no current plans to incorporate in regulation.

- **Congressional Stakeholders:** 2020 PIPES Act mandates reporting of the number of natural gas distribution operators who have implemented a pipeline safety management system in accordance with API RP 1173 and other provisions.

Where We Are Going…

Ensuring a "layers-of-protection" approach to work planning, design, and construction using competent, qualified individuals.

PSMS implementation with an emphasis on a strong Safety Culture.
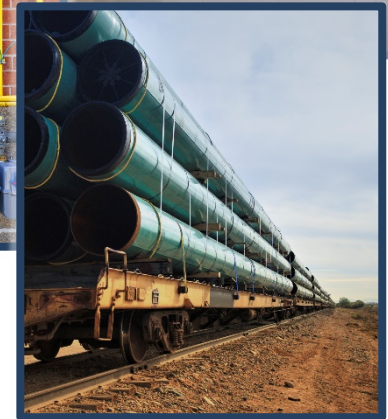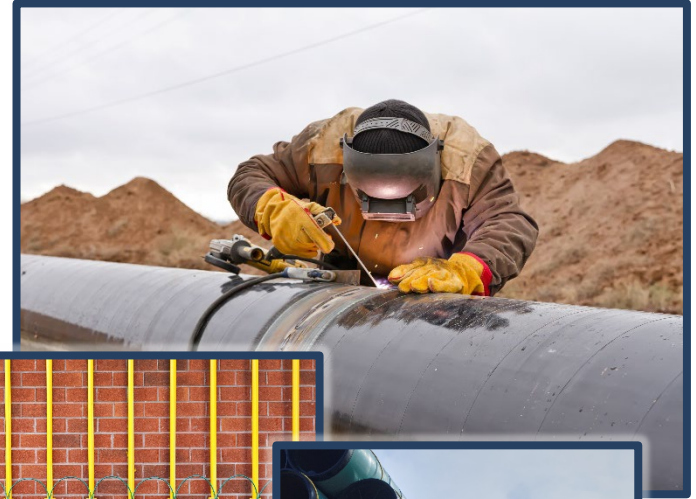
Safety Gaps

SMS is the key to closing the safety gaps that cause infrequent, yet catastrophic, accidents.

Regulations alone will not solve the problem, implementation of a SMS underpinned by culture of safety will go much further.

PSMS Approach Examples

- Conduct Gap Analysis

- Design plans to address gaps based on risk

- Conduct safety culture baseline assessments

Gaps Examples

- Roles/responsibilities are not consistently defined
- Data systems are not consistently populated with available data to support risk management
- Change is not properly communicated across safety functions
- Near misses are not consistently identified or pursued
- Lessons learned from incidents are not identified and/or shared
- Aggregation of simple design procedures into larger, more complex design practices do not adequately consider possible pitfalls
- Lack of KPIs to measure program effectiveness
- Lack of complete/accurate records
- Contractors are not adequately monitored and assessed

A Positive Safety Culture…

…is Necessary to Ensure PSMS Works in Practice

Safety Culture

Culture influences what people see, hear, feel, say, and do.

Most importantly, culture influences behavior which impacts decisions and actions in an organization.

Ultimately, it is this behavior that drives safety performance.

Positive Culture

Safety culture must not be restricted to the operational aspects of pipeline safety. A positive safety culture should start at the top and permeate the entire organization.

Safety needs to be built into all processes of the organization; from the time the line is designed through start up, operation, and even abandonment.

Roadmap to a Strong Safety Culture

- Demonstrate commitment and accountability to safety
- Promote questioning attitudes
- Promote open communication and reporting
- Promote a culture of justice and trust
- Avoid normalization of deviance
- Eliminate production pressures
- Reduce workplace complacency
- Implement a "layers of protection" approach
- Make bold changes when necessary
- Make safety the highest priority

Culture-based Approach to Safety

- Driven by individual values/accountability

- Do what is right, no matter what

- Proactive

- Positive and engaging

- Driven by safety for all (employees, assets, public, environment)

Measuring Safety…

We all must change the way we measure safety…

From: injuries, deaths, and violations…

To: the presence of safety in our culture

Pipeline Safety Culture

It is the job of everyone, from the design phase to day-to-day operations, to foster a culture that focuses on safety in order to ensure this does not happen on our watch.

Where Will PSMS Take Us?

01 REACTIVE
Develops strategies that respond to past incidents and accidents

02 PROACTIVE
Actively collects data to identify and address current hazardous conditions

03 PREDICTIVE
Systematically analyzes safety risk data and performs forward-looking data analytics to identify potential/future problems

PAST — PRESENT — FUTURE

Reactive → Proactive → Predictive

Questions?