PSMS: Key Takeaways & Resources Available to Get Started

Wisconsin Pipeline Safety Seminar

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Topics to be Covered

- Background
- Key Elements and Takeaways A place to Start
- The Need to Begin Your Journey and Why?
- Available Resources to Help you get Started
PSMS Background

- Major incidents in 2010
- NTSB Recommendation
- API RP-1173 Published July 2015
PSMS - What is it and What does it Involve?

- **Leadership and support of a Positive Safety Culture** - Promotes Intentional Safety Actions and Non-punitive Reporting
- **Holistic Framework** - Reveal and Manage Risk
- **Management Tools** - Promote Learning & Continuous Improvement
PSMS 10 Elements

1. Leadership and Management Commitment
2. Stakeholder Engagement (Public Awareness)
3. Risk Management (Integrity Management)
4. Operational Controls (Procedures)
5. Incident Investigation, Evaluation & Lessons Learned
6. Safety Assurance
7. Management Review and Continuous Improvement
8. Emergency Preparedness and Response (Procedures)
9. Competence, Awareness & Training (Operator Qualification)
10. Documentation and Record Keeping (Of Course)
Status

- Voluntary
- In some cases, it could be Mandatory
PSMS Elements & Their Contributions

- Leadership & Management
- Commitment to Safety and Culture
- Risk Management
- Continuous Improvement
Leadership, Management Commitment & Safety Culture

“A positive safety culture is essential to an organization’s safety performance, regardless of its size or sophistication.”

API RP-1173 Introduction – Safety Culture
Defining Safety Culture

“Safety Culture is the collective set of attitudes, values, norms, beliefs, and practices an Operator’s employees and Contractor personnel share with respect to risk and safety.”

API RP-1173 Introduction – Safety Culture
Why is Safety Culture Important?

A positive safety culture influences diligence and intentionality regarding risk, and thereby can reduce human error and failure to follow procedures, which oftentimes leads to incidents.
PSMS Strengthens Safety Culture

• An effective PSMS depends on the actions of every individual and organizational unit at all levels of the organization.

• Each element contributes to different aspects of the safety culture.

• The PSMS, with all its discrete elements, supports the culture, and the culture feeds back into the management system in a continuous process, yielding an increasingly mature organization.

API RP-1173 - Section 15
PSMS & Safety Culture

“...although a positive safety culture can exist without a formal PSMS, an effective PSMS cannot exist without a positive safety culture. Therefore, Operators should actively work to assess and improve their safety cultures.”

API RP-1173 Introduction – Safety Culture
Risk Management

System Knowledge
Risk Identification
Risk Prevention & Mitigation
Systematic Management of Risk & Continuous Improvement
Continuous Improvement

1. Identify objectives and desired outcomes
2. Determine performance measures/metrics
3. Analyze data/metrics
4. Make adjustments
5. Repeat (Plan, Do, Check, Act - PDCA)
The Importance of Beginning Your PSMS Journey

NTSB: “not in favor of a mandate”
PHMSA: “do not want PSMS to be a requirement”
Public: “if nothing changes, they want a mandate”
Congress – Pipeline Safety Act Reauthorization
Pipeline Safety Act Reauthorization
PIPES Act of 2020

Report from Secretary of the DOT on PSMS
• # of Operators Implemented
• Progress in Implementing
• Feasibility based on Size
• Guidance and Recommendations to further adoption
Pipeline Safety Act Reauthorization

PIPES Act of 2020

Requires PHMSA and States to promote and assess PSMS Frameworks through a system that:

• Promotes self disclosure of errors & deviations from regulatory standards
• Requires PHMSA or States to work with Operators to use the most appropriate tools to correct deviation
The Importance of Beginning Your PSMS Journey

The industry can help shape its future regarding PSMS.
Resources Available

APGA PSMS Workshops
https://www.apga.org/events/psms-series

Pipeline SMS Industry Group
www.pipelinesms.org

LinkedIn PSMS Discussion Group
https://www.linkedin.com/groups/8650649/
https://www.psmscentral.com/
Expanded Resources

APGA Planning Tool

EWN Safety Culture Perception Survey
In 2015, during the aftermath of several significant large pipeline incidents and at the recommendation of the U.S. National Transportation Safety Board, the pipeline industry came together to develop a safety management framework for pipelines. The goal of this framework was to further assist pipeline operators to achieve the ultimate goal of zero incidents. This result of this effort was the publication of the American Petroleum Institute’s Recommended Practice 1173, 3rd Ed. — Pipeline Safety Management Systems (PSMS).

In our industry, an incident on any of our systems can potentially impact every operator in the country. With this in mind, APGA’s Operations & Safety Committee recently developed the APGA Planning Tool. The APGA Planning Tool helps operators manage, prioritize, and communicate the elements of AP-1173, while also helping identify potential areas for improvement. Click here for a PDF of the Planning Tool.
Leadership & Management Commitment

A. Gas Management is not aware of PSM/S.
B. Gas Management is aware of PSM/S but not involved with its implementation.
C. Gas Management is directly involved with the implementation of PSM/S.
D. Gas Management has prioritized involvement with PSM/S and has linked goals to the success of PSM/S.

A. Gas Management has not committed to the implementation of PSM/S.
B. Gas Management is supportive of PSM/S but we have not assigned PSM/S responsibilities to our employees.
C. Gas Management is supportive of PSM/S and we have assigned PSM/S responsibilities to our employees.
D. Gas Management is supportive of PSM/S and we have assigned PSM/S responsibilities to our employees. Those employees are held accountable for PSM/S related activities.

A. Gas Management not involved in the prioritization of gas operations & maintenance activities.
B. Gas Management is only briefed annually on the prioritization and selection of gas operations & maintenance activities.
C. Gas Management is involved in the prioritization and selection of gas operations & maintenance activities.
Each Survey Question Tied to One Element

Each Survey Question Tied to Two Safety Culture Indicators
Positive

• Safety Priority
• Accountability
• Empowerment & Ownership
• Communication/Transparency
• Procedural Compliance
• Employee Satisfaction
• Inspires, Enables, & Nurtures Change When Necessary
• Promotes a Questioning & Learning Environment
• Encourages Non-Punitive Reporting

Negative

• Complacency
• Fear of Reprisal
• Over Confidence
• Normalization of Deviance
• Tolerance of Inadequate Systems and Resources
• Production Pressure
Element Questions Dashboard

Survey Question Data Visualization by Element

Indicators Tied to Each Question
Safety Culture Survey Scoring

- 7.2 Leadership & Management Commitment
- 7.1 Stakeholder Engagement
- 6.4 Risk Management
- 7.5 Operational Controls
- 5.7 Incident Investigation & Lessons Learned
- 6.6 Safety Assurance
- 5.5 Management Review & Continuous Improvement
- 5.2 Emergency Preparedness & Response
- 4.1 Competence, Awareness, & Training
- 6.1 Documentation & Record Keeping

Overall Safety Culture Score: 6.5
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