Safety Management Systems – Southern Company Gas’s Approach

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Safety Moment - How Our Values Correlate With SMS

• The safety of our personnel and the public is paramount. Pipeline safety directly influences and impacts employee and public safety.

• Our customers trust us to deliver natural gas to their homes and businesses safely and reliably. Our employees trust that the Company has provided them with the resources to perform each job safely – and the Company trusts its employees to carry out each job safely.

• PSMS and SMS programs drive performance and improvement on a continual basis. Playing offense is part of Southern Style, and PSMS supports that mindset.

• We are absolutely committed to the safety of our employees, our assets, and the affected public safe. This is an unwavering commitment from our leadership and each employee. Pipeline safety and safety excellence is a culture that we are committed to.

Our Values

Safety First
We believe the safety of our employees and customers is paramount. We will perform and maintain every job, every day, safely.

Unquestionable Trust
Honesty, respect, fairness and integrity drive our behavior. We keep our promises, and ethical behavior is our standard.

Superior Performance
We are dedicated to superior performance throughout our business. We will continue our strong focus on innovative solutions, improving how we run our business and our commitment to environmental stewardship.

Total Commitment
We are committed to the success of our employees, our customers, our shareholders and our communities. We fully embrace, respect, and value our differences and diversity.
Southern Company System Overview

Electric Utilities:
- Alabama Power
- Georgia Power
- Mississippi Power

Other Subsidiaries:
- Southern Linc
- Southern Nuclear
- Southern Telecom
- Pivotal LNG
- Sequent Energy Management

Wholesale Electric Utilities:
- Wholesale energy

Natural Gas Utilities:
- Southern Company Gas
- Atlanta Gas Light
- Chattanooga Gas
- Nicor Gas
- Virginia Natural Gas
Where We Started and “Target Zero”

Years prior to 2016 DO NOT include SoGas
Years prior to 2019 DO include Gulf Power
Safety Evolution Timeline at Southern Company

- **2005**: Target Zero
- **2016**: Conducted Safety Culture Survey
- **2017**: New Measures Removed RIR
- **2018**: SHMS Framework
- **2019**: PSMS Analyses & Roadmap

**Key Points:**
- **2005**: Target Zero
- **2016**: Conducted Safety Culture Survey
- **2017**: New Measures Removed RIR
- **2018**: SHMS Framework
- **2019**: PSMS Analyses & Roadmap
Safety Behavior and Metrics Focused on Heinrich’s Triangle
“There has been much confusion about the original ratio in industrial accident prevention. It does not mean, as we have too often interpreted it to mean, that the causes of frequency are the same as the causes of severe injury. National figures show that different things cause severe injuries than the things that cause minor injuries. Statistics show that we have been only partially successful in reducing severity by attacking frequency.”

- H. W. Heinrich
Shifting the Mindset to Understanding the “Why”

• A utility operates in a complex environment that requires high reliability.
• While barriers add value, understanding behavior and culture is essential to driving excellence and eliminating larger safety events.
• Safety is not static – therefore problems must be anticipated and identified early through organizational learning and sharing.
• Formalized frameworks and management systems allow for consistency, tracking and continual improvement.
Safety Approach at Southern Company Gas

Manage Critical Risks and Controls

Event Learning, Culture & Human Performance

Safety Management Systems

Improve Risk Competence

Become a Learning Organization

Continuous Process Improvement
What is a Management System – and what is an SMS?

• Synonymous with Process Safety, Systems Engineering

• Occupational Safety v. Process Safety
  • Occupational Safety hazards usually affect one individual worker at a time. On the other hand, process safety hazards may cause major accidents and have catastrophic effects and can result in multiple injuries/fatalities.*

• API RP 1173 provides a framework for pipeline operators developing, maintaining, and continuously improving a Pipeline SMS.

• SHMS framework based on OSHA and ISO 18001 standards relating to occupational safety.

• The framework introduces practices such as corrective action processes and formalizing complex processes, fostering improved communication channels – as well as building on many of our existing processes.

• Promotes an environment of continuous improvement, not maintaining the status quo, and is present in other industries – including nuclear, aviation, and chemical.

Safety Management Systems Complement One Another

PSMS (Pipeline Safety Management System)
- Enterprise risk management
- Asset integrity and reliability
- Process safety
- KPIs that drive pipeline safety performance and compliance
- Holistic and systematic approach to pipeline safety

SHMS (Safety and Health Management System)
- Focus on worker protection
- Emphasis on driving OSHA standards
- Improved safety programming
- Critical Risk Identification

Other Management Systems
- Continual improvement and optimization
- Structure and standardization around processes and procedures
- QA/QC to ensure performance
- Risk Identification and mitigation
The APEX program aligns leadership commitment with comprehensive pipeline safety management and continuous improvement activities to drive a culture of safety & excellence that enables Southern Company Gas to become the safest, most reliable, and most innovative natural gas company in the US.
Leadership and Management Commitment

Throughout the benchmark interviews, senior leadership commitment was consistently rated higher than middle management commitment. However, distinctions were frequently made between verbal leadership support and actual resource allocation and investment made in developing, implementing, and sustaining a PSMS program.

Barriers to executive leader commitment include:

- A lack of actual investment (money and resources) in the program beyond verbal recognition of its importance.
- Different priorities and ownership across distinct regions and operating units, organizational structures, and disparate operations from mergers and acquisitions.
- Not aligning key business metrics to the program early on to promote PSMS-supportive behaviors.

*Mosaic, “2018 PSMS API RP 1173 Benchmark Report.”*
Safety Evolution Timeline at Southern Company

- **2005**: Target Zero
- **2016**: Conducted Safety Culture Survey
- **2017**: New Measures Removed RIR
- **2018**: SHMS Framework
- **2019**: CRM Implementation

- **PSMS Program Launch**
- **PSMS Process Mapping**
- **PSMS Analyses & Roadmap**
System-Based Performance and Next Steps

• Continue to implement and mature within the frameworks of PSMS and SHMS. Focal points around culture, risk management, and organizational learning.
• Work the roadmaps developed by analyses through initiatives and programs.
• Measure progress on program maturity and implementation as metrics are developed.
  • Develop key performance indicators of system performance as maturity enhances.
• Consolidate and standardize process, where applicable, and align SHMS and PSMS efforts.
Questions?