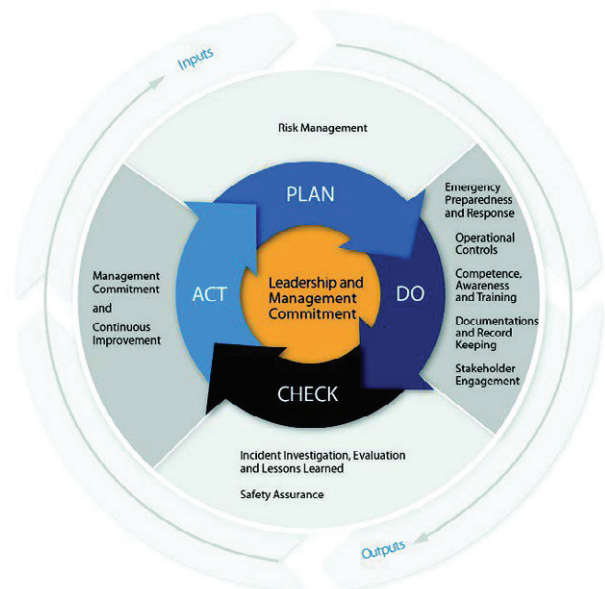# API 1173 – PIPELINE SAFETY MANAGEMENT SYSTEMS

ABOUT API RP 1173:

A Pipeline Safety Management System (PSMS) is a holistic approach to improving pipeline safety through the identification, prevention, and mitigation of risk. It is about understanding risks associated with a series of complex processes that make up the system, and through a comprehensive, systematic effort mitigating those risks to ensure the safety of a pipeline operator's workforce, assets, and the public.

An effective PSMS broadens the perspective on safety and engages all stakeholders that can impact the processes, including those outside of operations and engineering, which ensure the safe delivery of energy to the customer.

A PSMS is at its best when proactively engaging key stakeholders (employees, contractors, regulators, and the public) in a comprehensive, systematic process to reduce risk before there is a safety incident. This is done through a deliberate, intentional, and perpetual continuous improvement process that also has robust processes to evaluate an incident, should one occur, to understand the effectiveness of the operational controls, implement improvements, and measure their effectiveness.

ENCONSULTING

OUR CAPABILITIES

ENTRUST Solutions Group, ISO 9001:2015 certified, is uniquely positioned to provide guidance and technical expertise to implement a PSMS. Our team of professionals are experienced in the design, implementation, and execution of all elements of the PSMS. We work with clients to develop and implement a comprehensive PSMS program and to build upon or implement specific aspects of the PSMS within existing pipeline safety programs. Additionally, we leverage our extensive experience in process safety management to provide a broader set of solutions that can be applied to pipeline safety.

OUR SERVICES

PROGRAM DEVELOPMENT:
- Project management
- Assess existing processes and procedures to determine how they address pipeline safety and each element of the PSMS
- Conduct a gap assessment relative to PSMS requirements
- Develop PSMS implementation roadmap
- PSMS element process and procedure development
- Conduct or facilitate stakeholder assessments
- Stakeholder communications and engagement planning
- Develop PSMS governance process
- Key performance measures and scorecard development
- PSMS program training and educational material development
- Develop process safety management program
- Develop contractor quality management and assessment program

PROGRAM EXECUTION:
- Threat assessment and risk identification
- Safety culture and PSMS maturity assessment
- Safety goal and objectives reviews
- Quality assurance or effectiveness assessments (annual program and element)
- Quality control testing development
- Operational control effectiveness assessment
- Facilitate an internal peer review program
- Incident or near-miss review and lessons learned communication plan
- Management of change process assessment
- Data and records assessments
- Audits - compliance, safety assurance, effectiveness assessments, element, risk-specific
- Program reviews (ex. TIMP, DIMP, OQ, damage prevention)
- Procedural reviews

RISK MANAGEMENT & MITIGATION:
- Facilitation of the risk management process
- Data evaluation and gap assessments
- Risk assessments (bow-tie analysis, cause and effect analysis, process hazard analysis, FMEA, HAZOP, what-if analysis, design safety review, process safety information data compilations)
- Data quality assessment, verification, and improvement planning
- Risk mitigation planning, facilitation, and implementation

INCIDENT INVESTIGATION AND ASSESSMENT:
- Incident investigation
- Operational control effectiveness review
- Root cause analysis