



API RECOMMENDED PRACTICE (RP) 1160

MANAGING SYSTEM INTEGRITY FOR HAZARDOUS LIQUID PIPELINES



PROTECTS THE PUBLIC, EMPLOYEES, THE ENVIRONMENT

Pipeline operators are committed to zero incidents; they go above and beyond what is required by regulators through the implementation of API standards that ensure robust preventative, mitigative, and response measures.



GOES ABOVE AND BEYOND GOVERNMENT REGULATIONS

API is the global leader in convening subject matter experts across segments to establish and maintain consensus standards for the oil and gas industry. These standards further safety, efficiency, environmental protection, and sustainability across the industry.

Developed under a third-party accredited process with participation from the Pipeline and Hazardous Materials Safety Administration, **API Recommended Practice 1160** provides a process within a management system framework for operators to assess potential risks and make day-to-day decisions. Through effective integrity management, pipeline operators can significantly reduce the likelihood of an incident and adverse effects on the public, employees, and the environment.

PREVENTS AND MITIGATES RISK THROUGH INTEGRITY MANAGEMENT GUIDELINES

- Helps identify and analyze actual and potential precursor events
- Examines the likelihood and potential severity of incidents
- Provides comprehensive and integrated means for examining and reducing risks
- Establishes and tracks system performance to increase efficiency



FACILITATES SAFE AND RELIABLE OPERATIONS WITH A PRINCIPLED INTEGRITY MANAGEMENT PLAN

- Builds integrity management into the initial planning, design, and construction of pipeline systems
- Ensures qualified employees are using defined processes to operate and maintain facilities
- Provides flexibility, allowing operators to customize a program under unique conditions
- Integrates data and information
- Conducts a risk assessment using the integration and analysis of data and information
- Accommodates operating changes through continuous evaluation and modification

RP 1160 OUTLINES THE STEPS FOR ESTABLISHING AND MAINTAINING AN EFFECTIVE INTEGRITY MANAGEMENT PLAN

A pipeline integrity management program is a set of policies, processes, and procedures to manage risk. Integrity management plans follow the foundational safety management system's (SMS) "Plan-Do-Check-Act" cycle to facilitate not only inspection and maintenance of a program, but also performance measuring, continual evaluation and improvement activities.

PLAN

- Identify Threats
- Identify Potential Impacts to High Consequence Areas
- Assess Risk and Rank Segments
- Develop or Revise an Integrity Management Plan

DO

- Conduct Inspections, Testing, Examinations
- Collect Integrity Data
- Collect Performance Data

ACT

- Perform Preventative and Mitigative Activities
- Calculate Reassessment Intervals
- Perform Program Improvement Activities
- Perform Remediation Activities

CHECK

- Review Management of Change (MOC)
- Integrate MOC Information with Integrity and Performance Data
- Review Operator, Industry, and Regulator Learnings, Recommendations or Advisories
- Evaluate Integrity Program Performance
- Assess Pipeline Integrity

