IMPLEMENTING API RP 1173:HOW TO GET STARTED

Implementing a Pipeline Safety Management System to meet API RP 1173 will help you operate safer and be more compliant

Knowing if you have an effective Pipeline Safety Management System

If you already have policies and procedures to execute your pipeline operations, you already have a Pipeline Safety Management System. But do you have everything you need?

In its new standard API RP 1173, the American Petroleum Institute has spelled out what every operator of oil and gas pipelines must do to improve its pipeline safety performance. Every day, more pressure to enhance safety and environmental performance is being applied to the pipeline industry and it's safe to assume increased regulatory scrutiny is inevitable. By voluntarily moving towards meeting APR RP 1173 now, companies have an opportunity to demonstrate to regulators and the public that they can operate in a safe and responsible manner.

"This seems easy...So how do I do it?"

By following the recommendations in this white paper, you will be able to demonstrate the current state of your Pipeline Safety Management Systemin accordance with API RP 1173and build an improvement plan to be more compliant and increase safety performance.

- Understand what API RP 1173 asks you to do and break down the sections into manageable chunks.

- Learn how to assess your own organization to determine what you already have and what you need to improve.

- Identify and prioritize gaps and make an improvement plan that will work for you.

- Know when to use expert assessors to ensure your API RP 1173 assessment is conducted in a credible and defensible way.

- Understand how spreadsheets and email are unsecure and why you need a data management tool to store and manage assessment information

Understand API RP 1173 Requirements

The API RP 1173 standard is a document that was developed collaboratively with participation from pipeline companies, regulators, associations and industry experts. We strongly recommend you purchase your own copy from the API website.

The document follows a fairly typical structure for technical standards which includes many requirements to implement. The following table summarizes the key requirements in the 10 sections of API RP 1173 that comprise the essential Pipeline Safety Management System (PSMS) Elements.

By reviewing this table, you will understand the main requirement topics that API RP 1173 covers and begin to understand how it aligns to your existing organizational structure and procedures.

API RP 1173	Key Requirements	
Leadership and Management Commitment (Section 5)	• *Establish a Pipeline Safety Management System and shared understanding of Safety Culture* • *Document policies, goals, objectives and commitment to safety* • *Create and assess a culture of openness* • *Demonstrate leadership commitment* • *Processes and procedures are in place for each PSMS element*	• *Addressing regulatory and legislative requirements* • *Data integration and sharing* • *Budget and resource planning* • *Detailed positional responsibilities for Top Management, Management and Employees* • *Responsibility, Accountability and Authority defined throughout the organization for pipeline safety*
Stakeholder Engagement (Section 6)	• *Communication and engagement with internal and external stakeholders* • *Employees and contractors understand the PSMS as it relates to their work* • *Process to raise employee and contractor concerns and recommendations for improvement*	• *Lessons learned are communicated and applied* • *Engagement with regulatory bodies and the public* • *Exchanging safety information with stakeholders*

API RP 1173	Key Requirements	
Risk Management (Section 7)	• Risk management procedures • Analyze and evaluate risk of threats • Manage risks through preventive controls, monitoring and mitigation measures • Maintain inventory of pipeline assets and environment in proximity to define safe operating conditions	• Identify and close historical gaps in data to support risk assessment and safe operations • Risk identification and assessment • Risk prevention and mitigation • Periodic analyses and update of risk assessments • Top Management review of risk management processes and results
Operational Controls (Section 8)	• Safe work practices • Operating procedures content and review • Authority to stop work • Deviation process • Assure system integrity	• Manufacturing and construction controls, including inspection • Maintenance procedures • Testing and inspection procedures • Management of Change (MOC) • Contractor management
Incident Investigation, Evaluation, and Lessons Learned (Section 9)	• Incident investigation procedures, including near-misses • Follow-up and communication of lessons learned	• Learning from past events • Learning from external events
Safety Assurance (Section 10)	• PSMS Audits and findings follow-up • Evaluation of risk management • Evaluation of safety performance • Evaluation of safety culture	• Evaluation of PSMS Maturity • Reporting and Feedback System • Performance Measurement and Analysis of Data
Management Review and Continuous Improvement (Section 11)	• Management review of elements of the PSMS, including summary output for top management review	• Continuous improvement based on audits, data analysis and management review
Emergency Preparedness and Response (Section 12)	• Emergency preparedness procedures • Training ,drills and external agencies and organizations	• Emergency response plans • Periodic review and lessons learned
Competence, Awareness, and Training (Section 13)	• Employee training and competency evaluation	• Contractor competency evaluation • Training records maintained
Documentation and Record Keeping (Section 14)	• Procedures for control of Pipeline Safety Management System documents • Control of documents	• Control of records • Maintenance of procedures

* This table has purposefully summarized API RP 1173 requirements and should not be considered a complete representation of the original document. Please refer to the actual API RP 1173 standard for the complete document, detailed requirements and supporting guidance.

Assess Your Operations

Now you have some knowledge of what the API RP 1173 standard expects, it's time to assess your operations and determine where you already meet requirements, and where you need improvement. Although we call this stage assessment, we recommend a number of activities to support your organization's understanding of a Pipeline Safety Management System and to guarantee a successful implementation through this important assessment phase. The steps we recommend are:

1. **Hold a Leadership Session** Leadership needs to understand the PSMS from the beginning and commit to this first phase of implementation. This session will include leadership API RP 1173 awareness training, an overview of recommended leadership roles and responsibilities, and the identification of senior leaders to be on point for each of the 10 elements of API RP 1173.

2. **Plan the Assessment** With leaders on-board, it's time to plan your assessment. For each of the 10 elements of API RP 1173 you will identify the key personnel that need to be included in the assessment (based on knowledge, expertise and experience), identify and collect existing documentation that supports the elements and requirements and identify an assessment facilitator to guide you through the process and record the assessment(preferably the same person for all 10 elements to maintain consistency and be the go-to person for any questions throughout the planning).

3. **Conduct Awareness Training** Before the assessment gets started, it is important that everyone included participates in an awareness training session. This is recommended within 1-2 weeks of conducting the assessment. It will provide an overview of a Pipeline Safety Management System and API RP 1173,discuss important assets and risks of the operations that need to be considered, and provide an overview of the assessment process that will be executed.

4. **Complete the Assessment** Now the fun part! Your leadership is committed, participants are trained and you're ready to assess your operations against API RP 1173. Each of the 10 elements can be assessed in separate sessions or all together depending on the size and complexity of your organization. Each assessment session will begin with an overview of the element and requirements being covered. The participants will review and discuss your current state and gather positive and negative observations for each API RP 1173 requirement. Where a gap exists, it will be identified. For each element, you will assess your organization's maturity score using API's suggested maturity scale or your own internal scoring criteria. When complete, you will review and validate the assessment results with your Leadership team and finalize the report. This is now your baseline current state with which you can build your improvement plan.

Prioritize Gaps and Create Improvement Plan

The gaps you've identified in your assessment now drive the creation of your improvement plan. But not all gaps are the same, and they need to be risk ranked for importance and prioritized. Reviewing the list of gaps with your Leadership Team and technical experts will enable you to quickly identify what's really important vs. administrative changes that may have less priority.

Importantly, many gaps will clump together and get fixed under the same project. It is a common mistake to assign an action for each gap which generates extra work and duplication of effort. For example, you might identify one gap under leadership related to risk awareness, another gap related to risk assessment, and another related to contractor risk assessment. They were all identified in different Elements of API RP 1173 but you will want to fix them under one Risk Management project. You can imagine the cost of duplication caused if these three gaps were fixed by three separate projects.

At this stage, aligning your gaps with your existing organizational accountabilities is critical to success. It is important to assign responsibility for implementation with the group or person that has the gap accountability and highest chance of success. This might be a corporate manager, or it might be a field leader. This make sit clear who will make the improvement and avoid duplicated effort where multiple groups try to fix the same thing.

When to use Experts for API RP 1173

To support the completion of your assessment and to demonstrate to regulators, stakeholders or associations that your assessment and implementation activities are credible, we recommend that you use qualified personnel with the appropriate assessment and technical expertise.

Although this is an assessment, we strongly recommend you implement audit rigor and use personnel that have formal audit training and experience. The assessors should also be independent of the activities being assessed, meaning they must not have been involved in the implementation of the existing programs and processes they are assessing.

Although this isn't an explicit requirement, an independent assessment of your Pipeline Safety Management System by externally qualified personnel will be much more credible and defendable to a regulator or other party. Using external expertise will also provide you a "fresh set of eyes" on your business that allows you to obtain more comprehensive input on how you can improve and how to benchmark against other pipeline companies. Future assessments will also need to assess the status of gaps from previous assessments and test the implementation of improvements. Again, the regulators and stakeholders will look for a credible, trustworthy assessment of these activities before accepting the assessment results.
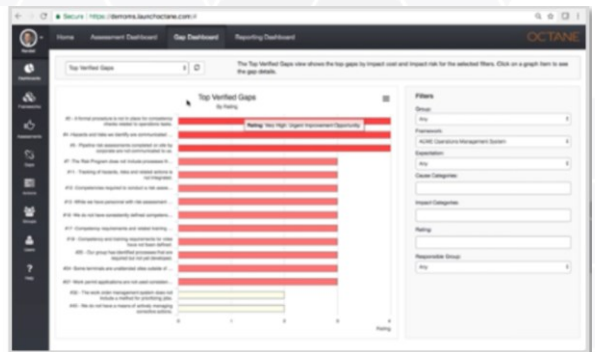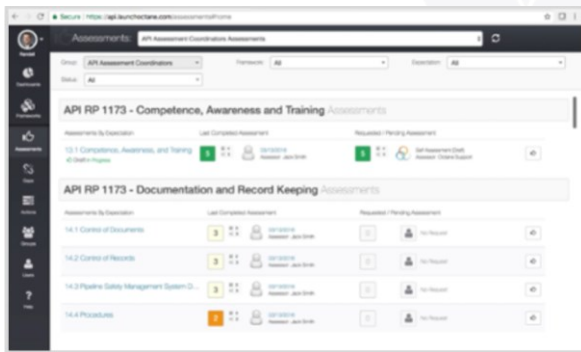
Why you need a Secure Data Management Tool

Email and spreadsheets are unsecure. Companies don't realize the risk of sending around sensitive information that in the wrong hands could damage the value and reputation of the company and its employees. Further still, when you have external service providers or associations managing your information on your behalf, you completely lose control of its security when it sits in other systems.

A proper data management tool that supports assessments and the management of gaps and implementation of actions is necessary to maintain the security and integrity of your Pipeline Safety Management System information. The tool SPAN uses is called Octane and we supported its development as no other tool exists that supports the implementation of a management system in the same way.

Regulators, or other stakeholders who you need to prove your PSMS to, will expect that you have adequate documentation and traceability of information to justify your assessment results and implementation of actions. The assessment information and any supporting evidence needs to be stored and tracked in a way that can easily be recalled for review and to support the resolution of gaps arising from the assessment. For these reasons, it is important that you capture evidence of documents, records showing implementation, and observations in a system that can track and report this information over time.

The following images show an assessment being completed in Octane, our assessment and action tracking tool. In this all-in-one tool, your assessment observations can be recorded, evidence can be attached, gaps can be created and tracked and all assessment data can be easily reported on for internal management and review, all in a secure environment.

Knowing you've done the Right Thing

It's not often easy to know what the regulators are asking for and what you need to do to meet their requirements. Requirements are often buried in legal jargon with no practical help on how to achieve them.

Our goal is to break down that complexity and help you find easy, implementable solutions that meet your business needs and meet the needs of regulators and stakeholders. This white paper is a starting point to help you understand API RP 1173 and how to break it down into achievable pieces.

Prove that you have an effective Pipeline Safety Management System by understanding the standard, assessing your operations, prioritizing gaps and creating an improvement plan. Consider using expert assessors to help build credibility and trust and use a tool like Octane that helps you track progress and demonstrate improvement over time. Don't take short cuts and pay later. Do it right and put your energy into what makes your company successful, building and operating productive oil and gas assets

About SPAN Consulting

SPAN is a consulting company that focuses on assisting companies to implement management systems like API RP 1173. Our knowledgeable and trained team has extensive experience in management systems, assessments, process improvement, project & change management and business performance management among others. We pride ourselves on our fresh and strong culture focused on delivering services using the right approach and methods to suit your company's way of operating.

Meet the full SPAN team on our website under About Us