What’s in your pipeline safety tool kit?
New recommendations from the American Petroleum Institute are on the horizon.

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This year, pipeline operators anticipate the publication of the American Petroleum Institute’s (API) Recommended Practice (RP) 1173: Pipeline Safety Management System Requirements (“RP 1173”). Since 2012, the API has worked with industry, agencies including the NTSB and PHMSA, and other stakeholders to develop the recommendations. Originally published for comment in 2014, the API has solicited remarks, prepared several drafts, and held workshops on the proposed content. The API’s goal for RP 1173 is to help the industry achieve “zero incidents” through use of Pipeline Safety Management Systems (PSMS) and improved safety cultures.

The Setting: Major Spills, Devastating Damage, and Unprecedented Fines

RP 1173’s creation was spurred by several catastrophic pipeline failures and the NTSB’s 2012 recommendation that the API “facilitate the development of a safety management system standard specific to the pipeline industry.” This recommendation was included in the NTSB’s Accident Report on the 2010 Marshall, Michigan pipeline spill. In Marshall, an Enbridge liquid pipeline ruptured, spilling over one million gallons of crude oil into the Kalamazoo River. The NTSB found that before the Marshall incident, operations personnel “had developed a culture that accepted not adhering to the procedures.”

The NTSB concluded that organizational and safety culture deficiencies also contributed to a 2010 fatal gas-pipeline explosion in San Bruno, California. There, a segment of a PG&E natural gas pipeline ruptured releasing an estimated 47.6 million standard cubic feet of natural gas. The gas ignited, resulting in a fire that left eight dead, many injured, and destroyed a neighborhood. Earlier this month, California regulators levied a record setting penalty of $1.6 billion against PG&E for the disaster noting continuing concerns regarding PG&E’s safety culture.

The Framework: Key Elements, the Plan-Do-Check-Act Cycle, and Safety Culture

Numerous industries, from transportation to petrochemicals, use safety management systems as a basis to assess and improve their safety performance, enhance their safety culture, and avoid high consequence incidents. These systems help manage the safety of the many interconnected,

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complex processes involved in designing, building, operating, maintaining, and managing an enterprise. Such a system is of particular importance to the reduction of disasters such as San Bruno and Marshall. Catastrophes “rarely occur due to a safety breakdown of a single activity but instead occur because of an alignment of weaknesses across multiple activities.”

API RP 1173 provides operators with an enhanced framework for a safety management system tailored to pipelines. It is designed to “reveal and manage risk, promote a learning environment, and continually improve pipeline safety and integrity.” RP 1173 identifies ten essential elements of a PSMS, including (1) leadership and management commitment, (2) stakeholder engagement, (3) risk management, (4) operational controls, (5) incident investigation, evaluation and lessons learned, (6) emergency preparedness and response, (7) competence, awareness and training, (8) safety assurance, (9) management review and continuous improvement, and (10) documentation and record keeping.

Each element is accompanied by detailed guidance for effective implementation. For example, under “lessons learned,” operators are instructed to periodically evaluate “the effectiveness of organizational learning from the known lessons learned” from past events. To learn from external events, API recommends that operators meet with “the affected public, including landowners.” The recommendations even contain tips for incorporating contractors impacting the PSMS into the system.

After detailing the ten elements, the API recommends incorporating them into a Plan-Do-Check-Act Cycle for continuous assessment and improvement. The first stage of the cycle, “planning” includes establishment of goals and risk management processes. Next, the “doing” stage involves execution of the “plans” within the established guidelines (e.g., emergency response, operational controls and stakeholder engagement). The “plans” are then “checked” in the third stage through data collection and analysis. Subsequently, “actions”, including corrective actions, are taken based on the data gathered during the “checking” stage. The “actions” are used to develop the next “plans” to feed the continuing loop. The API encourages operators to apply the Plan-Do-Check-Act Cycle flexibly and to adapt it to their needs.

A necessary complement to the PSMS elements and cycle is a robust safety culture. The API describes a healthy safety culture as “one where employees and contractor personnel collaborate; have positive attitudes towards compliance (meeting and exceeding minimum standards); feel responsible for public safety, for each other’s safety, and for the health of the business; and fundamentally believe in non-putative reporting.” Factors such as complacency, fear of reprisal, over confidence, and acceptance of deviance from standards and procedures are identified as strong indicators of an unhealthy safety culture. A sound safety culture will support a PSMS and be further strengthened by its effective implementation.

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4 Draft RP 1173, supra at iii.  
5 Id. at 1.  
6 Id. at 14-15.  
7 Id. at v.  
8 Id. at vii.
The External Effect: Use by Investors, Insurers, Regulators, and Plaintiffs

At this time, there is no indication that RP 1173 will be adopted by any agency or codified into regulations. Although implementation of RP 1173 is not mandatory, operators rejecting it risk reprisal from investors, insurers, regulators, and plaintiffs.

Investors and insurers could monetarily penalize non-compliant operators after labeling them as less safe than those that do comply. State and federal regulators could apply the RP 1173 factors to evaluate operators during incident investigations and when recommending corrective actions.

Plaintiffs’ attorneys may use RP 1173 to help establish negligence by arguing that a reasonably prudent operator should follow RP 1173 to avoid accidents. In negligence actions, evidence of industry standards is “often highly probative when defining a standard of care.” 57A Am.Jur.2d Negligence § 185 (2002); see also Kraus v. Alamo Nat'l Bank, 586 S.W.2d 202, 208 (Tex. App.—Waco 1979), affirmed on other grounds, 616 S.W.2d 908 (Tex. 1981) (non-compliance with OSHA regulations is evidence of negligence, but not conclusive proof).

Plaintiffs’ attorneys may also point to safety system and culture failures to support a gross negligence finding or an award of punitive damages. Despite Federal Rule of Evidence 404(b)’s prohibition against admission of insufficiently similar prior conduct, in the Gulf oil spill litigation, plaintiffs successfully pointed to prior incidents, including those not factually similar to the spill at issue, as evidence that defendants had failed to learn from past mistakes or correct pervasive safety issues. Using RP 1173 as a guide, operators can work to address any safety issues, such as patterns of normative deviance or safety process failures across business segments, before such issues are used to their detriment in litigation or investigations following serious incidents.

The Execution: Assessment, Implementation, and Monitoring

Pipeline operators wishing to avoid the risks of ignoring RP 1173 may take a number of measures now to build or support their PSMS:

- **Determine Needs:** Using the draft RP 1173, operators may assess their current safety systems, risk management programs, and safety culture to identify how the RP 1173 elements may bolster their current programs, and where the elements can be used to fill gaps. Such an assessment should include interviews with stakeholders, analysis of procedures, and audience tailored education to inform stakeholders about the new recommendations and to obtain buy-in regarding any anticipated safety culture corrections and new programs or procedures that the organization plans to adopt.

- **Customize and Apply:** After identifying its organization’s needs, operators may begin tailoring and implementing the RP 1173 elements. Documenting the links between an operator’s PSMS to the RP 1173 elements will provide a compliance roadmap for anyone seeking to use RP 1173 as a sword against the operator in future legal actions or investigations. Papering application of the elements and adherence to the Plan-Do-
Check-Act Cycle, will help operators control risk better, detect and correct safety issues earlier, and analyze and share safety data more effectively in a programmatic way.

- **Measure Progress:** Application of RP 1173 will also help operators measure safety performance more carefully. As noted by the API, measurements will be more accurate through the use of tools including documentation, information gathering, tracking, analysis, assessments, and internal and external audits. Moreover, when faced with overarching concerns such as systemic problems or patterns of noncompliance in certain regions or segments, outside counsel can be added to assessment and audit teams to help perform the review, identify regulatory and other legal risks, and provide privilege to protect the work from future discovery.

Although API RP 1173 is not yet final and published, application of the recommendations provided in the current draft can help ensure that an operator’s safety toolkit is full of the latest and greatest tools known to build or strengthen a PSMS, and lessen the risk of future high consequence failures.