DON'T WAIT: NAVIGATE PROCESS SAFETY MANAGEMENT (PSM) STANDARDS AMID PENDING REGULATORY UPDATES

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Process Safety Management (PSM) is essential to controlling hazardous materials and preventing disasters or catastrophic incidents. In the past few years, ongoing conversations and formal committees have focused on improving and updating the current PSM Standard, originally published in 1992. Regardless of when the standard will officially be updated, we have provided 5 key focus areas for you and your company to consider for your own process safety management risk reduction strategy. We recommend self-assessing and correcting where needed, so that you are ahead of any official rule change. Making changes now can 1) keep your employees, customers, and other important stakeholders safe, and 2) prevent scrambling to meet new regulations because you've proactively implemented key improvement areas.

Understanding the History of 1910.119 PSM Standard

Prior to 1992, there were several catastrophic chemical manufacturing incidents worldwide. The Process Safety Management (PSM) Standard was implemented in response to these incidents caused by mismanagement of highly hazardous chemicals (HHC), flammables, and explosives. While the 1992 standard was effective in improving process safety, major accidents continued. These incidents included toxic chemical releases, runaway chemical reactions, major fires, and explosions, posing life-threatening risks to workers.

In response to these process safety incidents, the executive order "Improving Chemical Facility Safety and Security" was signed in 2013 and aimed to modernize the PSM standard. Since then, multiple stakeholder meetings have been held to discuss expanding, updating, and clarifying important elements. In 2022, a series of PSM Stakeholder Meetings convened to discuss the future of the regulation. As of today, it is still unknown when an update to the 1992 standard will be put into place.

The five recommended focus areas to review and proactively improve include highly hazardous and reactive chemicals, atmospheric storage tanks, oil and gas drilling/production facilities, safer technology and mechanical integrity, and third-party auditing. Below, we cover each topic in more detail.

1. Highly Hazardous and Reactive Chemicals

Aligned with its original goal of preventing accidents with hazardous materials, the PSM standard applies to identified highly hazardous chemicals (HHC). The term "process" applies to any activity that uses, stores, manufactures, handles, or moves these HHCs. The current standard lists thresholds of more than 130 specific toxic and reactive chemicals and includes flammable liquids and gases in quantities of at least 10,000 pounds. The current standard also mandates written procedures, training, safety, equipment integrity evaluations, written change management procedures, and other requirements.

The list of HHCs and threshold amounts will likely expand in an expected update to the PSM standard. OSHA specifically named ammonium nitrate as a likely candidate for adding to the list. When improving in this area, make sure your team members know how to handle hazardous chemicals, even if not currently listed in the standard.

2. Atmospheric Storage Tanks

Flammable liquids that meet certain flashpoint criteria (below 100 degrees F) and are stored in atmospheric tanks are currently excluded from the PSM standard's scope. Atmospheric tanks operate at pressures from atmospheric to 0.5 psig. We know from stakeholder communications that OSHA is prioritizing clarifying the exemption in future updates.

Oftentimes, flammable and volatile materials stored in atmospheric tanks can feel "remote," and therefore, proper safety attention and resources may not be paid to the dangers of these tanks. Remote should not

PSM Regulatory Update Timeline, 2016-2022

While the implementation of the PSM Standard in 1992 was effective in mitigating risk, incidents have continued to occur. Recent efforts in the past decade have been dedicated to updating the regulation.

mean "not included." Even if exempted from the current PSM, review the processes associated with these tanks and implement the appropriate safety standards. One example is checking the accuracy of the tank's level indicators and confirming they work as they should.

This exemption might not last for much longer, and it is better to be ahead of the regulation than behind.

3. Oil and Gas Drilling/Production Facilities

Like atmospheric storage tanks, oil and gas drilling facilities were specifically exempted from the 1992 PSM Standard.

OSHA is considering adding coverage for these activities in the next update.

Drilling operations bring unique risks, including exposure to pressurized processes, hydrogen sulfide, and other flammables. These operations would benefit from the formal risk review process that accompanies the process hazard analysis mandated by the PSM standard.

The process hazard analysis includes a comprehensive and systematic evaluation of hazards in any given process. The following methods are typically used in these types of reviews:

- **What-if and/or checklist**
- **Hazard and operability study (HAZOP)**
- **Failure mode and effects analysis (FMEA)**
- **Fault tree analysis**
- **Other appropriate similar methods**

Review the PSM standards to identify key outcomes you should accomplish then select your appropriate risk analysis/ reduction tool(s).

4. Safer Technology and Mechanical Integrity (MI)

Significant technological advancements in safety technology and mechanical integrity have occurred since 1992. Implementing the latest technology and ensuring that it performs its intended function correctly and reliably is now an even more essential part of process safety management.

Upcoming PSM updates may include added coverage or clarifications for requirements of technology usage. Be prepared and start implementing, managing, and monitoring your technology improvements today. These may need capital funding approvals.

5. Third Party Auditing

The final of the five focal areas for process safety improvement is auditing. Third-party reviews and audits are a simple solution to combating complacency in your organization.

Process safety is about reducing risk and perpetuating safety. Cold eyes can help go beyond compliance. Not to mention, OSHA stakeholder communications have included third-party audits as key consideration areas for requirement changes. Get ahead now and set up your organization for success.

Stay Proactive with your Process Safety

The most productive action you can take now is to proactively manage process safety beyond minimum compliance. We hope we have provided some direction in the highest-value areas to focus your efforts, but remember: the ultimate goal is safety, always.

For more information about process safety management, contact us.

References

OSHA 3132 (2000). Process Safety Management U.S. Department of Labor and Health Administration

OSHA 3909-03 (2017). Process Safety Management Storage Facilities

OSHA Directive (2023). CPL-02-01-065. Issued December 14, 2023

Process Safety Stakeholder Meeting Presentation (PowerPoint) October 12, 2022