

Process Safety Management: Major changes might be on the horizon for the oil & gas industry

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On August 1, 2013, President Obama signed Executive Order 13650, entitled "Improving Chemical Facility Safety and Security." Section 6(e)(ii) of the order required the Occupational Health and Safety Administration (OSHA) to publish, within 90 days, a request for information (RFI) designed to identify issues related to modernization of its Process Safety Management (PSM) standard and related standards necessary to meet the goal of preventing major chemical accidents. In response to the executive order, OSHA published an RFI to collect data and information on its PSM standard and related standards, as well as other regulatory issues involving hazardous chemicals. The RFI was published December 9, 2013, and the comment period was recently extended to March 31. OSHA will use the information received in response to the RFI to determine what action, if any, it may take.

OSHA originally promulgated the § 1910.119 Process Safety Management standard in 1992 in response to a number of catastrophic chemical-release incidents that occurred worldwide. The incidents spurred broad recognition in the safety community that accidental releases of highly hazardous chemicals can result in multiple worker injuries or fatalities. The main objective of the PSM standard is to prevent or minimize employee exposure to the hazards associated with uncontrolled releases of highly hazardous chemicals.

The PSM standard is a comprehensive management program

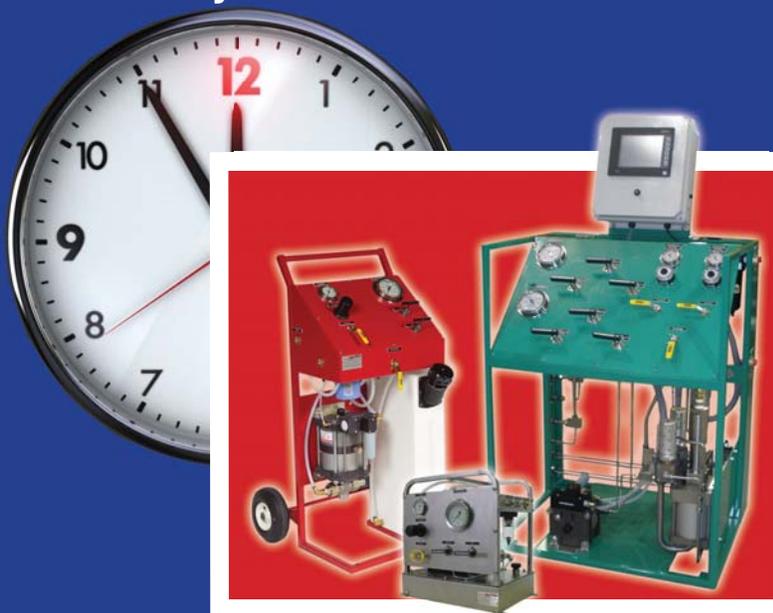


for highly hazardous chemicals that integrates technologies, procedures, and management practices to help assure safe and healthful workplaces. One of the key components of the PSM standard is the requirement that employers perform a Process Hazard Analysis (PHA), which is a careful review of what could go wrong and what safeguards employers must implement to prevent uncontrolled releases. The PSM standard also mandates written operating procedures; employee training; pre-startup safety reviews; evaluation of the mechanical integrity of critical equipment; and written procedures for the management of change. In addition, the PSM standard specifies a permit system for hot work; investigation of incidents involving releases or near misses of covered chemicals; emergency-action plans; compliance audits at least every three years; and trade-secret protection.

While the PSM standard has been effective in improving process safety in the United States and protecting workers from many of the hazards associated with uncontrolled releases of highly hazardous chemicals, major incidents have continued to occur.

On April 23, 2004, an explosion and fire at Formosa Plastics in Illiopolis, Illinois, killed five workers and severely injured three others. On March 23, 2005, 15 workers died and more than 170 others were injured at the BP Refinery in Texas City, Texas. On April 2, 2010, an explosion and fire at the Tesoro refinery in Anacortes, Washington, killed seven workers. The incident

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occurred when a heat exchanger suddenly ruptured during maintenance, releasing a highly hazardous chemical that subsequently exploded. Most recently, on April 17, 2013, an ammonium nitrate explosion at the West Fertilizer Company storage and distribution facility in West, Texas, killed at least 15 people—the majority of whom were firefighters responding to a fire at the facility—and injured over 160 others. The West Fertilizer facility is not currently covered by PSM, however it is a stark example of how potential modernization of the PSM standard may include such facilities and prevent future catastrophe.

OSHA has determined that revisions to its PSM standard may be needed to address issues in coverage. OSHA identified a number of rulemaking and policy options through the Agency’s PSM National Emphasis Programs (NEPs), its investigation of major accidents, and its review of recommendations from the safety community. These proposed changes represent an enormous expansion of coverage and compliance requirements for employers. Both the fiscal and administrative burdens of complying with such dramatic changes could prove to be enormous.

OSHA identified the following topics as potential candidates for rulemaking or enforcement policy changes:

1. Clarifying the PSM exemption for atmospheric storage tanks.
2. Oil- and gas-well drilling and servicing.
3. Oil- and Gas-production facilities.
4. Expanding PSM coverage and requirements for reactivity hazards.
5. Updating the List of highly hazardous chemicals in Appendix A of the PSM standard.

6. Revising the PSM standard to require additional management-system elements.

7. Amending paragraph (d) of the PSM Standard to require evaluation of updates to applicable recognized and generally accepted good engineering practices (RAGAGEP).

8. Clarifying the PSM standard by adding a definition for RAGAGEP.

9. Expanding the scope of paragraph (j) of the PSM standard to cover the mechanical integrity of any safety-critical equipment.

10. Clarifying paragraph (l) of the PSM standard with an explicit requirement that employers manage organizational changes.

11. Revising paragraph (n) of the PSM standard to require coordination of emergency planning with local emergency-response authorities.

12. Revising paragraph (o) of the PSM standard to require third-party compliance audits.

13. Expanding the requirements of § 1910.109 to cover dismantling and disposal of explosives, blasting agents, and pyrotechnics.

14. Updating §§ 1910.106 and 1910.107 based on the latest applicable consensus standards.

15. Updating the regulations addressing the storage, handling, and management of ammonium nitrate.

16. Changing enforcement policy of the PSM exemption for retail facilities.

17. Changing enforcement policy for highly hazardous chemicals listed in Appendix A of the PSM standard without specific concentrations.





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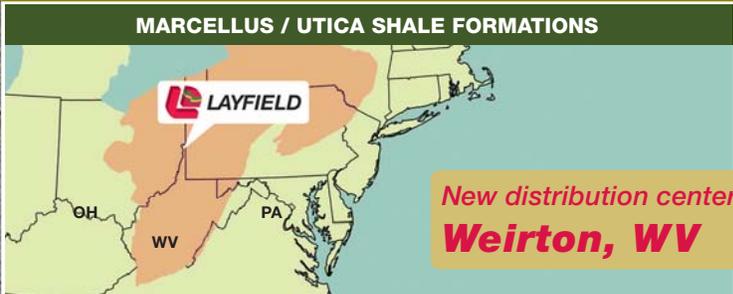
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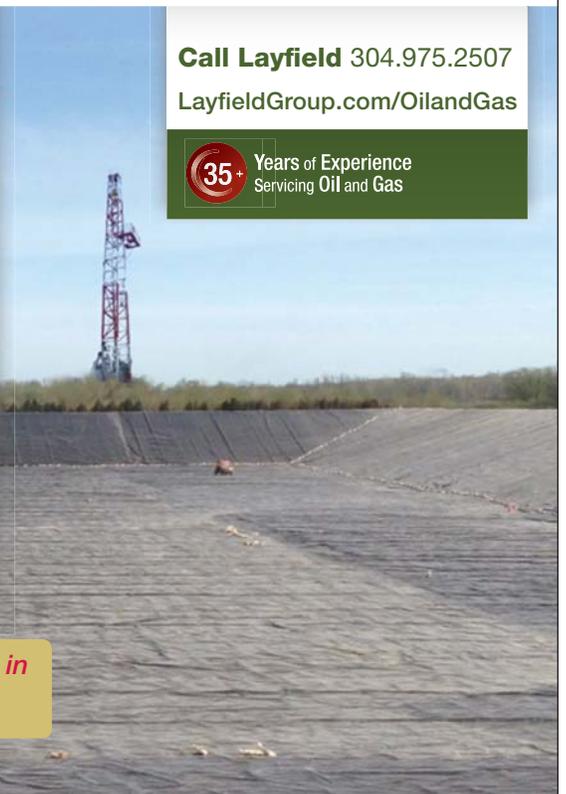
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The proposed changes that could have the greatest impact on the oil and gas industry are the following:

- **Oil- and gas-well drilling and servicing**

Paragraph (a)(2)(ii) of § 1910.119 exempts oil- and gas-well drilling and servicing operations from PSM coverage. The preamble to the PSM final rule explained that OSHA excluded these operations because it had begun a separate rulemaking for oil and gas well drilling and servicing operations (48 FR 57202). However, the Agency subsequently removed the oil and gas well drilling and servicing operations rulemaking from its regulatory agenda and never promulgated a final rule for these operations. In light of this history, OSHA requests public comment on whether to retain or remove the § 1910.119(a)(2)(ii) exemption.

- **Oil- and gas-production facilities**

On March 4, 1998, a catastrophic vessel failure and fire killed four workers at an oil- and gas-production facility near Pitkin, Louisiana, owned by Sonat Exploration Company. Sonat was using well fluid to purge air from a two-mile pipeline that connected a separation facility to a production well when the separation vessel failed. In its investigation report on the incident (Report No. 1998-002-I-LA), the Chemical Safety Board (CSB) stated that “[t]wo elements of the PSM standard, process hazard analyses and written operating procedures, are particularly relevant to the Sonat incident.” The CSB further concluded that “[t]he incident would likely have been prevented if process safety management principles or good engineering practice had been followed more effectively at the facility.”

The exemption in § 1910.119(a)(2)(ii) does not extend to oil- and gas-well production operations such as the Sonat facility noted in the previous paragraph. A December 20, 1999, memo

from Compliance Programs Director Richard Fairfax to OSHA regional administrators, entitled “PSM Applicability to Oil/Gas Production Facilities,” explained that “production facilities...were always intended to be covered under PSM.” The memo described covered production operations as follows:

Production, as recognized by the petroleum industry, is a phase of well operations that deals with bringing well fluids to the surface, separating them, and then storing, gauging and otherwise preparing the product for the pipeline. This production phase occurs after a well has been drilled, completed and placed into operation, or after it has been returned to operation following workover or servicing. A completed well includes a “Christmas tree” (control valves, pressure gauges and choke assemblies to control the flow of oil and gas) which is attached at the top of the well where pressure is expected. It is at this point, the top of the well, where the covered PSM process begins. The distance between separation equipment and the well is not a factor when determining PSM applicability for production facilities.

The American Petroleum Institute (API) objected to the December 20, 1999, memo, asserting that PSM coverage of oil- and gas-production facilities was invalid because OSHA did not conduct an economic analysis during the original PSM rulemaking proceedings addressing such coverage. In a March 7, 2000, letter to API, OSHA conceded that the original economic analysis for the PSM standard did not include oil- and gas-production operations, and stated further that the agency would suspend enforcement of the PSM standard for oil- and gas-production operations until it performed the analysis. OSHA is considering completing this analysis so that it can resume enforcement of the



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PSM standard for oil- and gas-production facilities.

OSHA believes that implementation of an effective PSM program in accordance with the requirements in § 1910.119 by oil and gas production facilities could prevent or mitigate accidents like the Sonat explosion. In the questions in this RFI, the agency requests public comment on completing an economic analysis and possibly resuming enforcement for PSM-covered oil- and gas-production facilities. OSHA will review the comments received to determine what action, if any, it will take.

OSHA provided the following questions to collect data, information and comments on the options discussed in this RFI. The agency invited the public to respond to any questions for which they have specific knowledge, data or information, regardless of their involvement in PSM-covered operations.

Oil- and gas-well drilling and servicing: Does your facility conduct oil- and gas-well drilling or servicing operations not covered under § 1910.119? If so, do you treat these activities as covered by the PSM standard for safety or other reasons? Are the activities covered under other federal or state regulations? Please explain.

Provide any data or information on workplace accidents, near misses, or other safety-related incidents involving oil-and gas-well drilling or servicing operations.

Would removing the § 1910.119(a)(2)(ii) exemption for oil- and gas-well drilling and servicing operations prevent worker injuries and fatalities? What would be the economic impact of removing the exemption? Are there any special circumstances involving small entities that OSHA should consider with respect to this option?

Oil- and gas-production facilities: Does your facility conduct

oil- and gas-production operations for which OSHA is not currently enforcing PSM requirements? If so, do you follow PSM requirements for these operations for safety or other reasons? Are the activities covered under other federal or state regulations? Please explain.

Please provide any data or information on workplace accidents, near misses, or other safety-related incidents involving oil- and gas-production facilities.

What would be the economic impact of resuming enforcement of the PSM standard for oil- and gas-production facilities? Are there any special circumstances involving small entities that OSHA should consider with respect to this option? These proposed changes, should they be implemented, would have a profound effect on the PSM standard, enforcement actions, and how the oil and gas industry operates on a day-to-day basis. ■

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