Challenges of Managing Process Safety in Facilities Operated by Multiple External Service Providers

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1. Introduction

Process safety management is crucial component in today`s pharmaceutical industry, particularly due to the prevalent externalization of non-core business functions. This typically includes the diligent oversight of process safety-relevant infrastructure, including gas and steam supply installations, solvent distribution systems, refrigeration units, as well as storage facilities for dangerous goods, including tank farms. The process safety risks associated with these facilities, given their operation by multiple external service providers and the connection to essential core processes of the business, presents significant challenges in managing them. These challenges involve the coordination of safety measures among diverse parties and the need for effective communication and collaboration to ensure comprehensive awareness of potential risks and concerted efforts to mitigate them effectively.

2. Methods

The process safety management approach discussed is anchored on the 14 process safety management elements derived from the OSHA Process Safety Management (PSM) Program [OSHA 1992].

3. Results and discussion

The 14 PSM elements were further evolved based on lessons learned from near-misses, incidents, and past experiences to help prioritize the key elements and priorities for process safety measures. These key elements include clearly assigning responsibility for safety-relevant facilities and processes, keeping them separate from other operations. Furthermore, the role of a system operations manager is required, effectively overseeing the process safety requirements, and exercising a pivotal function in maintaining a robust process safety management framework with proper handling of safety information in preventing incidents and continually improvement of safety.

4. Conclusions

The discussed work references several key events, which relate to processes safety on a modern research and development (R&D) campus, employing approximately 10,000 individuals. It demonstrates the experiences gained during the implementation of the process safety management program among various stakeholders. By sharing these experiences, this work aims to contribute to the broader understanding and adoption of effective process safety management practices within the pharmaceutical industry.

References

US Occupational Safety and Health Administration (OSHA), 1992, Process Safety Management Guidelines for Compliance