

The Complete Process Safety Management Lifecycle

We partner with clients to achieve full OSHA PSM compliance for a safe, secure, and compliant facility. Under the guidance of the 14 OSHA PSM Elements, our Team can help you develop a roadmap for improvement to reduce risk and meet regulatory requirements. Our Certified Functional Safety Engineers and Safety Professionals are experienced with IEC 61508/61511, NFPA Standards, ISA 84, OSHA 1910.119 Standard, and the entire Safety Lifecycle.

Process Hazard Analysis

A PHA is a systematic evaluation to identify and analyze potential hazards associated with the processing, storage, and handling of highly hazardous chemicals. Using methods like HAZOP or What-If analyses, teams evaluate causes, consequences, and safeguards. PHAs must be revalidated at least every 5 years, with all recommendations tracked to completion.

Mechanical Integrity

A Mechanical Integrity program ensures that process equipment is properly designed, installed, and maintained to prevent failures. This includes inspection, testing, and preventive maintenance of tanks, piping, relief systems, and controls, following recognized engineering standards.

Pre-Startup Safety Review

A PSSR is conducted before starting up new or modified processes to confirm everything is ready for safe operation. It is required when there is a significant change to a covered process involving highly hazardous chemicals that requires a change in the process safety information (PSI). This includes verifying equipment installation, ensuring procedures are in place, completing training, and resolving any identified hazards or recommendations.

Management of Change

MOC ensures that any process changes for chemicals, technology, equipment, facilities, personnel, and procedures that affect a covered process involving highly hazardous chemicals are reviewed for safety impacts before implementation. MOC is not required for "replacements in kind". It requires updating documentation, training personnel, and obtaining approvals to prevent unintended hazards from changes.

Process Safety Information

PSI provides the technical foundation for understanding process hazards involving highly hazardous chemicals. It includes data on chemicals from a safety data sheet (toxicity, flammability, exposure limits), process technology (flow diagrams, safe limits), and equipment design (materials, codes, P&IDs). Accurate PSI ensures that hazards are properly identified and managed. The PSI includes acceptable operating conditions to enable employees to identify deviations.



The Complete Process Safety Management Lifecycle

Compliance Audits

Compliance audits are conducted at least every 3 years to evaluate the effectiveness of the PSM program. Findings must be documented, corrective actions must be tracked, and records must be maintained to demonstrate continuous improvement.

Process Safety Information

PSI provides the technical foundation for understanding process hazards involving highly hazardous chemicals. It includes data on chemicals from a safety data sheet (toxicity, flammability, exposure limits), process technology (flow diagrams, safe limits), and equipment design (materials, codes, P&IDs). Accurate PSI ensures that hazards are properly identified and managed. The PSI includes acceptable operating conditions to enable employees to identify deviations.

Employee Participation

Employee involvement is essential to an effective PSM program. Employers must develop a written plan that encourages workers to participate in PHAs, procedure development, and PSSRs. Employees must also have access to key PSM information so they can actively contribute to process safety and risk reduction.

Incident Investigation

Incident investigations identify root causes of accidents and near misses to prevent recurrence. Investigations must begin within 48 hours and result in documented findings and corrective actions that are tracked until resolved.

Emergency Planning

This element ensures preparedness for emergencies such as chemical releases. It includes response plans, evacuation procedures, alarm systems, and coordination with local emergency responders.

Contractors

Contractors must perform work, maintenance, or repairs according to safety work practices on or near the covered process involving highly hazardous chemicals. Employers must account for contractors working in areas where there are covered processes. Employers must evaluate contractor performance, communicate hazards, and monitor compliance with safety procedures throughout the job.

Hot Work Permit

Hot work permits control ignition risks from activities like welding or cutting. The permit ensures fire hazards are evaluated, fire prevention and protection measures are in place, and work is properly authorized before it begins.

Training

PSM Training ensures that employees understand process hazards and proper procedures. Initial and refresher training at least every 3 years is required, along with documentation verifying employee competency and understanding.

Operating Procedures

Operating procedures outline how to safely perform tasks, including startup, normal operations, shutdown, and emergencies. They define operating limits and consequences of deviations and must be reviewed and certified annually.

Trade Secrets

Safety information cannot be withheld due to trade secret protections. Employers must provide all safety-related information necessary for employees and contractors to work safely, even when certain information is proprietary.

Our Team can provide you with a comprehensive assessment, identify gaps in each element, and offer recommendations to eliminate those gaps. Contact us today.



Scan here
to Contact Us Today