

Preparing Process Safety Information



Process safety information (PSI) refers to the complete and accurate, written information collected by those involved in process safety management activities. PSI is essential to the implementation of an effective process safety management program as well as a process hazards analysis.

14 Elements of PSM

- Risk Identification
 - ▶ **Process Safety Information**
 - Process Hazard Analysis
 - Pre-Startup Safety Review
- Documentation
 - Management of Change
 - Mechanical Integrity
 - Operating Procedures
 - Process Safety Information
- Written Plans of Action
 - Employee Participation
 - Emergency Planning and Response
 - Incident Investigation
- Employee Training
 - Contractors
 - Training (Initial, Refresher, and Supplementary)
- Management Issues
 - Compliance Audits
 - Hot Work Permit
 - Trade Secrets

Why do I Need Updated PSI?

The compiled information will help your organization to assess and determine the following:

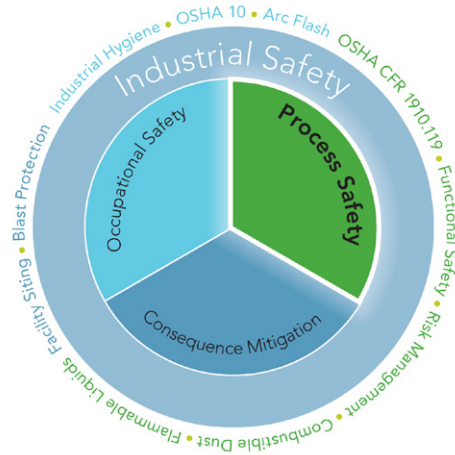
- Fire and explosion risks
- Reactivity hazards
- Safety and health hazards to workers
- The corrosion and erosion effects on the process equipment and tools
- Proper inventory levels of flammables and chemicals to maintain safe use and storage conditions

The collected information will allow your team to assess if engineering practices around process design as well as any process equipment used to date is compliant with established codes and standards. PSI will help you document process equipment, and facility instrument data; and will provide ongoing evidence of successful testing and inspection, and stable operation.

CH2M HILL Can Help

Our team of process safety professionals will help your organization to develop and maintain updated PSI to:

- Provide decision makers with the necessary data to make critical decisions based on the reality of your operational environment
- Provide your team with the required corporate memory to overcome critical personnel turnover issues
- Leverage reliable data in process safety training activities



- Set the boundaries for safe operations-related behavioral expectations
- Set baseline components in emergency procedures

Capabilities

Whether you are planning a new facility or re-engineering an existing facility to meet new safety requirements, our Process Safety professionals have the diversified industrial, process design and operations experience to help you prepare/update the essential process safety information needed to meet your process safety requirements.

The list below provides a sampling of the services we have available to help you address your process safety information needs:

- Chemical exposure analysis (e.g., toxicity, PEL)
- Chemical Hazard analysis (e.g., reactivity, corrosive)
- Inadvertent mixing hazards analysis
- Material balance, process chemistry
- PFD, block flow diagram
- P&ID
- Specifications
- Relief device sizing basis
- Establish control and safety limits
- Electrical area classification
- Ventilation system design
- Safety systems
- Flare and vent system design
- RAGAGEP reviews
- Code compliance assessment

Process Safety Information Clients

- Abbott
- Akzo Nobel
- Alyeska
- Amoco
- ASIMI
- BASF
- Bayer
- BP
- BP Exploration
- Chevron
- ConocoPhillips
- Georgia Pacific
- Huntsman
- Mallinckrodt
- Monsanto
- Morton
- NutraSweet
- Olin
- Polysar
- Sandoz
- Shell
- Shincor
- Tesoro
- Texaco
- Tosco
- Williams

About CH2M HILL

Headquartered near Denver, Colorado, employee-owned CH2M HILL is a global leader in full-service consulting, program management, design, construction, and operations for public and private clients. With \$6.3 billion in revenue and more than 23,500 employees worldwide, CH2M HILL delivers innovative, practical, sustainable solutions—helping clients develop and manage infrastructure and facilities that improve efficiency, safety, and quality of life. The firm has long been recognized as a most-admired company and leading employer, including being named by FORTUNE magazine as one of the 100 Best Companies to Work For (2009). CH2M HILL is an industry-leading program management, construction management, and design firm as ranked by *Engineering News-Record* (2008).

Visit us at ch2mhill.com

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