

Training is Key

The Challenge

Training is part of every element of a robust Process Safety Management (PSM) System. It is a foundation. Without an understanding of the hazards, risks and safeguards team members don't have all the tools they need to operate plants safely and consistently.

Many organizations struggle to right-size training across operations, maintenance, and engineering, leading to inconsistent practices, knowledge gaps, and increased risk.

To right size training for your site you need to identify your specific needs. What areas – operations, maintenance, general staff? What topics? What levels of training? Who should be assigned to those levels? How will you ensure continual training and knowledge exchange?

A gap assessment or an audit may identify a need for further training or refresher training. An incident investigation may uncover a need. Significant changes in staff may create knowledge gaps & trigger assessment of key systems, like MOC and MI, to confirm specific training needs.

Client Description

Company	Multiple Global
Project Location	Multiple sites
Industry	Chemical, Food, Agribusiness, Oil
Annual Revenues	\$20+ Billion
Employees	10,001+ employees
RISK, Inc. Solution	Custom Training Program

The Solution:

Training in PSM can be on a big picture level with overviews of the company pillars. Or it can be on a specific task level. In an overview it is important to focus on corporate PSM programs as applied specifically to the local site, especially for global companies. Basing overview training on corporate PSM guidelines aligns all sites on safety and leads to consistent approaches company wide.

Standardizing Mechanical Integrity Training Globally

We partnered with a company to support improving their Mechanical Integrity (MI) programs globally. We trained staff on what types of equipment information needed to be included, who would be responsible for maintaining the MI information & how it would be maintained per corporate guidance. We worked with them to understand the purpose of the information and how it supported safety at their sites. Trained teams at each site were able to assist other sites in completing their information systems and teach new team members in key tasks. This training approach led to standardized approaches throughout the company for improved documentation. More complete documentation means more accurate programs, both MI and others such as PHA.

Preparing Teams for Effective HAZOPs

We were preparing to facilitate a HAZOP at a site in Brazil where PSM principles and PHAs had not been fully implemented. Training needed to be part of the solution. We provided a company-wide overview of PSM to

provide context for the PHA. Then we trained the staff on HAZOP principles to ensure consistency in how HAZOP's are approached and documented. Any staff serving as a HAZOP team member needs to understand the basic principles of how a HAZOP is conducted. The training focused on the HAZOP method and understanding the purpose, scope and methodology as a HAZOP team member. It included how to use the new Risk Ranking matrix we developed with the company. Specific training, customized to the site's needs, led to a successful HAZOP with the entire team fully understanding the hazards and their role in maintaining the safeguards.

Aligning PHA/LOPA Practices

In a multi-year partnership we worked with a large refining corporation on their PHA/LOPA process. Training was instrumental in communicating the new approach. When working with one of their sites to update their RMP submittal the first step was training engineers on specific calculations for a consistent approach. The training set a standard across the company enabling alignment.

Discovering More Efficient and Effective HAZOPs

Sometimes training leads to new discoveries. We provided custom training to PHA facilitators that had attended an outside PHA training class and were having difficulty successfully implementing what they had learned in their own PHAs at the site. We developed a custom class with in-depth mock PHA sessions based on their process with a focus on leadership soft skills and quality documentation. Because the training was hands-on, it also provided an opportunity to use their own PHA software and try another PHA software to experience the pros and cons of each. After test driving a different software and experiencing the ease of use and greater efficiency the company decided to transition to the new software.



Building PSM Capability After Turnover

We partnered with a global company with regions that fall under several PSM standards (i.e. USA PSM, COMAH, Seveso, etc.) with corporate PSM guidelines that reflect how sites should address process safety. They experienced staffing issues and turnover at one of their sites. A gap assessment uncovered management issues which led to further changes at the site. With new staff on board the need for a comprehensive training effort was developed. After discussions with leadership, a layered approach began with training key site personnel or PSM Champions at each site on selected focus areas prior to rolling out specific training modules to site groups. The initial training focus area included 5 key elements: Mechanical Integrity, Management of Change, Process Hazard Analysis, Process Safety Information and Operating Procedures/Training & Competence. The next level is specific training for groups of site personnel in those focus areas enabling them to take control of safety at their sites.

Training needs to be refreshed on a regular basis. The frequency can vary, an important part of your training program should provide for repeat training as well as training new staff. Continual learning matched to skill level can be integrated. Testing knowledge is another aspect. The Center for Operator Performance has developed some standardized operator training tests that can be used to assess knowledge levels and help companies identify areas for improvement.

The Result:

Custom training in each of these projects was specific to the needs of that site or company. The main benefit of training was improved safety with reduced downtime as a bonus. Training supports improved safety through:

- Expanding staff knowledge and understanding of hazards, safeguards and what their role is in maintaining safety
- Standardizing how hazards are analyzed and documented across sites
- Improving technical and leadership skills while introducing more efficient tools and methods
- Empowering staff to lead safety in their areas and assist new staff and sister sites contributing to both safety and efficiency across the company
- More accurate, auditable documentation and stronger programs
- Supporting targeted program improvements (MI, MOC, PHA, PSI, etc.)

What our clients are saying about our training:

“Thanks again for creating the PHAWorks template specific for our company for the training, this will be quite helpful moving forward. I’ve received a lot of positive feedback from the PHA training course, including ‘the most interesting and relevant course I’ve taken since I’ve been in industry’. Rene’ really did a wonderful job keeping everyone focused and engaged.... If I could only do that during my HAZOP’s!”

Senior Process Engineer, industrial gas supplier

“Please let Rene’ know that her use of PHAPro during the training helped convince our management to upgrade our software. We saw how it could save hours of team time”

Process Engineer, manufacturing corporation

“The support provided by Risk in Hazop Process it was crucial for improvements in our process and increase the safety in our plant. The experience and expertise shared with us it was incredible, easy understand and we are certain that now we are able to start a Hazop *Culture in our company.* “

translated from PSM Manager, Fats & Oils, Brazil

“RISK is a trusted partner for our company. Their team has been significant to the success of our process safety journey. They listen to our needs and consistently deliver high quality results in a timely fashion.”

PSM Leader, for Starches, Sweeteners, & Texturizers section of major agribusiness company

Additional Resources:

See also: [The Center for Operator Performance](#)

Get expert guidance for process safety success

Partner with us for your custom training

Contact us at info@psmrisk.com

Call us at 510-828-7228 to talk about your needs