BLACKBIRD FOR TRAINING

# Strategic Implementation of Risk Based Process Safety (RBPS)

2 – 6 May 2027
Dubai (UAE)



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## Introduction

Risk-Based Process Safety Management RBPS is a critical framework developed by the Center for Chemical Process Safety CCPS in the USA, building on the original principles of process safety management PSM from the 1990s. RBPS offers a structured approach to managing risks associated with industrial processes that handle highly hazardous materials, such as toxic, reactive, or flammable chemicals. The goal is to reduce risks and avoid accidents caused by unintended releases of hazardous substances that could lead to catastrophic consequences.

This comprehensive process safety management training program equips professionals with the tools and knowledge to effectively implement RBPS in their organizations. Through this course, participants will learn how to identify potential hazards, implement safety measures, and comply with international standards. They will also gain an understanding of how effective safety risk management can not only protect workers and the environment but also enhance public perception of industries like petrochemical and oil.

## Course Objectives

- Understand how major accidents happen: Learn the underlying causes of incidents in the chemical and oil industries, and how to mitigate these risks.
- Identify potential failure modes or deviations: Develop skills to recognize and address factors that could lead to incidents at process safety management facilities.
- Principles of inherently safer design: Understand how adopting safer design principles can prevent accidents and improve the overall safety of processes.
- Framework for RBPS: Gain insights into the structure and key components of Risk-Based Process Safety Management to apply within your organization.
- Application of the twenty elements of RBPS: Learn how to implement the twenty critical elements of RBPS to enhance safety and minimize risk.
- Auditing Process Safety Management PSM: Understand how to evaluate and audit safety practices within your facility to ensure continuous improvement.
- Process Hazard Analysis PHA: Learn techniques such as SIL Safety Integrity Level and LOPA Layer of Protection Analysis for conducting detailed hazard analyses.



# Course Outlines

## Day 1: Introduction to Process Safety Management RBPS

- Importance of Process Safety Management: Understand the role of process safety management in preventing accidents and protecting lives.
- Key Requirements for Process Safety Management: Explore the regulatory and organizational requirements for a comprehensive process safety management system.
- Building a Process Safety Culture: Learn how to foster a safety culture across your organization and ensure competency at all levels.
- Compliance with Standards: Understand the importance of meeting international safety standards and how to align your facility's operations with PSM standards.
- Leadership and Commitment to Process Safety: Learn the role of authentic leadership in embedding safety into an organization's operations.

## Day 2: Training, Performance, and Operational Readiness

- Training and Performance Assurance: Learn about the essential role of ongoing training to maintain high levels of competence and safety.
- Management of Change: Understand the Management of Change MOC process and how it is critical in managing risks during operational changes.
- Operational Readiness: Learn how to ensure your facility is ready to operate safely through operational discipline and continuous preparedness.
- Emergency Management: Discover effective emergency response strategies and how to integrate them into your safety management system.

## Day 3: Incident Investigation, Auditing, and Continuous Improvement

- Incident Investigation: Learn best practices for investigating incidents and identifying root causes to prevent recurrence.
- Measuring Safety Performance: Understand key process safety management metrics to track the effectiveness of your safety efforts.
- Auditing for Process Safety: Learn how to conduct audits to ensure that your PSM system is functioning as expected and identify areas for improvement.
- Management Review and Continuous Improvement: Understand the principles of continuous improvement within process safety management and the role of management review.
- Contractor Management: Learn best practices for managing contractors to ensure they adhere to your facility’s process safety management system.



## Day 4: Process Safety Culture, Compliance, and Risk Analysis

- Building and Sustaining a Process Safety Culture: Dive deeper into cultivating a strong safety culture within your organization.
- Process Safety Competency: Develop strategies to ensure that all personnel, from operators to managers, maintain the necessary competency in process safety.
- Workforce Involvement: Learn how to effectively engage your workforce in process safety initiatives.
- Overview of LOPA and SIL: Understand LOPA and SIL techniques for hazard analysis and risk management.

## Day 5: Process Knowledge Management and Hazard Identification

- Process Knowledge Management: Understand how to manage and leverage process knowledge to enhance safety and reduce risks.
- Hazard Identification and Risk Analysis: Learn how to identify and assess process hazards, and implement risk reduction strategies.
- Developing Operating Procedures: Discover the importance of clear and effective operating procedures in maintaining safe processes.
- Safe Work Practices: Learn how to enforce safe work practices to reduce human error and ensure safety during operations.
- Asset Integrity and Reliability: Understand how to manage the integrity and reliability of critical assets to ensure ongoing process safety.

## Why Attend this Course: Wins & Losses!

- Gain Process Safety Management Certification: Upon completion, participants will have a solid foundation in process safety management and will be well-prepared for certification in RBPS.
- Minimize Risk and Prevent Incidents: This course will enable you to implement best practices in safety risk management, reducing the likelihood of accidents and improving your organization's safety culture.
- Boost Competency and Performance: Enhance your skills in incident investigation, hazard analysis, and process safety auditing, helping you manage and mitigate risks more effectively.
- Improve Operational Readiness: Learn how to ensure that your facility is always ready to handle any situation, whether it be routine operations or emergency response.
- Compliance with Industry Standards: Gain the knowledge required to meet and exceed process safety management regulations and industry standards, ensuring compliance and protecting your organization from costly penalties.



## Conclusion

This Risk-Based Process Safety Management RBPS course is a must-attend for professionals who want to improve safety standards and reduce risks in industries handling hazardous materials. By gaining an in-depth understanding of process safety management, hazard analysis, management of change, and emergency preparedness, you'll be equipped to drive significant improvements in your organization's safety culture and operations. Whether you're looking to achieve process safety management certification, enhance safety risk management, or ensure compliance with industry standards, this course provides you with the essential tools and insights to succeed in making your processes safer and more reliable.

