

# HEALTH, SAFETY & ENVIRONMENT



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**TRAINING TITLE**

HEALTH, SAFETY & ENVIRONMENT

**VENUE**

Dubai, UAE

**DURATION**

5 Days

**DATES**

19 - 23 September 2021

**PRICE**

US\$4,000 per attendee including training material/handouts, morning/afternoon coffee breaks and Lunch buffet.

**TRAINING INTRODUCTION**

Health, Safety and Environmental Management Systems are based on a proactive process for incidents prevention as well as reactive monitoring of performance. Risk assessment is required to be applied to all activities that impacts on health & safety, production, asset, environment and the company reputation.

**TRAINING OBJECTIVES**

**In this training session you will learn how to:**

- Improve your practical skills in applying advanced risk assessment techniques relevant to the process industry
- Effectively balance risk against cost in order to optimize risk reduction measures
- Motivate your people for improved safety culture
- Appreciate the role of Quantified Risk Assessment and major hazards
- Apply root-cause analysis to incident investigation and analysis

**TRAINING AUDIENCE**

- Production, project, process, mechanical, control, maintenance and HSE personnel
- All personnel involved in implementing the Company's HSE Management System

## **TRAINING OUTLINE**

### **DAY 1**

#### **Advanced Risk Assessment Techniques 1: HAZOP**

- Introduction to hazards identification and analysis techniques
- Techniques for hazard identification and analysis- HAZOP
- Syndicate exercise- application of HAZOP to batch and continuous processes
- Integrating HAZOP within the risk management system
- Review of commercial HAZOP software

### **DAY 2**

#### **The role of Quantified Risk Assessment 'QRA'**

- Failure Modes & Effects Analysis 'FMEA'
- Decision trees and Event Tree Analysis 'ETA'
- Sources of failure data
- Fault Tree Analysis 'FTA'
- Quantification of ETA and FTA
- Evaluation of Individual and Societal Risks

### **DAY 3**

#### **Mechanics of Fire, Explosion and Toxic Releases**

- The role of consequence analysis in QRA
- Types of Fires: Jet flame, pool fire, flash fire, BLEVE
- Types of Explosion: VCE, UVCE, pressure burst, dust explosion
- Vulnerability analysis
- Commercial software for modelling releases, fire, explosion and toxic releases

### **DAY 4**

#### **Advanced Incidents Investigation Techniques**

- Human contribution to accidents
- The role of root cause Analysis in identifying management system failures
- Accident investigation techniques
- Latent failure and root causes for incidents
- Techniques for root-cause analysis

## **DAY 5**

### **Promoting a positive safety culture**

- Introduction to Safety Culture
- Techniques for improving safety culture
- Measuring improvements in safety culture
- Integrating safety culture within the HSE Management System

## **TRAINING CERTIFICATE**

**MAESTRO CONSULTANTS** Certificate of Completion for delegates who attend and complete the training course

## **METHODOLOGY**

Our courses are highly interactive, typically taking a case study approach that we have found to be an effective method of fostering discussions and transferring knowledge. Participants will learn by active participation during the program through the use of individual exercises, questionnaires, team exercises, training videos and discussions of “real life” issues in their organizations. The material has been designed to enable delegates to apply all of the material with immediate effect back in the workplace.