

# Health, Safety & Environment in Engineering Projects

## INTRODUCTION

- Being in business can be dangerous when things go wrong, and people get hurt –organisations can lose reputation and money. Organisations, as a minimum, must demonstrate compliance with health, safety and environmental ‘HSE’ legal requirements. Many organisations want to do more than this.
- This training course will help to develop the thinking of the delegates to consider the positive business aspects of understanding the issues and of dealing with health, safety and environmental issues proactively.

Participants on the Health, Safety & Environment in Engineering Projects training course will develop the following competencies:

- How to contribute to the safe running of the operation
- How to help to improve and develop a positive HSE culture
- An understanding of technical & maintenance supervisor’s responsibility
- A better understanding of how to work with, and get the best from, people
- How to apply risk assessment principles in the workplace

## PROGRAMME OBJECTIVES

The Health, Safety & Environment in Engineering Projects training course aims to enable participants to achieve the following objectives:

- Appreciate the business importance of health, safety and environmental matters
- Contribute in syndicate exercises (including risk assessment, incident analysis, etc.)
- Enhance background of relevant HSE issues
- Contribute to HSE matters within the organisation
- Understand how and why things go wrong (often with catastrophic effects)
- Protect the organization from HSE failures
- Gain an understanding of how to contribute to the safe running of the operation, with consideration for environmental factors

## WHO SHOULD ATTEND?

- Professionals with responsibilities for health and safety management and supervision
- Those involved in Health, Safety, and Environmental Management of Projects

- Supervisory staff, project, process, maintenance, and HSE personnel
- Those wishing to understand more about how things go wrong
- Anyone wishing to understand the role and the importance of health and safety.
- Those involved in risk assessment and risk management
- Supervisors and other personnel responsible for HSE functions

## **TRAINING METHODOLOGY**

- This training course develops the delegates through the use of case studies, group discussion, reflection activities supported by video materials and exercises to help you apply what you learn to your work situation.

## **PROGRAMME SUMMARY**

- Using a series of case studies and syndicate exercises, the Health, Safety & Environment in Engineering Projects training course covers essential skills such as understanding the causes of HSE failure within an organization and learning how to avoid them. It includes analysis of the factors leading to major hazards (including fire, explosion, toxic releases, and environmental releases). There is consideration of how human error can lead to incidents and on how human endeavour can create a positive culture in your organisation, making it more resilient to failure.

## **PROGRAM OUTLINE**

### **The Management of Health, Safety and Environmental Issues**

- What do we mean by Health, Safety and Environment?
- What are the drivers for managing Health, Safety and Environment?
- Construction Projects Legislation (ILO & EU)
- Accident and incident causation (Part 1)
- Avoiding accidents and incidents: Principles of Risk Assessment
- Fire Safety
- Major incidents and how they happen (Part 1)

### **Project Health & Safety Plan & Environmental Issues**

- Construction Project Health, Safety & Environment Plan
- Project Excavations & Confined Spaces
- Major incidents and how they happen (Part 2)
- Environmental Issues
- Principles of environmental law
- Pollution prevention and emergency planning
- Major (environmental) incidents and how they happen (Part 3)

### **Human Factors Leading to Health, Safety and Environmental Incidents**

- Some decisions lead to incidents

- Accident and incident causation (Part 2)
- Project Tank Farms
- Major incidents and how they happen (Part 4)
- Reducing the potential for errors and violations
- Have we learned the lessons?

### Accident and Incidents

- Project Management of Change (MOC)
- Case Study – How MOC can fail
- Case Studies – Major incidents and how they happen (Part 5)
- Accident and Incident Investigation
- Have we learned the lessons?

### Getting the Culture Right and Introducing Some Systems

- Project High Hazard Plants – Pre-Construction & Pre-Operation
- Major incidents and how they happen (Part 6)
- Permit to Work Systems (PTW)
- Developing a positive HSE Culture within an organization
- Implementing Active Monitoring
- Some simple ideas for safer plant and safer processes