



Eco-Safe Practices: Contamination and  
Hazardous Waste Management &  
Prevention



# Eco-Safe Practices: Contamination and Hazardous Waste Management & Prevention

## Introduction

Improper storage of hazardous chemical products and wastes, lack of inspection of containment materials, opting for hazardous products when non-hazardous alternatives are available, and inadequate staff training are some of the leading causes of environmental contamination.

Contamination takes many forms, including ground and surface water, land, air, radioactive, food, noise, molds, odor, construction, and vibration. When not managed correctly, these contaminants result in pollution and, in severe cases, serious health issues.

This five-day eco-safe hazardous waste management and prevention course will detail these various contaminants, explore new frontiers in eliminating or minimizing them, highlight the use of effective non-hazardous products, and discuss environmentally acceptable disposal methods for hazardous and non-hazardous wastes.

## Eco-friendly Waste Management Systems

This module investigates the importance of hazardous waste management and incorporates eco-friendly waste management methods into our practices. Organizations can achieve a harmonized approach towards hazard prevention and waste management by understanding hazardous waste management and employing eco-safe systems.

Participants in the eco-safe hazardous waste management and prevention course will be trained on basic hazardous waste management principles and provided options for eco-friendly solutions and the latest hazardous waste management methods.

This eco-safe hazardous waste management and prevention course suits those aiming to become a certified hazardous waste manager. The eco-safe hazardous waste management and prevention course includes hazardous waste management training encompassing various aspects such as definitions and systemic approaches to promote an eco-friendly waste management information dissemination culture.

## Targeted Groups

- Health, Safety, and Environmental Professionals.
- Staff responsible for managing Hazardous Wastes.
- Staff responsible for Contamination Issues.
- Laboratory Technicians.
- Staff wishing to reduce risk and liability arising from polluting events.
- This eco-safe hazardous waste management and prevention course is for Technical Assistants and anyone seeking to play a role in the organization's environmental matters.
- Emergency Personnel.

## Course Objectives

At the end of this eco-safe hazardous waste management and prevention course, the participants will be able to:

- Understand the various types of contamination and determine their relevance to your company.
- Encourage and facilitate dialogue on specific contamination issues within organizations and develop regional networks in the GCC area to tackle common concerns.
- Learn about acquaintance with relevant environmental treaties dealing with contamination and pollution.
- Learn to systematically prioritize contamination problems when addressing contamination and waste management issues.
- Highlight the close relationship between human health and the environment affected by contamination.
- Review current methodologies for clean-up of contaminated sites, including soil, ground, and surface water, air pollution, construction materials, and radioactivity.

## Targeted Competencies

By the end of this eco-safe hazardous waste management and prevention course, the target competencies will be able to:

- Identify waste streams in your organization.
- The value of waste streams.
- Waste management practices.
- Evaluate the performance of current waste contractors and sub-contractors.
- Audit the life cycle of waste.
- Understand the benefits of the 7 R's in waste management.
- Monitor and review your performance.

## Course Content

### Unit 1: Brief History of Contamination and Introduction to Hazardous Wastes

- Definition and impact of contamination.
- Understand extensive examination of various contamination types.
- Overview of global environmental issues related to contamination.
- Understand international treaties and guidelines regarding contamination.
- What is the role of the toxic 12 Chemicals and the United Nations Environment Program UNEP?
- Learn about UNEP's 12 toxic chemicals and potential additions to this list.
- Significance of environmental law.
- Define hazardous and non-hazardous wastes.
- Link contamination to hazardous waste management.

## **Unit 2: Management of Contamination and Hazardous Wastes**

- Overview of the relationship between contamination and occupational health and safety.
- Understand the importance of documentation in hazardous waste management.
- Learn about some typical hazardous waste regulations and the need for harmonization.
- What is the purpose of a Workplace Hazardous Materials Information System WHMIS?
- What is the purpose of a Material Safety Data Sheet MSDS?
- Why is a Globally Harmonized System GHS essential for WHMIS and MSDS?
- Carry out a contamination audit.
- Manage a waste disposal site.

## **Unit 3: Contamination and Pollution Prevention**

- Examine pollution from exploration production activities.
- Case study of the Gulf of Mexico oil spill in April 2010.
- Understand advancements in tanker design to prevent major oil spills.
- Other oil-related sources of pollution.
- Learn the common thread amongst many third-world countries concerning pollution issues.
- Emerge concepts of Zero Waste ZW and Zero Liquid Discharge ZLD and their constraints.
- Overview of the bird droppings problem and contemporary technological solutions.

## **Unit 4: Contamination and Pollution Prevention Planning and Contingency Planning for Major Incidents**

- Emphasize life cycle management of all company materials.
- Deep dive into the 5Rs: reduce, reuse, recycle, recover, and rethink.
- Storage requirements for hazardous materials.
- Continuous training.
- Regular emergency plan reviews.
- Understand updates on ISO standards 14001, 18001, and 9001.
- Types of environmental audits.

## **Unit 5: Big Picture Review of the Management and Prevention of Contamination and Hazardous Wastes**

- Hazard identification HAZID.
- Hazard and operability HAZOP.
- Understand environmental ethics.
- Case studies from the instructor's experience relating to environmental ethics.
- Update on climate change and its implications for Gulf Coast countries.