

# Contamination and Hazardous Wastes - Management and Prevention

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# Contamination and Hazardous Wastes - Management and Prevention



## Overview

This course will give details on various types of contaminants and the new frontiers in eliminating or minimising these contaminants, the use of effective non-hazardous products in your company, and also environmentally acceptable methods of disposal for both hazardous and non-hazardous wastes.

## Course Objectives

At the end of this course, the participants will be able to:

- Learn about the various types of contamination and which ones are more applicable to your company
- Encourage and facilitate dialogue with like-minded individuals on specific contamination issues of concern in their organizations, and the opportunity to develop regional networks to address common concerns
- Learn about the relevant environmental treaties dealing with contamination and pollution
- Learn how to prioritise contamination problems when dealing with contamination and waste management issues in a logical sequence.
- Show and emphasise the close relationship between human health and the environment that has been directly affected by contamination
- Study the current methodologies for the cleanup of contaminated soil, ground and surface water, air pollution, construction materials, and radioactive materials



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## Course Content

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

- What is contamination and how does it affect us?
- Detailed look at all the various types of contamination
- Global Environmental issues related to contamination
- International Environmental Treaties and Guidelines related to Contamination
- The toxic 12 Chemicals and the role of the United Nations Environment Program (UNEP)
- The current watch list for chemicals that may soon be added to the toxic 12
- Environmental Law and Its Significance
- Definition of Hazardous Wastes & Non-Hazardous Wastes
- Connecting the Dots between Contamination and Hazardous Wastes

### 2. Management of Contamination and Hazardous Wastes:

- The relationship between Contamination and Occupational Health & Safety
- The importance of documentation in Hazardous Waste Management
- Some typical Hazardous Waste Regulations and the need for harmonisation
- The purpose of a Workplace Hazardous Materials Information System (WHMIS)
- The purpose of a Material Safety Data Sheet (MSDS)
- Why a Globally Harmonised System (GHS) is essential for WHMIS and MSDS
- Carrying out a Contamination Audit
- Managing a Waste Disposal Site



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## Course Content

### 3. Contamination and Pollution Prevention:

- Exploration & Production- Refining & Transportation
- Modern Tanker design to minimize the occurrence of a major oil spill
- Other oil-related sources of pollution
- The common thread amongst many third world countries concerning pollution issues
- The current concepts of Zero Waste (ZW) and Zero Liquid Discharge (ZLD) and their limitations
- The Bird Problem- Pollution from bird droppings and dead birds, and the latest available technologies to control this problem

### 4. Continuation of Contamination and Pollution Prevention Planning and Contingency Planning for Major Incidents:

- Life Cycle Management of all materials being used in a company
- The 5Rs- Reduce, Reuse, Recycle, Recover and Rethink
- Detailed requirements for the proper storage of hazardous materials
- The importance of ongoing training
- The importance of regular reviews of emergency plans
- Updated information on ISO 14001, 18001 and 9001
- Types of Environmental Audits

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

- HAZID (Hazard Identification)
- HAZOP (Hazard & Operability)
- Environmental Ethics
- Examples of Environmental Ethics from the Instructor's personal experiences
- Climate Change update and its significance for the Gulf Coast Countries





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## Targeted Audience

- 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
- Technical Assistants and anyone who has a role to play in environmental matters of the Organisation
- Emergency Personnel

## Course Methodology

Facilitated by an experienced professional trainer, this training course will be conducted as a highly interactive workshop session. A variety of training methodologies and facilitation techniques will be used before and during the course whenever applicable. These methods are aimed at enhancing individual and group interaction while maximizing learning. Some of these methods are:

- Online Pre-post Test
- Colorful Visual Aids
- Gamification
- Self-Assessment Instruments
- Simulations
- Case Studies
- Videos
- Group Exercises & Discussions
- Role plays
- Indoor & Outdoor games

