



HSE247

Environmental Impact of Oil Spills

Course Introduction:

The course covers a broad range of issues associated with oil spill management including all topics within International Maritime Organization's (IMO) course Levels 2 and 3 (On Scene Commanders, Oil Spill Management) and UK Maritime and Coastguard Agency Levels 4 and 5 (Oil Spill Response Manager and Incident Manager). The course program includes causes and fate of spilled oil, environmental impacts and issues, contingency planning, spill monitoring, surveillance and modelling, shoreline assessments and cleanup, dispersant use, controlled burning, bioremediation, response equipment and limitations, waste management, working with the media, international cooperation, liability and compensation, health and safety, terminating the response, spill management using the incident command system and post-response operations.

- Case histories include examples from Alaska, Gulf of Mexico, West Africa, Europe and the Middle East
- Exercises: Establishing response priorities and equipment requirements
- Special Case Examples: Environmental risk, sensitivity mapping and response planning for a major international pipeline

Course Objectives:

Upon successful completion of this course, the delegates will be able to:

- Acquire a broad understanding of oil spills, spill response methods and effective spill management techniques
- Discuss oil spills by identifying the petroleum components and properties, sources and historical trends, transporting spilled oil on aquatic and on land
- Enumerate and classify fate of spilled oil that includes spreading, evaporation, advection, emulsification, photo-oxidation and biodegradation
- Employ tracking spilled oil operation which applies oil spill transportation, fate modelling, surveillance and assessment techniques
- Explain ecological effects and recovery, impacts to shorelines, social-economic impacts and spill response management
- Identify and differentiate standard spill response techniques and limitations and alternative response techniques
- Carryout spill planning and determine liabilities and compensation in oil spill operation

Who Should Attend?

This course is intended for managers, supervisors and other individuals involved with spill response supervision and management. Participants commonly come from the oil transport, development and production, government, the mining and energy sectors as well as other companies involved in the transport or storage of petroleum. Those involved with pipelines and marine operations are particularly encouraged to attend.

Course Outline:

Day 1:

Module 1: Oil Spills - Introduction

- Petroleum components and properties
- Sources and historical trends
- Spilled oil transport (aquatic and on land)
- Fate of spilled oil (spreading, evaporation, advection, emulsification, photo-oxidation, and biodegradation)

Module 2: Tracking Spilled Oil

- Oil spill transport and fate modeling
- Satellite and high-altitude surveillance
- Low-altitude aerial surveys
- SCAT shoreline assessment techniques

Day 2:

Module 3: Ecological Effects and Recovery

- Physical and chemical effects
- Effects on shoreline organisms and recovery times
- Effects to Wildlife Groups (birds, fisheries, shellfish, mammals, reptiles)
- Wildlife Rescue and Treatment
- International Treatment Organizations

Module 4: Impacts to Shorelines

- Oil impact and persistence on different shoreline types

Day 3:

Module 5: Social-Economic Impacts

- Impacts to property and businesses

- Perception versus reality

Module 6: Spill Response Management

- Spill response organization and structure
- Using the Incident Command System
- Communications
- Health and safety
- Setting of objectives
- Monitoring field operations
- Record keeping/reporting
- Communication with the public and media

Day 4:

Module 7: Standard Spill Response Techniques and Limitations

- On-water recovery
- Shoreline protection
- Shoreline cleanup strategies and guidelines
- Shoreline strategies to avoid
- Risks versus benefits
- When to end a response
- Waste management

Module 8: Alternative Response Techniques

- Dispersants
- Controlled burning
- Bioremediation
- Solidifiers and other chemical agents

Day 5:

Module 9: Spill Planning

- International guidelines
- Determining risk
- Tiered responses
- Environmental sensitivity mapping
- Extent of planning area (marine and pipeline)
- International support
- Determining equipment requirements
- Response exercises (type and schedule)

Module 10: Liabilities and Compensation

- International compensation programs
- Compensable losses
- Documentation requirements

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work
- Discussion
- Presentation



Course Fees:

To be advised as per the course location. This rate includes participant's manual, Hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee/Tea
08:20 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session

12:20 - 13:30	Recess (Coffee/Tea/Snacks)
13:30 - 15:00	Last Session

