



MEMAC TRAINING COURSES

Oil and HNS Part

Introduction

The following is proposal for the different Training Courses which are 12 different type of courses MEMAC intends to convene during the next two years but not limited to. The purpose of these training courses is to support the National Focal Points in building up the national capabilities of the cadres, gain international Expertise from those Experts who work in different regions worldwide, stand on the latest technology and regulations and exchange information on Regional and International Levels.

MEMAC proposing these courses based on MEMAC experience gained from previous training courses, from different enquiries and, from different incidents occurring in the Region as well as from different from international official meetings organized by international organizations such as International Maritime Organization IMO, and Marine Environment Protection Committee Meeting (MEPC). So all the courses are built up, designed and updated by MEMAC on the highly performance criteria in according to the regional requirement utilizing different international Expertise. For the IMO standard course levels 1, 2 and 3, MEMAC has worked closely with IMO Working Group to establish these courses in order to meet our Region's requirements. There are also the Chemical Courses level 1,2 and 3 which are established by MEMAC and dedicated only for our Region, MEMAC has proposed these courses and made them obtainable for the IMO in order to make them available for international use.

In conclusion, MEMAC would like to have your views, comments and suggestions about these courses based on your national requirements. MEMAC also welcomes any suggestions for new training courses which you wish us to establish or to be supported so that MEMAC would be able to start establishing the courses tailored to your requirements.

C O N T E N T S

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1.

INTRODUCTION TO MARINE POLLUTION AND OIL SPILL COMBATING PROCEDURES

OBJECTIVE

This newly established course introduces all types of marine pollution, methods of marine surveillance and then focusing on oil spill and its cleanup technologies.

PERIOD

5 Days

TARGET AUDIENCE

This course newly designed by MEMAC and the Professors from the University of Bangor/Cardiff – U.K. for the ROPME Region. It is quite obvious for personnel to move from work to work or department to department, so the course targets those new member staff who are on Supervisor level as Response Officers or so, or Managerial level who have just joined the Marine Environment Pollution Sector. The course is adequate for personnel working in Government and Industries (Environmental Affairs) sectors.

CONTENT

The course contains theoretical subjects and practical exercise which organizations want their personnel to perform.

The course will address the following topics:

DAY 1 - MARINE POLLUTION

1 - The main types of marine pollution and their impacts.

- 2 - Oxygen demanding wastes (sewage).
- 3 - Oil. Nature of oil, sources, potential impact.
- 4 - Metals and radioactivity.
- 5 - Halogenated hydrocarbons.
- 6 - Case studies: Mediterranean and Caspian, Red Sea, ROPME Sea Area.

DAY 2 - METHODS OF SURVEILLANCE

- 1 - Data collection, data analysis and data synthesis.
- 2 - Survey objectives, defining objectives and generating solution.
- 3 - Planning considerations: sites, stations and samples.
- 4 - Samples size and number, statistical requirements.
- 5 - Compatibility and reproducibility of survey methodologies.
- 6 - Surveying marine resources.

DAY 3 - OIL SPILL MODELLING

- 1 - Ocean diffusion. The diffusion equation.
- 2 - Practical solutions. The Okubo diagrams.
- 3 - Shear diffusion. First stage growth. Radial spreading models.
Particle tracking methods.
- 4 - Oil spill models. Hydrodynamic databases. Tidal and residual flows.
- 5 - Simulation of evaporation and decay. Gas clouds.
- 6 - Application of spill model to major incidents.

DAY 4 - WHAT IS OIL

- 1 - Sources of oil to the sea.
- 2 - Different types of crude oil, properties of each oil.
- 3 - Analysis - how do we analyse oil? Fingerprinting.
- 4 - The problems caused by oils: ascetic, biologic, physical.

5 - Accidents and processes of weathering.

6 - Statistics of oil spills. Case studies of 'the worst oil spills'.

DAY 5 - CLEAN UP TECHNOLOGIES

1 - Introduction, windows of opportunity.

2 - Booms and skimmers.

3 - Dispersants and burning.

4 - Shoreline clean up removal, washing, biodiesel.

5 - Bioremediation.

6 - Case studies.

DAY 6

PRACTICAL INTRODUCTION AND DEPLOYMENT OF DIFFERENT TYPES OF COMBATING EQUIPMENT.

2.

OIL SPILL COMBATING

FIRST RESPONDER, THE OPERATOR LEVEL

IMO STANDARD COURSE, LEVEL - 1

OBJECTIVE

A complete overview of various techniques available for oil pollution combating and cleaning polluted shorelines, theoretical and practical.

It is an IMO standard course which has been updated and improved in cooperation with MEMAC.

PERIOD

5 Days

TARGET AUDIENCE

The Course is designed for Government and Industry Personnel who have the role and responsibility of On-Site Response to oil Spills. Personnel involved in on-site logistics and equipment deployment and operations, marine operations, health, safety and environmental monitoring.

CONTENT

The Course contains some theories but emphasis is given to the practical work that Organizations want their Personnel to perform.

The Course will address the following topics:

- Properties and Fate of Oil Response Strategies - Safety - Containment
- Booms Deployment - Mechanical Recovery - Dispersants - Sorbents
- Burning - Debris Transportation - Storage - Disposal - Bioremediation
- Shoreline Clean up - Care & Maintenance of Equipment,
- Hands-On deployment during the Drill.

ILLUSTRATION OF COURSE SUBJECTS

DAY 1

1. a) Course Introduction and Administration
- b) Overview of Oil Spill Response

Module 1

2. Environmental Impact of Oil
 - a. Physical Properties
 - b. Health and Safety
3. Response Organisation and Control Strategies
4. Contingency Planning Overview
- 5. Environmental Impacts of Oil**

Module 1 test

Module 2

7. Oil Containment Booms
8. Failures of Containment Booms

DAY 2

1. Boom Selection
2. Deployment, Recovery and Configuration of Oil Containment Booms
3. Oil Skimmers
4. Deployment and Operation of Various Types of Skimmers
5. Transfer, Storage and Transportation of Recovered Oil
6. Demonstration of Equipment, Storage and Maintenance

Module 2 test

DAY 3

Module 3

1. Use of Dispersants and Other Combating Techniques
2. Use of Absorbing Materials

Module 3 test

Module 4

4. Shoreline Clean Up
5. Practical exercise: Booms and Skimmers

DAY 4

1. Storage, Maintenance and Cleaning of Equipment
2. Oil Sampling

Module 4 test

3. Paper Exercise
4. Practical Exercise: Shoreline Evaluation and Cleanup

DAY 5

1. Exercise Debrief
2. Exercise Briefing
3. Practical Exercise: Students leading
4. Course review
5. Course evaluation

3.

OIL SPILL COMBATTING

SUPERVISOR LEVEL

IMO STANDARD COURSE, LEVEL – 2

OBJECTIVE

The Middle Management in general is relatively inexperienced in Oil Spill Response, who has a role or responsibility within a National Oil Spill Response Organization. The course provides detailed training in the subject given.

PERIOD

4 Days

TARGET AUDIENCE

Middle Management Government or Industrial Officials who will be in direct contact with the Field Operators.

CONTENT

The Course provides an ideal overview of matters relating to Oil Spill Response which includes:

- Contingency Planning - Response Professionals - Environmental Issues
- Learn in an informal and interactive environment - Gain Hands - On Practical experience - Raise awareness of the Secondary issues that arise during a spill - Cause Fate & Effect of Oil Spills - Safety Issues
- Recognition - Fate & Effects - Main Response Strategies
- Dispersants - Containment and Recovery - Protection
- Shoreline Clean-up - Practical Arrangements - Regional Agreements
- Case History - Combating Drill

ILLUSTRATION OF COURSE SUBJECTS

DAY 1

1. Course introduction and overview

Module 1

2. Oil Spill Causes, Behaviour and Fate
3. Environmental Considerations

Module 2

4. Contingency Planning

Module 3

5. Spill Evaluation and Assessment including manual plotting exercise

Module 4

6. Introduction to Response Strategies
 - Video on The Oil Spill

Module Test

DAY 2

1. Containment and Protection
2. Recovery Devices
3. Shoreline Cleanup
4. Waste Management
5. Health and Safety

6. Site Safety Plans
7. Spill Management
 - Video on Containment and Recovery

DAY 3

1. Practical Exercise: Planning Briefing
2. Exercise: Shoreline Cleanup on Meredian Beach
3. Media Relations
4. Exercise: Media Relations
5. Video on Dispersants
6. Compensation and Legal Aspects

DAY 4

1. Practical Exercise briefing
2. Practical Shoreline Protection, Boom Deployment
3. Exercise Cleanseas
 - Tabletop Response Management Exercise
 - Video on Shoreline Cleanup
 - Planning and Operation

4.

OIL SPILL COMBATING

ADMINISTRATORS AND SENIOR MANAGERS

IMO STANDARD COURSE, LEVEL – 3

OBJECTIVES

To provide Senior Managers and Administrators with awareness of the roles and responsibilities of Senior Personnel in the Management of Oil Spills of National significance and the many and often times competing challenges presented to them during a major spill event.

Senior Representatives need to be brought together to learn about the issues through discussions with Specialists and to develop a National co-ordinated and integrated response process for the management of major spills.

PERIOD

3 Days

TARGET AUDIENCE

The Course is designed expressly for Senior Managers/Administrators participants from Government and Industry Sectors (Environment, Transport, Energy, Customs, Immigration, Finance, Foreign Affairs, Armed Forces, Emergency Planning, Harbour Masters and Associations).

CONTENT

The Course focuses on:

- The policy and role of the Administrators and Senior Managers, - the Global implications of Oil Pollution, - the problems caused by oil pollution and its effect on the marine environment, - the need for rapid decision making and interface between National Group and other States and International Community.

The Course will address major topics such as;

- Overview of Response Policies - Management and Structure - National Contingency Plan - Roles and Responsibilities of the lead and resource groups and agencies - Regional and International Co-operation - Regulations and Conventions - Crisis Management - Public Information and Media Relations - Administration and Financial Aspects of the Spills - Liability and Compensation - Event De-Activation Response Policies.

ILLUSTRATION OF COURSE SUBJECTS

DAY 1

1. Introduction and Overview Session which includes Video on Working Together (11 mins)
2. Causes, fate and effects of spilled oil
3. Contingency Planning includes Video on Assessment of Risk (3 mins) and Tiered Response (4 mins)
4. National Contingency Planning in ROPME Region
Delegates should be prepared to make a short presentation on their own National Contingency Plan
5. Panel Discussion (Q & A)
Panel Members: External Experts and National Representatives

DAY 2

1. Oil Spill Strategy
Video on Response Strategies (4 mins)
2. Communication and Media issues
3. Regional Cooperation within ROPME Sea Area (RSA)
4. International Co-operation and Legal Framework (OPRC)
 1. Introduction
 2. Case Study

3. Essential Requirement
4. Liability Compensation and Cost Recovery
 - Video on Liability and Cost Recovery (3 mins)

DAY 3

1. Spill Management: Roles and Responsibilities
2. Witness Practical Exercise
3. Measures of Success
4. Measures of Response
5. Termination of Response
6. Group Table-Top Exercise
7. Action List

5.

SHORELINE CLEANUP OIL SPILL RESPONSE TECHNICIAN

OBJECTIVES

A complete overview of different types of shoreline and the effect of the oil on them. The course provides the different techniques of different shoreline cleanup operation theoretical and practical

PERIOD

3 Days

TARGET AUDIENCE

This course designs in how to deal with different types of coastline. It is convenient for Supervisors and Senior Operator Level staff with an adequate level of knowledge and background.

COURSE CONTENT

- Fate of oil
- Environmental considerations
- Shoreline types
- Nearshore cleanup methods
- Shoreline cleanup methods
- Specific methods for different shoreline types
- Net environmental benefit concept
- Practical exercises

ILLUSTRATION OF COURSE SUBJECTS

DAY 1

1. Introduction
 - Course Objectives and Content
 - Criteria for Successful Completion

Module 1

2. Environmental Considerations
 - 2.1 Fate of Oil
 - 2.2 Sources and Causes of spills
 - 2.3 Movement and Fate
 - 2.4 Oil types
 - 2.5 Other Issues
 - 2.6 Effects of spilled oil
 - 2.7 Wildlife
 - 2.8 Net environmental benefit

Module 2

3. Spill Evaluation
 - 3.1 Surveillance
 - Techniques
 - Estimation of oil quantities
 - Modelling
 - Estimation exercise

Module 3

4. Response Techniques
 - 4.1 Introduction to response strategies
 - 4.2 Inshore Protection and Recovery
 - Booms
 - Skimmers
 - Protection plans

4.3 Shoreline Cleanup

- Oiling Assessment
- Vulnerability of Shoreline Types
- Three stages of cleanup
- Cleanup techniques for different shoreline types

Module 4

5. Safety

- Oil hazards
- Weather and site hazards/first aid
- Site Safety and work practices

DAY 2

1. Decontamination

- Methods
- Procedures

2. Waste Management

Waste

- Types and quantities
- Minimisation
- Storage
- Disposal

3. Spill Management

3.1 Spill Management and Role of Beachmaster

3.2 Module test

4. Beach Cleaning Exercise Brief

5. Beach Exercise: Delegates to determine
 - Spill Scenario
 - Site Risk assessment
 - Site Safety Plan
 - Safety briefing
 - Detailed cleanup techniques to be used
 - Equipment requirements
 - Storage
 - Disposal
 - Decontamination
 - Personnel welfare

6. Exercise debrief

DAY 3

1. Exercise Briefing
2. Beach Exercise: Delegates to assist with boom deployment
 - Site Risk Assessment
 - Site Safety Plan
 - Safety briefing
 - Detailed Deployment Plan
 - Deploy shore sealing and floating booms
 - Spur boom
 - Protection boom
 - Recovery devices
 - Storage Locations
 - Disposal
 - Decontamination
 - Personnel welfare
 - Boom cleaning
3. Exercise debrief followed by course debrief

DESALINATION PLANT PROTECTION COURSE

OBJECTIVES

The Desalination plant is one of the first priorities to protect. For this reason a dedicated course has been made to deal with this issue. The course deals with the techniques of how to protect the intake and how to clean up the surroundings in case of an oil spill incident.

PERIOD

2 days

TARGET AUDIENCE

The course is designed for the Supervisor level staff who are having the role of protecting the intake or working closely to the field.

COURSE CONTENT

- Properties and Fate of the Oil
- Source of Pollution
- Survey
- Boom Design
- Selection of Boom
- Boom Type and Deployment
- Assembling of Equipment

ILLUSTRATION OF COURSE SUBJECTS

DAY 1

1. Introduction and Overview
2. Fate, Effect and Behaviour of Oil

3. Sources and cause of oil spill
4. Survey the Desalination plan
5. Design boom layout
6. Assemble equipment and installation of vessels

DAY 2

1. Practical Exercise Briefing
2. Booming revision, anchoring arrangements, sorbent booms. Use of recovery vessels to minimize oil approaching the plan
3. Install remaining boom moorings and install booms
4. Exercise debriefing

7.

HAZARDOUS MATERIALS EMERGENCY RESPONSE

EMERGENCY SPILL RESPONDER

MEMAC - LEVEL 1

OBJECTIVES

The level 1 training should enable response personnel to deal with small chemical spills independently (but never alone), and major spills as part of a response team. The emphasis of the training is given on safety and operations

PERIOD

2 days

TARGET AUDIENCE

The course is dedicated for the field operator level as well as the supervisor level. It is for Environmental Affairs, Civil Defence, Coast Guard, Port Authorities, Oil or Petrochemical Companies, etc.

COURSE CONTENT

1. Understanding basic chemical terms and their meanings.
2. Understanding the dangers and hazards presented by chemicals and how they can effect human beings.
3. Identification of hazard labels and their meanings.
4. The identification and use of protective equipment. This will be practical and theoretical.
5. The safe use of spill response equipment.
6. The use of gas detection and monitoring equipment.
7. Handling techniques for chemicals.
8. Sources of information on chemicals, including the use of and understanding of MSDS.
9. Waste disposal legislation (basic understanding only).

10. Basic decontamination procedures.
11. Basic responder safety and hygiene.
12. Manual handling techniques.
13. Handling Drums and tanks.

PRACTICAL TRAINING

General scenarios considering different hazardous incidents, i.e. drum leaking, pressurized tanks, tanks leaking,.... etc.

ILLUSTRATION OF COURSE SUBJECTS

DAY 1

1. - Course Objectives and Content and Criteria for Successful Completion

Module 1

- 2 Chemical Characteristics and Toxicology

- 2.1 Industrial Hygiene and Toxicology

- Chemical Hazards/ Health Effects
- Principles/Terms

- 2.2 Hazmat Chemistry

- Definition
- Chemical Nature of Hazardous Materials
- Behaviour of Hazardous Substances

- 2.3 Monitoring and Detection

- Instruments
- Limitations

Module 2

3. Identifying Substances and the sources of incidents

- 3.1 Classification and identification of hazardous substances

- Sources of information
- DOT Emergency Response Guidebook
- Computer Databases/ Internet Sources

- Other References

Module 3

4. HNS Incident Safety
 - Site Safety and work practices
 - Access Control
 - Heat Stress/First Aid
 - Risk Assessment
5. The selection and use of HNS protective clothing (PPE) The selection and use of respiratory equipment
 - Air Purifying
 - SCBA
 - Demonstration of Donning and Doffing Techniques
 - Atmospheric monitoring equipment

DAY 2

1. Decontamination
 - Methods
 - Procedures
 - Setup and Demonstration

Module 4

2. Response Planning
 - 2.1 Emergency Response Plans and Implementation
 - 2.2 Response Strategies
 - 2.3 Introduction to Response Strategies and Incident Assessment
 - 2.4 Control and Containment
Termination

Module 5

3. Waste Management
 - The principals of Waste handling and disposal
4. Desktop Exercise
5. Practical Exercises: (Equipment dependent)
 - Scenario
 - Pipe Leak
 - Drum Patch
 - Overpack
 - Drum Transfer
 - Use of Facility Emergency Response Plan (if applicable)

HAZARDOUS MATERIALS EMERGENCY RESPONSE**TEAM LEADER****MEMAC - LEVEL 2****OBJECTIVES**

The level 2 training should enable response personnel to perform the duties of a team leader. The emphasis of the training remains on safety and operations, but with an increase in the legislation concerning waste disposal and other environmental issues. All subjects covered in basic responder training will be covered in team leader training. The individual subjects will be covered in much more detail.

PERIOD

3 days

TARGET AUDIENCE

The course design for Supervisor and Senior Staff level with good background or adequate in the field. It is for Environmental Affairs, Civil Defense, Oil Companies, Petrochemicals, Port Authorities, etc.

CONTENTS

1. A full understanding of basic chemical terms and their meanings.
2. Understanding the dangers and hazards presented by chemicals and how they effect humans and the environment
3. Understanding the behaviour characteristics of chemicals and how this will affect the response.
4. Chemical Spill Information System (ChemSIS): A chemical spill model for predicting the trajectory, spreading and toxicity of accidental chemical spills.
5. The identification and use of protective equipment, practical and theoretical.

6. The selection and operation of spill response equipment.
7. Chemical containment and recovery techniques.
8. Command and control techniques.
9. Basic understanding of legislation relating to chemical handling and pollution.
10. The use of gas detection and monitoring equipment.
11. Handling techniques for chemicals.
12. Sources of information on chemicals, including the use of, and understanding of MSDS.
13. Waste disposal legislation (detailed knowledge).
14. Decontamination set up and operational procedures.
15. The setting up and monitoring of hazardous zones.

PRACTICAL TRAINING

In general, the following scenarios should be covered. The team leader should be familiar with the level 1 response training, and where applicable this training should develop the skills required for a team leader.

- Leaking drum incidents, to include “over-packing, patching and transfer
- Pressurised line leak
- Valve failure and leak
- Tank leak
- Tank failure
- Laboratory spill, to include “toxic, corrosive, flammable”
- Tanker overturn
- Marine incident scenarios “product transfer”
- Container incidents “ damaged goods removal etc”

ILLUSTRATION OF COURSE SUBJECTS

DAY 1

1. Introduction
 - Course Objectives and Content
 - Criteria for Successful Completion

Module 1

2. Chemical Characteristics and Toxicology
 - 2.1 Industrial Hygiene and Toxicology
 - Chemical Hazards/ Health Effects
 - Principles/Terms
 - 2.2 Hazmat Chemistry
 - Definitions
 - Chemical Nature of Hazardous Materials
 - Behaviour of Hazardous Substances
 - 2.3 Monitoring and Detection
 - Instruments
 - Limitations

Module 2

3. Identifying Substances and the sources of incidents
 - 3.1 The classification and identification of hazardous substances
IMO Classification and Signs
 - 3.2 Sources of Information
Emergency Response Guidebook
Computer databases./ Internet Sources
Others References

Module 3

4. HNS Incident Safety
 - Site Safety and work practices
 - Access Control
 - Heat Stress/First Aid

5. Risk Assessment
 - Consideration
 - Hazards

DAY 2

1. The selection and use of HNS protective clothing
(PPE)

Levels of Protection

- Selection
- Donning, Doffing
- Inspection, Care and Maintenance

2. The selection and use of respiratory equipment
 - Air Purifying
 - SCBA
3. Demonstration of Donning and Doffing Techniques
Atmospheric monitoring equipment

4. Decontamination
 - Methods
 - Procedures
 - Setup and Demonstration

5. Classroom Exercises
 - SCBA
 - Level A Suit
 - Setup and Conduct Decontamination

6. Training and Exercising of response personnel
Training requirements.
Video presentation

Module 4

7. Response Planning
 - Incident Response Plans

Module 5

8. Incident Management
 - Overview of ICS Management system.

DAY 3

Module 6

1. Response Strategies
 - 1.1 Introduction to Response strategies & Incident assessment
 - 1.2 Control and Containment
Termination

Module 7

2. Waste Management
 - 2.1 The principals of Waste handling and disposal
3. Desktop Exercise
4. Practical Exercises
 - Scenario
 - Pipe Leak
 - Drum Patch
 - Overpack
 - Drum Transfer
 - Use of Facility Emergency Response Plan (if applicable)

HAZARDOUS MATERIALS EMERGENCY RESPONSE**INCIDENT COMMANDER****MEMAC, LEVEL - 3****OBJECTIVES**

The level 3 training should prepare management personnel to manage a major chemical incident. The training is based on understanding of chemical response and management techniques combined with thorough understanding of appropriate legislation.

The candidates for level 3 training need not have undergone level 2 training prior to the course.

PERIOD

5 days

TARGET AUDIENCE

The course is dedicated for Manager and Senior Level of personnel working in the field whether Environmental Affairs, Civil Defense, Port Authorities, Oil Companies or Petrochemical companies.

CONTENTS

1. Full understanding of chemical terms and their meanings.
2. Understanding the dangers and hazards presented by chemicals and how they effect humans and the environment.
3. Understanding the behaviour characteristics of chemicals and how this will affect the response.
4. Chemical Spill Information System (ChemSIS): A chemical spill model for predicting the trajectory, spreading and toxicity of accidental chemical spills.

5. The selection, identification and use of protective equipment. This will be practical and theoretical.
6. The selection and operation of spill response equipment.
7. Chemical containment and recovery techniques.
8. Crisis management techniques.
9. Spill prevention and contingency planning.
10. Advanced Command and control techniques.
11. Detailed understanding of legislation relating to chemical handling and pollution and the environment.
12. The limits of gas detection and monitoring equipment.
13. Handling techniques for chemicals.
14. Sources of information on chemicals, including the use of and understanding of MSDS.
15. A full understanding of waste disposal legislation.
16. Decontamination requirements and operational procedures.
17. The setting up and monitoring of hazardous zones.
18. Responder safety and hygiene.
19. Advanced Fire fighting.

PRACTICAL TRAINING

To ensure that Incident Commanders are familiar with their own role and that of their Response Team, it is essential that this course is completed with a realistic table top exercise.

ILLUSTRATION OF COURSE SUBJECTS

DAY 1

1. Introduction
 - Course Objectives and Content
 - Criteria for Successful Completion

Module 1

2. Chemical Characteristics and Toxicology
 - 2.1 Toxicology and Exposure Guidelines
 - Chemical Hazards/ Health Effects
 - Principles/Terms
 - 2.2 Hazmat Chemistry
 - Chemical Nature of Hazardous Materials
 - Behaviour of Hazardous Substances
 - 2.3 Video on Introduction to Hazardous Chemicals (30m)

Module 2

3. Identifying Substances and the sources of incidents
4. Classification and identification of hazardous substances
 - Classification of Substances & Sources of Information- Emergency Response Guidebook
 - Computer databases./ Internet Sources
 - Other References
5. Sources of Incidents
 - Scenarios- Actual Incidents

DAY 2

Module 3

1. HNS Incident Safety
 - Site Safety and work practices
 - Operational Safety
 - Heat stress/first aid
2. Personnel Protection
 - The selection and use of HNS protective clothing (PPE)
 - Levels of Protection
 - Consideration
 - Hazards
3. The selection and use of respiratory equipment
 - Types and Limitations
4. Risk Assessment
5. Decontamination
 - Methods
 - Procedures
 - Setup and Demonstration
6. Video on Decontamination
7. Site Entry and Recon
8. Nuclear, Biological and Chemical Incident Issues (Special Presentation)

DAY 3

Module 4

1. Response Planning
 - 1.1 Incident Response Plans
Preparation and Implementation
 - 1.2 HNS Spill monitoring (Waterborne and Airborne)
2. Training and Exercising of response personnel
Training requirements
3. Video presentation on Exercise Brightstar
4. Developing HNS response capability

Module 5

5. Incident Management
 - 5.1 Overview of ICS Management system
 - 5.2 Incident Management and Assessment Issues
 - 5.3 Video on Sizing up the Hazmat Incident

DAY 4

Module 6

1. Response Strategies
 - 1.1 Response
 - Control and Containment
 - General Response
 - Marine Response
2. Incident Termination
 - Video on Handling hazardous Spills
 - Video on Exercise Autumn Leaf

Module 7

3. Waste Management

3.1 The principals of Waste Handling and Disposal

3.2 Legal Issues

- OPRC HNS Protocol
- MARPOL 73/78
- HNS Convention

4. Handling the Media and Communication Issues

Day 5

1. Table-Top Exercise
Exercise Clean Seas

- Syndicate Exercise involving management of a major marine related chemical incident. (Actual incident will reflect experience of course attendees).

2. Exercise Debrief and Course Summary

TRAJECTORY MODELLING

OBJECTIVES

To train the administration personnel on how to predict the oil spill electronically in order to plan the protection strategy in advance.

PERIOD

2 Days

TARGET AUDIENCE

The course is designed for administrator and decision-makers with good or even fair and adequate PC background.

REMARKS

MEMAC has established the Regional Model which will be distributed to all Member States. So the plan is to have an on-site model location of one day training in each of the Member States. This will give a great opportunity for training a maximum number of administration staff.

POLLUTION DAMAGE ASSESSMENT AND COMPENSATION CLAIMS

OBJECTIVES

The objectives of the course are:

- 1) to review the means of establishing the extent and severity of the environmental damage,
- 2) to discuss the restoration of damaged sites and show the limitations of such restoration and
- 3) to review the acceptability of claims for surveys and restoration under the International Conventions.

PERIOD

2 Days

TARGET AUDIENCE

Environmental affairs managers and scientists, senior spill managers and personnel involved in claims preparation, documentation and legal issues.

ILLUSTRATION OF COURSE SUBJECTS

DAY 1

1. Introduction to the MEMAC Damage Assessment Protocol
2. Introduction to the Principal of Environmental Damage Assessment
3. Mapping the Extent and Distribution of Oil
 - Aerial Surveillance by Experienced Observers
 - Rapid Ground Based Surveillance of Beaches
 - SCAT surveys – Shoreline Cleanup Assessment Team Surveys

- Resource Specific Survey
- 4. Identifying and Prioritizing Impacted Resources for Damage Assessment
- 5. Gathering Pre-spill Data, Collecting and Recording Dead Wildlife
- 6. Damage Assessment - General Guidelines and Techniques
 - General Approach
 - Site Selection and Fixing
- 7. Sampling of water, sediments and animal tissues for hydrocarbon analysis

DAY 2

- 1 Restoration of Natural Habitats – General Guidelines and Limitations
 - 1.1 General Guidelines, Acceptability of restoration methods and studies to the IOPC Fund
IOPC Fund Claims Procedure
 - 1.2 Summary of resource sensitivities - the resource, its importance, sensitivity and typical vulnerability
 - 1.3 Factors affecting potential damage - the main factors that can vary from place to place, and would make a particular example of the resource more or less sensitive/vulnerable (to aid prioritisation)
 - 1.4 Monitoring and Assessment - the survey and assessment methods that are most likely to be useful for Damage Assessment.
 - 1.5 Restoration – a summary of potential restoration techniques (if appropriate)
 - 1 Coral Reefs

- 2 Seagrass beds
- 3 Sand and mud shores
- 4 Rocky shores
- 5 Mangroves
- 6 Halophyte marshes
- 7 Sabkha
- 8 Industrial Facilities: Ports
- 9 Industrial Facilities: Seawater intakes
- 17 Tourism: Amenity beaches
- 18 Tourism: Water sports areas
- 22 Birds: Seabird colonies and feeding grounds
- 23 Birds: Wetland birds
- 10 Fisheries: Coastal fisheries
- 11 Fisheries: Offshore fisheries
- 12 Fisheries: Breeding and nursery areas for commercial species
- 13 Aquaculture: Fish/prawn tanks/ponds
- 14 Aquaculture: Finfish farms (cages)
- 15 Aquaculture: Mollusc farms
- 16 Aquaculture: Hatcheries
- 19 Marine Mammals: Dugong
- 20 Marine Mammals: Cetaceans
- 21 Turtles: Nesting sites

- 2. Review accession to the IOPC Fund and obstacles of joining by some Member States
- 3. Review Draft Protocol, Review Proposed Amendments, Discussions on Damage Assessment Alternatives

PORT STATE CONTROL TRAINING COURSE

OBJECTIVES

The Port State Control is one of the important issues which the State could exercise their right in supervising their obligation and commitment towards the different Regional and International Conventions and Protocol. This Course introduces all the international Conventions and Protocols which have to be dealt with.

PERIOD

There are two types of this course: a three-day course which is introductory, the and other 10-day courses which provide more detailed theoretical and practical training.

TARGET AUDIENCE

Government Maritime Officials and commercial port or terminal operators, ship managers and ship owners responsible for inspection, survey and certification of ships entering their ports. All those participating must be well experienced in shipping. They should be either ship surveyors or masters/chief officers, chief engineers/second engineers, or have equivalent proficiency.

COURSE CONTENT

It will cover all relevant international/IMO Safety and Pollution Prevention Conventions, explaining procedures and mechanisms involved in issuance of certificates, the associated surveys, the items to be surveyed, and acceptance criteria.

COURSE CRITERIA

Participants will be expected to have good working knowledge of IMO SOLAS, MARPOL and LOAD LINES Conventions and be familiar with certification requirements under the STCW Convention.

COURSE LITERATURE

A comprehensive package of reference literature will be provided to each participant, comprising a course reference manual, besides Procedures for Port State Control IMO, SOLAS, MARPOL, LOAD LINES and STCW Conventions and all relevant Protocols.
