

9. Training Module on Industrial Disaster Management

Aim of the Course

The course aims at developing skills of the officers working as disaster management teams to effectively manage different phases of industrial disasters.

Methodology

The course uses participatory techniques such as table top exercises, case studies, projects, demonstrations, mock drills, action planning, micro-films and lessons in the course.

Objectives

At the end of the course, participants will be able to;

- Explain the meaning of terminologies related to Industrial Disaster Management
- Describe Safety Measures to be taken in Hazardous industries
- Identify components of Onsite and Offsite plan of a Major Accident Hazardous Industry
- Apply the procedures for preparation of Industrial Disaster Management Plan
- Participate in the Safety Mock Drill
- Discuss the Disaster proof procedures applied in Chemical factory
- Explain the salient features of the Disaster Management Act.

Expected Outcome

- Participants would prepare industrial disaster management plan as follow up of the course
- Apply tools for Risk Analysis
- Practice and rehearse the implementation of mitigation, relief and response action plans

Target Group

The Group A and B officers of Urban Local Bodies, Development Authorities, Fire service officers, Home guards, Engineers and administrators etc., from line departments of the Industries, Pollution Control Board, Town Planning, Municipal administration of state Government.

Validation

Apart from daily assessment, the course will be validated by using immediate reaction questionnaires and oral feedback by the participants at the end of the course.

Certification: On completion of the course, participants will be issued certificate.

Training Module

Day I

Sessions I and II

Topic	Introductory Activity
Contents	<ul style="list-style-type: none"> • Introduction of Course Team and Faculty • Introductory Game • Expectations of participants • Expectations of trainers
Session Objective	Participants will be able to; <ul style="list-style-type: none"> • Share experiences in DM • List expectations from the course • Introduce themselves • Set ground rules for the course
Expected Outcome	<ul style="list-style-type: none"> • Listing of Expectations from the course • Setting Ground Rules for Trainees and Trainers • Limitations and scope of the training
Method	Introductory game Eliciting responses and Eliciting reactions
Process	<p>Resource persons to introduce themselves, welcome the participants warmly.</p> <p>Introductory games: Participants to pair up and talk to each other - about their work, their families, their interests, their hobbies, etc. Participants will then introduce their partners in the plenary, so that all other participants get to know each other.</p> <p>Resource persons to define the objectives of the course and elicit the expectations of the participants from the course. Based on the above, the resource team may reset the course objectives. It is important that the resource team provide space and time for the participants to freely share their experiences and opinions, since the issues that emerge from their experiences will form the basis of the objectives of the course.</p> <p>Resource Person Course Team</p>
Performance Aids	Checklist, Flow Chart
Media	White Board/LCD Projector/PPT
Trainers	Course Co-ordinator and Faculty of CDM
Time	2 hours

Day I

Session III & IV

Topic	An Overview of Industrial Disasters
Contents	<ul style="list-style-type: none"> • Industrial Disaster Terminology • Concept of Industrial Disaster Management • Past history of Industrial disasters • Industrial Disaster events

Session Objective	Participants will be able to; <ul style="list-style-type: none"> • Explain the meaning of terminologies related to Industrial Disaster management • Draw distinction between Hazard, Risk, Vulnerability, Preparedness, Mitigation, Response etc. • Distinguish between different types of Chemical/ Industrial Disaster
Expected Outcome	They will understand meanings of terminologies, Types Industrial Disasters
Method	PPT, Lesson, Micro film, Case Study and Discussion
Process	Resource Person will make a pictorial presentation on the status of Industrial disasters management and types of Industrial disasters in the state.
Performance Aids	Checklist
Media	White Board/LCD Projector/PPT/ Hand outs
Trainers	Course Co-ordinator
Time	2 hours

Day I

Sessions V and VI

Topic	Components of Industrial/Chemical Disaster Management Plan(Onsite/ Offsite)
Contents	<ul style="list-style-type: none"> • Onsite Plan • Offsite plan
Session Objective	Participants will be able to; <ul style="list-style-type: none"> • Identify components of Onsite and Offsite plan of a Major Hazardous Industry • Apply the procedures for preparation of Industrial Disaster Management Plan
Expected Outcome	Provides framework for Onsite and Offsite Plan
Method	PPT, Demonstration, Case study and Discussion
Process	The RP will make a presentation on different components of Onsite and Offsite plan giving suitable example of MAH unit
Performance Aids	Guidelines
Media	White Board/LCD Projector/PPT/ Hand outs
Trainers	From Factories and Boilers
Time	2 hours
Assessment	Question answer

Day II

Session I & II

Topic	Industrial Safety Measures
Contents	<ul style="list-style-type: none"> • Fire • Chemical • Effluent • Accident, etc
Session Objective	Participants will be able to; <ul style="list-style-type: none"> • Describe Safety Measures to be taken in Hazardous Industries
Expected Outcome	Use of Safety Measures
Method	PPT, Group Activity, Case study and Discussion

Process	The RP will make a PPT on important safety measures to be taken in Hazardous Industries. He would also highlight a few cases of failure and resultant impact due to non implementation of adequate safety measures.
Performance Aids	Checklist
Media	White Board/LCD Projector/PPT/ Hand outs
Trainers	MAH unit
Time	2 hours
Assessment	Question answer

Day II

Session III & IV

Topic	Case Study of Chemical Factory (Organosys)
Contents	
Session Objective	Participants will be able to; <ul style="list-style-type: none"> • Discuss the Disaster proof procedures applied in Organosys
Expected Outcome	Experience of MAH unit
Method	PPT, Case study and Discussion
Process	RP will discuss the Case Study of Organosys with respect to Safety Plan. He will discuss the system adopted to monitor the safety of the unit. A few instances of accidents if any will be quoted.
Performance Aids	Pamplate
Media	White Board/LCD Projector/PPT/ Hand outs
Trainers	Safety Manager of Organosys
Time	2 hours
Assessment	Question - answer

Day II

Session V & VI

Topic	Industrial Safety Drill at HPCL
Contents	
Session Objective	Participants will be able to; <ul style="list-style-type: none"> • Participate in the Safety Mock Drill
Expected Outcome	Organise Drills
Method	Mock Drill
Process	Safety drill will be organized in coordination with HPCL, Fire Services and neighboring units. The faculty members in consultation with HPCL will be develop disaster scenario and exercise will be designed to conduct the Mock Drill. Participants will be taken to site of the drill. After observing the drill participants will be given an opportunity to have discussion and question answer session. Different unit members deployed to play the roles will present their status report.
Performance Aids	
Media	
Trainers	HPCL, Fire services etc.,
Time	2 hour
Assessment	Feed back

Day III**Session I& II**

Topic Contents	Exercise on Preparation of Industrial Disaster Management Plan <ul style="list-style-type: none"> Guidelines and Templates
Session Objective	Participants will be able to; <ul style="list-style-type: none"> Prepare Industrial Disaster Management Plan
Expected Outcome	Plan
Method	PPT, Case study ,Group work and Presentation
Process	Four group will form, Each group will be work preparation of the plan
Performance Aids	Guidelines
Media	White Board/LCD Projector/PPT
Trainers	Factories and Boilers
Time	2 hours
Assessment	Report presentation

Day III**Session III & IV**

Topic Contents	Management of Burn Injuries <ul style="list-style-type: none"> Types of Burn Injuries Methods of treatments
Session Objective	Participants will be able to; <ul style="list-style-type: none"> Discuss different types of Burn injuries and Methods of treatment
Expected Outcome	Understand treatment for different burn injuries
Method	PPT, case study and Discussion
Process	RP will make pictorial presentation on cases of burn injuries and treatment. Cases related to industrial /chemical burn accidents will be discussed.
Performance Aids	Checklist
Media	White Board/LCD Projector/PPT/ Hand outs
Trainers	St John Hospital, Bangalore
Time	2 hour
Assessment	Question answers

Day III**Session V**

Topic Contents	Disaster Management Act,2005
Session Objective	Participants will be able to;
Expected Outcome	Drought management planning
Method	PPT, Demonstration, case study and Discussion
Process	The RP will make a PPT on drought and types of Karnataka. During the presentation, the RP will specifically highlight the status of drought in different parts of Karnataka. Drought mitigation strategies and case studies will be explained. A question answer session will be conducted towards the end for 20 minutes.
Performance Aids	Checklist on drought mitigation measures
Media	White Board/LCD Projector/PPT/ Hand outs

Trainers	Director/Professor on Drought Management from KSNDMC, GKVK or ISECs from SJCE, Mysore
Time	1 hour
Assessment	Random questioning with 5 questions and answering

Day III

Session V

Topic	Guidelines for Chemical Disaster Management Plan
Contents	•
Session Objective	Participants will be able to;
Expected Outcome	Action planning using TTX methodology
Method	PPT, case study and Discussion
Process	The RP will explain the importance of TTX and its significance in DM. The steps in TTX and roles to be played by the participants and formation of teams namely players, observers, evaluators, media etc. will be explained. A short micro-film will be screened to understand the concept.
Performance Aids	Steps in TTX, Checklist on the process of TTX
Media	White Board/LCD Projector/PPT/ Hand outs
Trainers	ATI/CDM Faculty
Time	1 hour
Assessment	Question answer

Day III

Session VI

Topic	Emergency Planning – Case study
Contents	
Session Objective	Participants will be able to;
Expected Outcome	Developing and playing the TTX
Method	Group Activity
Process	Different teams as formed earlier would play the roles. Control room team and the response team would play their respective exercises one after the other. The observers will make the list of observations on the player team and control room team. Evaluators will evaluate each member of the group. This will be followed by the feedback of facilitators/trainers and drawing of lessons from the TTX
Performance Aids	Maps, Scenario, Steps in TTX, Checklist on the process of TTX
Media	Handout on TTX
Trainers	ATI/CDM Faculty
Time	1 hour
Assessment	Question answer

Course Schedule

Time	Topic
Day One 09.30 AM- 10.30 AM	Registration Introductory Activity & Expectation Warming up Activity
10.30 AM-11.30AM	INUAGURAL SESSION Industrial Disaster management –Roles and Responsibilities of Officers
11.45AM-12.45PM	Operating Procedures in Industrial Disaster Management and Provisions of the Act
12.45PM-01.45PM	Environmental Planning for Hazardous Industries
2.30 PM-04.30 PM	Status of Hazardous Industries and Disaster Management Plan
04.30PM-05.30 PM	Screening of Film Bhopal gas Tragedy followed by discussions
Day Two 9.30 AM-11.30AM	Industrial Safety Plan of Mangalore Chemicals and Fertilizers Limited
11.45AM-01.45PM	Safety Management Plan : Experience of Jubilant Organosys
02.30 PM-04.45PM	Industrial Safety Drill at HPCL: Visit to HPCL
Day Three 09.30 AM-11.30AM	Exercise on Preparation of Industrial Disaster Management Plan
11.45PM-01.45PM	Management of Burn Injuries
02.30 PM-04.30 PM	Feedback Report and Discussion
04.30PM-05-00PM	Validation and Closing