

COURSE OVERVIEW HE0870 ERP Emergency Response Planning

Course Title

ERP Emergency Response Planning

Course Date/Venue

October 20-24, 2024/ SAS Meeting Room, Holiday Inn Muscat al Seeb, an IHG Hotel, Muscat, Oman

Course Reference

HE0870

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.

On December 3, 1984, a chemical leak occurred at a Union Carbide pesticide plant in Bhopal, India. The leaking cloud of methyl isocyanate (MIC) killed thousands of people living near the plant, injured tens of thousands more, and contaminated water and soil within a one-mile radius of the facility.



This disaster occurred when water entered a tank containing the MIC through leaking valves. The mixture of water and MIC created a tremendous amount of heat and a runaway reaction that released the toxic cloud of gas into the surrounding community. Union Carbide eventually paid \$470 million to compensate the victims of this tragedy.

As a result of this worst industrial disaster on record, governments around the world began adopting emergency response planning requirements for state and local governments.



In the U.S., the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) created regulations designed to require employers to prevent and plan for similar emergencies. In this course, you will learn how you can use these planning requirements to protect people, property and the environment from the type of disaster that occurred in Bhopal, as well as other emergencies that might impact your workplace.

The course focuses on the plans that facilities must prepare to protect their employees and the surrounding community from potential emergencies. Participants will learn how to use the National Response Team's guide for developing an Emergency Response Plan to cover fires, explosions, hazardous materials incidents, technical rescues, emergency medical incidents, natural disasters, and acts of terrorism.

Course Objectives

Upon the successful completion of the course participants will be able to:

- Identify planning requirements as established by various jurisdictions.
- Identify elements of a plan that can be used to prepare for all types of emergencies.
- Identify the steps in the planning process for developing a site-specific emergency response plan.
- Prepare, write and test emergency plans that are appropriate to your risk exposure
- Identify hazards and prepare a comprehensive hazard register
- Effectively allocate resources in the right place to deal with your identified hazards
- Establish an Incident Command System (ICS) and emergency organization
- Establish communication lines between your team and external support groups
- Ensure you have taken into consideration all emergency predicaments by testing your emergency plans through simulated scenarios
- Experience the pressures in decision making by taking part in an emergency response exercise

Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive "Haward Smart Training Kit" (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes **electronic version** of the course materials, sample video clips of the instructor's actual lectures & practical sessions during the course conveniently saved in a **Tablet PC**.

Who Should Attend

This course provides an overview of all significant aspects and considerations of emergency response planning in power plants for emergency response teams, technical staff, HSE officers & safety inspectors as well as shift in-charge supervisors.

Course Fee


US\$ 5,500 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Course Accreditations


Certificates are accredited by the following international accreditation organizations: -

- 
The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units (CEUs)** in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

- 
British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council for Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



Mr. Raymond Tegman is a **Senior HSE Consultant** with extensive experience within the **Oil & Gas, Petrochemical** and **Refinery** industries. His broad expertise widely covers in the areas of **Rigging Safety Rules, Machinery & Hydraulic Lifting Equipment, Handling Hazardous Chemicals, Spill Containment, Fire Protection, Fire Precautions, Incidents & Accidents Reporting, HSEQ Audits & Inspection, HSEQ Procedures, Environmental Awareness, Waste**

Management Monitoring, Emergency Planning, Emergency Management, Working at Heights, Root Cause Analysis, HSE Rules & Regulations, Process Safety Management (PSM), Process Hazard Analysis (PHA), Techniques, HAZOP, HSE Risk, Pre-Start-up Safety Reviews, HSE Risk Identification, Assessments & Audit, HSE Risk Assessment & Management Concepts, HSE Management Policy & Standards, HSSE Emergency Response & Crisis Management Operations, Confined Space Entry, Quantitative Risk Assessment (QRA), Hazardous Materials & Chemicals Handling, Safety Precaution & Response Action Plan, Hazard & Risk Assessment, Task Risk Assessment (TRA), Incident Command, Accident & Incident Investigation, Emergency Response Procedures, Job Safety Analysis (JSA), Behavioural Based Safety (BBS), Fall Protection, Work Permit & First Aid, Lock-out/Tag-out (LOTO), Emergency Response, Construction Supervision, Scaffolding Inspection, HAZCHEM, Manual Material Handling, Road Traffic Supervision, ISO 9001 and OHSAS 18001.

During his career life, Mr. Tegman has gained his practical and field experience through his various significant positions and dedication as the **Operations Manager, Safety & Maintenance Manager, Safety Manager, Road/Traffic Supervisor, Assessor/Moderator, Safety Consultant, Safety Advisor, Safety Officer** and **Liaison Officer** from Zero Harm, SHRA Training & Services (Health & Safety), Road Crete, Balwin Property Development, DEME International, Gladstone Australia, Godavari Gas Pipeline and New Castle NCIG.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: Sunday 20th of October 2024

0730 – 0745	<i>Registration & Coffee</i>
0745 – 0800	<i>Welcome & Introduction</i>
0800 – 0815	PRE-TEST
815 – 0930	Planning Requirements <i>Occupational Health</i>
0930 – 0945	<i>Break</i>
0945 – 1130	Planning Requirements (cont'd) <i>Environmental Protection</i>
1130 – 1230	Planning Requirements (cont'd) <i>Emergency Response Planning Resources</i>
1230 – 1245	<i>Break</i>
1245 – 1420	Hazard Identifications <i>Identify the Hazards</i>
1420 – 1430	Recap
1430	<i>Lunch & End of Day One</i>

Day 2: Monday 21st of October 2024

0730 – 0930	Hazard Identifications <i>Evaluate Risks</i>
0930 – 0945	<i>Break</i>
0945 – 1100	Risk Assessment <i>Risk Concepts • How to Estimate Risk & Evaluate its Acceptability • The Risk Management Process • Techniques for Risk Analysis</i>
1100 – 1230	Risk Assessment (cont'd) <i>Risk Reduction Measures • Risk Mitigation & Control</i>
1230 – 1245	<i>Break</i>
1245 – 1420	Incident Command System (ICS) <i>Introduction to Incident Command System • Adaptation of ICS to Other Command Structures</i>
1420 – 1430	Recap
1430	<i>Lunch & End of Day Two</i>

Day 3: Tuesday 22nd of October 2024

0730 – 0930	Incident Command System (ICS) (cont'd) Additional Consideration
0930 – 0945	Break
0945 – 1100	Integrated Contingency Plan National Response Team • Contents of the Integrated Contingency Plan • Plan Introduction
1100 – 1230	Integrated Contingency Plan (cont'd) Contents of the Integrated Contingency Plan (cont'd)
1230 – 1245	Break

1245 – 1420	Integrated Contingency Plan (cont'd) Contents of the Integrated Contingency Plan (cont'd)
1420 – 1430	Recap
1430	Lunch & End of Day Three

Day 4: Wednesday 23rd of October 2024

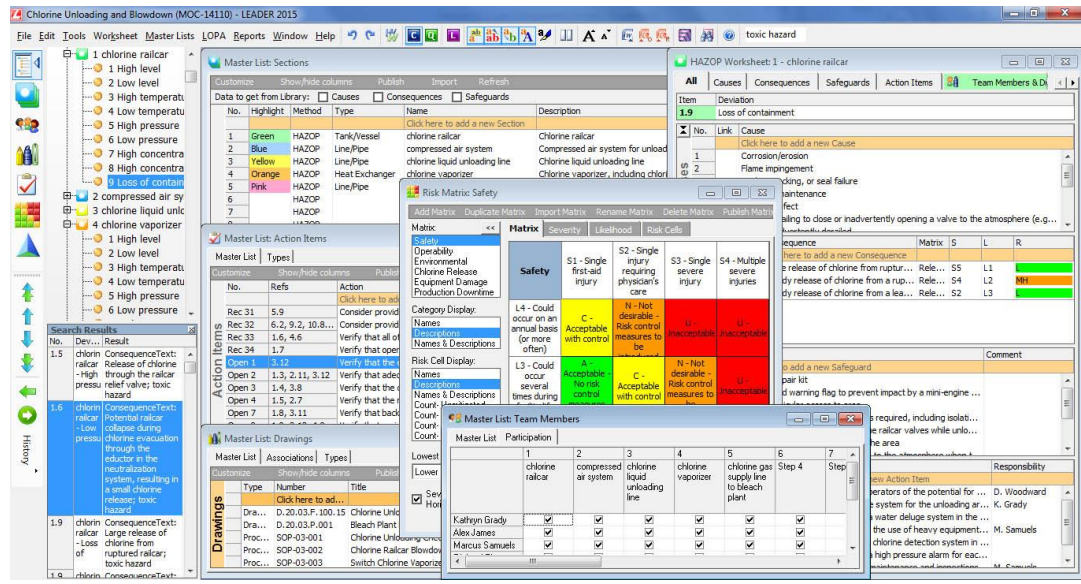
0730 – 0930	Integrated Contingency Plan (cont'd) Contents of the Integrated Contingency Plan (cont'd)
0930 – 0945	Break
0945 – 1100	Integrated Contingency Plan (cont'd) Contents of the Integrated Contingency Plan (cont'd)
1100 – 1230	The Planning Process Creating a Planning Team
1230 – 1245	Break
1245 – 1420	The Planning Process (cont'd) Conducting a Needs Assessment
1420 – 1430	Recap
1430	Lunch & End of Day Four

Day 5: Thursday 24th of October 2024

0730 – 0930	The Planning Process (cont'd) Developing or Revising the Plan
0930 – 0945	Break
0945 – 1100	The Planning Process (cont'd) Developing or Revising the Plan (cont'd)
1100 – 1230	The Planning Process (cont'd) Implementing the Plan
1230 – 1245	Break
1245 – 1345	The Planning Process (cont'd) Evaluating the Plan (cont'd)
1345 – 1400	Course Conclusion Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

Simulator (Hands-on Practical Sessions)

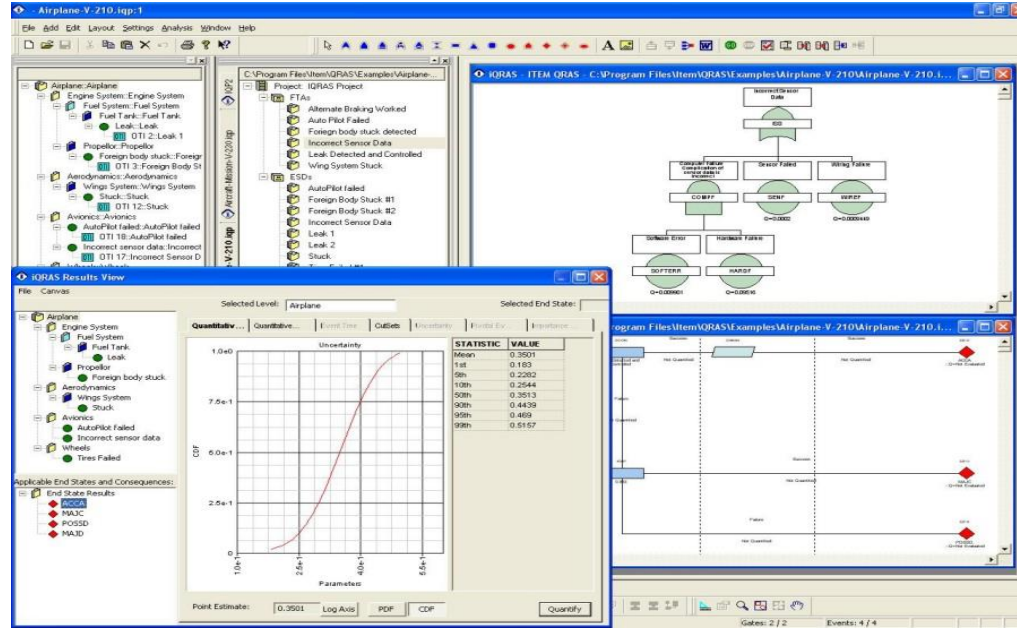
Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carry out various exercises using our state-of-the-art “HAZOP”, “QRA”, “Visio Software”, “Mindview Software” and “Workplace Risk Assessment” simulators.



The screenshot displays the HAZOP Simulator interface for a project titled "Chlorine Unloading and Blowdown (MOC-14110) - LEADER 2015". The interface includes several key components:

- Master List Sections:** A table listing identified hazards with columns for No., Highlight, Method, Type, Name, and Description. Items include "chlorine railcar", "compressed air system", "chlorine liquid unloading line", and "chlorine vaporizer".
- Risk Matrix:** A grid showing the severity of risks based on Likelihood and Risk. It includes categories like "Safety", "Operability", "Environmental", and "Chlorine Release".
- Master List Action Items:** A list of recommended actions to mitigate risks, such as "Verify that all of...", "Verify that the...", and "Verify that back...".
- Master List Drawings:** A list of drawings associated with the HAZOP study, including "Chlorine Unit", "Bleach Plant", and "Chlorine Unloading".
- HAZOP Worksheet:** A detailed view of a specific hazard (1.9 Loss of containment) with associated causes, consequences, and safeguards.
- Team Members & Participation:** A table showing the involvement of team members like Kathryn Grady, Alex James, and Marcus Samuels in different steps of the analysis.

HAZOP Simulator



The screenshot displays the QRA System Simulator interface for an "Airplane V 210" project. The interface includes several key components:

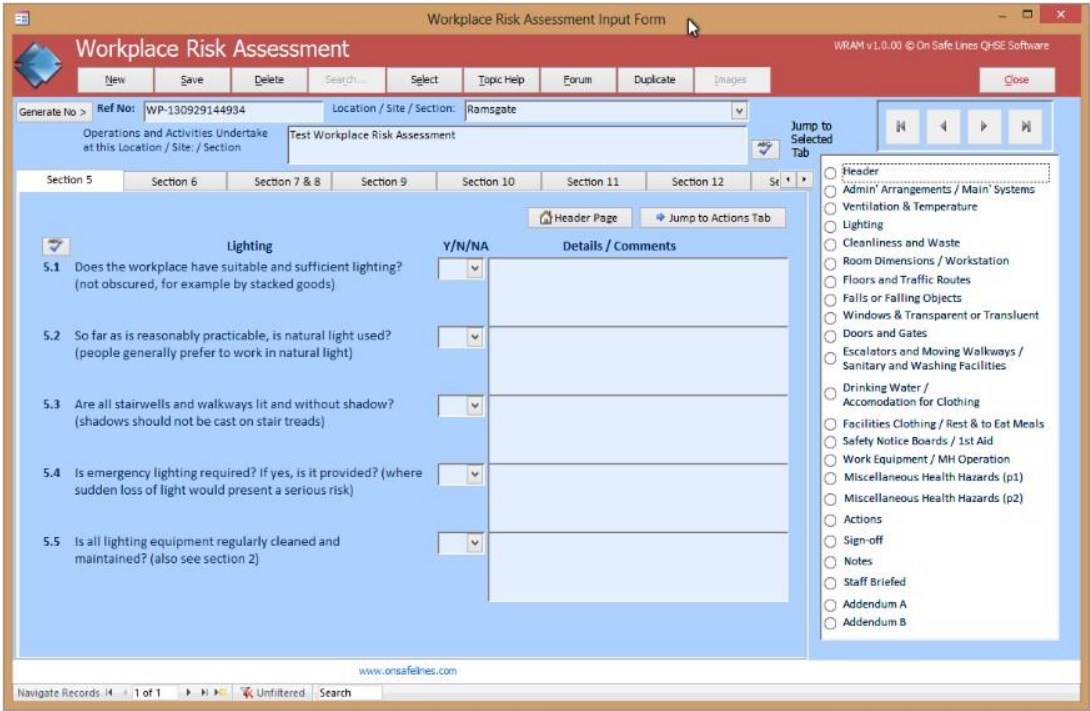
- Event Tree Diagram:** A flowchart showing the progression of events from an initial failure (e.g., "Main Engine Failure") through various states to final outcomes like "Fatal", "Major Injury", "Minor Injury", "Property Damage", and "No Consequence".
- QRA Results View:** A window showing a graph of the Cumulative Distribution Function (CDF) for the "Airplane" system. The x-axis represents "Parameter" and the y-axis represents "CDF".
- Statistical Data Table:** A table providing statistical values for the system, such as Mean, Std, 10th, 50th, 90th, 95th, and 99th percentiles.
- Applicable End States and Consequences:** A list of potential outcomes, including "FATAL", "MAJOR INJURY", "MINOR INJURY", "PROPERTY DAMAGE", and "NO CONSEQUENCE".

QRA System Simulator



Visio Software

Mindview Software



The screenshot displays the 'Workplace Risk Assessment Input Form' software. The main window title is 'Workplace Risk Assessment' with version 'WRAM v1.0.00 © On Safe Lines QHSE Software'. The interface includes a menu bar with options like 'New', 'Save', 'Delete', 'Search', 'Select', 'Topic Help', 'Forum', 'Duplicate', and 'Images'. Below the menu, there are fields for 'Generate No.', 'Ref No: WP-130929144934', and 'Location / Site / Section: Ramsgate'. A navigation bar shows sections from 5 to 12. The main content area is titled 'Lighting' and contains a table with the following questions and response options:

Question ID	Question	Y/N/NA	Details / Comments
5.1	Does the workplace have suitable and sufficient lighting? (not obscured, for example by stacked goods)	<input type="text"/>	
5.2	So far as is reasonably practicable, is natural light used? (people generally prefer to work in natural light)	<input type="text"/>	
5.3	Are all stairwells and walkways lit and without shadow? (shadows should not be cast on stair treads)	<input type="text"/>	
5.4	Is emergency lighting required? If yes, is it provided? (where sudden loss of light would present a serious risk)	<input type="text"/>	
5.5	Is all lighting equipment regularly cleaned and maintained? (also see section 2)	<input type="text"/>	

A sidebar on the right lists various assessment categories such as 'Admin Arrangements / Main Systems', 'Ventilation & Temperature', 'Lighting', 'Cleanliness and Waste', etc. The bottom of the window shows a status bar with 'Navigate Records 1 of 1' and 'Unfiltered Search'.

Workplace Risk Assessment

Course Coordinator

Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org