

COURSE OVERVIEW HE1098
Emergency Tools and Reports
(E-Learning Module)

Course Title

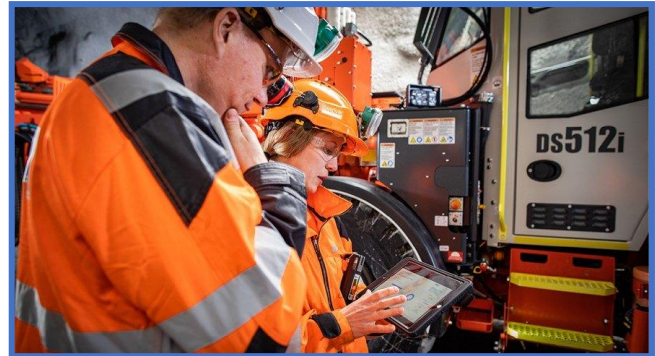
Emergency Tools and Reports
 (E-Learning Module)

Course Reference

HE1098

Course Format & Compatibility

SCORM 1.2. Compatible with IE11, MS-Edge, Google Chrome, Windows, Linux, Unix, Android, IOS, iPadOS, macOS, iPhone, iPad & HarmonyOS (Huawei)



Course Duration

30 online contact hours
 (3.0 CEUs/30 PDHs)



Course Description



This E-Learning course is designed to provide participants with a detailed and up-to-date overview of emergency tools and reports. It covers the emergency, crisis and dangers of the oil and gas industry; the oil and gas exploration risk analysis; the financial risks, strategic risks, operational risks and compliance issues; the quantitative oil and gas risk assessment, discounted cash flow analysis, sensitivity and scenario analysis and quantitative risk analysis; the boiling liquid expanding vapour explosion (BLEVE); the codes of practice; and the disaster management plan, installation, off site emergency plan, risk analysis, risk assessment and risk management.

Further, the course will also discuss the site incident controller, transport emergency (TREM) card and the unconfined vapour cloud explosion (UVCE); the objectives of emergency response and disaster management plan (ERDMP); the HAZOP study, fire explosion and toxicity index (FEI & TI) analysis and accident event identification; the consequence analysis; the models for determining the source strength for the release of hazardous substances; and the semi-continuous outflow, gas outflow, vapour outflow, pressurized liquefied gas outflow and liquid outflow.

Moreover, the course will also discuss the model for evaporation, dispersion, heavy gas dispersion, heat load and shock waves; the emergency organization and responsibilities as well as support and auxiliary services for major installations; the maintenance of ERDMP records; the roles and responsibilities of stakeholders, external agencies, civil society and private sector; the guidelines for filling the incident report and emergency recovery procedures; the security threat plan, emergency action in case of bomb threat and emergency action plan for emergency during off-shift hours (including holidays); the integrated contingency planning for industrial emergencies; the quantity and storing method and schedule of implementation of code of practice for ERDMP; the fire and explosion index and category including corrosives, propensity of a certain consequence of an accident and probability estimation for occurrence of MCA scenario; and the incident preventing measures and procedures, firefighting and safety systems.

During this interactive course, participants will learn the classification of fire and the suitability of fire extinguishers; the portfolio management; the sustainable crude oil production capacity and non-associated gas production; replacing reserves to sustain production; facilitating technology and capability transfer; managing stakeholders to satisfy energy demand efficiently; the key responsibilities of planning and support team as well as project management team; the common factors in major accidents; establishing controls to prevent future oil spills; the safety management systems, hazard analysis, maintenance, third party certification, management of change and risk management; the risk management strategies and processes, risk identification, risk analysis, risk assessment and evaluation, risk mitigation and risk monitoring; the risk avoidance, risk reduction, risk sharing and risk retaining; the steps in risk analysis process, conducting a risk assessment survey and developing risk management plan; the purpose of the emergency response plan; the hazard planning distances pipeline hazard planning distances, well site hazard planning distances and facility hazard planning distances; the emergency response resources and types of equipment; the proper deployment, monitoring and communication procedures; responding to incident or emergency ; the classification and reporting of incident; the emergency response; the role of the facilitator; and the public information systems and communication plans for emergency response resources and for the general public.

Course Objectives

After completing the course, the employee will:-

- Apply and gain a comprehensive knowledge on emergency tools and reports
- Understand the overview of the various local and international emergencies and crisis situations in the oil and gas industry
- Understanding the company procedures, protocols and various stakeholders involved in emergency response and crisis situations
- Understanding emergency tools and reports and describe the tools and systems used during an emergency response and crisis situations
- Draft relevant reports and documentation content, requirements, structure and forms/checklists
- Discuss the emergency, crisis and dangers of the oil and gas industry

- Carryout oil and gas exploration risk analysis as well as identify the financial risks, strategic risks, operational risks and compliance issues
- Apply quantitative oil and gas risk assessment, discounted cash flow analysis, sensitivity and scenario analysis and quantitative risk analysis
- Define boiling liquid expanding vapour explosion (BLEVE) and discuss codes of practice
- Illustrate disaster management plan, installation, off site emergency plan, risk analysis, risk assessment and risk management
- Apply site incident controller, obtain transport emergency (TREM) card and discuss the unconfined vapour cloud explosion (UVCE) and the objectives of emergency response and disaster management plan (ERDMP)
- Employ HAZOP study, fire explosion and toxicity index (FEI & TI) analysis and accident event identification
- Illustrate consequence analysis and models for determining the source strength for the release of hazardous substances
- Describe semi-continuous outflow, gas outflow, vapour outflow, pressurized liquefied gas outflow and liquid outflow
- Illustrate model for evaporation, dispersion, heavy gas dispersion, heat load and shock waves
- Recognize emergency organization and responsibilities as well as support and auxiliary services for major installations
- Maintain ERDMP records and discuss the roles and responsibilities of stakeholders, external agencies, civil society and private sector
- Review the guidelines for filling the incident report and apply emergency recovery procedures
- Carryout security threat plan, emergency action in case of bomb threat and emergency action plan for emergency during off-shift hours (including holidays)
- Employ integrated contingency planning for industrial emergencies as well as quantity and storing method and schedule of implementation of code of practice for ERDMP
- Identify fire and explosion index and category including corrosives, propensity of a certain consequence of an accident and probability estimation for occurrence of MCA scenario
- Apply incident preventing measures and procedures, firefighting and safety systems
- Classify fire and the suitability of fire extinguishers
- Optimize portfolio management and achieve sustainable crude oil production capacity and non-associated gas production
- Replace reserves to sustain production, facilitate technology and capability transfer
- Manage stakeholders to satisfy energy demand efficiently

- Identify the key responsibilities of planning and support team as well as project management team
- Set-up and implement organization and governance model
- Apply permit cancellation, permit surrender and annual and final reports
- Identify the common factors in major accidents and establish controls to prevent future oil spills
- Recognize safety management systems and apply hazard analysis, maintenance, third party certification, management of change and risk management
- Carryout risk management strategies and processes, establish context, risk identification, risk analysis, risk assessment and evaluation, risk mitigation and risk monitoring
- Apply risk avoidance, risk reduction, risk sharing and risk retaining
- Implement the steps in risk analysis process, conduct a risk assessment survey, identify and analyze the risks and develop a risk management plan
- Discuss the purpose of the emergency response plan and determine hazard planning distances pipeline hazard planning distances, well site hazard planning distances and facility hazard planning distances
- Recognize the emergency response resources and the types of equipment
- Employ proper deployment, monitoring and communication procedures, respond to an incident or emergency and classify and report the incident
- Evaluate the emergency response, discuss the role of the facilitator and recognize public information systems and communication plans for emergency response resources and for the general public

Who Should Attend

This course provides an overview of all significant aspects and considerations of emergency tools and response for all managers, HSE team leaders, workplace leaders, engineers, HSE engineers supervisors, safety inspectors, foremen, project job officers and junior production operation staff.

Training Methodology

This Trainee-centered course includes the following training methodologies:-

- Talking presentation Slides (ppt with audio)
- Simulation & Animation
- Exercises
- Videos
- Case Studies
- Gamification (learning through games)
- Quizzes, Pre-test & Post-test


Every section/module of the course ends up with a Quiz which must be passed by the trainee in order to move to the next section/module. A Post-test at the end of the course must be passed in order to get the online accredited certificate.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course.

Certificate Accreditations


Certificates are accredited by the following international accreditation organizations: -

-  USA International Association for Continuing Education and Training (IACET)

Haward Technology is an Authorized Training Provider by the International Association 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 1-2013 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 1-2013 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 Association 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.

Course Fee

As per proposal

Course Contents

- Overview of the Various Local and International Emergencies and Crisis Situations in the Oil and Gas Industry - Emergency Tools and Reports
- Emergency and Crisis in Oil and Gas
- The Dangers of the Oil and Gas Industry
- Laws & Regulations
- Geological
- Terrorism
- Cost
- Supply & Demand
- Oil and Gas Exploration Risk Analysis
- Risks Faced by the Oil and Gas Industry
- Financial Risks
- Strategic Risks
- Operational Risks
- Compliance Issues
- Quantitative Oil and Gas Risk Assessment
- DCF or Discounted Cash Flow, Sensitivity and Scenario Analyses
- Quantitative Risk Analysis
- Advantages of Risk Analysis
- Terms & Definitions
- Board
- Boiling Liquid Expanding Vapour Explosion (BLEVE)
- Codes of Practice
- Disaster
- Disaster Management Plan
- Emergency Response Vehicle (ERV)
- Hazard
- Incident
- Incident Record Register
- Installation
- Leak

- Mutual Aid Association
- Off-Site Emergency
- Off Site Emergency Plan
- On Site Emergency
- Risk
- Risk Analysis
- Risk Assessment
- Risk Management
- Site Incident Controller
- Spill
- Transport Emergency (TREM) Card
- Unconfined Vapour Cloud Explosion (UVCE)
- Scope
- Intent
- Objectives of Emergency Response and Disaster Management Plan (ERDMP)
- Credible Accident Scenarios
- The Credible Scenarios Identified for the POL Depot
- HAZOP Study
- Fire Explosion & Toxicity Index (FEI & TI) Analysis
- Identification of Accident Event
- Consequence Analysis
- Models for Determining the Source Strength for the Release of Hazardous Substances
- Semi-Continuous Outflow
- Gas Outflow
- Vapour Outflow
- Pressurized Liquefied Gas Outflow
- Liquid Outflow
- Model for Evaporation
- Model for Dispersion
- Heavy Gas Dispersion Model
- Model for Heat Load and Shock Waves
- Emergency Organization and Responsibilities
- Overall Objectives of an Emergency Control Organization

- Chief Incident Controller
- Site Incident Controller (SIC)
- Administration and Communication Coordinator
- Fire Safety Coordinator and Fire Team
- Support and Auxiliary Services for Major Installations
- Security Coordinator
- Maintenance of ERDMP Records
- Recorder
- Communications Services
- Roles and Responsibilities of Stakeholders including External Agencies
- The Police
- The Fire Services
- In a Chemical Emergency
- The Role of Civil Society and Private Sector
- The Health Department
- Pollution Control Boards
- The NDRF and SDRF
- Reporting of the Incident:
- Guidelines for Filling the Incident Report
- Action After Reporting of Incident by the Entity
- Termination of Emergency
- Termination
- The Termination of Emergency
- Emergency Recovery Procedures
- Manmade Disasters
- Man-Made Disasters are Mainly of Two Types
- Local Disasters
- Industrial and Technological Disasters
- Some of the Industrial and Technological Disasters which Happened in the Past
- Bhopal Gas Tragedy (BGT)
- Jaipur oil depot fire
- Security Threat Plan
- Emergency Action in Case of Bomb Threat

- Communication Flow Chart
- Flow of Information
- Siren Codes
- Emergency Control Centre (ECC)
- Assembly Points
- Assembly point - Near Admin Building
- Declaration of On-Site & Off-Site Emergencies
- Level 1: Minor Emergency Incidents
- Level 2: Major Emergency Incidents
- Level 3: Disaster Incidents
- Emergency Action Plan for Emergency during Off- Shift Hours (Including Holidays)
- Fire / Vapour Cloud Explosion / Emergency
- Course Recap
- Integrated Contingency Planning for Industrial Emergencies (ICP) (Documentations and Procedures)
- Storage Tank Details, Quantity & Storing Method
- Pump facilities
- Fire Fighting Facilities
- Life Saving Equipment
- Schedule of implementation of Code of Practice for ERDMP
- Consequences of Default or Non-Compliance
- Do's and Don'ts
- Introduction
- Specific Recommendations
- Fire & Explosion Index & Category
- Corrosives
- Propensity of a Certain Consequence of an Accident
- Probability Estimation for Occurrence of MCA Scenario
- Mitigation/Preventive Measures for MCA Scenarios
- Spillage in Tank Area
- Pool Fire in Dyke Area
- Tank on Fire
- Unconfined Vapor Cloud Explosion

- Incident Preventing Measures and Procedures
- Mutual Aid / Mock Drills
- ERDMP Response Measures/Infrastructure
- Fire Fighting & Safety Systems
- Classification of Fire
- Suitability of Fire Extinguishers
- Incident Reporting Format
- ERDMP - Recovery Measures
- Post Emergency Recovery
- Salvage of Product
- Taking Care of Affected Manpower
- Addressing Media and Outside Bodies
- Investigation
- Damage Assessment – Monetary and Physical
- Clean Up and Restoration
- 2040 Strategy
- 2040 Upstream Mission:
- 2040 Upstream Vision:
- 2040 Upstream Values:
- Excellence
- Caring for People
- Pride
- One Team
- Partnership
- Integrity
- Commitment to HSSE
- 2040 Domestic Upstream Strategic Objectives
- Strive for World-Class Operational Excellence
- Optimize Portfolio Management
- Achieve Sustainable Crude Oil Production Capacity
- Achieve Sustainable Non-Associated Gas Production
- Replace Reserves to Sustain Production
- Facilitate Technology & Capability Transfer



- Actively Manage Stakeholders to Satisfy Energy Demand Efficiently
- The Invasion & Destruction of Oil Wells and Facilities (Case Studies)
- Al Awda (The Return) Project (Case Study)
- Al Ta'meer (The Reconstruction) Project Case Study
- Wild Well Killers Team
- History
- Innovation and Technology
- Planning & Support Team: Key Responsibilities
- Planning & Coordination
- R&D Group Action Plan
- Set-Up and Implementation of Organization & Governance Model
- Provision of Delivery Enablers
- Execution of Other Studies
- Programmes Team: Key Responsibilities
- Design and Deliver The R&D/TM Roadmap
- Project Management Team: Key Responsibilities
- Implement KIPRC R&D Center
- Centre of Excellence: Key Responsibilities
- Knowledge Sharing/Functional Excellence
- Technical Advisory/Expertise
- Capability/Talent Development
- BLEVE
- Related Articles
- What is a BLEVE?
- How can a BLEVE be Prevented?
- Firefighter Safety in BLEVE-Possible Situations
- Oil and Gas Permit Conditions and Administration Guidelines
- Petroleum Act 1998
- Work Program Commitments
- Variation of Conditions
- Each Application for Variation will be Assessed on a Case by Case Basis with Consideration Given
- Suspension of the Permit Conditions and Extension o Permit Term
- Permit Cancellation



- Permit Surrender
- Annual and Final Reports
- A Report Must Contain Details
- Risk Management in the Oil and Gas Industry
- Common Factors in Major Accidents
- Major Accidents Share Some Common Factors
- Lack of Real Commitment to Safety by Leader
- Non-Existent or Not Followed Management of Change Procedures
- Inadequate Hazard Analysis and Design for Safety
- Flawed Communication and Reporting Systems
- Inadequate Learning from Prior Events
- Two Additional Common Factors in Accidents are Primarily Found Only in the Process (Chemical, Oil, and Gas) Industry
- Confusion Between Occupational and System Safety
- Belief that Process Accidents are Low Probability
- Safety as a Control Problem
- Figure 1: The Operational Safety Control Structure for the Macondo Well
- Figure 2: The General Form for a Control Loop in the Safety Control Structure
- Establishing Controls to Prevent Future Oil Spills
- Providing Appropriate Incentives to Change the Safety Culture
- Industry Standards
- Industry Self-Policing
- Safety Management Systems
- Integration of Safety Engineers into Operational Decision Making
- Certification and Training
- Learning from Events
- Hazard Analysis
- Maintenance
- Third Party Certification
- Management of Change
- Risk Management
- Importance
- Other Important Benefits of Risk Management
- Risk Management Strategies and Processes

- Establish Context
- Risk Identification
- Risk Analysis
- Risk Assessment and Evaluation
- Risk Mitigation
- Risk Monitoring
- Communicate and Consult
- Risk Management Strategies Should Also Attempt to Answer the Following Questions
- Risk Management Approaches
- Risk Avoidance
- Risk Reduction
- Risk Sharing
- Risk Retaining
- Limitations
- Other Limitations Include
- A False Sense of Stability
- The Illusion of Control
- Failure to See the Big Picture
- Risk Management is Immature
- Risk Management Standards
- The ISO Recommends the Following Target Areas, or Principles, should be Part of the Overall Risk Management Process
- Risk Management Examples
- Risk Analysis
- Enterprises and Other Organizations Use Risk Analysis
- Benefits of Risk Analysis
- Steps in Risk Analysis Process
- Conduct a Risk Assessment Survey
- Identify the Risks
- Analyze the Risks
- Develop a Risk Management Plan
- Implement the Risk Management Plan
- Monitor the Risks

- Qualitative Vs. Quantitative Risk Analysis
- TREMCARD
- Definition
- Transport Emergency Cards (TREM Cards)
- Safeopedia Explains Transport Emergency Card (TREM Card)
- Emergency Roles of Local Government and Other Role Players
- Local Government
- Oil and Gas Commission
- The Purpose of the Emergency Response Plan
- Site-Specific Risks
- Determining Hazard Planning Distances
- Pipeline Hazard Planning Distances
- Well Site Hazard Planning Distances
- Facility Hazard Planning Distances
- Emergency Response Resources
- Types of Equipment
- Deployment, Monitoring and Communication Procedures
- Share Information with Persons or Entities in the HPZ
- Spillage
- Responding to an Incident or Emergency
- Classifying and Reporting the Incident
- Incident Reporting Process
- Determining an Incident Level
- Classification: Selecting a Probability Level
- Classification: Selecting a Consequence Level
- For Kicks and Induced Seismicity
- Security Incidents and Consequence Levels
- Consequence Levels Explained
- Incident Classification Examples
- Reporting the Incident
- Evaluating the Emergency Response
- Appendix A: Emergency Response Exercises
- Developing a Successful Exercise

- Role of the Exercise Facilitator
- Table Top Exercise
- Functional Exercise
- Full Scale Exercises
- Joint / Coordinated Exercises
- Appendix B: Emergency Communications
- Emergency Communications has Two Parts
- Technical Systems
- Information Management
- The Description of Public Information Systems
- Communication Plans for Emergency Response Resources
- Communications Plans for the General Public
- Emergency Response Table