C5: Control Emergencies and Critical Situations

This unit is about controlling emergencies and critical situations.

C5.1 Maintain a State of Readiness

C5.2 Control Critical Situations

C5.3 Coordinate the Response to Emergencies

During this work you must take account of the relevant worksite operational requirements, procedures and safe working practices AS THEY APPLY TO YOU.

Unit Scope

Candidates must prove competence across the following items as appropriate to the workplace and Evidence Specification:

- individual operation
- team operation
- consideration of H₂S and other toxic substances
- maintaining communication
- reacting to on-site emergencies

In addition, the following terms in bold relate directly to those shown in bold in the Performance Statements.

- **Safe Systems of Work** must include processes or systems that incorporate Hazard Identification, Risk Assessment, Permit to Work and any other associated systems.

Unit-wide Knowledge

- How to use ‘Safe Systems of Work’ processes to identify hazards and mitigate or reduce risks to as low as reasonably practicable (ALARP)
- How to select, use and care for PPE (to include sight/hearing protection, coveralls, coveralls, gloves, footwear, hard hats, respirators)
- The implications of statutory (e.g. HASAWA and COSHH) and organisational requirements
- How to interpret operational requirements (e.g. Policies, procedures, instructions, codes of practice, standards, schedules)
- Emergency procedures for the installation
- Plant layout and its integration with other complex processes and systems
- The internals of equipment and their function and operation
- Methods and consequences of isolation and depressurisation
- Functioning of remote process control (to include instrumentation and logic)
- Normal operating parameters and their tolerances
- How to access and interpret drawings and manuals regarding the plant
- The composition and properties of produced fluids and gases (to include toxicity, flammability, specific gravity (SG), temperature)
- The reactions taking place and the effect of changes to the physical and chemical properties
- The effects of changes in ambient conditions on plant operation
• The principles and effect of Hydrocarbon hydrate formation, prevention and dispersion
• The operation of and potential implications of the ESD control systems
• The operation of and potential implications of the Fire and Gas control systems
• The effect and potential implications of loss of any system and its reinstatement
• Consequences of emissions to the environment

Element C5.1: Maintain a State Of Readiness

Performance Statements

In achieving this unit you must have:

1. effectively accessed current emergency procedures and reported all anomalies
2. identified all conditions which may affect the emergency response
3. effectively handed over all safety critical information
4. correctly taken part in drills and exercises
5. worked safely in accordance with operational requirements and associated Safe Systems of Work

Knowledge and Understanding

You must know and understand:

1. how to access and interpret the status of the appropriate equipment and systems (to include detection; protection; communications; evacuation)
2. how to access and interpret the status of operations and simultaneous operations
3. how to access and interpret information on weather conditions
4. how to access and interpret information on the availability of key emergency response personnel
Element C5.2: Control Critical Situations

Performance Statements

In achieving this unit you must have:

1. identified developing and existing critical situations
2. activated all relevant alarms and taken actions appropriate to the situation
3. effectively monitored the situation and minimised risks to personnel, process, plant and equipment
4. reported the critical situation correctly
5. worked safely in accordance with operational requirements and associated Safe Systems of Work

Knowledge and Understanding

You must know and understand:

1. the operation of and potential implications of the Emergency Shutdown control systems
2. the operation of and potential implications of the Fire and Gas control systems
Element C5.3: Coordinate the Response to Emergencies

Performance Statements

In achieving this unit you must have:

1. accurately identified and immediately taken the actions required to make the situation safe
2. activated all relevant alarms
3. effectively communicated all relevant information and instructions
4. clarified and acted upon information received
5. recorded critical information
6. worked safely in accordance with operational requirements and associated Safe Systems of Work

Knowledge and Understanding

You must know and understand:

1. how to react appropriately (to include make safe; isolate; shutdown; evacuate the work area; informing connecting installations and others; do nothing; activate internal emergency response teams; inform duty personnel; inform adjacent facilities; activate ESD; account for people)
2. those who must be contacted and how to contact them