



# **LEVEL 3 DIPLOMA IN DOWNSTREAM CONTROL ROOM OPERATIONS**

**Centre Qualification Handbook**

**Competence-based Qualifications**



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## **INTRODUCTION TO THE HANDBOOK**

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This qualification sits within the Regulated Qualifications Framework (RQF).

This Qualification Handbook has been developed to ensure that PAA\VQ-SET Centres understand the requirements of the qualification. The Handbook contains the following information:

- Qualification Structure
- Assessment Requirements
- Assessment Methods
- Glossary
- Qualification Units

This Qualification Handbook has been developed to provide support in the implementation of the qualification as well as giving information to ensure that the assessment and quality assurance is consistent, robust and reliable within each centre and nationally. The handbook also contains details of the skills and/or knowledge the learner must obtain to achieve the units and qualification.

### Qualification Structure

This section of the handbook summarises the content of the qualification and the skills and/or knowledge learners that achieve it can be expected to gain. It also outlines the units required to achieve the qualification and will give the learner an idea of how long the qualification will take to achieve through the Total Qualification Time (TQT) and how much contact time they can expect through the Guided Learning Hours (GLH). It also provides information about possible progression opportunities once the qualification has been achieved.

### Assessment Requirements

The assessment requirements for the qualification will cover any specific information about how the qualification may be assessed, such as whether assessors require specific qualifications or occupational competence and whether simulation is permitted in the achievement process.

### Assessment Methods

This section summarises the different assessment methods and types of evidence that support assessment; these may be used to demonstrate competence or the achievement of knowledge and understanding.

### Qualification Units

The unit overview summarises the content of the unit and the skills and/or knowledge the learner will have gained on achievement of the unit. The units may also contain additional information in the assessment context which will describe the areas to be covered and any appropriate assessment guidance and evidence requirements which will outline additional assessment requirements and should be built into assessment plans and included on assessment records. The unit detail will also confirm whether simulation is permitted for that particular unit.

### Qualification Assessment and Support Materials

Centres will be sent the following qualification assessment and support materials:

- Assessment Forms - it is not mandatory to use these forms. Centres may wish to use their own assessment documentation - these should be approved by the External Verifier prior to use.
- Learner Guide
- Qualification Handbook
- Registration Spreadsheet & Certification Claim Forms

## LEVEL 3 DIPLOMA IN DOWNSTREAM CONTROL ROOM OPERATIONS

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### Qualification Summary

This qualification has been designed to provide recognition of the skills and knowledge of individuals working in Downstream Control Room Operations.

### Total Qualification Time (TQT) and Guided Learning Hours (GLH)

#### Guided Learning Hours (GLH)

Guided Learning Hours are the time the learner is under the immediate supervision or guidance of a lecturer, supervisor, tutor or other appropriate provider or education or training.

The GLH for this qualification is 429

#### Total Qualification Time (TQT)

Total Qualification Time is comprised of 2 elements:

1. GLH plus
2. an estimate of the number of hours a learner will reasonably be likely to spend in preparation, study or any other form of participation in education or training, including assessment, which takes place as directed by (but not under the immediate supervision of) a lecturer, supervisor, tutor or other appropriate provider or education or training

The TQT for this qualification is 720

### Achieving the Qualification

#### **20 Units must be achieved**

Mandatory Units: All 16 Mandatory Units must be achieved.

Optional Units: Learners must achieve 4 units from two Option Groups. Knowledge and competence units must be taken in combination i.e. if unit DO(CR) 9k is chosen, unit DO(CR) 9c must also be completed; and vice-versa.

#### Mandatory Units

Unit No.	Unit Name	Credit Value
DO(CR) 1k	How to Contribute to the Safety of the Processing Environment within Downstream Control Room Operations Environments	5
DO(CR) 1c	Contribute to the Safety of the Processing Environment within Downstream Control Room Operations Environments	3
DO(CR) 2k	How to Respond to Incidents, Hazardous Conditions and Emergencies within Downstream Control Room Operations Environments	3
DO(CR) 2c	Respond to Incidents, Hazardous Conditions and Emergencies within Downstream Control Room Operations Environments	3
DO(CR) 3k	How to Work Effectively in a Team within Downstream Control Room Operations Environments	4
DO(CR) 3c	Work Effectively in a Team within Downstream Control Room Operations Environments	4
DO(CR) 4k	How to Start Up Equipment within Downstream Control Room Operations Environments	5

DO(CR) 4c	Start Up Equipment within Downstream Control Room Operations Environments	4
DO(CR) 5k	How to Monitor and Maintain Process and Equipment Conditions within Downstream Control Room Operations Environments	4
DO(CR) 5c	Monitor and Maintain Process and Equipment Conditions within Downstream Control Room Operations Environments	3
DO(CR) 6k	How to Handle Non-routine Information on Plant Condition within Downstream Control Room Operations Environments	5
DO(CR) 6c	Handle Non-routine Information on Plant Condition within Downstream Control Room Operations Environments	3
DO(CR) 7k	How to Shut Down Equipment within Downstream Control Room Operations Environments	5
DO(CR) 7c	Shut Down Equipment within Downstream Control Room Operations Environments	2
DO(CR) 8k	How to Prepare for Maintenance within Downstream Control Room Operations Environments	5
DO(CR) 8c	Prepare for Maintenance within Downstream Control Room Operations Environments	3

### **Optional Units**

Learners must achieve 4 units from two of the Option Groups - DO(CR) 9, DO(CR) 10 or DO(CR) 11.

Unit No.	Unit Name	Credit Value
DO(CR) 9k	How to Carry Out Advanced Control Room Operations within Downstream Control Room Operations Environments	4
DO(CR) 9c	Carry Out Advanced Control Room Operations within Downstream Control Room Operations Environments	3
DO(CR) 10k	How to Facilitate the Maintenance of Plant and Equipment within Downstream Control Room Operations Environments	2
DO(CR) 10c	Facilitate the Maintenance of Plant and Equipment within Downstream Control Room Operations Environments	2
DO(CR) 11k	How to Provide Instruction within Downstream Control Room Operations Environments	5
DO(CR) 11c	Provide Instruction within Downstream Control Room Operations Environments	3

### **Progression**

This Level 3 Diploma has been developed from the Downstream Operations National Occupational Standards (NOS).

Further information can be found on the PAA\VQ-SET website [www.paa-uk.org](http://www.paa-uk.org) or on the Register of Regulated Qualifications website <http://register.ofqual.gov.uk>

## ASSESSMENT REQUIREMENTS

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Assessors must ensure that, when assessing the skills, knowledge and/or understanding, the evidence produced by learners is:

- Valid - does evidence meet the requirements described in the unit?
- Authentic - has the learner produced the evidence?
- Current - has the evidence been produced recently and does it demonstrate current competence?
- Sufficient - is there enough evidence to demonstrate competence?

to enable reliable and consistent judgements to be made about the achievement of all the requirements of the unit(s) and qualification.

PAA\VQ-SET Centres must ensure that people involved in the assessment process have the appropriate expertise and are adequately informed and supported to fulfil their responsibilities.

### ASSESSMENT STRATEGY

Below is the information to support the assessment requirements of the qualification:

- Mandatory use of evidence from workplace performance
- Use of Simulation
- Occupational competence of assessors and verifiers

#### ***Mandatory use of evidence from workplace performance***

- a. Unless the use of simulation is expressly permitted within the qualification or unit specific evidence requirements, evidence must demonstrate the learner's competence in a real or realistic environment.
- b. Knowledge and Understanding will be assessed via (pre-set and/or free form) questions, or by inference from performance, which cover three primary types of knowledge:
  - Knowledge of facts and procedures
  - Understanding of principles, concepts and underpinning procedures
  - How to apply principles and procedures in specific contexts

All questions must be asked by the assessor at appropriate moments throughout the assessment process, preferably linked to observed activity and/or review of documentary evidence. The questions asked of, and answers provided by, the learner must be recorded.

#### ***Use of Simulation***

- c. The qualification or unit specific assessment requirements will define where evidence from simulation is acceptable, and in which contexts.

Simulation should be used only where direct evidence of learner performance cannot be obtained. Under these circumstances simulation may be used for summative assessment. Reasons for the use of simulation should be made clear to and agreed by the external verifier and should include the following details:

- which competence (and standards) the simulation was designed to assess;
- the kind of equipment, facilities and physical environment proposed for the simulation of performance. It is unlikely that the External Verifier will approve a simulation if it does not involve real plant and equipment;
- how the simulated activity relates to the learner's normal work context in terms of the pressures of time, access to resources and access to information, and the communication media; and

- how the simulation was set up and conducted, preferably supported by physical evidence such as photographs or inspection of a test rig.

Assessors, internal verifiers and external verifiers should monitor the proportion of evidence generated via simulations to ensure that it is not the primary source of a learner's claim to competence.

- d. Under these circumstances simulations are reserved for aspects of competence illustrated by the following contexts:
- where demonstration of emergency shutdown and related safety procedures would be; **dangerous and/or disruptive** to plant/environment/individuals; **too costly** such as total plant shutdown or dealing with spillage of dangerous substances; where **issues of confidentiality** restrict access to real work opportunities;
  - demonstrating specific aspects of the operation which rarely or never occur due to effective quality assurance systems;
  - the capacity to integrate disparate knowledge to cope with unforeseen events and to solve problems; or
  - aspects of working relationships and communications for which no opportunity has presented for the use of naturally occurring workplace evidence of learner performance.
- e. Simulation must enable the individual to demonstrate competence in a real or realistic work environment. In this context this means in specialist centres which replicate the workplace in terms of equipment and environment, reflect normal working situations and use relevant industrial or commercial standards and procedures. Short work placements or non-realistic work environments which do not replicate the pressures and requirements of normal commercial or industrial activities will not be acceptable. The bulk of the learner's evidence should be drawn from their normal working activity and not consist of artificially contrived opportunities for one-off demonstration of competence. Similarly equipment must be that used in current commercial and industrial contexts. Procedures and standards used should be those which are nationally or internationally recognised or devised by specific companies as standard operating procedure.
- f. Simulation must enable the individual to acquire his/her skills and knowledge in a realistic work environment. In this context this means in specialist centres which replicate the workplace in terms of equipment and environment, it reflects normal working situations and uses relevant industrial or commercial standards and procedures. Where possible providers should attempt to replicate the pressures and requirements of normal commercial or industrial activities. Equipment must be that used in current commercial and industrial contexts. Procedures and standards used should be those which are nationally or internationally recognised or devised by specific companies as standard operating procedure.
- g. Circumstances outside of those listed in Section D above may also be considered suitable for the use of simulation with the agreement of the External Verifier and PAA\Q-SET. Under these circumstances simulation may be used for formative assessment only.

### ***Occupational competence of Assessor and Verifiers***

- h. Assessors:
- must be competent in the units they are assessing. This is shown through the assessor having achieved the award they are assessing OR providing quality evidence to the external verifier that they are able to make valid judgements of the competence of learners. This could be done through a combination of a) personal interview, b) review of employment histories and/or c) examination of the assessor's judgement during assessments.
  - must have a working knowledge of awards and a full understanding of that part of the award for which they have responsibility.
  - should hold or be working towards suitable qualifications for assessment, as defined by PAA\Q-SET.

i. Internal verifiers:

- must be either working in the appropriate sector itself OR they must be able to demonstrate they possess practical and up-to-date knowledge of current working practices appropriate to the sector in which they are carrying out verification practices; and
- must be appointed by a PAA\VQ-SET recognised centre
- must have a working knowledge of the awards they are internally verifying
- should hold or be working towards suitable qualifications for verification, as defined by PAA\VQ-SET.

## ASSESSMENT METHODS AND TYPES OF EVIDENCE

The following section gives information on the different assessment methods/types of evidence that support assessment. The following assessment methods/types of evidence may be used to demonstrate competence or that the learner has achieved the required level of knowledge and understanding.

### *Observation of Performance*

Observation allows the assessor to see learners carrying out their work activities. It will take place primarily in the workplace but can also be undertaken in a training scheme. Natural discussion should take place where possible during observation, allowing the assessor to ask questions relating to what they are observing at the time. Assessors must capture their observations either by a written report and/or other methods (e.g. video, audio recording).

### *Questioning*

This method of assessment can be used to ensure that the learner has knowledge and understanding to support their skills. Questions can be used to check knowledge - these questions can either be verbal during or at the end of an observation, or they can be set in a written format in formal or informal conditions. As some units may focus entirely on learners' knowledge, assessors may encourage a variety of evidence to meet the requirements of the unit - use of verbal and/or written questions, learner statements and professional discussion (see below). Verbal questioning or professional discussion should be captured, either by written notes or audio recording.

### *Products*

Work product evidence may be generated as a result of work activities undertaken by learners, and could include reports, letters, or records of work carried out.

### *Witness Statement or Testimony*

A Witness Statement or Testimony is confirmation by others that the learner carried out an activity or series of activities relevant to the requirements of the unit. It could be written by the learner and signed by the witness to confirm that it did take place, or the witness may write the statement. Alternatively, the assessor could speak to the witness and record the discussion. The statement can then be used as evidence within an assessment.

There may be occasions when an Expert Witness may be required to contribute to the assessment process. PAA\VQ-SET's definition of an Expert Witness is 'an experienced employee who works in partnership with the assessor, by observing the learner carrying out their duties and recording their observations in line with the assessment procedures'. It should be noted that while the Expert Witness makes a valued contribution to the assessment process, it is the assessor who makes the assessment decision.

### *Simulation*

Simulations are a source of performance evidence showing how an activity is carried out. Simulations require careful planning to ensure that they reflect as near as possible "real life" conditions and the requirements of the qualification(s). As a result of this the costs to set up a simulation may be considerable. Simulations are likely to be used in the following situations:

- they occur infrequently (e.g. dealing with emergencies)
- they involve unusual working conditions (e.g. working in isolation, outside the workplace)
- the work is hazardous
- it is not cost effective

Any use of simulation should be discussed and agreed with the PAA\VQ-SET External Verifier and approved prior to implementation.

### ***Recognition of Prior Learning (RPL)***

This is the process whereby credit is given to experienced individuals for their previous achievements. It requires careful mapping of the individual's experience to the unit(s) to ensure that it meets the requirements. This exercise must be referred to the External Verifier to ensure that all the evidence presented is acceptable.

### ***Professional Discussion***

A Professional Discussion gives the learner the opportunity to tell their assessor what they are doing and why they are doing it in a particular way. The discussion should be supported by appropriate evidence - an observation report, work product or witness testimony. Professional Discussions should be planned to give the learner the chance to prepare, and should be recorded.

### ***Learner Statements***

A Learner Statement is an account of an activity that took place, described by the learner. A detailed statement could demonstrate skill, and also provides evidence of knowledge and understanding. Learner statements should be authenticated by an appropriate person.

### ***Photographs and use of other media***

Photographs and use of other media, e.g. video and audio, can provide detail of work activities carried out and questioning. Photographs are more effective when used with supporting statements. Video and audio evidence should be effectively referenced to allow specific activities or questioning to be found easily. It is important to note that if photographs and other media are to be used, the learner and assessor should ensure that permission is gained from all people who may be involved.

## GLOSSARY

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Term	Definition
<b>Access Arrangements</b>	Arrangements that are approved in advance of an examination or assessment to allow achievement to be demonstrated by learners with a disability, special learning needs (including where the learner's first language is not English, Welsh or Irish) or to avoid unlawful discrimination
<b>Appeal</b>	The process through which an awarding organisation may be challenged on the outcome of an enquiry about results or, where appropriate, other procedural decisions affecting a centre or an individual learner
<b>Assessment</b>	The process of making judgements about the extent to which a learner's work meets the requirements of a unit, or any additional assessment requirements of a qualification
<b>Assessor</b>	A person who assesses a learner's work
<b>Award of Qualifications</b>	A certificate (electronic or paper-based) issued to an individual that recognises their achievement
<b>Award</b>	A qualification with a TQT value between 10 and 129
<b>Awarding Organisation</b>	A body recognised by the qualifications regulators to award qualifications
<b>Centre</b>	An organisation accountable to an awarding organisation for assessment arrangements leading to the award of qualifications
<b>Centre Recognition</b>	A process through which a centre wishing to offer an award or awards is confirmed as being able to maintain the required quality and consistency of assessment, and comply with other requirements of the awarding organisation
<b>Certificate (1) for a Unit or Qualification</b>	A record of attainment of a qualification issued by an awarding organisation
<b>Certificate (2)</b>	A qualification with a TQT value between 130 and 369
<b>Credit</b>	An award that may be made to a learner in recognition of the achievement of a unit or qualification
<b>Credit Value</b>	The number of credits that may be awarded to a learner for the successful achievement of a unit or qualification
<b>Diploma</b>	A qualification with a TQT value of 370 or above
<b>Guided Learning Hours</b>	The number of hours of teacher-supervised or directed study time required to teach a qualification or unit of a qualification
<b>Learning Time</b>	The amount of time a learner at the level of the unit is expected to take, on average, to complete the unit to the standard required
<b>Level</b>	An indication of the relative demand, complexity and/or depth of achievement, and/or the autonomy of the learner in demonstrating that achievement

<b>Term</b>	<b>Definition</b>
<b>Mandatory Units</b>	Units that must be achieved for the qualification to be awarded
<b>National Occupational Standards (NOS)</b>	Describe what a person needs to do, know and understand in a job to carry out the role in a consistent and competent way
<b>Optional Unit</b>	A unit that a learner may choose to complete to achieve the required number of units for award of the qualification
<b>Pathway</b>	A route to the achievement of a qualification that requires particular units to be achieved and is identified by an endorsement to a qualification title
<b>Qualification</b>	An award made to a Learner for the achievement of the required units or other components for that qualification
<b>Qualification Level</b>	An indication of the relative demand, complexity and/or depth of achievement, and/or the autonomy of the learner, represented by a qualification
<b>Qualifications Regulators</b>	Government-designated statutory organisations required to establish national standards for qualifications and secure consistent compliance with them
<b>Recognition of Prior Learning (RPL)</b>	A method of assessment that considers whether a learner can demonstrate that they can meet the assessment requirements for a unit through knowledge, understanding or skills they already possess and do not need to develop through a course of learning
<b>Sector Skills Council</b>	A body responsible for formulating and reviewing occupational standards for a specific sector across the UK, and for supporting the development of units and qualifications based on these standards. Each SSC is an employer-led, independent organisation and is licensed by government
<b>Standardisation Of Assessment</b>	A process to ensure that assessment leading to the award of qualifications is applied consistently by individuals, centres and awarding organisations
<b>Unique Learner Number (ULN)</b>	The unique number that is used to identify an individual learner
<b>Unit</b>	A component of a qualification

## LEVEL 3 DIPLOMA IN DOWNSTREAM CONTROL ROOM OPERATIONS

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### CONTENT OF THE QUALIFICATION

#### MANDATORY UNITS

UNIT DO (CR) 1K	HOW TO CONTRIBUTE TO THE SAFETY OF THE PROCESSING ENVIRONMENT WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS
LEVEL	3
CREDIT VALUE	5
GUIDED LEARNING HOURS	44

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#### Unit Overview

This unit addresses the knowledge required to contribute to the safety of the processing environment within downstream control room operations environments.

#### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet all the required knowledge and understanding within this unit. This could be provided through different types of evidence and assessment methods, for example learner statements, questioning and professional discussion which should be recorded for verification.

- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

#### Information on use of Assessment Context

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

PPE to include:

- Sight/hearing protection
- Gloves
- Footwear
- Hard hats
- Respirators

Safety Equipment could include:

- Approved site PPE
- Safety showers
- Eye baths
- Gas detection equipment
- Fire fighting equipment

## Learning Outcome and Assessment Criteria

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to identify hazards	1.1. Identify the potential hazards associated with the particular working area and with work procedures 1.2. Identify the types of activity occurring, and possible hazards, in areas adjacent to plant
2. Know how to take action when a hazard has been identified	2.1. Explain: <ul style="list-style-type: none"> <li>• How to rectify the hazard</li> <li>• The reporting lines when a hazard has been identified</li> <li>• When the work should be discontinued</li> <li>• How to make those affected aware of the problem, including contractors, company personnel and visitors</li> <li>• The appropriate responses to fire and gas alarms on adjacent plant</li> </ul> 2.2. Explain the procedures for obtaining medical assistance 2.3. Identify the safety roles of immediate supervisors, colleagues and safety representatives
3. Know how to use and care for safety equipment and related tools	3.1. Describe how to identify and report defects in safety equipment and approved tools 3.2. Explain how to ensure that safety equipment and approved tools are fit for purpose and why they should be used 3.3. Identify when additional resources are needed and how to access and use them
4. Know how the immediate work environment can impact on safety	4.1. Identify how and why it is necessary to keep the working area clean and tidy to a satisfactory standard 4.2. Explain the plant layout in the working area and the position of other relevant areas outside the plant 4.3. Identify the location and position of emergency exits, muster points and emergency equipment 4.4. Explain the procedures for allowing people in the work area
5. Know how to discharge substances safely	5.1. Identify the appropriate personnel to consult and advise regarding discharges and emissions 5.2. Identify the appropriate method of disposal for relevant waste classifications 5.3. Identify the required limits for discharges and emissions into the environment 5.4. Explain the need for discharge and emission limits and the implications of exceeding them 5.5. Describe the classification of waste products
6. Know how to protect the environment	6.1. Explain how the overall environmental system operates, including their responsibilities 6.2. Identify the operating procedures which have the most potential for environmental impact

	6.3. Explain how noise levels can be minimised
7. Know how to follow organisational, operational and regulatory procedures	7.1. Describe how to use approved manual handling methods 7.2. Explain how to select, use and care for PPE 7.3. Describe the implications of statutory (e.g. HASAWA and COSHH) and organisational requirements 7.4. Describe the implications of statutory (e.g. HASAWA and COSHH) and organisational requirements

<b>UNIT DO (CR) 1C</b>	<b>CONTRIBUTE TO THE SAFETY OF THE PROCESSING ENVIRONMENT WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	3
CREDIT VALUE	3
GUIDED LEARNING HOURS	4

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### **Unit Overview**

This unit addresses the skills required to contribute to the safety of the processing environment within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

#### **Evidence Requirements**

The learner should for two different situations:

- Demonstrate the ability to detect and deal with a safety hazard using relevant safety equipment, if required
- Demonstrate how to ensure substances are discharged according to the appropriate limits including restrictions on noise levels

#### **Assessment Guidance**

- The use of simulation is acceptable in the assessment of this unit.
- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- This unit should not be taken prior to taking “Unit DO (CR) 1k - How to Contribute to the Safety of the Processing Environment within Downstream Control Room Operations Environments.”
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

Safety Equipment could include:

- Gas / fire detection equipment
- Fire fighting equipment

## Learning Outcome and Assessment Criteria

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Be able to identify and deal with safety hazards	1.1. Identify the safety hazards 1.2. Take appropriate action on the identification of safety hazards
2. Be able to use and care for safety and emergency equipment	2.1. Ensure that safety and emergency equipment are fit for purpose 2.2. Use all relevant safety and emergency equipment correctly 2.3. Return safety and emergency equipment to designated areas after use and report any defects 2.4. Access and use additional resources as appropriate
3. Be able to keep all working areas clear and tidy at all times	3.1. Ensure that access to and egress from working area is maintained at all times 3.2. Keep all escape routes and access to emergency and safety equipment clear 3.3. Keep the working area clean and tidy in accordance with requirements
4. Be able to discharge substances safely and so that the environment is protected	4.1. Advise and consult with appropriate personnel prior to any discharge or emission 4.2. Ensure that: <ul style="list-style-type: none"> <li>• The amount of gas and liquid discharged is within required limits</li> <li>• The amount of pollutant discharged into dedicated drainage systems is within required limits</li> <li>• The level of atmospheric emissions is within required limits</li> </ul> 4.3. Ensure that noise levels are minimised by taking appropriate action
5. Be able to follow organisational procedures	5.1. Work safely in accordance with operational requirements 5.2. Use specified PPE correctly in designated areas, as appropriate 5.3. Ensure that only authorised people are allowed access to the work area 5.4. Use safe manual handling methods

<b>UNIT DO (CR) 2K</b>	<b>HOW TO RESPOND TO INCIDENTS, HAZARDOUS CONDITIONS AND EMERGENCIES WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	2
CREDIT VALUE	3
GUIDED LEARNING HOURS	28

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### **Unit Overview**

This unit addresses the knowledge required to respond to incidents, hazardous conditions and emergencies within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

The learner should provide evidence to meet all the required knowledge and understanding within this unit. This could be provided through different types of evidence and assessment methods, for example learner statements, questioning and professional discussion which should be recorded for verification.

- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Reporting lines and procedures to include:

- Fire
- Flood
- Toxic vapour and/or liquid release
- Uncontrolled release of product
- Explosions
- Injured personnel
- Major plant or service failure

Operational requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

## Learning Outcome and Assessment Criteria

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know the potential incidents that could occur and which of these should be reported	1.1. Identify the potential incidents within their area of responsibility and the actions to be taken 1.2. Identify the types of incidents which should be reported
2. Know how to respond appropriately when an incident has been identified	2.1. Explain the procedure for responding at an early stage of an incident 2.2. Describe how the alarm should be raised for each type of incident 2.3. Explain the need for and use of emergency equipment 2.4. Explain the appropriate first response to casualties
3. Know how to communicate information effectively	3.1. Explain how to communicate effectively, including: <ul style="list-style-type: none"> <li>• Verbal</li> <li>• Written</li> </ul> 3.2. Identify: <ul style="list-style-type: none"> <li>• What information needs to be communicated</li> <li>• Who to communicate information to</li> </ul>
4. Know how an incident will impact on organisational resources	4.1. Explain the effect of the emergency on: <ul style="list-style-type: none"> <li>• Plant</li> <li>• Equipment</li> <li>• Personnel</li> </ul>
5. Know how to follow organisational procedures	5.1. Describe the implications of statutory (e.g. HASAWA, COMAH and COSHH) and organisational and operational requirements 5.2. Explain how to access, interpret and implement site emergency plans; environmental procedures; plant emergency procedures 5.3. Explain the emergency procedures for plant and site 5.4. Identify their own responsibilities during emergencies

<b>UNIT DO (CR) 2C</b>	<b>RESPOND TO INCIDENTS, HAZARDOUS CONDITIONS AND EMERGENCIES WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	2
CREDIT VALUE	3
GUIDED LEARNING HOURS	4

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### Unit Overview

This unit addresses the skills required to respond to incidents, hazardous conditions and emergencies within downstream control room operations environments.

### Assessment Guidance and Evidence Requirements

#### **Evidence Requirements**

The learner should for an incident, a hazardous condition and an emergency:

- Demonstrate the appropriate way to raise the alarm, collate the required information and communicate the situation to supervision, area field operations and other relevant parties
- Demonstrate the actions required for the situations stated including ensuring the safety of the area personnel and the safe condition of the plant
- Demonstrate the ability to evaluate the situation and modify the plant conditions as required to minimise the impact

#### **Assessment Guidance**

- The use of simulation is acceptable in the assessment of this unit.
- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- This unit should not be taken prior to taking “Unit DO (CR) 2k - How to Respond to Incidents, Hazardous Conditions and Emergencies within Downstream Control Room Operations Environments.”
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### Information on use of Assessment Context

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Reporting lines and procedures to include:

- Fire
- Flood
- Toxic vapour and/or liquid release
- Uncontrolled release of product
- Explosions
- Injured personnel
- Major plant or service failure

Operational requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

## Learning Outcome and Assessment Criteria

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Be able to respond appropriately when an incident has been identified	1.1. Identify the nature, location and scope of incident 1.2. Raise the appropriate alarms 1.3. Act promptly and in association with others
2. Be able to communicate information in a timely and appropriate way	2.1. Report the incident to the appropriate people in accordance with plant reporting procedures 2.2. Provide accurate and unambiguous information to the appropriate people 2.3. Complete all relevant documentation
3. Be able to respond appropriately during an incident	3.1. Inform appropriate people as actions are taken 3.2. Modify actions appropriately in response to changing conditions
4. Be able to minimise the impact of an incident	4.1. Minimise the incident, hazard or emergency 4.2. Minimise waste and loss
5. Be able to follow organisational, operational and statutory procedures	5.1. Work safely in accordance with operational requirements 5.2. Follow appropriate procedures after the situation has been assessed 5.3. Take the correct actions, in accordance with procedures, to make the process safe 5.4. Take the correct actions, in accordance with procedures, to deal with the incident

UNIT DO (CR) 3K	HOW TO WORK EFFECTIVELY IN A TEAM WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS
LEVEL	2
CREDIT VALUE	4
GUIDED LEARNING HOURS	34

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### **Unit Overview**

This unit addresses the knowledge required to work effectively in a team within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

The learner should provide evidence to meet all the required knowledge and understanding within this unit. This could be provided through different types of evidence and assessment methods, for example learner statements, questioning and professional discussion which should be recorded for verification.

- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

## Learning Outcome and Assessment Criteria

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to carry out checks prior to undertaking an activity	1.1. Identify how to check that all parties, including self, understand what is required of them and what their responsibilities are 1.2. Explain why it is important that personnel know what is required of them 1.3. Identify the methods of monitoring the activity 1.4. Explain the method of work activity planned
2. Know how to minimise disruptions	2.1. Explain the importance of keeping to agreed time schedules
3. Know how to use and monitor the effectiveness of communication methods at all times	3.1. Describe how to check whether others need to be informed 3.2. Identify the methods of communication within the organisation and when and how to use them 3.3. Explain how to keep all relevant personnel informed of the progress of the activity
4. Know how to deal with problems	4.1. Describe what typical problems may arise that are their responsibility and how to deal with them 4.2. Identify who to inform if the problem cannot be solved and/or responsibility and/or authority is exceeded 4.3. Explain why it is important to deal with problems effectively 4.4. Explain what actions could be taken when disagreement occurs
5. Know how to assist others	5.1. Describe how to identify when assistance may be required 5.2. Explain how to give assistance within the limit of their authority
6. Know how to liaise with, and support, others	6.1. Explain why it is important to give constructive feedback and support in the operation 6.2. Explain how to give, and take, constructive feedback and support within the organisation
7. Know how to follow organisational, operational and regulatory procedures	7.1. Explain personal responsibilities with regard to health, safety, environment and activities 7.2. Describe the meaning of responsibility and authority in the organisation 7.3. Explain how to check the level of authority and limit of responsibility required to undertake works 7.4. Identify what documentation to use and what information needs to be recorded 7.5. Explain the importance of completing documentation/records accurately and clearly 7.6. Describe the implications of statutory (e.g. HASAWA, COMAH and COSHH) and organisational and operational requirements and explain how to comply with them 7.7. Explain the emergency procedures for plant and site

<b>UNIT DO (CR) 3C</b>	<b>WORK EFFECTIVELY IN A TEAM WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	2
CREDIT VALUE	4
GUIDED LEARNING HOURS	4

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### **Unit Overview**

This unit addresses the skills required to work effectively in a team within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

#### **Evidence Requirements**

The learner should for two different situations:

- Demonstrate how to clarify with supervision the required outcome of the activity; ensure all team members are fully briefed prior to undertaking the activity in order to minimise the impact on process and others
- Demonstrate how and when to deal with problems effectively and to liaise with or offer assistance to others in order to complete the task
- Demonstrate how to provide constructive feedback and how to assimilate feedback from others

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- This unit should not be taken prior to taking “Unit DO (CR) 3k - How to Work Effectively in a Team within Downstream Control Room Operations Environments.”
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

## Learning Outcome and Assessment Criteria

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Be able to carry out checks prior to undertaking an activity	1.1. Ensure that all personnel, including self, know, understand and agree responsibilities when undertaking an activity 1.2. Check that the work activity is understood 1.3. Check that the required authority to complete the required activity is obtained
2. Be able to minimise disruptions	2.1. Work within agreed time schedules 2.2. Ensure that the activity proceeds as planned
3. Be able to use and monitor the effectiveness of communication methods at all times	3.1. Check the need to inform others who may be affected by an activity 3.2. Use appropriate methods of communication to keep personnel informed 3.3. Check that all personnel have received the necessary information 3.4. Keep other relevant personnel informed of the progress of the activity
4. Be able to deal with problems	4.1. Deal promptly and effectively with any problems in the activity that are their responsibility 4.2. Inform the appropriate person of any problems that cannot be solved and/or are not their responsibility 4.3. Take appropriate action when disagreement occurs
5. Be able to assist others	5.1. Identify when assistance is required 5.2. Give assistance when required if it is within the limit of their authority
6. Be able to liaise with, and support, others	6.1. Give constructive support and feedback to appropriate personnel 6.2. Receive support and feedback from personnel
7. Be able to follow organisational and operational procedures	7.1. Follow safe working procedures at all times with regard to material, equipment and personal safety 7.2. Complete any required documentation clearly and accurately

<b>UNIT DO (CR) 4k</b>	<b>HOW TO START UP EQUIPMENT WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	3
CREDIT VALUE	5
GUIDED LEARNING HOURS	48

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### **Unit Overview**

This unit addresses the knowledge required to start up equipment within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

The learner should provide evidence to meet all the required knowledge and understanding within this unit. This could be provided through different types of evidence and assessment methods, for example learner statements, questioning and professional discussion which should be recorded for verification.

- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Checks and tests could include:

- Visual inspection
- Equipment integrity tests
- Line-up

Communication could include:

- Face to face
- Telephone
- Radio
- Written

Operational requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

Plant and equipment to include:

- Rotating
- Non-rotating and storage
- Heat transfer
- Control
- Start-up procedures

## Learning Outcome and Assessment Criteria

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to prepare to start up equipment	1.1. Explain the start-up and operating procedures for the equipment, including how to override the start-up process 1.2. Describe the function of the equipment to be started in the operation of the plant and process 1.3. Explain the reasons for the defined sequence in the start-up and the consequences of not following it 1.4. Describe why it is important to be familiar with the plant layout and operation manuals
2. Know the range of factors to take into account when starting up equipment	2.1. Explain the line-up and control systems as on process and instrumentation diagrams 2.2. Identify the properties of the material contained in the equipment 2.3. Explain the trip systems and logic sequences 2.4. Identify the possible process excursions and acceptable tolerances 2.5. Explain the parameters to be measured, checked and the acceptable tolerances (e.g. equipment integrity tests; line-up)
3. Know the importance of the operating conditions when starting up equipment	3.1. Identify the normal range of operating conditions and acceptable conditions 3.2. Explain the reasons for achieving conditions for each stage within a given timescale 3.3. Explain the consequences of correct conditions not being achieved 3.4. Explain the reasons for operating equipment to specified conditions
4. Know how to communicate effectively in a range of conditions	4.1. Explain the appropriate selection and effective use of communication links between operators and relevant others 4.2. Identify the nature and extent of information to be communicated (e.g. status of start-up equipment; status of interconnected plant and equipment) 4.3. Explain the importance of clarity and accuracy when communicating information
5. Know how to document and record information	5.1. Describe how to access relevant documentation (e.g. permits; standard operating procedures) 5.2. Identify the location of equipment records and methods of recording 5.3. Explain the reasons for recording the equipment conditions

<p>6. Know how to deal with abnormal conditions and hazards</p>	<p>6.1. Describe how to identify abnormal conditions (to include those associated with mechanical, electrical and instrument integrity)</p> <p>6.2. Explain the potential hazards and the actions to be taken:</p> <ul style="list-style-type: none"> <li>• During start-up</li> <li>• During checks and tests</li> </ul> <p>6.3. Describe the actions to be taken when a hazard has been identified and consequences of delayed response to hazards</p> <p>6.4. Identify the availability of standby equipment</p>
<p>7. Know how to follow organisational and operational procedures</p>	<p>7.1. Explain how to select, use and care for PPE</p> <p>7.2. Describe the implications of statutory (e.g. HASAWA and COSHH) and organisational and operational requirements</p> <p>7.3. Describe the emergency procedures</p> <p>7.4. Describe the alarm systems and the appropriate responses to alarm conditions</p> <p>7.5. Explain how to identify the need for appropriate assistance and where to find it</p>

<b>UNIT DO (CR) 4C</b>	<b>START UP EQUIPMENT WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	3
CREDIT VALUE	4
GUIDED LEARNING HOURS	5

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### Unit Overview

This unit addresses the skills required to start up equipment within downstream control room operations environments.

### Assessment Guidance and Evidence Requirements

#### **Evidence Requirements**

The learner should for two different pieces of equipment and for two separate occasions (one from cold start, one from hot start):

- Demonstrate how to obtain permission to start the equipment and liaise with the field operators to identify any relevant emergency isolation valves and re-set systems ensuring all systems match the required line up and drawings
- Demonstrate the appropriate start-up checks based on cold start or hot start to achieve normal operating conditions including communications requirements with the field operator during and after start-up
- Demonstrate the ability to detect any abnormal condition and how to correct it or return the equipment to a safe state

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- This unit should not be taken prior to taking “Unit DO (CR) 4k - How to Start up Equipment within Downstream Control Room Operations Environments.”
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### Information on use of Assessment Context

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Checks and tests could include:

- Visual inspection
- Equipment integrity tests
- Line-up

Communication could include:

- Face to face
- Telephone
- Radio
- Written

Operational requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

Plant and equipment to include:

- Rotating
- Non-rotating and storage
- Heat transfer
- Control
- Start-up procedures

### Learning Outcome and Assessment Criteria

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Be able to prepare to start up equipment	1.1. Obtain relevant authorisation for start-up to proceed 1.2. Correctly identify equipment and check status 1.3. Identify the locations of emergency isolation valves and their reset mechanisms 1.4. Inform appropriate personnel that start-up is imminent 1.5. Line up the equipment correctly
2. Be able to deal with discrepancies in the paperwork	2.1. Identify any discrepancies between the plant drawings and the procedures 2.2. Report any discrepancies to the appropriate personnel
3. Be able to start up equipment	3.1. Start-up equipment in accordance with specified procedures 3.2. Achieve normal operating conditions within required timescale 3.3. Achieve operational conditions at each stage before proceeding to the next
4. Be able to communicate information during start up	4.1. Inform relevant personnel when start-up is complete 4.2. Complete all relevant documentation
5. Be able to correct abnormal start up conditions	5.1. Identify abnormal conditions 5.2. Identify the impact of the abnormality on other areas and inform relevant personnel 5.3. Take prompt and appropriate action to correct the abnormality
6. Be able to follow organisational and operational procedures	6.1. Follow operational procedures for checks and tests 6.2. Work safely in accordance with operational requirements

<b>UNIT DO (CR) 5k</b>	<b>HOW TO MONITOR AND MAINTAIN PROCESS AND EQUIPMENT CONDITIONS WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	3
CREDIT VALUE	4
GUIDED LEARNING HOURS	38

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### Unit Overview

This unit addresses the knowledge required to monitor and maintain process and equipment conditions within downstream control room operations environments.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet all the required knowledge and understanding within this unit. This could be provided through different types of evidence and assessment methods, for example learner statements, questioning and professional discussion which should be recorded for verification.

- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### Information on use of Assessment Context

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Responsibilities for work area to include:

- Plant steady
- Plant unsteady
- Start-up
- Shut-down
- On-grade product
- Off-grade product

Information to record and pass on may include:

- Log books
- Readings sheets
- Measurements outside acceptable tolerances
- Adjustments made

Documentation could include:

- Handover logs
- Permits
- Other specified recording documentation

Statutory and Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

## Learning Outcome and Assessment Criteria

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know the role and purpose of consumables when monitoring and maintaining equipment	1.1. Describe the specified consumables used in the control room
2. Know how to access, use and interpret documentation and logs	2.1. Explain how to access and use relevant documentation 2.2. Explain the relevance of each log item to the operation of the plant 2.3. Identify how the handover log relates to the plant equipment and process
3. Know how to record and pass on information	3.1. Identify the relevant information to record and its potential impact (e.g. abnormal consumption) 3.2. Identify the relevant information to record and pass on to others as appropriate
4. Know how to monitor and maintain process and equipment	4.1. Explain the principles and practice of process control 4.2. Explain the principles and practice of equipment inspection in working areas 4.3. Identify the parameters to be measured and where those measurements should be taken 4.4. Explain the reasons for taking particular readings and measurements and their significance 4.5. Describe the appropriate timescale for making adjustments 4.6. Describe the action required on off-specification material 4.7. Identify the limits of adjustments to process and utilities
5. Know how to work safely when monitoring and maintaining equipment	5.1. Describe how to keep the equipment and process within given tolerances 5.2. Explain the effects of exceeding tolerance levels 5.3. Explain the potential impact of process deviations on other areas, for example, the interconnected items of equipment that support the process 5.4. Explain the potential hazards during normal operation and the actions to be taken
6. Know how to work within organisational and operational procedures	6.1. Describe their responsibilities in relation to their work area 6.2. Explain the implications of statutory (e.g. HASAWA , COMAH and COSHH) and organisational requirements and explain how to comply with them

<b>UNIT DO (CR) 5c</b>	<b>MONITOR AND MAINTAIN PROCESS AND EQUIPMENT CONDITIONS WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	3
CREDIT VALUE	3
GUIDED LEARNING HOURS	4

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### Unit Overview

This unit addresses the skills required to monitor and maintain process and equipment conditions within downstream control room operations environments.

### Assessment Guidance and Evidence Requirements

#### **Evidence Requirements**

The learner should for a minimum of two different occasions:

- Demonstrate a clear, accurate verbal and written handover of the status of the process area and receipt of a handover ensuring full understanding of the situation
- Demonstrate the ability to conduct a review of the panel control systems, correcting, recording and communicating any abnormalities and adjustments made. This may also include completing routine tasks such as taking equipment readings and stock taking of consumables

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- This unit should not be taken prior to taking “Unit DO (CR) 5k - How to Monitor and Maintain Process and Equipment Conditions within Downstream Control Room Operations Environments.”
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### Information on use of Assessment Context

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Responsibilities for work area to include:

- Plant steady
- Plant unsteady
- Start-up
- Shut-down
- On-grade product
- Off-grade product

Information to record and pass on may include:

- Log books
- Readings sheets
- Measurements outside acceptable tolerances
- Adjustments made

Documentation could include:

- Handover logs
- Permits
- Other specified recording documentation

Statutory and Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

### Learning Outcome and Assessment Criteria

<b>Learning outcomes</b>	<b>Assessment criteria</b>
<b>The learner will:</b>	<b>The learner can:</b>
1. Be able to carry out the handover of responsibilities	1.1. Carry out the handover with appropriate people at the designated time and location 1.2. Ensure that the information exchanged provides a full, clear and accurate description of the current status of the work area 1.3. Clarify and confirm any information that is unclear or conflicting BEFORE acceptance
2. Be able to maintain the levels of consumables	2.1. Maintain the level and concentration of consumables 2.2. Perform stock checks of consumables in accordance with requirements 2.3. Use and store consumables correctly
3. Be able to maintain process conditions within work area	3.1. Complete all routine checks at the earliest opportunity 3.2. Maintain the specified conditions within given tolerances for each piece of equipment 3.3. Carry out all relevant adjustments and inform the relevant people as appropriate 3.4. Ensure, through timely and appropriate adjustments, that the process is operating within the given tolerances 3.5. Leave equipment safe and clean on conclusion of operation 3.6. Identify the implications of changing plant conditions on further work
4. Be able to follow organisational and operational procedures	4.1. Work safely in accordance with operational requirements 4.2. Use the appropriate operating procedures for designated checks and adjustments correctly 4.3. Complete all relevant documentation 4.4. Acknowledge and respond to alarms properly

<b>UNIT DO (CR) 6K</b>	<b>HOW TO HANDLE NON-ROUTINE INFORMATION ON PLANT CONDITION WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	3
CREDIT VALUE	5
GUIDED LEARNING HOURS	46

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### **Unit Overview**

This unit addresses the knowledge required to handle non-routine information on the condition of plant within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

The learner should provide evidence to meet all the required knowledge and understanding within this unit. This could be provided through different types of evidence and assessment methods, for example learner statements, questioning and professional discussion which should be recorded for verification.

- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Information could be accessed from:

- Process and instrumentation diagrams
- Plant and equipment operating procedures
- Plant operating manuals

Sources of information could include:

- Appropriate people
- Readings
- Surveys
- Records
- Reports
- Field observation

Statutory and Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

## Learning Outcome and Assessment Criteria

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to access and use information	1.1. Explain how to access a range of information from different sources 1.2. Explain how to identify, gather and understand information which is relevant to the problem 1.3. Explain how to access, interpret and contribute to equipment records
2. Know how to check the condition of the plant	2.1. Identify the operating principles of relevant equipment, to include: <ul style="list-style-type: none"> <li>• Rotating</li> <li>• Non-rotating and storage</li> <li>• Heat transfer</li> <li>• Control</li> </ul> 2.2. Describe how to perform the relevant checks, to include: <ul style="list-style-type: none"> <li>• Visual inspection</li> <li>• Equipment integrity test</li> </ul> 2.3. Explain the need for, and possible outcome of, surveys
3. Know how to take non-routine panel readings and diagnose faults affecting plant conditions	3.1. Explain the operating principles, conditions and parameters of the relevant plant 3.2. Identify the possible causes to be investigated and the order of priority 3.3. Identify the most likely cause of the problem and the appropriate actions to implement 3.4. Explain how to implement a systematic and effective analysis 3.5. Identify what actions to take on identification of abnormal results 3.6. Explain the consequences should the fault not be rectified
4. Know how to communicate effectively and the consequences of poor communication	4.1. Explain the importance of communication 4.2. Describe the consequences of poor and inaccurate communication 4.3. Identify when and how communication links should be used between field operators and others 4.4. Explain the consequences of not producing written and verbal reports within the required timescale 4.5. Explain how to use log books and data sheets effectively
5. Know how to follow organisational procedures	5.1. Explain the implications of statutory (e.g. HASAWA, COMAH and COSHH) and organisational requirements and explain how to comply with them

<b>UNIT DO (CR) 6C</b>	<b>HANDLE NON-ROUTINE INFORMATION ON PLANT CONDITION WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	3
CREDIT VALUE	3
GUIDED LEARNING HOURS	4

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### **Unit Overview**

This unit addresses the skills required to handle non-routine information on the condition of plant within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

#### **Evidence Requirements**

The learner should for two different situations:

- Demonstrate how to record and communicate non-routine information on plant conditions
- Demonstrate how to interpret non-routine information affecting plant conditions and provide solutions

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- This unit should not be taken prior to taking “Unit DO (CR) 6k - How to Handle Non-routine Information on Plant Condition within Downstream Control Room Operations Environments.”
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Information could be accessed from:

- Process and instrumentation diagrams
- Plant and equipment operating procedures
- Plant operating manuals

Sources of information could include:

- Appropriate people
- Readings
- Surveys
- Records
- Reports

Statutory and Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

## Learning Outcome and Assessment Criteria

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Be able to record and document relevant information	1.1. Record the actions required to solve the problem 1.2. Prepare accurate and clear records and documentation after taking readings within an appropriate timescale
2. Be able to process information relating to plant conditions	2.1. Gather all relevant information from the appropriate sources 2.2. Provide prompt, accurate and clear information on plant status to the appropriate people 2.3. Interpret the available information and provide relevant solutions to the problem
3. Be able to perform checks and analyse problems	3.1. Perform all relevant checks 3.2. Take the appropriate panel readings correctly 3.3. Analyse the problem in a systematic and effective manner 3.4. Establish the actions required to solve the problem 3.5. Fit any additional monitoring equipment correctly
4. Be able to communicate information effectively to the relevant people in a timely manner	4.1. Inform all relevant people: <ul style="list-style-type: none"><li>• That the panel readings are being taken and of any possible impact on them</li><li>• Of the problem, its solution and any possible impact on them</li></ul> 4.2. Provide prompt, accurate and clear information on plant status to the appropriate people 4.3. Pass records to the appropriate people where no further personal action is required
5. Be able to follow organisational and operational procedures	5.1. Work safely in accordance with operational requirements

<b>UNIT DO (CR) 7k</b>	<b>HOW TO SHUT DOWN EQUIPMENT WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	3
CREDIT VALUE	5
GUIDED LEARNING HOURS	42

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### **Unit Overview**

This unit addresses the knowledge required to shutdown equipment within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

The learner should provide evidence to meet all the required knowledge and understanding within this unit. This could be provided through different types of evidence and assessment methods, for example learner statements, questioning and professional discussion which should be recorded for verification.

- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Documentation could include:

- Permits
- Operating procedures

Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

## Learning Outcome and Assessment Criteria

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to prepare to shutdown equipment	1.1. Identify the potential problems and appropriate action to be taken in preparing for shutdown 1.2. Explain the situations when shutdown should not proceed
2. Know how to access and interpret relevant documentation	2.1. Explain how to access relevant documentation 2.2. Identify the plant operating manuals that are relevant 2.3. Explain the plant layout and plant operating manuals
3. Know how the process being undertaken affects the shutdown of equipment	3.1. Explain the function and operating principles of the equipment to be started in the operation of the plant and process, to include: <ul style="list-style-type: none"> <li>• Rotating</li> <li>• Non-rotating and storage</li> <li>• Heat transfer</li> <li>• Control</li> </ul> 3.2. Explain the properties of the material contained in the equipment
4. Know how to shutdown equipment safely and in a timely manner	4.1. Identify the operating conditions and parameters 4.2. Describe the equipment shutdown procedures 4.3. Explain the importance of time taken to shutdown and isolate item of equipment to specified state 4.4. Explain how to shutdown equipment in the correct sequence and the problems that arise if this is not achieved 4.5. Explain the trip systems and logic sequence 4.6. Identify the potential problems and appropriate action to be taken if item of equipment is not shutdown correctly 4.7. Explain the consequences if item of equipment is not isolated correctly
5. Know the effects of shutting down equipment	5.1. Explain the effect on the remainder of the plant where the item of equipment is taken out of service 5.2. Explain the effect on plant in adjacent areas
6. Know how to follow organisational and regulatory procedures	6.1. Describe the implications of statutory (e.g. HASAWA , COMAH and COSHH) and organisational requirements, and explain how to comply with them

<b>UNIT DO (CR) 7c</b>	<b>SHUT DOWN EQUIPMENT WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	3
CREDIT VALUE	2
GUIDED LEARNING HOURS	4

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### **Unit Overview**

This unit addresses the skills required to shutdown equipment within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

#### **Evidence Requirements**

The learner should for two different pieces of equipment and for two separate occasions (one for full shutdown, one for shutdown to standby position):

- Demonstrate how to obtain permission to shutdown the equipment and to identify any relevant plant precautions
- Demonstrate the appropriate shutdown requirements based on full shutdown or shutdown to standby position ensuring plant conditions are maintained including communications requirements during and after shutdown
- Demonstrate the ability to detect any abnormal condition and how to correct it or return the equipment to a safe state

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- This unit should not be taken prior to taking “Unit DO (CR) 7k - How to Shut down Equipment within Downstream Control Room Operations Environments.”
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Documentation could include:

- Permits
- Operating procedures

Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

## Learning Outcome and Assessment Criteria

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Be able to prepare to shutdown equipment	1.1. Obtain appropriate confirmation for shutdown to proceed 1.2. Identify equipment and check status correctly 1.3. Inform all relevant people of possible impact on them due to shutdown 1.4. Inform appropriate personnel that shutdown is imminent
2. Be able to shutdown equipment and deal with abnormal conditions	2.1. Shut down equipment in accordance with specified procedures 2.2. Inform appropriate personnel when shutdown is completed to specified state 2.3. Identify, correct and promptly report any abnormality
3. Be able to follow organisational and operational procedures	3.1. Follow procedures for checks and tests 3.2. Work safely in accordance with operational requirements 3.3. Complete all relevant documentation

<b>UNIT DO (CR) 8k</b>	<b>HOW TO PREPARE FOR MAINTENANCE WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	3
CREDIT VALUE	5
GUIDED LEARNING HOURS	50

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### **Unit Overview**

This unit addresses the knowledge required to prepare for maintenance within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

The learner should provide evidence to meet all the required knowledge and understanding within this unit. This could be provided through different types of evidence and assessment methods, for example learner statements, questioning and professional discussion which should be recorded for verification.

- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Equipment should include:

- Rotating
- Non-rotating
- Heat transfer
- Control

Checks and tests could include:

- Visual inspection
- Line up
- Equipment integrity tests

Statutory and Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

Site Procedures could include:

- Use of log books
- Check sheets

## Learning Outcome and Assessment Criteria

Learning outcomes The learner will:	Assessment criteria The learner can:
1. Know how to prepare for maintenance activities	1.1. Explain how to interpret operational requirements 1.2. Identify the equipment relevant to their work area 1.3. Explain why controlled entry to work area is required 1.4. Describe how and when to cordon off a work area 1.5. Describe the isolation techniques for all relevant items of equipment
2. Know how to carry out checks	2.1. Explain how to carry out checks and tests 2.2. Explain the implications of commencing work in an area that is not prepared
3. Know how to accept back equipment and the work area	3.1. Explain the implications of accepting back incomplete equipment 3.2. Explain how the operation of incomplete equipment affects the work activity 3.3. Explain why work area must be handed back in accordance with the permit conditions
4. Know how to identify hazards	4.1. Explain how to identify hazards within the work area 4.2. Describe how hazardous conditions can arise in a previously prepared area
5. Know why it is important to work safely	5.1. Explain why it is necessary to follow site procedures 5.2. Explain the importance of using: <ul style="list-style-type: none"> <li>• The correct work methods</li> <li>• Hand tools</li> <li>• The correct materials</li> </ul> 5.3. Explain why relevant personnel have to be informed of equipment status 5.4. Explain why work has to be carried out under permit control
6. Know how operating conditions affect maintenance preparation	6.1. Explain the operating conditions and principles of relevant equipment which may impact on the work area 6.2. Explain the operating conditions and parameters of the work area 6.3. Explain the effect of operating conditions on equipment preparation 6.4. Explain the operating principles of relevant equipment
7. Know how to deal with abnormalities	7.1. Identify how to deal with abnormal occurrences during: <ul style="list-style-type: none"> <li>• Isolation</li> <li>• Draining</li> <li>• Purging</li> <li>• Flushing</li> <li>• Venting</li> </ul>

<p>8. Know how to communicate appropriate information effectively</p>	<p>8.1. Identify the information required by maintenance personnel for the equipment to be worked on</p> <p>8.2. Explain how to pass on:</p> <ul style="list-style-type: none"> <li>• Details of the equipment to be prepared</li> <li>• Advice about significant delays</li> </ul> <p>8.3. Explain why people need to be informed of work about to commence</p>
<p>9. Know how to follow organisational and regulatory procedures</p>	<p>9.1. Describe the implications of statutory (e.g. HASAWA, COMAH and COSHH) and organisational requirements, and explain how to comply with them</p> <p>9.2. Explain why permits associated with the activity have to be completed</p> <p>9.3. Identify the limits of their own responsibility and authority</p>

<b>UNIT DO (CR) 8c</b>	<b>PREPARE FOR MAINTENANCE WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	3
CREDIT VALUE	3
GUIDED LEARNING HOURS	4

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### **Unit Overview**

This unit addresses the skills required to prepare for maintenance within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

#### **Evidence Requirements**

The learner should for a minimum of two different pieces of equipment preparations for and two reinstatements from maintenance (one fixed, one rotating):

- Demonstrate how to coordinate with the field operations team to isolate the equipment in accordance with the appropriate procedure, permit to work requirements and communications
- Demonstrate how to receive equipment back from maintenance, ensure the mechanical integrity and cleanliness of work area
- Demonstrate the ability to reinstate equipment as per procedure, test the operational function and return to standby or commission as required

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- This unit should not be taken prior to taking “Unit DO (CR) 8k - How to Prepare for Maintenance within Downstream Control Room Operations Environments.”
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Equipment should include:

- Rotating
- Non-rotating
- Heat transfer
- Control

Checks and tests could include:

- Line up
- Equipment integrity tests

Statutory and Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

Site Procedures could include:

- Use of log books
- Check sheets

**Learning Outcome and Assessment Criteria**

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Be able to prepare equipment	1.1. Isolate the correct items from both process and energy sources
2. Be able to prepare the work area and deal with problems that arise	2.1. Prepare the work area as specified in the Permit to Work procedures 2.2. Cancel the permits correctly and promptly when conditions are adversely changed 2.3. Identify any outstanding problems and report these to the appropriate personnel
3. Be able to accept back equipment	3.1. Check the integrity of equipment before accepting back 3.2. Confirm that work area preparations are complete 3.3. Confirm that the work on plant and equipment is complete
4. Be able to communicate information with the appropriate people	4.1. Communicate effectively with appropriate personnel 4.2. Supply the maintenance personnel with all relevant information
5. Be able to follow organisational and operational procedures	5.1. Complete all relevant documentation 5.2. Work safely in accordance with operational requirements 5.3. Ensure that the Permit to Work conditions are fully met

## OPTIONAL UNITS

UNIT DO (CR) 9K	HOW TO CARRY OUT ADVANCED CONTROL ROOM OPERATIONS WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS
LEVEL	3
CREDIT VALUE	4
GUIDED LEARNING HOURS	36

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### Unit Overview

This unit addresses the knowledge required to carry out advanced control room operations within downstream control room operations environments.

### Assessment Guidance and Evidence Requirements

The learner should provide evidence to meet all the required knowledge and understanding within this unit. This could be provided through different types of evidence and assessment methods, for example learner statements, questioning and professional discussion which should be recorded for verification.

- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### Information on use of Assessment Context

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Materials may include solids, liquids and gases

Operating conditions may include:

- Temperature
- Flow
- Humidity
- Pressure
- Density
- pH
- Level

PTW may include permit to work, authority to start, and/or continue with the operation or the equivalent.

Corrective actions may include:

- Adjust
- Request assistance
- Replace defective materials
- Shutdown

Equipment/plant may include equipment/plant where there is interaction between items and/or people. Includes parameters within the operator's control, and control instrumentation. Typical equipment may include:

- Chemical reactors
- Addition tanks
- Phase separators
- Receiving vessels
- Pipework and pumps

- Film coaters
- Solution make-up vessels
- Filters and spray equipment

Process type/operations may include:

- Batch operations, where there may be a number of batch operations running simultaneously, or may be multi-staged batch operation
- Continuous operations, such as reaction, recovery, separation and purification processes, mixing, granulating, drying and compressing, distillation

Relevant personnel may include process, utilities, materials handling, laboratory and any other relevant personnel

Documentation may include that relating to controlling processing, and any other relevant documentation

Problems to include those that are predictable, within plant's history, within other operational areas, indoors and outdoors

Communication to include:

- Spoken
- Written
- Electronic

## Learning Outcome and Assessment Criteria

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Know how to carry out checks and why this is important	1.1. Explain how to check that the equipment and materials are ready for processing 1.2. Explain why it is important to check that all controls are set correctly
2. Know how to maintain process conditions	2.1. Describe how to set the controls correctly as specified in the operating instructions 2.2. Describe how to monitor the process and explain the importance of the activity 2.3. Explain what corrective action could be taken when appropriate 2.4. State the meaning of terms used in operating instructions
3. Know how to work within the operating parameters	3.1. Explain the importance of operating parameters in the process 3.2. Describe how to set operating parameters in the control room operation 3.3. Explain how to follow the correct operating procedure and sequence of actions when in control
4. Know how to identify and use data when carrying out advanced control room operations	4.1. Identify the methods of obtaining process data 4.2. Explain how to interpret the data 4.3. Explain how to log process data accurately
5. Know how to record and document information	5.1. Explain how to record and document information accurately 5.2. Explain the consequences of not recording accurately
6. Know how to communicate with others	6.1. Explain the importance of communicating systems information to others 6.2. Identify appropriate methods of communication
7. Know how to deal with problems	7.1. Explain the importance of accepting responsibility 7.2. Explain the types of problems that may occur and how to recognise and deal with them 7.3. Identify who to report to with unsolvable problems and/or those which are not their responsibility
8. Know how to follow operational and organisational procedures	8.1. Explain their personal responsibilities with regard to health, safety and environment 8.2. Explain when and why it may be important to observe security and confidentiality 8.3. Explain the consequences of not following correct procedures

<b>UNIT DO (CR) 9C</b>	<b>CARRY OUT ADVANCED CONTROL ROOM OPERATIONS WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	3
CREDIT VALUE	3
GUIDED LEARNING HOURS	6

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### **Unit Overview**

This unit addresses the skills required to carry out advanced control room operations within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

#### **Evidence Requirements**

The learner should for a minimum of two occasions:

- Demonstrate the ability to set control systems within prescribed parameters and to receive and provide clear and accurate communication using the appropriate format of delivery
- Demonstrate how to maintain and monitor the equipment including dealing with any problems or reporting any that they are not able to resolve

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- This unit should not be taken prior to taking “Unit DO (CR) 9k - How to Carry out Advanced Control Room Operations within Downstream Control Room Operations Environments.”
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Materials may include solids, liquids and gases

Operating conditions may include:

- Temperature
- Flow
- Humidity
- Pressure
- Density
- pH
- Level

PTW may include permit to work, authority to start, and/or continue with the operation or the equivalent.

Corrective actions may include:

- Adjust
- Request assistance
- Replace defective materials
- Shutdown

Equipment/plant may include equipment/plant where there is interaction between items and/or people. Includes parameters within the operator's control, and control instrumentation. Typical equipment may include:

- Chemical reactors
- Addition tanks
- Phase separators
- Receiving vessels
- Pipework and pumps
- Film coaters
- Solution make-up vessels
- Filters and spray equipment

Process type/operations may include:

- Batch operations, where there may be a number of batch operations running simultaneously, or may be multi-staged batch operation
- Continuous operations, such as reaction, recovery, separation and purification processes, mixing, granulating, drying and compressing, distillation

Relevant personnel may include process, utilities, materials handling, laboratory and any other relevant personnel

Documentation may include that relating to controlling processing, and any other relevant documentation

Problems to include those that are predictable, within plant's history, within other operational areas, indoors and outdoors

Communication to include:

- Spoken
- Written
- Electronic

## Learning Outcome and Assessment Criteria

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Be able to start up control room operations, including at handover	1.1. Check that the operating instructions are as required and that they are clear and complete 1.2. Ensure that the operating parameters are set according to the operating instructions 1.3. Follow any 'handover' procedure before accepting responsibility
2. Be able to control operations	2.1. Follow the correct operating procedure when carrying out control actions 2.2. Follow the correct sequence of actions when carrying out control actions 2.3. Ensure that controls are set correctly as contained in the operating instructions
3. Be able to maintain process conditions	3.1. Monitor and check the process operation at the required intervals 3.2. Maintain the quality, quantity and time schedule of the process 3.3. Ensure that the process operation runs within acceptable limits as specified in the operating instructions 3.4. Check that all of the control equipment/system is in a safe and functional state 3.5. Interpret the results and take corrective action where necessary
4. Be able to use and complete documentation relevant to control room operations	4.1. Complete any required documentation accurately and clearly 4.2. Obtain the process data and log accurately
5. Be able to communicate with others	5.1. Communicate with other relevant personnel when required, including: <ul style="list-style-type: none"> <li>• Spoken</li> <li>• Written</li> <li>• Electronic</li> </ul>
6. Be able to deal with problems	6.1. Deal promptly with any problems that arise from: <ul style="list-style-type: none"> <li>• Standard operation procedures</li> <li>• Health, safety and environmental protection procedures</li> </ul> 6.2. Report any problems that they cannot solve and/or are not their responsibility
7. Be able to follow operational and organisational procedures	7.1. Work safely at all times 7.2. Observe security and confidentiality when required

<b>UNIT DO (CR) 10K</b>	<b>HOW TO FACILITATE THE MAINTENANCE OF PLANT AND EQUIPMENT WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	2
CREDIT VALUE	2
GUIDED LEARNING HOURS	20

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### **Unit Overview**

This unit addresses the knowledge required to facilitate the maintenance of plant and equipment within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

The learner should provide evidence to meet all the required knowledge and understanding within this unit. This could be provided through different types of evidence and assessment methods, for example learner statements, questioning and professional discussion which should be recorded for verification.

- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

Equipment should include:

- Rotating
- Non-rotating
- Heat transfer
- Control

## Learning Outcome and Assessment Criteria

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Know how operational requirements impact on maintenance	1.1. Describe the operating principles of all relevant equipment 1.2. Explain the plant and equipment operating procedures 1.3. Explain how to interpret operational requirements
2. Know how to facilitate maintenance and work safely when carrying out the activity	2.1. Identify the types of equipment to be maintained 2.2. Describe the importance of using correct work methods 2.3. Explain why work has to be carried out under permit control 2.4. Explain why relevant personnel have to be informed of equipment status
3. Know how to follow organisational, operational and regulatory procedures	3.1. Explain how to select, use and care for PPE 3.2. Explain why it is necessary to follow site procedures (e.g. use of log books; check sheets) 3.3. Describe the implications of statutory (e.g. HASAWA, COMAH and COSHH) and organisational requirements 3.4. Identify the limits of their own responsibility and authority

<b>UNIT DO (CR) 10C</b>	<b>FACILITATE THE MAINTENANCE OF PLANT AND EQUIPMENT WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	2
CREDIT VALUE	2
GUIDED LEARNING HOURS	4

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### **Unit Overview**

This unit addresses the skills required to facilitate the maintenance of plant and equipment within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

#### **Evidence Requirements**

The learner should for two separate maintenance activities:

- Demonstrate they have sufficient knowledge, skill, experience and confidence to facilitate the required maintenance task including confirming any reference documentation to be used
- Demonstrate how to recognise own limitations and when to seek further assistance especially if any irregularities arise

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- This unit should not be taken prior to taking “Unit DO (CR) 10k - How to Facilitate the Maintenance of Plant and Equipment within Downstream Control Room Operations Environments.”
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

Equipment should include:

- Rotating
- Non-rotating
- Heat transfer
- Control

## Learning Outcome and Assessment Criteria

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Be able to use and complete documentation	1.1. Obtain all documentation which allows the maintenance to be carried out 1.2. Consult written records as appropriate 1.3. Complete all relevant documentation
2. Be able to facilitate maintenance safely	2.1. Facilitate maintenance, using appropriate tools, in accordance with procedures and schedules 2.2. Leave plant and equipment in a safe condition
3. Be able to identify and deal with irregularities	3.1. Identify abnormal performance 3.2. Monitor and record faults 3.3. Take appropriate corrective action
4. Be able to work within the scope of authority	4.1. Request help and consult with appropriate personnel
5. Be able to follow organisational, operational and regulatory procedures	5.1. Work safely in accordance with operational requirements 5.2. Ensure that routine maintenance has minimal effect on production objectives 5.3. Wear the appropriate PPE

<b>UNIT DO (CR) 11K</b>	<b>HOW TO PROVIDE INSTRUCTION WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	4
CREDIT VALUE	5
GUIDED LEARNING HOURS	43

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### **Unit Overview**

This unit addresses the knowledge required to provide instruction within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

The learner should provide evidence to meet all the required knowledge and understanding within this unit. This could be provided through different types of evidence and assessment methods, for example learner statements, questioning and professional discussion which should be recorded for verification.

- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Statutory and Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

## Learning Outcome and Assessment Criteria

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Know the training plan and subject content for the training to be delivered	1.1. Explain the operating principles and procedures of the process on which instruction will take place 1.2. Identify the relevant training plan for a downstream operations environment
2. Know the principles of training delivery	2.1. Explain how to structure the learning into appropriately sized sections and why this is important 2.2. Describe the written and verbal communication methods of training 2.3. Explain why standards of performance are required
3. Know how to interact with the trainee prior to the training taking place	3.1. Explain how to put the trainee at ease and why this is important 3.2. Explain the importance of explaining the training activity objectives to the trainee 3.3. Explain the importance and relevance of establishing existing levels of understanding of the trainee
4. Know why progress is monitored	4.1. Explain the importance of checking progress regularly 4.2. Identify why checking is necessary to complete a training activity
5. Know how to debrief trainee and monitor progress	5.1. Explain the importance of giving objective and constructive feedback to trainee on performance 5.2. Explain the importance of recording results 5.3. Explain the importance of monitoring progress
6. Know how to work in accordance with operational requirements	6.1. Describe the implications of statutory (e.g. HASAWA, COMAH and COSHH) and organisational requirements and explain how to comply with them

<b>UNIT DO (CR) 11c</b>	<b>PROVIDE INSTRUCTION WITHIN DOWNSTREAM CONTROL ROOM OPERATIONS ENVIRONMENTS</b>
LEVEL	4
CREDIT VALUE	3
GUIDED LEARNING HOURS	5

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### **Unit Overview**

This unit addresses the skills required to provide instruction within downstream control room operations environments.

### **Assessment Guidance and Evidence Requirements**

#### **Evidence Requirements**

The learner should deliver on panel instruction for two different types of equipment / processes and:

- Demonstrate how to prepare for instruction taking into account different learning methods, deliver instruction and monitor level of retention
- Demonstrate encouragement and constructive feedback to a trainee
- Demonstrate how progress is monitored and recorded including suggested further training plans

#### **Assessment Guidance**

- The use of simulation is not acceptable in the assessment of this unit.
- Workplace performance evidence is mandatory.
- This unit is subject to the requirements set out in the Cogent Assessment Strategy.
- This unit should not be taken prior to taking “Unit DO (CR) 11k - How to Provide Instruction within Downstream Control Room Operations Environments.”
- The assumption is made that the learner undertaking this unit will be an apprentice or experienced operator seeking progression.

### **Information on use of Assessment Context**

During this work, the learner must take account of the relevant operational working practices, as they apply to the learner.

Statutory and Operational Requirements could include:

- Policies
- Procedures
- Instructions
- Codes of practice
- Standards
- Schedules

## Learning Outcome and Assessment Criteria

<b>Learning outcomes</b> <b>The learner will:</b>	<b>Assessment criteria</b> <b>The learner can:</b>
1. Be able to prepare to give instruction	1.1. Ensure that copies of the appropriate procedure are available and ready for use 1.2. Put trainee at ease 1.3. Determine the existing level of trainee knowledge 1.4. Provide trainee with a clear explanation and outline of the training objectives
2. Be able to instruct a trainee and monitor understanding	2.1. Provide trainee with a logical step-by-step explanation stressing the key points 2.2. Ensure that information and summaries are given at a suitable pace and frequency for the trainee 2.3. Check trainee's understanding of the activity
3. Be able to provide feedback and monitor progress	3.1. Provide thorough and constructive feedback to the trainee 3.2. Monitor the trainee's progress in accordance with procedures 3.3. Ensure that the trainee progresses only when competent
4. Be able to report progress and suggest further training, as appropriate	4.1. Provide a thorough, accurate and objective report to supervisor on trainee's progress 4.2. Recommend appropriate further training
5. Be able to work in accordance with operational requirements	5.1. Complete all relevant documentation 5.2. Work safely in accordance with operational requirements

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