
Overview

This unit is about operating and monitoring process systems.

This unit deals with the following:

- 1 Operate process systems
- 2 Monitor process systems

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

Previous version:

Unit PT2.2 Processing Operations Hydrocarbons NOS – November 2006

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Performance criteria

- You must be able to:*
- P1 achieve required process system specification through appropriate work methods/techniques
 - P2 ensure steady state conditions by appropriate process systems throughput
 - P3 accurately identify process system faults and take appropriate action
 - P4 accurately identify critical situations and take appropriate action
 - P5 ensure that all information supplied and recorded is accurate, complete and legible
 - P6 work safely in accordance with operational requirements and associated **Safe Systems of Work**
 - P7 effectively maintain the process system in the required steady state
 - P8 accurately identify and rectify faults and problems
 - P9 correctly take samples and carry out relevant tests and comparative testing
 - P10 promptly report deviations not within your responsibility
 - P11 effectively maintain your work area to be clean and hazard free

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Knowledge and understanding

You need to know and understand:

- K1 how to use “Safe Systems of Work” processes to identify hazards and mitigate or reduce risks to as low as reasonable practicable (ALARP)
- K2 how to select, use and care for Personal Protective Equipment (PPE) to include sight/hearing protection, coveralls, gloves, footwear, hard hats, respirators
- K3 the implications of statutory (e.g. HASAWA and COSHH) and organisational requirements
- K4 how to interpret operational requirements (e.g. policies, procedures, instructions, codes of practice, standards, schedules)
- K5 equipment internals and their functions
- K6 functioning of process control including instrumentation and logic
- K7 normal plant conditions and the tolerances within which they operate
- K8 sources of information and interpretation of drawings and manuals regarding the plant
- K9 composition and properties of feedstock (to include toxicity, flammability, specific gravity and temperature)
- K10 reactions taking place, conditions and effects of changes (to include chemical and physical properties)
- K11 the effects of changes in ambient conditions on plant operation
- K12 hydrocarbon hydrate formation – prevention and dispersion
- K13 effects of emergency shutdown control systems
- K14 effects of fire and gas control systems
- K15 effects of loss of any utility and its reinstatement
- K16 how to identify and deal with critical situations (to include process deviations, extreme weather conditions, spillages, uncontrolled emissions)
- K17 how to deal with process system throughput (to include increase/decrease throughput, specified sequence, recommended rate)
- K18 how to identify process system faults (to include lack of services and supply, variances in services, mechanical and electrical breakdown, process and utility setting deviations)
- K19 the limits of your own responsibilities
- K20 the actions appropriate to critical situations (to include quick shut down, return process with safe parameters, operate standby equipment)
- K21 the nature of information required (e.g. oral, written, equipment status, process status, handover reports)
- K22 what steady state conditions are and how they are achieved
- K23 types and causes of deviations and the relevant actions (to include report, record, adjust) to take when they occur
- K24 how to deal with oral and written information
- K25 how to perform leak testing and sampling and how to interpret results

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Additional Information

Scope/range

Candidates must prove competence across the following items (or “systems”) as appropriate to the workplace and Evidence Specification:

- 1 wells
- 2 oil storage/discharge process
- 3 gas process
- 4 oil/gas process and export
- 5 water injection
- 6 metering
- 7 utilities

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

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

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