

COGDO30 - SQA Unit Code FA7A04

Control room operations in downstream operations



Overview

This unit addresses the competence required to start-up, control, maintain and shutdown the required process by remote control within the control room environment.

This involves:

- 1 Control operations
- 2 Maintain process conditions by monitoring and adjusting
- 3 Restore required process conditions
- 4 Communicating with others
- 5 Maintaining your own and others' safety while working

This unit deals with the following:

- 1 Take control of operations
- 2 Monitor and maintain the process

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

Previous version:

Adapted from Unit 3.1 of Chemical, Pharmaceutical and Petro-Chemicals Operations NOS – version May 2005

Performance criteria

- You must be able to:*
- P1 check that you have the required operating instructions and that they are clear and complete
 - P2 ensure that the operating parameters are set according to the operating instructions
 - P3 ensure that controls are set correctly as contained in the operating instructions
 - P4 check that all of the control equipment/system is in a safe and functional state
 - P5 follow any `handover' procedure before accepting responsibility
 - P6 follow the correct operating procedure when carrying out control actions
 - P7 follow the correct sequence of actions when carrying out control actions
 - P8 ensure that the process operation runs within acceptable limits as specified in the operating instructions
 - P9 monitor and check the process operation at the required intervals
 - P10 obtain process data and log accurately
 - P11 interpret the results and take corrective action where necessary
 - P12 communicate with other relevant personnel when required
 - P13 maintain the quality, quantity and time schedule of the process
 - P14 deal promptly with any problems that arise, reporting any which you cannot solve and/or are not your responsibility
 - P15 complete any required documentation accurately and clearly
 - P16 wear appropriate PPE
 - P17 work safely at all times
 - P18 observe security and confidentiality when required

Knowledge and understanding

You need to know and understand:

- K1 the importance of accepting responsibility
- K2 the meaning of terms used in operating instructions
- K3 the importance of operating parameters in the process
- K4 how to set operating parameters in the control room operation
- K5 how to check that the equipment and materials are ready for processing
- K6 how to set the controls correctly as specified in the operating instructions
- K7 why it is important to check that all controls are set correctly
- K8 how to follow the correct operating procedure and sequence of actions when in control
- K9 the consequences of not following correct procedures
- K10 how to, and the importance of monitoring the process
- K11 methods of obtaining process data
- K12 how to log process data accurately
- K13 how to interpret the data
- K14 what corrective action could be taken when appropriate
- K15 the importance of communicating systems information to others
- K16 methods of communication
- K17 how to record and document information accurately
- K18 the consequences of not recording accurately
- K19 the types of problems that may occur and how to recognise and deal with them
- K20 who to report to with unsolvable problems and/or those which are not your responsibility
- K21 your personal responsibilities with regard to health, safety and environment
- K22 when and why PPE needs to be worn
- K23 when and why it may be important to observe security and confidentiality

Glossary

The following terms have a specific meaning in this unit:

Materials

May include solids, liquids and gases

Operating instructions

The set of instructions which describe the work to be carried out, including details of the operating parameters

Operating parameters

The conditions under which the processing should take place

Operating conditions

Control of conditions may include:

1. Temperature
2. Flow
3. Humidity
4. Pressure
5. Density
6. pH
7. Level

System

The collection of plant, equipment, materials, components and personnel which functions dynamically, and contributes to the process

PPE

Personal protective equipment to be specified, when necessary

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 or shutdown

Equipment/plant

This 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:

1. Chemical reactors

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2. Addition tanks
3. Phase separators
4. Receiving vessels
5. Pipework and pumps
6. Film coaters
7. Solution make-up vessels
8. Filters and spray equipment

Process type/operations

Batch and/or continuous processing. The following types may be included:

1. Batch operations, where there may be a number of batch operations running simultaneously, or may be multi-staged batch operation
2. 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

Problems

Working practices you are required to follow will be in relation to:

1. Standard operating procedures
2. Health, safety and environmental protection procedures

Communication/Communicate

Methods of communication to include spoken, written and electronic

Deviations

Significant deviations from quality specifications, non-conformance departures of process parameters from expected norms. Problems to include those that are predictable, within plant's history, within other operational areas, indoors and outdoors

Documentation

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

Health, safety and environmental legislation

May include all relevant legislation and company policy

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