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### 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

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### 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

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### 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

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### 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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