

## **EUSTPO06**

# Monitor and maintain the quality of treatment processes



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### **Overview**

This unit is about using data and information to monitor the treatment processes in treatment plants and to make adjustments where required.

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### Performance criteria

*You must be able to:*

#### **Collect and monitor treatment process data**

- P1 use the monitoring data collected to confirm flow recording instruments, quality monitors and level indicators are working as required in the plant specification
- P2 use readings and other data to compare the plant with the schedule and operating instructions
- P3 make sure the procedures for collecting data from on-site visual assessment and quality tests remain adequate and conform to operating instructions
- P4 make sure the procedures for taking samples for off-site testing remain adequate and conform to operating instructions
- P5 monitor the collation and use of flow, quality and operational data and make sure they comply with schedule and operating instructions
- P6 instigate special monitoring of process inputs and outputs where process adjustments have been made

*You must be able to:*

#### **Use data and make decisions which will maintain optimum process performance**

- P7 assess process performance from flow, quality, and operational records, and direct observations
- P8 analyse data from records and direct observations and determine what adjustments are required
- P9 prioritise corrective measures and resource them within a programme of work
- P10 assess process inputs and outputs to determine whether the plant has responded to corrective adjustments and conforms to the plant specification
- P11 implement day-to-day activities which maintain the conditions for the treatment process
- P12 implement day-to-day activities to make sure the disposal of process by-products meet with the requirements of legislation, standards, and codes of practice
- P13 implement work procedures to ensure there is a consistent approach to responding to alarms
- P14 use energy monitoring of the pumping plant to maximise energy performance

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*You must be able to:*

### **Use and communicate data and information**

- P15 monitor completed plant and process documentation and ensure it provides accurate and up-to-date data in the timescale required
- P16 ensure the systems for storing and transmitting data and information are being complied with
- P17 provide the designated operating personnel with clear information and instructions for adjusting processes
- P18 provide the designated management personnel with clear information about the adjustments to processes which are being made
- P19 record and report process defects, the corrective measures taken, and the results and outcomes
- P20 maintain up-to-date data audit trails and make sure they are accessible

*You must be able to:*

### **Resolve problems affecting treatment quality**

- P21 resolve issues with team members where there are shortfalls in the supply of data from treatment processes
- P22 resolve issues where there are problems which arise from inaccurate or incomplete data from treatment processes
- P23 investigate and resolve failures of process adjustments through instruments, configurations, flow, and doses
- P24 consult and liaise with management personnel on further measures to be taken where there are failures to adjustments

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### Knowledge and understanding

*You need to know and understand:*

#### **General**

- K1 UK and EC legislation, standards, codes of practice, and industry regulations for health, safety, and hygiene
- K2 UK and EC legislation, standards, codes of practice, and industry regulations for environmental protection and measures to reduce harmful emissions and substances
- K3 dealing with statutory inspectorates
- K4 dealing with emergency situations
- K5 safe working practices when dealing with equipment, instrumentation and environment
- K6 maintaining safety – smoking, eating, drinking and drugs
- K7 duty of care
- K8 protecting people and the environment from pollutants both inside and outside the workplace
- K9 personal conduct and behaviour and responsibilities towards colleagues and the general public
- K10 the role and purpose of data audit trails in quality assurance, health and safety and regulatory requirements

*You need to know and understand:*

#### **Treatment processes**

- K11 using energy efficiently and cost-effectively
- K12 own role, responsibilities, and actions in sustaining favourable environmental conditions
- K13 how negative impacts on the environment are reduced or kept to a minimum
- K14 applying fundamental principles to the treatment process and unit processes for treating water or waste water
- K15 disposing of the various process by-products
- K16 predicting changes in quality and flow and the effects of these changes on the unit processes and the final outflow
- K17 assessing the effects of changes in quality and flow
- K18 assessing the performance of each unit process
- K19 assessing variations in unit process performance and the effects of these variations in the total treatment process
- K20 assessing the effect of process failure
- K21 implementing corrective actions to ensure the process meets its target performance
- K22 assessing the effects of a breach of consent for discharges from the process plant
- K23 assessing the adverse effect of variations from the predetermined

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- performance level for each process, and the impact on the local environment
- K24 dealing with technical queries arising from deviations to predetermined performance levels for unit processes
- K25 ensuring that the total treatment process and the disposal of process by-products meet with the requirements of current uk and ec legislation, standards and relevant codes of practice

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### Additional Information

#### Behaviours

You work in a manner which:

1. is vigilant to possible risks and hazards
2. uses a range of leadership styles appropriate to different people and situations
3. shows pride in achieving high quality work

#### Glossary

##### Samples

inflow, partially treated flows, outflow, by-products, return liquors

##### Adjustments to processes

timers, flow rate, configuration, flow distribution, chemical doses

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**Relevant occupations** Engineering; Science and Engineering Technicians

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**Suite** Treatment Process Operations

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