Water Treatment Technician

Unit WTTC04 Maintenance of Monitoring Equipment

This training specification has been developed from the water process technician standard. The specification details the **minimum** training specification, as agreed by industry employers, to deliver the skills and knowledge required to carry out maintenance of monitoring equipment in the water industry.

The specification details the critical requirement of the activity to carry out the work outlined and does not preclude employers from adding to the skills and knowledge detailed by the specification in their own training programmes.

All work must be carried out to approved procedures and practices and in accordance with statutory health, safety and environmental requirements.

What does this specification look like?

Water treatment technicians need to be able to:

MME1 Identify the water quality targets key for process management, their optimum location and use

MME2 Identify the correct type and use of various analytical equipment for water quality measurement, including the levels at which the instruments operate and their limitations

MME3 Understand maintenance requirements for the instruments in use

MME4 Analyse data provided by monitoring equipment to ensure the results are correct and accurate, including control systems

What do I need to take this module?

Candidates to be **assessed** as competent in this area should have successfully completed the modules shown below or have evidence demonstrating an equivalent level of competence.

1. Completion of all health and safety training requirements related to this module activity
2. Completion of the process specific modules
3. Completion of water quality sampling and testing module

Performance Criteria

To achieve this unit, you will need to be able to:

General Requirements

P1. Identify the work area to be accessed using company documentation, systems and work instructions
P2. Select, inspect and wear required PPE in line with company procedures
P3. Carry out a site specific risk assessment of the work area, identifying the hazards and control measures required
P4. Maintain accurate and up to date records
P5. Report information and data to the designated person

Task Specific – Water Treatment Processes – Maintenance of Monitoring Equipment

P6. Carry out key calibration or instrument checks of online equipment and identify issues with their performance
P7. Understand the operation of control systems and how to operate each instrument various control states
P8. Carry out procedure for maintaining online instruments in line with company instructions including paperwork and records
P9. Review and analyse the performance of the water instruments by reviewing site and telemetry data

Knowledge and Understanding

To achieve this unit, you will need to know and understand:

General Requirements

K1. The principles of Health, Safety and Environmental legislation when working with water treatment processes
K2. The organisation's safety rules, policies and procedures when working with water treatment processes
K3. The hazards associated with working with water treatment processes and the correct way to respond to them
K4. How to select, inspect and use PPE when working with water treatment processes
K5. How to carry out a site specific risk assessment and identify workplace hazards
K6. How to respond in the event of an emergency situation in the workplace environment
K7. How to leave the work area in a safe and secure condition

K8. The company recording and reporting process

Task Specific – Water Treatment Process – Maintenance of Monitoring Equipment

K9. The legal requirements for online water quality reporting, and control systems
K10. The basic principles of key online analytical instruments.
K11. The requirement and need for online monitoring of water process, including the key performance criteria for the water treatment works
K12. The use and care of online equipment, including record keeping
K13. The equipment required to maintain the instrument and its use
K14. The calibration of the instruments including understanding the expected results
K15. Communications, reporting and record keeping, associated with maintenance of monitoring equipment
K16. Monitoring, the identification of instrument performance, including troubleshooting, such as flat lining
K17. The need for accurate and precise analysis and risks associated with incomplete or inaccurate analysis or results
K18. Contingency plans associated with the water treatment works when monitoring equipment is unavailable or incorrect

How will it be assessed?

To achieve this unit, you will need to be able to provide evidence of the performance criteria and the knowledge and understanding requirements listed above.

Assessment types:

1. External assessment – an external accrediting body will assess against a national minimum standard
2. Internal assessment process – a company led on-going assessment against requirements
3. End-point assessment – see assessment plan for further details here (will be Energy & Utility Skills defined)

What type of evidence will be expected?

To achieve this unit, you will need to be able to provide evidence of the performance criteria and the knowledge and understanding requirements listed above.

Evidence types:

1. On-going local assessments
    a) Assessment plan, review, feedback, standard assessment sheets
2. Knowledge based learning
    a) Classroom, exams, assignments, Q&A sessions, e-learning modules
3. Evidence portfolios
    a) Learning logs, photos, observation sheets

Assessment types and process