Wastewater Treatment Technician
Unit WWTTC01 Wastewater Compliance and Performance Monitoring

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 wastewater compliance and performance monitoring in the water sector.

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?

Wastewater treatment technicians need to be able to:

WWC1   Understand the nature and sources of different types of wastewater effluent and its impact on the environment. Describe current legislation and permits governing wastewater quality standards

WWC2   Understand the chemical, biological, microbiological and physical characteristics of wastewater effluents and trade effluents and the parameters used to measure them

WWC3   Carry out sampling and analysis and control the process based on the results to ensure that wastewater quality standards are maintained

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.   SHEA Water or equivalent
    2.   Process control systems

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 the control measures required
P4. Maintain accurate and up to date records
P5. Report information and data to the designated person

Task Specific - Wastewater Compliance and Performance Monitoring

P6. Identify and retrieve current data and documentation governing wastewater quality standards applicable to your work, including company and legislation
P7. Monitor, interrogate, analyse and evaluate the company monitoring system e.g. SCADA / HMI to prove compliance with wastewater quality standards
P8. Take samples from the correct locations to monitor works performance
P9. Carry out the required sampling and analysis relating to permits:
     a) In the laboratory
     b) On site
P10. Maintain the required level of wastewater quality standards making adjustments where required
P11. Keep and maintain accurate and up to date records
P12. Report information and data to the designated person including a non-compliance scenario

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 in relation to working with wastewater
K2. The organisation's safety rules, policies and procedures relating to working with wastewater
K3. The hazards associated with working with wastewater and the correct way to respond to them

K4. How to select, inspect and use PPE when working with wastewater
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 - Wastewater Compliance and Performance Monitoring

K9. The nature and sources of a range of untreated and treated effluents and the potential impacts that they can have on the treatment works and the environment
K10. Current legislation and permits relating to wastewater quality and be able to correctly interpret the conditions of permits
K11. Key parameters and variables associated with untreated and treated effluents including chemical, biological, microbiological and physical characteristics and how to analyse samples correctly for these
K12. River quality classification in the UK and it's relationships to use of the river and abstraction, and how different effluents impact on the quality
K13. How the design specification for the treatment process relates to wastewater quality standards
K14. Alarms, action levels, authorisation levels and consequences associated with the process
K15. How to interrogate the information system e.g. SCADA / HMI to evaluate trend data differentiating normal operational cycles from developing fault conditions or emerging risks
K16. The importance of sampling from the correct locations, using approved techniques
K17. The consequences of inaccurate sampling, analysis, recording and reporting
K18. Data collection, recording, reporting and maintenance requirements

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

Local assessment	Assessment plan developed	Quarterly assessments	Portfolio reviewed	Feedback to learner
Workplace training	Theory based learning	Assignments	Observation and Q&A	Exams
End-point assessment	Portfolio submission	Industry Context trade tests	Knowledge exam	Observation