

Water Treatment Technician

Unit WTT001 Screening Operations

This training specification has been developed from the water process technician standard. The specification details the required skills, knowledge and behaviours to establish competence to control the screening operations process of water treatment works.

The specification details the critical requirements of the activity to establish competence 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 competence look like?

Water treatment technicians need to be able to:

- SO1 Control the screening operations process on water treatment works
- SO2 Optimise the screening operations process on the basis of test results and analysis of trends
- SO3 Restore the screening operations process to normal operation through identification of the root cause of faults arising with the process

What do I need to take this module?

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

1. COSHH

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 – Screening Operations

- P6. Identify and locate the screening operations plant on the IT systems and on the works
- P7. Identify all mechanical, electrical and instrumentation assets which monitor and control the screening operations process on the IT system and on the works
- P8. Evaluate trend data from their IT system and / or test results to identify:
 - a) Normal trends or cycles for the works, and
 - b) Atypical trends or changes and the underlying or root causes for the change
- P9. Instigate corrective action to return the screening operations process to stable state conditions, taking account of process lag time

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 Processes – Screening Operations

- K9. The objectives of screening operations process and consequences of sub-optimal performance
- K10. Key process parameters and variables associated with screening operations, design limitations of works and the introduction of wash water return
- K11. The set-points applicable to screening operations and the impact of variable water quality on these
- K12. The control parameters associated with screening operations on their works, action levels and authorisation levels
- K13. The consequences of sub-optimal screening operations performance on the subsequent process streams
- K14. How to interrogate the IT system to:
 - a) Identify and control items of mechanical, electrical and instrumentation equipment
 - b) Evaluate trend data differentiating normal operational cycles from developing fault conditions
- K15. How to confirm the configuration, operation and performance of the actual screening operations plant corresponds to the IT system
- K16. The range of instrumentation used to monitor and control the process and their calibration requirements
- K17. Alarms, action levels, authorisation levels and consequences associated with the process
- K18. How to identify the root cause of screening operations process problems and the sequence of actions required to restore the process to steady-state conditions, taking account of all process variables and process lag times
- K19. Data collection, recording, reporting and maintenance requirement

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

