

Water Networks Technician

Unit WNTC09 Pumping Station Operations

This training specification has been developed from the water process technician standard. The specification details the **minimum** required skills, as agreed by industry employers, to deliver the skills and knowledge required to understanding clean water network pumping station operations 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?

Water networks technicians need to be able to:

- PSO1 Identify the component parts of a clean water network pumping station installation and explain how each interacts and operates
- PSO2 Understand the health and safety, maintenance and operating regimes associated with clean water network pumping stations

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. National water Hygiene Scheme
2. SHEA water or equivalent

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 - Pumping Station Operations

- P6. Identify key components and associated ancillaries of a clean water network pumping station installation
- P7. Identify examples of negative suction and positive suction
- P8. Identify examples of static discharge, static suction and total static variations of head / lift

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 water
- K2. The organisation's safety rules, policies and procedures relating to working with water
- K3. The hazards associated with working on the clean water network and the correct way to respond to them
- K4. How to select, inspect and use PPE when working with water
- K5. How to carry out a site specific risk assessment and identify workplace hazards
- K6. How to respond in the event of emergency situations in the work environment
- K7. How to leave a work area in a safe and secure condition
- K8. The company recording and reporting process

Task Specific - Pumping Station Operations

- K9. The principals of and reasons for clean water network pumping station operations

- K10. The key factors in clean water network pumping station design
- K11. The operating philosophy of clean water network pumping stations
- K12. The interaction between pumping stations and the clean water network infrastructure
- K13. Basic design considerations for pumps, including:
 - a) Pump delivery head and suction
 - b) Impact of pipework- friction losses, pipe size and material
- K14. Basic reactive and planned maintenance activities in relation to clean water network pumping stations, including:
 - a) First line maintenance activities
 - b) Safe isolation of pumps
 - c) Lifting equipment safety inspections
- K15. 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

