

Water Networks Technician

Unit WNTC10 Leakage Detection Operations

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 leakage detection 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:

- LD1 Confidently select, set-up, maintain and operate appropriate leakage detection equipment to undertake clean water network investigations in accordance with company procedures
- LD2 Carry out leakage detection operations safely and ensure that company procedures are carried out to restore the network to its normal operating condition

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
2. SHEA water or equivalent
3. Wayleaves – operations in private land

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

Task Specific - Leakage Detection Operations

- P6. Interpret district metered area (DMA) drawings and company data associated with clean water networks
- P7. Plan leakage detection method based on leakage volume e.g. sounding, visual, correlation
- P8. Confirm DMA integrity e.g. check boundary valves
- P9. Use leakage methods and equipment to accurately determine the location of leaks. This must cover:
 - a) Visual
 - b) Sounding
 - c) Correlation
 - d) Noise logging
 - e) Step test equipment
- P10. Determine leakage from genuine water consumption
- P11. Sample and test the leak to determine its source e.g. groundwater
- P12. Arrange for repair of leak to company standards
- P13. Confirm that leak has been repaired satisfactorily and that the network has been restored to normal
- P14. Maintain and store leakage equipment in line with manufacturers' recommendations e.g. annual calibration

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 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 - Leakage Detection operations

- K9. Specific health & safety requirements relating to leakage detection operations.
- K10. Different types of leakage detection methods and equipment. This must cover:
 - a) Visual
 - b) Sounding
 - c) Correlation
 - d) Noise logging
 - e) Step test equipment
- K11. Current legislation relating to water supply and distribution
- K12. Regulatory and company requirements and standards relating to leakage performance targets
- K13. Correct selection and use of leakage detection equipment
- K14. How to interpret the data provided from the equipment to enable accurate leak detection
- K15. District metered area (DMA) configuration via correct interpretation of company data
- K16. The importance of maintaining DMA integrity in order to facilitate effective management and monitoring of night lines
- K17. The notification and reporting processes following detection of a leak
- 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

