

# Common Core

## Unit - WPTCC06 - Water Quality Monitoring, Sampling and Testing

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 the water treatment process 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?**

Learners need to be able to:

WQMS1 Prepare test equipment and materials in order to take samples

WQMS2 Carry out on site tests on samples and record and report test results

WQMS3 Know the sampling, monitoring and testing procedures

### **What do I need to take this module?**

There are no specific module pre-requisites necessary for candidates before taking this module.

## Performance Criteria

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

### General Requirements

- P1. Identify the area to be worked on by interpreting system plans and using available information
- P2. Select and wear the PPE required to carry out the activity
- 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 - Water Quality Monitoring and Sampling

- P6. Collect, check, calibrate and prepare equipment, materials and other resources required in the sampling process in accordance with sampling procedures
- P7. Match samples to be tested against those in the work instructions / documentation and assemble the required bottles and associated equipment
- P8. Safely access the sampling points and take samples as specified, following sampling procedures to ensure samples are representative and avoiding any contamination
- P9. Take correct action when water quality parameters or sampling facilities appear abnormal, in line with company procedures
- P10. Dispose of waste materials according to company procedures and any relevant legislation / regulations
- P11. Accurately record and report sample information and any test results, in accordance with documented procedures
- P12. Demonstrate and explain two appropriate methods of tap disinfection and why this is important
- P13. Store and transport samples in an appropriate manner to ensure sample stability and integrity are not compromised, meeting any monitoring requirements, in accordance with procedures

## 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 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 with water processes and the correct way to respond to them
- K4. How to select, inspect and use appropriate PPE when working with water treatment / networks
- 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 Quality Monitoring and Sampling

- K9. The purpose of regulatory and non-regulatory water quality sampling and on-site testing, including regulatory requirements
- K10. The conditions and requirements associated with representative water sampling to include:
  - a) Approved samplers
  - b) Types of sample bottles used
  - c) Importance of a representative sample point
  - d) Quality assurance requirements for sampling and laboratories
  - e) Preservation of sample quality
- K11. How to identify defective sampling equipment, including sample points, and the actions to take
- K12. The equipment, materials and resources required for sampling and how they should be stored and used
- K13. Possible sources of contamination and situations that can detrimentally affect the representative nature of a sample
- K14. The maintenance, care and use of portable instrumentation for on-site measurement of chlorine
- K15. The importance of providing accurate sample information for efficient analysis and record keeping
- K16. The actions that might be taken when sampling indicates abnormal water quality

### 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

