

# Common Core

## Unit - WPTCC11 - Safe Isolation of Plant and Equipment

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 for safe isolation of plant and equipment 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?**

Learners need to be able to:

- SIPC1 Identify the most effective way to safely isolate the equipment you are working on
- SIPC2 Isolate the equipment and prove it is safe to work on

### **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 complete this module 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 – Safe Isolation of Plant and Equipment

- P6. Identify the different ways in which equipment used in the water industry can utilise or store energy
- P7. Identify how the equipment can be 'made safe' or isolated
- P8. Select and use the correct equipment to safely isolate the plant to be worked on
- P9. Safely isolate the identified equipment
- P10. Follow approved procedures to ensure the isolated equipment is safe to work on
- P11. Record the results of the isolation activity carried out using approved 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 with treatment processes
- K2. The organisation's safety rules, policies and procedures when working with treatment processes
- K3. The hazards associated with working with treatment processes and the correct way to respond to them
- K4. How to select, inspect and use PPE when working with 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 – Safe Isolation of Plant and Equipment

- K9. Understands company procedures, permits and authorisations required relating to isolation of plant and equipment
- K10. The ways in which equipment used in the water industry can utilise or store energy and how that energy can be harmful to health, to include:
- Electrical energy
  - Kinetic energy – i.e. rotational and linear movement
  - Potential energy – i.e. pressurisation
  - Heat energy
  - Chemical energy
- K11. How the equipment to be worked on can be 'made safe' or isolated, to include identification of point of isolation:
- Electrical isolation and locking off (locking off procedure to follow company policy)
  - Proving dead electrical equipment – ensuring you have isolated the correct supply for the machine you are to work on (i.e. test running to ensure panel 1 has not been cross connected to pump 2)
  - Immobilisation techniques such as: valves, chains, clamps, locking pins, props etc.
  - Bleeding off pressure, isolation of sections of process, valving around (bypassing)
  - Cooling – particularly the amount of time some equipment (i.e. dry well submersible pumps and electric motors) take to cool
  - Neutralisation of certain chemicals (e.g. chlorine or caustic soda) and how chemical compounds used in the water industry can be reactive
- K12. Be able to select and use the correct equipment to safely isolate the plant to be worked on, to include:
- Isolating locks
  - Valves, chains, clamps, locking pins, props etc.

### 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

