

**EM141** Maintain workplace environmental control systems used in food and drink operations

**SQA Unit Code**

**HD62 04**

**Level 3**

**SCQF Level 6**

**Credit value 56**

**Unit Summary**

This standard identifies the competences you need to carry out corrective maintenance activities on workplace environmental control systems used in food and drink related operations, including heating and ventilation, air conditioning and ventilation, chillers, lighting, lifts, building/room access, fire systems and CCTV systems, in accordance with approved procedures. This will involve dismantling, removing and maintaining faulty or damaged components, including sensors, switches, thermostats, meters, thermocouples, transformers, timers, interlocks, electrical components and wiring, electronic boards and components, controller units, computer systems, peripheral devices and environmental monitoring and targeting software. You will be expected to apply a range of dismantling and assembly methods and techniques, to include marking/labelling of components to aid the reassembly, dismantling components by unplugging, de-soldering, removal of screwed, clamped and crimped connections, and aligning and adjusting components. Food and drink operations is a term used in this standard to cover the following sub sectors of Meat, Drinks, Confectionery, Fresh Produce, Bakery, Seafood and Dairy.

You will be expected to work with minimal supervision, taking personal responsibility for your own actions, and for the quality and accuracy of the work that you carry out.

In order to be assessed as competent you must demonstrate to your assessor that you can consistently perform to the requirements set out below. Your performance evidence must include at least one observation by your assessor.

You must be able to:	You need to show:
<p>1. Maintain workplace environmental control systems used in food and drink operations</p> <p>This means you:</p> <p>Work safely at all times, complying with health and safety and other relevant food and drink regulations, directives and guidelines</p> <p>Follow the relevant maintenance schedules to carry out the required work</p>	<p>Evidence must be work-based, simulation alone is only allowed where shown in <b><i>bold italics</i></b></p> <p>Evidence of maintaining workplace environmental control systems used in food and drink operations as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.</p>

<p>Carry out the maintenance activities within the limits of your personal authority</p> <p>Carry out the maintenance activities in the specified sequence and in an agreed timescale</p> <p>Report any instances where the maintenance activities cannot be fully met or where there are identified defects outside the planned schedule</p> <p>Complete relevant maintenance records accurately and pass them on to the appropriate person</p> <p>Dispose of waste materials in accordance with safe working practices and approved procedures</p>	
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You need to know and understand:

Evidence of knowledge and understanding should be collected during observation of performance in the workplace. Where it cannot be collected by observing performance, other assessment methods should be used.

1. the health and safety requirements of the area in which the maintenance activity is to take place, and the responsibility these requirements place on you not to compromise food safety
2. the isolation and lock-off procedures or permit-to-work procedure that applies to the equipment being maintained, including critical control points
3. the specific health and safety food and drink precautions to be applied during the maintenance procedure, and their effects on others
4. the requirements of the British Retail Consortium (BRC) guidelines and standards in relationship to the maintenance activities
5. the specific requirements of your customer/client specifications in relationship to the maintenance activities
6. your responsibilities in relationship to Hazard Analysis and Critical Control Points (HACCP, TACCP, VACCP) during the maintenance activities
7. what constitutes a hazardous voltage and how to recognise victims of electric shock
8. how to reduce the risks of a phase to earth shock (including insulated tools, rubber mating and isolating transformers)
9. the importance of wearing protective clothing and other appropriate safety equipment (PPE) during the maintenance process
10. hazards associated with carrying out maintenance activities on workplace environmental equipment/systems (including stored pressure/force/temperature, live electrical connections, using damaged or badly maintained tools and equipment, not following laid-down maintenance procedures), and how to minimise them to reduce any risks
11. how to obtain and interpret drawings, specifications, manufacturers' manuals and

- other documents needed in the maintenance process
12. the basic principles of how the equipment functions, its operation sequence, the working purpose of individual units/components and how they interact
  13. the principles of the equipment's design features for safe operation in a food or drink environment including minimising the chance of contaminants or foreign bodies in the final product
  14. the procedure for obtaining replacement parts, materials and other consumables necessary for the maintenance activities, including their safe/hygienic storage before use
  15. company policy on repair/replacement of components during maintenance process
  16. the procedures and precautions to be adopted to eliminate electrostatic discharge (ESD) hazards
  17. the sequence to be adopted for the dismantling/reassembly of various types of assemblies
  18. the methods and techniques used to dismantle/assemble workplace environmental control equipment (including unplugging, de-soldering removal of screwed, clamped and crimped connections)
  19. methods of checking that components are fit for purpose, how to identify defects and wear characteristics, and the need to replace 'lived' or consumable items (including batteries, lamps, filters, seals and gaskets)
  20. how to make adjustments to components/assemblies to ensure they function correctly
  21. methods of removing and replacing components and units without damaging the system and infrastructure
  22. how to check that tools and equipment are free from damage or defects, are in a safe and usable condition, and are configured correctly for their intended purpose
  23. the processes in place to segregate the tools and equipment used into high or low risk areas
  24. the checks required to ensure that all tools, materials and components are all accountable before operating the equipment
  25. the cleaning requirements/policies in place before returning the equipment into full operational production
  26. the generation of maintenance documentation and/or reports following the maintenance activity
  27. the equipment operating and control procedures to be applied during the maintenance activity
  28. how to use lifting and handling equipment correctly and safely in the maintenance activity
  29. the problems associated with the maintenance activity, and how they can be overcome
  30. the organisational procedure to be adopted for the safe disposal of waste of all types of materials including any spoiled food or drink products
  31. the extent of your own authority and to whom you should report if you have problems that you cannot resolve

Evidence of performance may employ examples of the following assessment:

- observation
- written and oral questioning;
- evidence from company systems (e.g. Food Safety Management System)
- reviewing the outcomes of work

- checking any records of documents completed
- checking accounts of work that the candidate or others have written