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## Overview

This Standard is about carrying out maintenance work on treatment processing plant and equipment to ensure the treatment process operates efficiently.

It includes shutting down and isolating equipment, operating plant and equipment without the use of computer systems, carrying out maintenance, monitoring safety, reporting defects and malfunctions and disposing of waste.

This Standard is suitable for operators carrying out first line maintenance as well as third party contractors carrying out maintenance on water, waste water, or sludge treatment processing plant and equipment.

## Performance criteria

*You must be able to:*

1. arrange for all materials, tools and parts to be available as recommended by manufacturers and in line with organisational requirements
2. shut down or isolate, or request designated people to shut down or isolate, electrical and mechanical instruments and equipment being worked on
3. operate treatment processes without the use of computer systems, or where there is a computer failure, to the required standard
4. carry out maintenance within agreed timescales and in the specified sequence using procedures specific to the site
5. follow manufacturers' and organisational specifications and safety procedures for using instruments and equipment
6. check that safety monitoring procedures and equipment are in place and functioning throughout the maintenance work
7. make sure that work is carried out using equipment, tools and procedures specific to the site
8. restore plant and equipment to specified operational performance when maintenance is finished, in line with organisational requirements and safety procedures
9. make sure waste materials and unwanted components are disposed of in accordance with safe working practices and approved procedures
10. report malfunctions of instrumentation, equipment or the plant environment to the designated people without delay
11. report malfunctions and maintenance requirements which are outside the responsibility for your job role and which require designated skilled people or maintenance work
12. report any instances where maintenance activities cannot be met or where defects are identified
13. provide maintenance reports to designated people where decisions outside your authority are required
14. use performance checks, observation, noise, heat, vibration and remote monitoring to check for malfunctions or other maintenance which might be required
15. inform affected people when plant and equipment is to be shut down and when to expect plant and equipment to be re-started and re-commissioned

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16. issue and display safety warnings in advance of operational changes to plant and equipment
  17. record maintenance work in the designated place
  18. store maintenance records in an auditable format
  19. provide access to maintenance records on request

## Knowledge and understanding

*You need to know and understand:*

1. the organisation's process for safe working practices when dealing with equipment, instrumentation and environment, including lone working
2. the role and purpose of data audit trails in quality assurance, health and safety and regulatory requirements
3. the organisation's operation and maintenance methods and procedures and consequences of carrying out maintenance incorrectly and out with limits of responsibility and authority
4. who to contact when maintenance and problems affecting treatment operations occur
5. procedures and the factors to be considered for isolation, diverting flows, bypassing treatment process units, operating temporary plant and shut down of plant and equipment, and who has authority to carry this out
6. typical and unusual problems which may occur during maintenance and how these can be resolved
7. the need for information which is provided to other people relating to maintenance activities
8. how to source materials and parts
9. the characteristics of faulty equipment and instrumentation and the outcome of equipment and instrumentation breakdown
10. why it is important to comply with the organisation's confidentiality policies and cyber security protocols
11. the organisation's process for operating treatment processes when there is a computer system failure
12. the impact of changes in the catchment or distribution system on treatment process operations
13. why it is important to maintain site security
14. mechanical and electrical principles for maintenance of treatment process plant and equipment
15. the organisation's procedures for recording and storing information
16. how and when to produce data in text, tabular and graphical formats and how to interpret it
17. the treatment process that the equipment being worked on relates to, and how the work may impact the performance or efficiency of that process

EUSTPC03

Carry out the maintenance of treatment processing plant and equipment



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## Glossary

EUSTPC03

Carry out the maintenance of treatment processing plant and equipment



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**Developed by** Energy & Utility Skills

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**Relevant Occupations** Engineering; Plant and Machine Operatives; Plant Maintenance

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**Suite** Treatment Processing and Control in the Water Industry

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