

Take samples and measurements for quality assurance purposes

Overview

This standard is about taking samples and measurements for quality assurance purposes. It may require travel to different sampling and measurement locations.

It includes preparing sampling equipment reagents and containers prior to use, taking representative samples and measurements and correctly labelling them, disposing of any waste products safely, transporting samples and equipment and delivering samples as required.

The standard is suitable for operatives at water, waste water and sludge treatment processing plants and for water distribution samplers.

Take samples and measurements for quality assurance purposes

Performance criteria

You must be able to:

1. record details of planned sampling and measurement work in accordance with the organisation's procedures
2. check that the condition of equipment and how it is stored conforms to manufacturers' specifications and organisational procedures
3. check that sample containers and labels are suitable for the planned work
4. use personal protective equipment (PPE) that it is specified for the work, checking its condition before use
5. check that there is provision to dispose of waste materials in accordance with safety requirements
6. resolve any difficulties connected to travelling to different sampling and measurement locations
7. use the equipment and containers to take and transport samples as specified in organisational procedures
8. handle materials, equipment and samples in accordance with organisational procedures
9. clean equipment after use and before returning it to storage as specified in organisational procedures
10. store equipment and materials to be re-used in the designated place(s) as specified in organisational procedures
11. enter and exit the sampling and measurement locations in accordance with organisational procedures
12. prepare containers, reagents and any portable or other equipment, making sure that reagents are within date
13. take samples and measurements at the position and time specified in organisational procedures
14. take samples and measurements using methods specified in organisational procedures
15. deal with any samples or results that are not as expected in accordance with organisational procedures
16. label samples according to organisational procedures
17. take samples and measurements in accordance with hygiene and safety requirements
18. dispose of any waste in the designated place and in accordance with organisational procedures
19. deliver samples to the designated person or place
20. access, exit and move around the sampling locations in accordance with the organisation's procedures
21. maintain records of successful and aborted activities in accordance with organisational procedures and in the format for audit and quality assurance purposes
22. report any defective or unsafe sampling and measuring equipment to the designated person in accordance with organisational procedures

Take samples and measurements for quality assurance purposes

- 23. follow security procedures in accordance with organisational protocols and policies
- 24. record and report result of measurements which are outside the expected range to the designated people in accordance with organisational procedures

Knowledge and understanding

You need to know and understand:

1. water industry legislation, standards, codes of practice, and industry regulations for health, safety, and hygiene in relation to your job role
2. water industry legislation, standards, codes of practice, and industry regulations for quality and environmental protection and measures to reduce harmful emissions and substances in relation to your job role
3. the organisation's quality assurance procedures, and the factors which can affect the quality of sampling and measurement work
4. the organisation's process for safe working practices when dealing with equipment, instrumentation and environment, including lone working and personal protective equipment (PPE)
5. legal powers of access and the organisation's procedures for gaining access to sampling and measurement locations
6. the importance of using transport and storing equipment, materials and samples securely to prevent contamination of samples and the implications of contamination
7. types and use of sampling and measurement equipment and other materials, and the implications of using unspecified or defective equipment or failing to report a defect
8. the importance of maintaining sampling and measurement equipment and calibrating it where required
9. the importance of disposing of waste and reagents and the dangers of disposing of them incorrectly
10. the importance of identifying abnormalities in measurement results and the impacts to the customer
11. methods to deal with samples or results that are not as expected included confirming readings, re-testing and investigating sample points
12. the organisation's reporting procedures and the implications of not reporting sampling and measurement results outside the expected range
13. the organisation's customer service procedures
14. the steps involved in recording sample and measurement results
15. the steps involved in efficient work scheduling and planning of own daily work activities
16. the steps involved in compiling, administering and filing of records and reports
17. the importance of using data for quality assurance, monitoring, and audit
18. the role and purpose of data audit trails and the importance of using and maintaining them
19. the steps involved in recognising inaccurate information
20. the importance of storing information and documentation in the correct location

Take samples and measurements for quality assurance purposes

21. the way sample information is used by other people
22. how the information relating to sampling and measurement activities is provided to and used by other people
23. the importance of supplying accurate and legible information and in a designated format within identified time
24. the importance of ensuring the sample is taken at the time and in circumstances to ensure the sample is representative
25. protocols and policies for confidentiality, cyber security and site security and why they are important

Take samples and measurements for quality assurance purposes

Developed by	Energy & Utility Skills
Version Number	3
Date Approved	31 Mar 2024
Indicative Review Date	31 Mar 2027
Validity	Current
Status	Original
Originating Organisation	Energy & Utility Skills
Original URN	EUSTPC07
Relevant Occupations	Engineering, Science and Engineering Technicians, Water Processing Operative
Suite	Treatment Processing and Control in the Water Industry, Water Supply Distribution, Water Network Construction Operations
Keywords	sampling, samples, quality assurance, duty of care, hazard, risks, water, waste water, sludge, treatment, processing