

Overview

This standard is about carrying out maintenance on sewage pumping plant and equipment. Maintenance can be planned as part of a maintenance routine or unplanned in response to identified or unforeseen problems.

It involves shutting down or safely isolating equipment, carrying out maintenance, monitoring safety, reporting defects and malfunctions and disposing of waste.

This Standard is for operatives in sewage pumping stations who carry out first line operational maintenance of sewage pumping plant and equipment.

Performance criteria

You must be able to:

1. check all equipment, materials, tools and parts recommended by manufacturers are available and comply with organisational requirements before planned or unforeseen maintenance work commences
2. shut down or isolate, or request designated people to shut down or isolate, plant or equipment being worked on in line with permits to work and safe systems of work
3. inform affected people when plant and equipment is to be shut down, the duration of shutdown and when plant and equipment will be re-started and recommissioned
4. display predetermined safety warnings in visible locations in advance of planned or unforeseen maintenance activities
5. carry out planned or unforeseen maintenance in line with site specific organisational procedures and safe systems of work and within the timescales and sequence specified in maintenance schedules
6. use instruments and monitoring equipment to carry out planned or unforeseen maintenance in line with manufacturers' and organisational specifications and safety procedures
7. use instrumentation and monitoring equipment to inform operatives of planned and unforeseen maintenance that will impact on their work activities
8. use relevant tests, checks and the results of monitoring activity to check for unforeseen malfunctions or other maintenance requirements
9. monitor site conditions throughout planned or unforeseen maintenance work to ensure it poses no risk to workers, site or environment
10. restore plant and equipment to specified operational performance when planned or unforeseen maintenance is finished, in accordance with organisational requirements and safety procedures
11. dispose of waste materials and unwanted parts in accordance with safe working practices, organisational procedures and environmental legislation
12. report mechanical or electrical malfunctions or problems with maintenance activities which you cannot resolve in line with organisational procedures
13. complete and store maintenance records and reports in accordance with organisational procedures, providing access to designated people on request

Knowledge and understanding

You need to know and understand:

1. regulatory and organisational procedures relevant to the maintenance you are undertaking including those relating to health, safety, security, the environment and waste
2. the risk of disease or injury and associated procedures and control measures for working in confined spaces, at height, in excavations, lone-working, on public highways/roadways, in dangerous atmospheres, in aerobic and anaerobic conditions, with increasing water levels, with industrial waste or trade effluent, uncontrolled discharges into the system, manual handling, vermin, known diseases, operation of mechanical equipment
3. the components of sewage pumping plant and equipment and pump control equipment, their functions and typical operational sequences when operating manually and automatically
4. how to source and check equipment, materials, tools, parts and consumables including verifying inspection dates and frequencies
5. the characteristics of faulty monitoring equipment and instrumentation and the outcome of equipment and instrumentation breakdown during unforeseen or planned maintenance activities
6. where to obtain and how to interpret drawings, specifications, manufacturers' manuals and maintenance schedules
7. requirements for safe work zones to protect the workforce and any members of the public
8. predetermined actions to take in instances of safe zone infringements
9. how to carry out safely and interpret performance tests, operational checks, remote monitoring and sensory checks including observation, noise, heat, vibration
10. the common causes of faults and damage to sewage pumping plant and equipment and actions to take to resolve them which follow safe systems of work, including making adjustments, replacing parts, lubrication, cleaning and removing blockages
11. environmentally responsible waste disposal procedures including for oils and chemicals and their containers, used gloves or soiled PPE, metal components, rags, grit, fat
12. safe procedures and operational factors to be considered for isolation, permit to work, diverting flows, operating temporary plant and shut down of plant and

equipment, and who has authority to carry this out

13. typical and unusual mechanical and electrical malfunctions and other problems which may occur during maintenance, how they can be avoided safely and the scope of your responsibility for resolving them

14. who may be affected by planned and unforeseen maintenance work and organisational procedures for communicating with them including control room, onsite colleagues or contractors, upstream or downstream asset controllers, customers

15. who to report progress or problems that you cannot resolve to and the organisational procedures for doing so

16. the purpose of maintenance records including informing designated people of planned and reactive tasks, improving the operation of assets

17. the organisation's procedures for recording and storing information and their purpose in audit trails for quality assurance, health and safety, regulatory and environmental requirements

Carry out maintenance of sewage pumping plant and equipment

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