



Unit title	Inspect and Maintain Sewers and Ancillaries
SQA code	H8MH 04
SCQF level	5
SCQF credit points	9
SSC ref	EUS SD8

History of changes

Publication date: Feb 2015

Version: completed by SQA

Version number	Date	Description	Authorised by

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Title	Inspect and Maintain Sewers and Ancillaries	
Learning Outcomes		Assessment Criteria
The learner will:		The learner can:
1	Be able to prepare sewers and ancillaries for inspection and maintenance in accordance with approved procedures and practices.	<p>1.1 Locate position of sewers and ancillaries in accordance with approved procedures and practices to include those requiring:</p> <ul style="list-style-type: none"> (a) Inspection. (b) Rectification. (c) Repair. <p>1.2 Select the water supply in accordance with approved procedures and practices.</p> <p>1.3 Establish inspection and maintenance requirements of sewers and ancillaries in accordance with approved procedures and practices.</p> <p>1.4 Confirm materials, tools and equipment are appropriate for work activities.</p> <p>1.5 Notify individuals and organisations affected by work activities in accordance with relevant company procedures.</p> <p>1.6 Report defects and deficiencies outside the scope of the job holder in accordance with relevant company procedures.</p> <p>1.7 Identify and report external factors which prevent jobs being carried out at the present time.</p> <p>1.8 Record work activities in accordance with relevant company procedures.</p> <p>1.9 Ensure work activities comply with approved procedures and practices at all times.</p>

<p>2 Be able to carry out inspection and maintenance of sewers and ancillaries.</p>	<p>2.1 Prepare tools and equipment in accordance with approved procedures and practices.</p> <p>2.2 Carry out inspection and operational maintenance of sewers and ancillaries in accordance with approved procedures and practices.</p> <p>2.3 Report outcomes of work activities in accordance with relevant company procedures.</p> <p>2.4 Carry out inspection of maintained components in accordance with approved procedures and practices and relevant technical specification.</p> <p>2.5 Identify risks associated with confined spaces, and the associated control measures.</p> <p>2.6 Undertake, record and report work activities and outcomes in accordance with relevant company procedures.</p>
<p>3 Be able to identify and report condition of sewers and ancillaries outside the scope of the job holder in accordance with approved procedures and practices.</p>	<p>3.1 Identify reportable defects and conditions outside the scope of the job holder.</p> <p>3.2 Check that reportable defects and conditions are notified in accordance with relevant company procedures.</p> <p>3.3 Recommend possible temporary arrangements to protect the operation and condition of sewers and ancillaries, in accordance with approved procedures and practices.</p> <p>3.4 Confirm records of reportable defects and conditions are accurate and legible and notified to the relevant person.</p> <p>3.5 Ensure work activities comply with approved procedures and practices at all times.</p>

<p>4 Understand how to carry out inspection and operational maintenance of sewers and ancillaries in accordance with approved procedures and practices.</p>	<p>4.1 Describe risks and the necessary control measures associated with working in confined spaces in line with associated procedures.</p> <p>4.2 Describe how to identify the condition of sewers and ancillaries.</p> <p>4.3 Describe the maintenance requirements relating to different types of fault and damage on sewers and ancillaries.</p> <p>4.4 Explain risks associated with manual handling and the appropriate control measures.</p> <p>4.5 Explain the implications of inadequate inspection and operational maintenance for the operation of the system.</p> <p>4.6 Explain how to work out what the problem is from the tests carried out.</p> <p>4.7 List the technical specifications for: (a) Tools and equipment operational maintenance procedures. (b) Verification. (c) Testing.</p> <p>4.8 Explain how to identify reportable defects and conditions in the sewer.</p> <p>4.9 Identify different types of temporary arrangements to recommend in different circumstances.</p> <p>4.10 Explain the effects of influents on sewer condition.</p> <p>4.11 Explain the implications of flooding and pollution.</p>
<p>5 Understand the procedures for inspection and operational maintenance of sewers.</p>	<p>5.1 Explain the correct procedures for obtaining and using a water supply.</p>

	<p>5.2 Describe methods that could be used for:</p> <ul style="list-style-type: none">(a) Operational maintenance of sewers and ancillaries.(b) Inspection of sewers and ancillaries. <p>5.3 Describe the reporting procedures for inspection and operational maintenance activities.</p> <p>5.4 Explain preparation procedures for inspection and operational maintenance of sewers and ancillaries.</p> <p>5.5 Describe correct procedures for using tools and equipment.</p> <p>5.6 Explain procedures for recording and notifying reportable defects and conditions.</p> <p>5.7 Explain the implications of not recording and notifying reportable defects and conditions correctly.</p>
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Additional information about the Unit

Unit purpose and aim(s)

This unit allows the learner to demonstrate competence in carrying out inspections and operational maintenance on sewers and ancillaries. Within this unit, operational maintenance is taken to mean straightforward activities on sewers, un-powered and electrically isolated ancillaries such as cleaning and lubrication.

The learner must be aware of the risks associated with carrying out sewerage maintenance operations, and must follow safe working practices throughout any work activities, in line with health, safety and environmental requirements and company policies.

Details of the relationship between the Unit and relevant national occupational standards (if appropriate)

Energy & Utility Skills. Suite: Sewerage Maintenance Unit: 019NSM5 Carry out inspection and operational maintenance of sewers and ancillaries.

Details of the relationship between the Unit and other standards or curricula (if appropriate)

Assessment requirements specified by a sector or regulatory body (if appropriate)

Some terms, used in the assessment criteria, cover a range of situations, as follows:

1. **Approved procedures and practices** are:
 - (a) Regulatory.
 - (b) Health, Safety & Environment.
 - (c) Relevant company procedures.
2. **External factors** are:
 - (a) Weather.
 - (b) Traffic.
 - (c) Access.
 - (d) Safety.
 - (e) Working environment.
 - (f) Environmental issues.
3. **Reportable defects and conditions** include:
 - (a) Major structural damage.
 - (b) Serious blockage.
 - (c) Flooding.
 - (d) Danger to public health.
 - (e) Pollution.
 - (f) Dangerous atmospheres.
 - (g) Presence of vermin.

4. **Inspection** covers:
 - (a) Visual inspection.
 - (b) Performance test.
5. **Inspection and maintenance requirements** include:
 - (a) Visual inspection.
 - (b) Performance test.
 - (c) Operational checks.
 - (d) Lubrication.
6. **Operational maintenance** includes:
 - (a) Operational checks.
 - (b) Lubrication.
 - (c) Cleaning.
7. **Sewers and ancillaries** include:
 - (a) Sewers.
 - (b) Drains.
 - (c) Ancillaries (air valve, combined storm overflow, non-return valve, overflow outfall, interceptor, etc.)
 - (d) Unpowered and electrically isolated ancillaries.
8. **Temporary arrangements** include:
 - (a) Flow diversion.
 - (b) Temporary pumping.
 - (c) Isolation to protect work area.
9. **Tools and equipment** include:
 - (a) Cutting equipment.
 - (b) Hand tools.
 - (c) Inspection equipment.
 - (d) Cleaning tools.

Some terms in the assessment criteria cover a range of situations. Refer to the full assessment requirements and guidance for this unit for a detailed list of terms and definitions, agreed with Energy & Utility Skills.

This unit must be assessed in line with the Energy & Utility Skills assessment strategy for vocational qualifications based on its national occupational standards.

The learner must either be observed by an assessor on at least one occasion, or must provide an observation report or witness testimony from their line manager as part of the evidence for this unit.

All evidence produced for this unit must come from real work activities undertaken by the learner in their workplace. Simulated activities or assessment in a realistic working environment may not be used for assessment of the unit.

Assessment (evidence) Requirements

Workplace evidence

The performance evidence used for this Unit must come from the learner's own work activities, both in their own 'reporting base' and from their sewer inspection and maintenance activities. Simulated activities or activities carried out in a realistic working environment, for the purposes of assessment, may not be used for the assessment of this Unit.

Knowledge and understanding

The knowledge and understanding requirements for this Unit must be covered in full. The learner may demonstrate considerable knowledge through their workplace performance and during observed assessments, but it is likely that some assessor questioning will be needed to confirm that all knowledge requirements are met. The centre may use oral and/or written questioning to cover the knowledge requirements.

Guidance on Instruments of Assessment

The evidence for this Unit is likely to be generated through a mixture of observation reports, assessor-guided discussions and questioning, and workplace records, reports, or documentation. The evidence must include an assessor observation report or a witness statement or report that has been assessed against the Unit requirements.