



Australian Government

Department of Education, Employment and Workplace Relations

UEGNSG301A Coat gas pipelines

Release: 1

UEGNSG301A Coat gas pipelines

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

1)

This Unit covers the undertaking of inspections, testing and coating of steel pipelines in a utilities industry workplace. It includes the use of testing and application equipment; coatings used; coating defect assessment surveys; MSDS information and handling of chemicals/flammable liquids.

Application of the Unit

Not Applicable

Licensing/Regulatory Information

License to practice

3.1)

The skills and knowledge described in this unit are not subject to licence regulation other than those directly related to Occupational Health and Safety, gas/electricity/water industry safety and compliance, industrial relations, environmental protection, telecommunications, anti discrimination and training. Commonwealth, State/Territory or Local Government legislation and regulations may exist that limits the age of persons who can operate certain equipment.

Pre-Requisites

Prerequisite Unit(s) 2)

Competencies 2.1)

Granting of competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed:

Nil

Employability Skills Information

Refer to the Evidence Guide

Elements and Performance Criteria Pre-Content

5) Elements describe the essential outcomes of a competency standard unit. Performance Criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT		PERFORMANCE CRITERIA	
1	Prepare pipelines for coatings, inspection and testing	1.1	Work instructions are received and confirmed
		1.2	Relevant requirements and established procedures to be followed for the work to be performed are discussed with all persons to establish and confirm the work schedule
		1.3	OHS, environmental and sustainable energy policies and procedures to be followed for the work to be performed are received and confirmed

ELEMENT	PERFORMANCE CRITERIA
1.4	Suggestions to assist with the correct and safe coating of pipelines are made to others involved in the work
1.5	Appropriate persons are consulted to ensure the work is coordinated effectively and hazards identified, risks assessed, control measures identified, confirmed and reported according to established procedures
1.6	Pipeline coating and related inspection and tests are planned for under the relevant work permit and confirmed according to requirements and established procedures with relevant persons
1.7	Resources including equipment, tools and personal protective equipment required for the job are obtained and in working order according to established procedures
1.8	Relevant responsibilities associated with First Aid and other related work safety procedures at the worksite are confirmed in accordance with requirements and established procedures to ensure safety measures and followed in the instance of an incident
1.9	Client issues are referred to appropriate persons in accordance with industry and community standards
1.10	Site is prepared according to given instructions and the work schedule for a quality outcome and to minimise risk and damage to property, commerce and individuals in accordance with established procedures
2 Inspect, test and coat pipeline	2.1 OHS policies and procedures and safe work practices are followed to eliminate or minimise incidents and hazards
	2.2 Lifting, climbing, working in confined spaces, excavations, trenches, or aloft, and use of power tools, techniques and practices are safely followed in accordance with given instructions and according to requirements confirmed to

ELEMENT	PERFORMANCE CRITERIA
	eliminate the prospects of incidents
	2.3 Operational knowledge for the coating of pipelines is confirmed to ensure completion in an agreed timeframe and to quality standards with a minimum of waste according to requirements and established procedures
	2.4 Pipeline coatings are visually inspected to determine condition in accordance with given instructions and established procedures
	2.5 Pipeline is tested to determine condition in accordance with requirements and established procedures
	2.6 Pipeline is coated where required in accordance with established procedures
	2.7 Hazard warnings and safety signs are recognised and hazards are assessed and OHS risks are reported to the immediate authorised persons for directions according to established procedures
	2.8 Non-routine events are referred to the immediate authorised persons for directions according to established procedures
	2.9 Information related to status and any irregularities are reported and recorded using acquired known solutions and skills related to routine procedures to ensure work instructions and established procedures are met
	2.10 Ongoing checks of quality of the work are undertaken in accordance with given instructions and established procedures
3 Complete inspection/test/coating of pipeline	3.1 Work area is isolated to enable repair to proceed against work schedule and anomalies reported to authorised persons in accordance with established procedures
	3.2 Accidents and incidents are actioned and reported to authorised persons in accordance with established procedures

ELEMENT**PERFORMANCE CRITERIA**

- 3.3 Coating materials applied to the pipeline, work site is rehabilitated, cleaned up and made safe in accordance with given instructions and established procedures
- 3.4 Tools, equipment and any surplus resources and materials are, where appropriate, cleaned, checked and returned to storage in accordance with established procedures
- 3.5 Appropriate persons are notified of work completion according to established procedures
- 3.6 Work completion records, report forms and data sheets are completed accurately in accordance with given instructions and established procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

6) This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of safe working practices for the coating pipelines. The extent of the essential knowledge and associated skills (EKAS) required is given in Volume 2 - Part 2.2 EKAS. It forms an integral part of this unit.

- G 2.1.1 Working in the gas sector
- G 2.1.2 Identify roles of statutory authorities
- G 2.1.3 Identify employment roles and responsibilities
- G 2.1.4 Apply relevant OHS legislation, regulations, policies and procedures
- G 2.1.5 Maintain safe, clean and healthy workplace
- G 2.1.6 Work safely with hazardous materials and equipment

REQUIRED SKILLS AND KNOWLEDGE

- G 2.1.7 Apply safe manual handling techniques in the workplace
- G 2.1.8 Control traffic at the work-site
- G 2.1.9 Respond to emergency and accident situations
- G 2.1.10 Apply relevant environmental legislation, regulations and codes of practice
- G 2.1.11 Protect and maintain the environment
- G 2.1.12 Communicate in the workplace
- G 2.1.13 Communicate effectively in a team
- G 2.1.14 Read and interpret workplace documents
- G 2.1.15 Complete routine workplace forms, memos and reports
- G 2.1.16 Identify requirements of work activity
- G 2.1.17 Apply basic planning skills
- G 2.1.18 Conduct tasks to complete work activity
- G 2.1.19 Review work activity
- G 2.1.20 Customer relations
- G 2.1.21 Problem solving
- G 2.1.22 Confined spaces
- G 2.1.24 Work site environmental impact
- G 2.3.1 Identify pipeline coatings
- G 2.3.2 Describe OHS and environmental requirements
- G 2.3.3 Apply and test new coating
- G 2.3.4 Determine pipeline locations
- G 2.3.5 Operate tools and equipment for testing/inspecting pipelines

REQUIRED SKILLS AND KNOWLEDGE

- G 2.3.6 Establish and reinstate work site for pipeline inspection and coating
- G 2.3.7 Inspect pipeline coating

Evidence Guide

EVIDENCE GUIDE

8) The Evidence Guide forms an integral part of this Unit and shall be used in conjunction with all components parts of the unit and performed in accordance with the Assessment Guidelines of this Training Package.

Overview of Assessment

8.1)

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the Industry's preferred model for apprenticeships. However, where summative (or final) assessment is used it is to include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. It is recognised that, in some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accord with Industry regulatory policy in this regard.

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity, electrical equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. Hence, sources of evidence need to be 'rich' in nature so as to minimise error in judgment.

Activities associated with normal every day work have a bearing on the decision as to how much and how detailed the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practiced. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are included for Assessors in the Assessment Guidelines of this Training Package.

Critical aspects of evidence required to demonstrate competency in this unit

8.2)

Before the critical aspects of evidence are considered all prerequisites shall be met.

Evidence for competence in this unit shall be considered holistically. Each element and associated Performance Criteria shall be demonstrated on at least two occasions in accordance with the 'Assessment Guidelines UEG06'. Evidence shall also comprise:

- A representative body of Performance Criteria demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:
 - Implement Occupational Health and Safety workplace procedures and practices including the use of risk control measures as specified in the Performance Criteria and range
 - Apply sustainable energy principles and practices as specified in the Performance Criteria and range
 - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit to such an extent that the learner's performance outcome is reported in accordance with the preferred approach; namely a percentile graded result, where required by the regulated environment
 - Demonstrate an appropriate level of skills enabling employment
 - Conduct work observing the relevant anti-discrimination legislation, regulations, policies and workplace procedures
 - Demonstrate performance across a representative range of contexts from the prescribed items below.

Range of tools/equipment/materials/procedures/workplaces/other variables		
Group No	The minimum number of items on which skill is to be demonstrated	Item List
A	At least 7	Abrasive blasting equipment Compressors Low voltage/high voltage

		holiday detectors Paint thickness coating gauges and meters Pipe wrapping machines Spray painting equipment Abrasive blast comparators and standards Densitometers Coating defect assessment survey equipment (DCVG method equipment, person technique method equipment) Hand/power tools Heating torch
B	All	Inspection of pipeline coatings Testing pipeline coatings Safe handling procedures for a range of dangerous and toxic chemicals and compounds OHS and environmental legislative requirements associated with the use, application and disposal of coating materials Coating defect assessment and application methods
C	At least one occasion	Deal with an unplanned event by drawing on essential knowledge and associated skills to provide appropriate solutions incorporated in the holistic assessment with the above listed items

Context of and specific resources for assessment**8.3)**

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to undertake actual work as prescribed by this Competency Standard Unit.
- Appropriate environmental regulation and work practices.
- Appropriate organisational requirements.
- Appropriate work environment, equipment and tools.

In addition to the resources listed above, in Context of and specific resources for assessment, evidence should show demonstrated competency in coating gas pipelines.

Assessment of this competency must also be undertaken in either an actual workplace or under a simulated work environment. Assessment must also integrate the Key Competencies .

Method of assessment**8.4)**

This Competency Standard Unit shall be assessed by methods given in Volume 1, Part 3 'Assessment Guidelines'.

Note:

Competent performance with inherent safe working practices is expected in the Industry to which this Competency Standard Unit applies. This requires that the specified Essential Knowledge and Associated Skills are assessed in a structured environment which is primarily intended for learning/assessment and incorporates all necessary equipment and facilities for learners to develop and demonstrate the essential knowledge and associated skills described in this unit.

Concurrent assessment and relationship with other units**8.5)**

There are no recommended concurrent assessments with this unit, however in some cases efficiencies may be gained in terms of learning and assessment effort being concurrently managed with allied Competency Standard Units where listed.

UEGNSG102A Carry out work activities in a utilities industry work environment

UEGNSG103A Comply with workplace OHS procedures

and practices

UEGNSG104A Comply with environmental policies and procedures

UEGNSG105A Establish the work site

BSBCMN302A Organise personal work priorities and professional development

BSBFLM312A Contribute to team effectiveness

BSBFLM303A Contribute to effective workplace relationships

BSBCMN311A Maintain workplace safety

Or, with the following units of competency, if delivered in the Certificate IV in Gas Industry Transmission Pipeline qualification:

UEGNSG302A Maintain pipeline easements

UEGNSG303A Ground transmission pipeline surveillance

UEGNSG308A Identify, evaluate and control threats to transmission pipelines

UEGNSG309A First on-site emergency response

UEGNSG310 Supervise and monitor contract staff

UEGNSG311A Site control of third party works in the vicinity of a transmission pipeline

Key Competencies 8.6)

Evidence that particular Key Competencies have been achieved within this Competency Standard Unit is in the context of the following Performance Criteria of evidence. See Volume 2, Part 4 for an explanation of Key Competencies and levels of this Training Package.

Key Competencies	Example of Application	Performance Level
How are ideas and information communicated within this	Refer to the following Performance Criteria for examples of application: 1.4; 2.8; 3.5	1

competency?		
How can information be collected, analysed and organised?	Refer to the following Performance Criteria for examples of application: 1.5; 2.7; 3.1; 3.6	2
How are activities planned and organised?	Refer to the following Performance Criteria for examples of application: 1.2	1
How is team work used within this competency?	Refer to the following Performance Criteria for examples of application: 1.2; 1.4	2
How are mathematical ideas and techniques used?	Refer to the following Performance Criteria for examples of application:	N/A
How are problem solving skills applied?	Refer to the following Performance Criteria for examples of application:	N/A
How is use of technology applied?	Refer to the following Performance Criteria for examples of application:	N/A

Skills Enabling Employment

8.7)

Evidence that competency in this unit incorporates skills enabling employment is in the context of the following performance. See Volume 2, Part 5 for definitions and an explanation of skills enabling employment.

Skills for Employment		Example of Application
1	Developing and using skills within a real workplace	Refer to the following Performance Criteria for examples of application: All

2	Learning to learn in the workplace	Refer to the following Performance Criteria for examples of application: 1.1; 1.5
3	Reflecting on the outcome and process of work task	Refer to the following Performance Criteria for examples of application: 3.1; 3.6
4	Interacting and understanding of the context of the work task	Refer to the following Performance Criteria for examples of application: 1.2; 2.7; 2.10; 3.3
5	Planning and organising the meaningful work task	Refer to the following Performance Criteria for examples of application: 1.4; 1.5; 1.7
6	Performing the work task in non-routine or contingent situations	Refer to the following Performance Criteria for examples of application: 2.8; 2.9

Range Statement

RANGE STATEMENT

7) This relates to the competency standard unit as a whole providing the range of contexts and conditions to which the Performance Criteria apply. It allows for different work environments and situations that will affect performance.

This Competency Standard Unit shall/may be demonstrated in relation to the coating of gas pipelines.

The following constants and variables included in the element/Performance Criteria in this unit are fully described in the Definitions Section of this volume and form an integral part of the Range Statement of this unit:

Testing and application equipment (2)

Coatings (2)

Coating defect assessment surveys (2)

MSDS (2)

Unit Sector(s)

Not Applicable

Competency Field

Literacy and numeracy skills 2.2)

Participants are best equipped to achieve this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 'Literacy and Numeracy'

Reading	3	Writing	3	Numeracy	3
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Application of the Unit 3)

This competency standard shall apply to any basic and safe work site where Gas Industry operations occur. It could also apply, where applicable to other workplaces in the electricity supply industry (transmission and distribution and generation), the electrotechnology

Literacy and numeracy skills**2.2)**

Participants are best equipped to achieve this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 'Literacy and Numeracy'

industry and the water industry, subject to all Occupational Health and Safety and duty of care requirements being met for the workplace.

Custom Content Section**Competency Field****4)**

Transmission.