



Australian Government

Department of Education, Employment and Workplace Relations

UEGNSG303A Gas transmission pipeline surveillance

Release: 1

UEGNSG303A Gas transmission pipeline surveillance

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

1)

This Competency Standard Unit covers the surveillance of Gas Industry pipelines. The competency standard is applied against the procedures found under AS 2885.3 2001 Australian and New Zealand Standard. The competency standard also refers to threat mitigation through identification of system non-conformance. The competency standard outlines the areas to be monitored; inspection of areas; system's pipe work; structures; fittings; equipment; organisational and statutory requirements and recording and reporting.

Application of the Unit

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

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

License to practice**3.1)**

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 Monitor gas pipeline system performance	<p>1.1 Routine inspection of network is conducted and faults reported in a timely manner against work schedule(s) and established procedures and confirmed if necessary by site inspection</p> <p>1.2 Relevant requirements and established procedures for the work are communicated to all persons</p> <p>1.3 OHS, environmental and sustainable energy policies and procedures related to requirements and established procedures for gas pipeline surveillance are obtained and confirmed for the purposes of the work performed and communicated</p> <p>1.4 Work is prioritised and sequenced following consultation with others for completion within acceptable timeframes and in accordance with established procedures</p> <p>1.5 Risk control measures for identified hazards are prioritised, implemented and monitored against the work schedule</p> <p>1.6 Relevant work permits are obtained to access, isolate/de-energise systems and perform work according to requirements and established procedures</p> <p>1.7 Resources including persons, equipment, tools and personal protective equipment required for gas pipeline surveillance are identified, scheduled and obtained and confirmed in working order</p> <p>1.8 Liaison and communication issues with authorised persons, authorities and clients are resolved and activities coordinated to carry out work</p> <p>1.9 Persons participating in the work, including plant operators and contractors are fully briefed and respective responsibilities confirmed where applicable in accordance with established</p>

ELEMENT	PERFORMANCE CRITERIA
	procedures
2 Identification of gas pipeline system non-conformance	<p data-bbox="549 365 1302 510">2.1 Analysis of information to identify key issues is undertaken as required and information is evaluated for relevance and validity to the requirements</p> <p data-bbox="549 544 1302 689">2.2 Dealings with customers are consistent with standard operating procedures and the special needs of customers are identified and considered in targeting client service</p> <p data-bbox="549 723 1302 902">2.3 Essential Knowledge and Associated Skills for the pipeline surveillance are applied to ensure completion in an agreed timeframe and to quality standards with a minimum of waste according to requirements</p> <p data-bbox="549 936 1302 1048">2.4 Leakages and damaged pipes and fittings are recorded in accordance with the work schedule and established procedures</p> <p data-bbox="549 1081 1302 1227">2.5 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</p> <p data-bbox="549 1261 1302 1373">2.6 Unplanned events in pipeline surveillance are undertaken with the scope of established procedures</p> <p data-bbox="549 1406 1302 1552">2.7 System faults and the operational condition of the network are identified and reported and known solutions are applied using Essential Knowledge and Associated Skills</p> <p data-bbox="549 1585 1302 1758">2.8 Pressure and flow fluctuations outside acceptable limits are investigated and ongoing checks of quality of the work are undertaken in accordance with given instructions and established procedures</p>

ELEMENT	PERFORMANCE CRITERIA
3 Review, record and report on gas pipeline surveillance work	3.1 Solutions are developed based on consideration of relevant information and options and proposed solutions are communicated and implemented as required against works schedule and anomalies reported in accordance with established procedures
	3.2 Accidents and injuries are reported in accordance with requirements and established procedures where applicable
	3.3 Solution is implemented in accordance with standard operating procedures ensuring that action is correctly documented, the transaction is accurately processed and the customer is advised
	3.4 Work completion records, reports and documentation are finalised and processed and appropriate persons notified

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 investigation of billing exceptions/conditions. 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.

- 3.3.1 Consulting appropriate persons to coordinate work and persons
- 3.3.4 Liaise and communicate with relevant authorities
- 3.3.7 Prepare reports
- 3.3.9 Undertake final inspections
- 3.3.10 Notify of completion of work

REQUIRED SKILLS AND KNOWLEDGE

- 3.3.15 Carry out repair work and make amendments or modifications as required
- 3.3.20 Prepare work site for repairs/modification work
- 3.3.36 Perform routine maintenance on high pressure pipelines, facilities and equipment

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.

EVIDENCE GUIDE

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

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EVIDENCE GUIDE

A	All	AS 2885.3 Pipelines-Gas and Liquid Petroleum Gas Operations and Maintenance: Sections 3, 4.3, 5.3.6.1, 5.4.1, 5.4.3, 5.5 Section 6 Threat Mitigation
B	All	Inspection techniques Identifying faults Recording information
C	All	Operating hand held tools Operating power tools Lifting equipment Mechanical excavation equipment Electronic metering systems Recording systems Motorised equipment Communication equipment
D	All	Work utilising relevant OHS legislation, regulations, codes of practice, policies and procedures Apply job safety analysis Maintain a safe and clean workplace Apply safe manual handling techniques Respond to emergency situations Communicate effectively in the workplace Apply basic planning and job completion skills Use of technology

EVIDENCE GUIDE

E	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
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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.

In addition to the resources listed above, in Context of and specific resources for assessment, evidence should show demonstrated competency of ground transmission pipeline surveillance.

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**8.5)**

There are no recommended concurrent assessments with this

EVIDENCE GUIDE

relationship with other units

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.

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|------------|--|
| 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 |

EVIDENCE GUIDE

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 competency?	Refer to the following Performance Criteria for examples of application: 1.8; 2.2; 3.4	3
How can information be collected, analysed and organised?	Refer to the following Performance Criteria for examples of application: 1.1	2
How are activities planned and organised?	Refer to the following Performance Criteria for examples of application: 1.4; 1.7	2
How is team work used within this competency?	Refer to the following Performance Criteria for examples of application: 3.1	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: 3.3	2
How is use of technology applied?	Refer to the following Performance Criteria for examples of application:	N/A

EVIDENCE GUIDE

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: 2.6; 2.7
3	Reflecting on the outcome and process of work task	Refer to the following Performance Criteria for examples of application: 3.3
4	Interacting and understanding of the context of the work task	Refer to the following Performance Criteria for examples of application: 1.4; 1.8
5	Planning and organising the meaningful work task	Refer to the following Performance Criteria for examples of application: 1.4; 1.5; 1.7; 1.8
6	Performing the work task in non-routine or contingent situations	Refer to the following Performance Criteria for examples of application: 2.6

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 gas pipeline surveillance.

The following constants and variables included in the element/Performance Criteria in this unit are fully described in the Definitions Section.

Areas to be monitored

Inspection of areas

System's pipe work

Structures

Fittings

Organisational and statutory requirements (3)

Recording and reporting

Unit Sector(s)

Not Applicable

Literacy and numeracy skills

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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Competency Field

Competency Field 4)
Transmission.