



Australian Government

UEGNSG136A Carry out transmission pipeline construction work activities

Release 1

UEGNSG136A Carry out transmission pipeline construction work activities

Modification History

This unit is a revised version of the UEG11 unit UEGNSG125A Carry out transmission pipeline construction work activities

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Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This unit covers the basic gas transmission pipeline construction work activities in accordance with relevant legislation, standards, codes and established procedures.

This encompasses the phases of work in a gas transmission construction environment, the safety and environmental hazards and the tools necessary to conduct the activities. This may include slinging, welding, trenching, shoring, hydro testing, pipeline coating and coating testing, cathodic protection components, directional drilling

Application of the Unit

Application of the Unit 2)

This competency standard shall apply to any safe work site where Gas Industry operations occur, subject to all Workplace Health and Safety (WHS)/Occupational Health and Safety (OHS) and duty of care requirements being met for the workplace.

This unit is intended as an entry level AQF 2 competency for new entrants in the gas industry. It is suitable for employment-based programs under an approved contract

of training.

Licensing/Regulatory Information

License to practice 3)

During Training:

Competency development activities are subject to regulations directly related to licensing, workplace health and safety/occupational health and safety and where applicable contracts of training such as apprenticeships.

In the workplace:

The skills and knowledge described in this unit are not subject to licence regulation other than those directly related to Workplace Health and Safety/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 operating certain equipment. Other conditions may apply to this competency under State and Territory legislative and regulatory requirements.

Pre-Requisites

Prerequisite Unit(s)

4) Prerequisites:

4.1) CSU(s): Competencies

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

UEGNSG141A	Apply Workplace Health and Safety regulations, codes and practices in the gas industry
UEGNSG005A	Prepare to work in the Australian gas industry
UEGNSG132A	Carry out basic work activities in a gas industry work environment
UEGNSG140A	Apply with environmental policies and procedures in the utilities industry
UEGNSG134A	Establish a utilities infrastructure work site

4.2) Literacy and numeracy skills

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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Employability Skills Information

Employability Skills

5)

This unit contains Employability Skills

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged

Employability Skills

5)

will assist in identifying Employability Skill requirements.

Elements and Performance Criteria Pre-Content

6) 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 to carry out transmission pipeline construction work activities

- 1.1 WHS/OHS and environmental measures for the site are identified, obtained and understood.
- 1.2 Relevant requirements and established procedures for the site are discussed with relevant persons to establish and confirm the work schedule.
- 1.3 WHS/OHS, environmental and sustainable energy policies and procedures are received and confirmed.
- 1.4 Hazards are identified, WHS/OHS risks assessed and control measures are prioritised, implemented and monitored according to established procedures.
- 1.5 Scope of responsibility under the relevant work permit and/or relevant notification is received and confirmed with relevant persons according to requirements and established procedures
- 1.6 Equipment, plant, tools and personal protective equipment needed to do the work are identified, scheduled, obtained and checked for correct operation and safety.
- 1.7 Appropriate persons are consulted to ensure the work is coordinated effectively with others

ELEMENT	PERFORMANCE CRITERIA
	involved
	1.8 Materials, plans, diagrams, drawings and resources required for work are confirmed, scheduled and obtained in accordance with established procedures
	1.9 Site preparation, safety plan and the work schedule are confirmed in accordance with established procedures.
2 Carry out transmission pipeline construction work activities	2.1 WHS/OHS risk control measures, schedule of work and standard operation procedures for carrying out the work are followed
	2.2 Appropriate materials, tools, equipment and measuring devices are selected and used correctly and safely.
	2.3 Hazardous activities such as lifting, climbing, working in confined spaces, excavations, trenches and/or aloft, use of power tools equipment, techniques and practices are conducted in accordance with given instructions and requirements
	2.4 Work is carried out efficiently, to the required standard without waste of materials or damage to apparatus, circuits, the surrounding environment or services and using sustainable energy principles.
	2.5 WHS/OHS risks and incidents are reported to the immediate authorised persons for directions according to established procedures.
	2.6 Procedures for referring non-routine events to the immediate authorised persons for directions are followed
	2.7 Routine quality checks are carried out in accordance with work instructions.

ELEMENT	PERFORMANCE CRITERIA
3 Complete basic work activities and relevant documentation	3.1 WHS/OHS risk control work completion measures and procedures are followed.
	3.2 Work area is tidied and made safe according to established procedures
	3.3 Tools, equipment and any surplus resources and materials are cleaned, checked and securely stored.
	3.4 Appropriate persons are notified of work completion according to established procedures
	3.5 Work completion documentation is completed accurately and provided to the appropriate persons in accordance with established procedures.

Required Skills and Knowledge

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

Evidence shall show that knowledge has been acquired of safe working practices for carrying out work activities in a transmission pipeline construction industry work environment.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies. The extent of the Required Skills and Knowledge required is provided below. It forms an integral part of this unit.

KS01-G136A Transmission pipeline construction

Evidence shall show an understanding of the transmission pipeline construction work activities in accordance with relevant legislation, standards, codes and established procedures to an extent indicated by the following aspects:

T1. Transmission Pipeline construction activity lifecycle

- alignment
- clearing
- excavation
- construction
- testing
- back filling
- reinstatement
- commissioning
- re-vegetation

T2. Transmission pipeline construction activities

- slinging
- welding
- trenching
- shoring
- hydro testing
- pipeline coating and coating testing
- cathodic protection components
- directional drilling

T3. Relevant legislation, regulations, codes

- awareness and knowledge of approvals

T4. Equipment, tools and PPE for transmission construction work

T5. Communication protocols and equipment

T6. Relevant Safety and Environmental hazards and mitigation measures

- signage and marking
- traffic control requirements
- construction risks
- remote area hazards
- drug and alcohol awareness
- treatment of disturbed materials

Evidence Guide

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

Overview of Assessment

8.1) Overview:

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 and, 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**

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 - UEG11". 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 Workplace Health and Safety/Occupational Health and Safety workplace procedures and practices including the use of risk control measures as specified in the performance criteria and range; and
 - Apply sustainable energy principles and practices as specified in the performance criteria and range; and
 - Demonstrate an understanding of the required skills and knowledge 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 employability skills; and
 - Conduct work observing the relevant anti-discrimination legislation, regulations, policies and workplace procedures; and
- Demonstrated performance across a representative range of contexts from the prescribed items below:
 - Carry out transmission pipeline construction work activities as described in 9.) Range Statement and including:

Range of tools/equipment/procedures/workplace		
Group	The minimum number of items on which skill is to be demonstrated	Item List
A WHS/OHS	All	Workplace/Occupational Health and Safety policies and procedures followed
B Tools and equipment:	At least 6	• General concrete mixer • General vacuum cleaner • General trolley

		• Non pressurised pumps and hoses • Wheelbarrows • Traffic barriers • Extra low voltage lighting equipment • Hand held tools • Holiday detection equipment • Power tools • Pressurised pumps and hoses • Tru bend • Hand wrapping machines • Follow standard operating procedures
C Calculations	All	Utilities industries calculations
D Information	All	• Read and interpret workplace documents • Communicate in a team environment
E Unplanned event	At least one occasion	Dealing with an unplanned event by drawing on essential knowledge and associated skills to provide appropriate solutions

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:

- WHS/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.

These should be part of the formal learning/assessment environment.

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

Note:

Where simulation is considered a suitable strategy for assessment, conditions must be authentic and as far as possible reproduce and replicate the workplace and be consistent with the approved industry simulation policy.

The resources used for assessment should reflect current industry practices in relation to locating, proving and protecting utility assets.

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 required Skills and Knowledge 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 required skills and knowledge 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.

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|------------|---|
| UEGNSG141A | Apply Workplace Health and Safety regulations codes and practices in the gas industry |
| UEGNSG002A | Prepare to work in the Australian gas industry |
| UEGNSG102C | Carry out work activities in a gas utilities industry work environment |
| UEGNSG134A | Establish a utilities infrastructure work site |

Range Statement

9) This relates to the unit of competency 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 be demonstrated in relation to carrying out work activities in a transmission pipeline construction industry work environment in accordance with relevant legislation, standards, codes and established procedures.

This may include slinging, welding, trenching, shoring, hydro testing, pipeline coating and coating testing, cathodic protection components, directional drilling.

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:

- WHS/OHS policies and procedures
- Tools and equipment
- Appropriate persons
- Established procedures and requirements
- Legislation
- Safety Equipment
- Personal Protective Equipment
- Emergency and Hazardous Work Situations

Unit Sector(s)

Gas Industry

Competency Field

Competency Field **11)**

Transmission