



Australian Government

UEGNSG333A Work in proximity of transmission pipeline construction plant and equipment

Release 1

UEGNSG333A Work in proximity of transmission pipeline construction plant and equipment

Modification History

This is a new unit which replaces the UEG11 unit UEGNSG323A Operate transmission pipeline construction plant and equipment

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This unit covers working in proximity of gas transmission construction plant and equipment in accordance with relevant legislation, code, regulations and procedures.

It encompasses the operating parameters and safety issues of a range of specific plant and equipment dedicated to the construction of transmission pipelines.

Application of the Unit

Application of the Unit

2)

This competency standard shall apply to any safe transmission pipeline construction work site, 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, 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 (WHS)/ Occupational Health and Safety (OHS), 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 limit the age at which a person can operate certain equipment. Other conditions may apply to this competency under State and Territory legislative and regulatory requirements.

Pre-Requisites

Prerequisite Unit(s) 4)

Competencies 4.1)

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 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

Literacy and numeracy skills 4.2)

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

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 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 work in proximity of plant and equipment for transmission pipeline construction	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 Easement is inspected and assessed to determine relevant requirements in accordance with standard operating procedures
	1.5 Hazards are identified, WHS/OHS risks assessed and control measures are prioritised, implemented and monitored according to established procedures
	1.6 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
	1.7 Equipment, tools and personal protective equipment needed to carry out the work are identified, scheduled, obtained and checked for operation and safety
	1.8 Appropriate persons are consulted to ensure the work is coordinated effectively with others involved
	1.9 Materials, plans, diagrams, drawings and resources required for work are confirmed, scheduled and obtained in accordance with established procedures
	1.10 Relevant responsibilities associated with first aid and other related work safety procedures for an incident at the worksite are checked and confirmed.
	1.11 Third party issues are referred to appropriate persons in accordance with established procedures.

ELEMENT	PERFORMANCE CRITERIA
2 Work in proximity of plant and equipment for transmission pipeline construction	1.12 Site preparation, safety plan and the work schedule are confirmed in accordance with established procedures.
	2.1 WHS/OHS risk control measures, schedule of work and standard operating 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, or aloft, and use of power tools, techniques and practices are conducted safely in accordance with given instructions and to 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 Remedial action associated with constructing pipeline easements is dealt with in accordance with established procedures
3 Complete work and relevant documentation	2.8 Routine quality checks are carried out in accordance with work instructions
	3.1 WHS/OHS risk control work completion measures and procedures are followed.
	3.3 Work site is tidied and made safe in accordance with established procedures
	3.4 Tools, equipment and any surplus resources and materials are cleaned, checked and securely stored.
	3.5 Appropriate persons are notified of work completion according to

ELEMENT

PERFORMANCE CRITERIA

- 3.6 established procedures
Work completion documentation is
completed accurately and provided to
appropriate persons in accordance
with and established procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

7) This describes the 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 in a gas industry 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 is provided below. It forms an integral part of this unit.

KS01-G333A Application of Plant Equipment in the Construction of Transmission Pipeline

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

T1. Plant and equipment types, purpose and basic operation

- Compressors
- Grader
- Dozer
- Excavator
- Vacuum lift
- Bending machine
- Bending machine & mandrel
- Internal line up clamp
- Tack Rig
- Side Boom
- Roller Cradles
- Trenching Equipment
- Bucket Wheel trencher
- Grit Blasting Unit
- Thermal Coil
- Padding machines
- Mitsu Bucket
- Crane (Rough Terrain)
- Crane Truck
- Flood pump
- Squeeze pump
- Drying Plant

- Heavy duty mulching machines
- T2. Safe operating parameters
- hand signals
 - safety hazards
- T3. Relevant legislation, regulations and codes
- Licencing requirements
- T4. Enterprise procedures
- T5. Construction sequence

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 this 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 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 practised. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are included in the Assessment Guidelines of this Training Package.

**Critical aspects 8.2)
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 work performance 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 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
 - Demonstrate an appropriate level of employability skills
 - 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:
 - Working in proximity of transmission construction plant and equipment in accordance with relevant legislation, code, regulations and procedures as described in 9.) Range Statement and including:
 - A. Identifying and interpreting correctly drawings, diagrams, schedules, procedures and manuals relevant to the work to be undertaken.
 - B. Identifying the plant and equipment and their safe operating parameters/requirements
 - C. Working in proximity of transmission construction plant and equipment in accordance with requirements
 - D. Completing required documentation and reporting.
 - E. Dealing with unplanned events by drawing on required skills and knowledge, procedures/ protocols to provide appropriate solutions incorporated in the

holistic assessment with the above listed items, for example encroachment and/or contact with assets

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 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 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 Unit applies.

This requires that the 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.

Range Statement

RANGE STATEMENT

9) *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 be demonstrated in relation to working in proximity of transmission construction plant and equipment in accordance with relevant legislation, code, regulations and procedures. This will include the following range of plant and equipment:

Backfill	At least 1 of the listed items of plant and equipment	Padding Machine Excavator Grader Dozer Front End Loader
Clear and Grade	At least 1 of the listed items of plant and equipment	Dozer Excavator Grader Backhoe Front End Loader
Ditching	At least 1 of the listed items of plant and equipment	Excavator Rock Saw Bucket Wheel Trencher
Hydro Testing	At least 1 of the listed items of plant and equipment	Crane Truck Side Boom Rough Terrain Crane
Joint Coating	At least 1 of the listed items of plant and equipment	Sand Blasting Rig (Skid Steer) Over Ditch Wrapping

RANGE STATEMENT

		Machine Thermal Coil
Lower and Lay	At least 1 of the listed items of plant and equipment	Side Boom with Roller Cradles Excavator
Mechanical (minor maintenance)	At least 4 of the listed items of plant and equipment	Excavator and Vacuum Lift Bending Machine and Mandrels Internal Line up Clamp Tack Rig Side Boom Roller Cradles Rock Saw Bucket Wheel Trencher Thermal Coil Over Ditch Wrapping Machine Padding Machines Mitsu Bucket
String and bend	At least 1 of the listed items of plant and equipment	Excavator Bending Machine with Mandrels Side Boom
Welding	At least 1 of the listed items of plant and equipment	Side Boom Internal Line up Clamp Tack Rig

Unit Sector(s)

Gas Industry

Competency Field

Competency Field

11)

Transmission discipline.