



Australian Government

Department of Education, Employment and Workplace Relations

UEGNSG321A Undertake hydrotesting for transmission pipeline construction

Release: 1

UEGNSG321A Undertake hydrotesting for transmission pipeline construction

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

To undertake hydrotesting on gas transmission pipelines construction worksites. Including testing work; Legislative and regulatory requirements for testing; Testing equipment, tools and materials. This competency refers to: Crane Truck; Side Boom; Rough Terrain Crane; Fill and Squeeze Pumps; Break Tanks; Victullic Piping; Dead Weight Tester; Temperature Probes; Test Shack; Gauges; Compressor; Data; Collectors; Test Header; Cleaning Headers; Gauging Plate; Drying Plant; After Cooler; Pig; Chart Recorder; Generator; Lighting Towers.

Application of the Unit

Application of the Unit 2)

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)

The skills and knowledge described in this unit are not

License to practice**3)**

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 limit the age at which a person can operate certain equipment.

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:

Nil

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 for hydrotesting for transmission pipeline construction	1.1 Work instructions are received and confirmed. 1.2 OHS, environmental and sustainable energy policies and procedures to be followed for the work to be performed are received and confirmed. 1.3 Easement is inspected and testing procedures determined in accordance with standard operating procedures relevant requirements. 1.4 Discussion occurs with all persons to establish and confirm work schedule. 1.5 Suggestions to assist with testing for construction of pipeline are made to others involved in the work. 1.6 Hazards are identified, OHS risks assessed and control measures are prioritised, implemented and monitored including emergency exits kept clear according to established procedures. 1.7 Scope of responsibility under the relevant work permit is received and confirmed according to requirements and established procedures with relevant persons. 1.8 Resources including equipment requirements, tools and personal protective equipment required

ELEMENT	PERFORMANCE CRITERIA
2 Carry out relevant testing for transmission pipeline construction	for the job are obtained and in working order according to established procedures.
	1.9 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.
	1.10 Third party issues are referred to appropriate persons in accordance with industry and community standards
	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 eliminate the prospects of incidents.
	2.3 Work area is isolated and made safe and civil activities and testing of pipeline for construction is carried out in accordance with given instructions and established procedures.
	2.4 Easement is confirmed for testing of pipeline construction to ensure completion in an agreed timeframe and to quality standards with a minimum of waste according to requirements and established procedures
	2.5 Operational knowledge as applied to potential hazards and safety risks are reported to the immediate authorised persons for directions according to established procedures
	2.6 Non-routine events are referred to the immediate authorised persons for directions according to established procedures.
	2.7 Remedial action associated with testing for

ELEMENT	PERFORMANCE CRITERIA
3 Complete procedures for testing of transmission pipeline construction	construction of transmission pipeline is dealt with using acquired known solutions and skills related to routine procedures to ensure work instructions and established procedures are met.
	2.8 Ongoing checks of quality of the work are undertaken in accordance with given instructions and established procedures.
	3.1 The work undertaken is checked 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.
	3.3 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

8) 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 using of equipment and tools to perform work 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.

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G 2.3.16 Transmission pipeline construction OHS, environmental and cultural legislative and regulatory requirements
Evidence shall show an understanding of the practical work requirements embedded in the OHS, Environmental and Cultural Legislation and Regulations.

For OHS:

- Complete Risk Assessment forms such as Work Permits and JHA's, JSA's, JSEA's, SWM's etc Hazard Identification
- Manual handling
- Basic First Aid
- MSDS
- Understanding how to apply control measures
- Emergency Response
- Signage
- Licenses and tickets
- Working at heights
- Awareness of confined spaces

For Environmental:

- Weed mitigation
- Erosion control
- Emission laws
- Quarantine laws
- Licenses
- Permits

For Cultural and Heritage Awareness:

- Cultural and heritage awareness tagging
- Understanding the role of the cultural monitor
- Uncovering of cultural/heritage artefacts
- Understanding heritage and cultural issues
- Understanding legislative and regulatory requirement applicable in working situations

G 2.3.20 Operation of portable high pressure equipment
Evidence shall show an understanding of safe operation of the following:

- high pressure equipment hoses and whip checks
- Exclusion zone awareness
- Specific signage requirements for using high pressure equipment

G 2.3.21 Knowledge of ASNZ 2885 for transmission pipeline construction crews
Evidence shall show an understanding of the relevant sections of:

- ASNZ 2885 dependent on the endorsement area. eg Hydro test only needs 2885.5.

Evidence Guide

EVIDENCE GUIDE

9) 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

9.1)

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
of evidence
required to
demonstrate
competency in
this unit**

9.2)

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 — 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 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
 - 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:

Range of tools/equipment/procedures/workplace		
Group No	The minimum number of items on which skill is to be demonstrated	Item List
A	All	Operate in a safe manner Practical working knowledge of ASNZ2885.5 Understand and respond to instructions relayed by Hydro Test Engineers (NATA Accredited Auditor)
B	All	Competent Operation of Fill and Squeeze Pumps Competent Operation of Pressure Pumps Competent Operation of Break Tanks Competent Operation of Victullic Piping

		Competent Operation of Dead Weight Tester Competent Operation of Temperature Probes Competent Operation of Test Shack Competent Operation of Gauges Competent Operation of Compressors Competent Operation of Data Collectors Competent Operation of Test Headers Competent Operation of Cleaning Headers Competent Operation of Gauging Plate Competent Operation of Drying Plant Competent Operation of After Cooler Competent Operation of Pig Competent Operation of Chart Recorder Competent Operation of Generator Competent Operation of Lighting Towers
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 9.3)

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 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 maintaining pipeline easements.

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.

Method of assessment

9.4)

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 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

9.5)

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 Units where listed.

UEGNSG125 Carry out transmission pipeline construction work

A	activities
UEGNSG127 A	Comply with transmission pipeline construction environmental and cultural policies and procedures
UEGNSG128 A	Establish a transmission pipeline construction work site

Range Statement

RANGE STATEMENT

10) 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 Unit shall be demonstrated in relation to the maintaining of pipeline easements.

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:

Crane Truck

Side Boom

Rough Terrain Crane

Fill and Squeeze Pumps

Break Tanks

Victullic Piping

Dead Weight Tester

Temperature Probes

Test Shack

Gauges

Compressor

Data Collectors

Test Header

Cleaning Headers

Gauging Plate

Drying Plant

After Cooler

RANGE STATEMENT

Pig

Chart Recorder

Generator

Lighting Towers

Unit Sector(s)

Not applicable.

Competency Field

Competency Field **11)**

Transmission discipline.