



Australian Government

UEGNSG216A Commission or decommission gas distribution pipelines

Release 1

UEGNSG216A Commission or decommission gas distribution pipelines

Modification History

This unit is a revised version of the UEG11 unit UEGNSG203B Commission or decommission gas distribution pipelines

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This unit covers the commissioning, decommissioning and re-commissioning of gas distribution pipelines in accordance with relevant legislation, standards, codes and established procedures.

It encompasses the use of relevant tools, equipment and procedures; pipeline systems; pipeline control systems; testing; and liaison with appropriate authorities

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 AQF 3 competency for new and existing workers 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 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 those who 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 Australian gas industry |
| UEGNSG006A | Use a portable gas detectors to locate |

Prerequisite Unit(s) 4)

escape

UEGNSG132A Carry out basic work activities in a gas industry work environment

UEGNSG140A Apply 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 commission/decommission gas distribution pipelines	<p>1.1 WHS/OHS and environmental measures for the site are identified, obtained and understood.</p> <p>1.2 Relevant requirements and established procedures for the work are discussed with relevant persons to establish and confirm the work schedule.</p> <p>1.3 WHS/OHS, environmental and sustainable energy policies and procedures are received and confirmed.</p> <p>1.4 Work is prioritised and sequenced following consultation with others for completion within acceptable timeframes in accordance with established procedures</p> <p>1.5 Hazards are identified, WHS/OHS risks assessed and control measures are prioritised, implemented, and monitored according to established procedures.</p> <p>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</p> <p>1.7 Resources including personnel, equipment, tools and personal protective equipment needed to carry out the work are identified, scheduled and obtained and checked for operation and safety</p> <p>1.8 Materials, plans, diagrams, drawings and resources required for work are confirmed, scheduled and obtained in accordance with established procedures</p>

ELEMENT	PERFORMANCE CRITERIA
1.9	Relevant responsibilities associated with first aid and other related work safety procedures for an incident at the worksite are checked and confirmed.
1.10	Third party issues are referred to appropriate persons in accordance with established procedures.
1.11	Pipeline in check for readiness (cleaned, pigged, bypassed, etc.) for commissioning/decommissioning
1.12	Site preparations, safety plan and the work schedule are confirmed in accordance with established procedures
1.13	Persons participating in the work, including plant operators and contractors are fully briefed and respective responsibilities confirmed in accordance with established procedures
1.14	Road signs, barriers and warning devices are positioned in accordance with requirements including traffic management plans
2 Commission/decommission gas distribution pipelines	2.1
	WHS/OHS and risk control measures 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 requirements.
	2.4
	Pipeline purging/flaring is undertaken according to procedures
	2.5
	Commissioning/decommissioning of gas distribution pipelines is carried out efficiently, to the required standard without waste of materials

ELEMENT	PERFORMANCE CRITERIA
	or damage to apparatus, circuits, the surrounding environment or services and using sustainable energy principles.
	2.6 Gas is tested for compliance with pressure, concentration and odourant level requirements
	2.7 WHS/OHS risks and incidents are reported to the immediate authorised persons for directions according to established procedures.
	2.8 Procedures for referring non-routine events to the immediate authorised persons for directions are followed
	2.9 Routine quality Reports and ongoing checks of work quality are carried out undertaken in accordance with work given instructions and established procedures
3 Complete work and relevant documentation	3.1 WHS/OHS risk control work completion measures and procedures are followed Tools and equipment appropriate to the testing requirements are selected and work undertaken is checked against works schedule for conformance with requirements 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 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 securely stored. returned to storage in accordance with established procedures
	3.5 Relevant work permits are signed off and equipment is returned to service in accordance with requirements
	3.6 Appropriate persons are notified of work

ELEMENT

PERFORMANCE CRITERIA

completion according to established procedures

- 3.7 Final inspections are undertaken and work completion documentation records, reports and information are finalised and processed and is completed accurately and provided to appropriate persons notified in accordance with established procedures

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 the commissioning/decommissioning of gas distribution pipelines.

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-G216A Distribution pipeline commissioning and decommissioning

- T1. Relevant legislation, standards, codes and established procedures.
- T2. Site preparation
 - identify equipment, pipes, fittings, purge substances
 - apply purge volume and time tables and charts
- T3. Environmental and safety hazards
 - risks and control measures
 - site emergency procedures
- T4. Required documentation and communication
 - notify affected customers
 - decommissioning
 - commissioning/recommissioning
 - non-conformances and incidents reports including customer outages
- T5. Decommissioning requirements, equipment, tools and procedures
 - bringing/taking pipeline system on/off line
 - effect on distribution system
 - fitting bypass apparatus ensuring continuity of supply
 - stopping off and isolation of pipelines using internal and external stop off equipment
 - monitoring of system pressure at appropriate locations depending on network design and operating conditions
 - regulating and maintaining system pressures
 - test and verify
- T6. Commissioning/Recommissioning requirements, equipment, tools and procedures
 - checking pipework is ready (tested, pigged, etc.)
 - purging the pipe system using a variety of media and testing procedures
 - testing and sealing of pipelines,
 - odour level requirements

- effect on distribution system
- monitoring of system pressure at appropriate locations depending on network design and operating conditions
- regulating and maintaining system pressures
- equipment faults
- test and verify

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 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 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 required 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 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.
 - De-commission, commission and recommission gas distribution pipelines 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/OWS procedures	All	<ul style="list-style-type: none"> • Interpret technical drawings and symbols • Ensure emergency response procedures in place • Communicate with other authorities and stakeholders • Communicate schedules/coordinate to persons

		<ul style="list-style-type: none"> • Carry out job safety analysis • Obtain work permit if required
B. Work Procedures	All	<ul style="list-style-type: none"> • Isolate, vent and purge gas pipeline systems • AS2865/relevant confined spaces code of practice • Operation of gas detector • Operate service locator • Calculate nitrogen volume needed
C. Isolation Methods	At least 2	<ul style="list-style-type: none"> • High pressure stop off • 312 • Bagtube • Squash off jacks/pliers • Hot tap and stopple
D. Unplanned event	At least one occasion	<ul style="list-style-type: none"> • Deal with an unplanned event by drawing on required knowledge and associated skills to provide appropriate solutions incorporated in the holistic assessment with the above listed items

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

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 be undertaken in an actual workplace. Assessment must also integrate the employability skills.

**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.

UEGNSG132A	Carry out work activities in a gas industry work environment
UEGNSG133A	Comply with environmental policies and procedures in the utilities industry
UEGNSG134A	Establish a utilities infrastructure work site
BSBFLM312B	Contribute to team effectiveness
BSBFLM303C	Contribute to effective workplace relationships

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 unit shall be demonstrated in relation to commissioning/decommissioning and re-commissioning distribution pipelines in accordance with relevant legislation, standards, codes and established procedures. This includes carrying out job safety analysis; obtaining the required work permit/authorisation; isolating, venting and purge gas pipeline systems; and using gas detectors.

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:

- Appropriate persons
- Tools, Materials and Equipment
- Appropriate authorities
- Pipeline systems
- Documentation

Unit Sector(s)

Gas Industry

Competency Field

Competency Field 11)

Gas Distribution.