



**Australian Government**

# **UEGNSG611B Control LPG storage/processing operations**

**Release: 1**

## UEGNSG611B Control LPG storage/processing operations

### Modification History

Not applicable.

### Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This Competency Standard Unit covers the control of LPG storage/processing operations. The competency standard refers to utilisation of resources; operational; monitoring; referring to the appropriate persons; identifying types of equipment and faults and developing the required reports.

### Application of the Unit

Application of the Unit 2)

This competency standard shall apply to any work site where liquefied petroleum gas operations occur.

### Licensing/Regulatory Information

License to practice 3)

The skills and knowledge described in this unit are not 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 limits the age of operating 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 4      Writing 4      Numeracy 4

## 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

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1 Plan control of operations	<p>1.1 Work schedules, including drawings, plans, requirements, established procedures and material lists are detailed, analysed if necessary by site inspection and the extent of the preparation of the work determined for planning and coordination</p> <p>1.2 Work is prioritised, processing priorities are determined and sequenced for the most efficient and effective outcome following consultation with others for completion within acceptable timeframes to a quality standard and in accordance with established procedures</p> <p>1.3 Risk control measures for identified hazards are prioritised, implemented and monitored against the work schedule</p> <p>1.4 OHS, environmental and sustainable energy policies and procedures related to the work are identified to ensure safe systems of work are followed</p> <p>1.5 Relevant work permits are secured to coordinate the performance of work according to requirements and established procedures</p> <p>1.6 Resources including appropriately licensed persons, equipment, tools and personal protective equipment required for the job are identified, scheduled, coordinated and confirmed in a safe and technical working order</p> <p>1.7 Clients are provided with possible solutions and options within the scope, acceptable cost and requirements</p> <p>1.8 Liaison and communication issues with authorised persons, authorities, clients and land owners 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 coordinated and</p>

ELEMENT	PERFORMANCE CRITERIA
	authorised where applicable in accordance with establish procedures
	1.10 Site is prepared according to the work schedule and to minimise risk and damage to property, commerce and individuals in accordance with established procedures
2 Control operations	<p>2.1 OHS policies and procedures and safe work practices are followed to eliminate or minimise incidents and hazards</p> <p>2.2 First Aid and other related work procedures such as systems isolation are performed according to requirements and established procedures</p> <p>2.3 Information concerning the operation of the storage or processing system is monitored and conveyed to relevant persons and other work areas to ensure safe and efficient system</p> <p>2.4 Work is performed and coordinated in accordance with a work schedule and to requirements</p> <p>2.5 Alarm codes are correctly interpreted and acknowledged and other hazards, OHS risks and control measures are monitored and preventative action taken and appropriate authorities consulted, where necessary, in accordance with requirements and established procedures</p> <p>2.6 Remedial actions are taken to overcome any shortfalls encountered in the work schedule according to requirements and/or established procedures</p> <p>2.7 Essential Knowledge and Associated Skills are applied to ensure completion in an agreed timeframe and to quality standards with a minimum of waste according to requirements</p> <p>2.8 Solutions to non-routine problems are identified and actioned using Essential Knowledge and Associated Skills according to requirements</p> <p>2.9 Ongoing checks of quality of the work are undertaken in accordance with requirements and</p>

**ELEMENT****PERFORMANCE CRITERIA**

		established procedures to ensure a quality outcome is achieved for the client/customer to community and industry standards
3	Shut down operations	3.1 Work undertaken is checked against works schedule for conformance with requirements, anomalies are reported and solutions identified in accordance with established procedures
		3.2 Accidents and injuries are reported and followed up in accordance with requirements and established procedures
		3.3 Emergency shutdown procedures are applied in the event of serious equipment failure or operational parameters being exceeded
		3.4 Relevant work permit(s) are signed off and system is returned to service and advice is given to clients in accordance with requirements
		3.5 Works completion records, reports as installed/modified drawing(s) and documentation and information is confirmed, processed and the appropriate persons notified

**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, Controlling LPG Storage/Processing Operations.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

**KS01-G611 Gaseous fuel storage****B**

## G 3.6.1 Working safely in an LPG environment

Evidence shall show an understanding of the requirements to work safely in an LPG environment, indicated by the following:

- working safely in accordance with procedures, OHS, emergency and environmental requirements
- awareness of the properties of LPG
- identifying variations and irregularities.

G 3.6.2 understanding the correct use of plant and equipment in an LPG environment

Evidence shall show an understanding of the requirements to correctly use plant and equipment in an LPG environment, indicated by the following:

- operate transfer equipment including compressors or pumps
- transfer methods for pipes and hoses
- selection, testing and set up processes for transfer equipment
- making analytical judgements for appropriate adjustments to plant and equipment
- awareness of test equipment and its uses
- operation, testing and inspecting equipment that includes pressure vessels and associated fitting
- understanding manufacturer's specifications to make adjustments to parts where appropriate
- understanding of how to select appropriate equipment for tasks associated with LPG
- operating correctly gas analysis equipment
- operating correctly gas alarm and communication equipment.

G 3.6.3 Static electricity

Evidence shall show an understanding of the requirements to deal with situations where static electricity is present in an LPG environment, indicated by the following:

- understanding properties of static electricity and how to manage it in an LPG environment.

G 3.6.4 LPG communication including the recording of LPG information

Evidence shall show an understanding of the requirements to communicate and record information in an LPG environment, indicated by the following:

- accurately recording LPG information
- recording and reporting corrective actions in an LPG

environment

- identifying and reporting any problems associated with transfer processes and procedures
- communicating in an LPG environment
- understanding of permit to work systems for an LPG environment.

#### G 3.6.5 The LPG production process

Evidence shall show an understanding of the requirements to work in the LPG production process, indicated by the following:

- understanding of the appropriate processing, handling and storage operations for LPG
- understanding how to mix/blend the properties of LPG.

#### G 3.6.6 Technical drawings

Evidence shall show an understanding of the requirements to understand technical drawings for the LPG environment, indicated by the following:

- understanding and interpreting technical drawings.

## Evidence Guide

### EVIDENCE GUIDE

9) 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 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 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** 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, where required by the regulated environment
  - Demonstrate an appropriate level of employability skills
  - Conduct work observing the relevant Anti discrimination legislation, regulations, polices and workplace procedures
- Demonstrate performance across a representative range of contexts from the prescribed items below.

<b>Range of tools/equipment/procedures/work place</b>		
<b>Group No</b>	<b>The minimum number of items on which skill is to be demonstrated</b>	<b>Item List</b>
A	At least 5	Resources required: Pumps and compressors Valves Vessels Control and monitoring equipment Mixing equipment Sampling equipment Air equipment
B	At least 3	Unexpected events: Gas leaks and fire

		Equipment failure LPG supply levels Electricity supply fires
C	At least 4	Monitoring of storage/processing facilities: Monitoring pressure Temperature Levels Corrosion Gas leaks Stock levels Security
D	At least 5	Equipment faults: Electrical problems Over filled vessel Compressor failure Pump failure Out of current inspection status Gauge failure Hose rupture/leaks Instruments out of calibration Non-flow of LPG
E	All	Reports: Routine inspections (daily readings, monthly checks) Scheduled maintenance activities Mandatory or statutory inspections Hazard and incident reports
F	All	Working safely in an LPG

		<p>environment</p> <p>Correct use of plant and equipment in an LPG environment</p> <p>Knowledge of the effects/potential effects of static electricity</p> <p>Recording information</p>
G	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 Competency Standard 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 controlling LPG storage/processing operations.

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 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  
relationship with  
other units**            **9.5)**

There are no recommended concurrent assessments with this unit.

## 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 Competency Standard Unit shall be demonstrated in relation to the control LPG storage/processing operations.

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:

Resources

Operational

Monitoring

Relevant persons

Types of equipment faults

Reports

### Unit Sector(s)

Not applicable.

### Competency Field

**Competency Field**            **11)**  
LPG.