



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **UEGNSG607B Process LPG**

**Release: 1**

## UEGNSG607B Process LPG

### Modification History

Not applicable.

### Unit Descriptor

#### Unit Descriptor

#### 1) Scope:

##### 1.1) Descriptor

This Competency Standard Unit covers the processing of liquefied petroleum gas including the manufacture of TLGP, LPG and blending/mixing odourising LPG. The competency standard also refers to the relevant equipment; processing of LPG; process monitoring; relevant emergency response and completion of relevant documentation.

### Application of the Unit

#### Application of the Unit 2)

This competency standard shall apply to work sites where liquefied petroleum gas is transported.

### 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 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 process LPG	<p>1.1 Pipelines and hoses are connected in accordance with manufacturer's specifications and standard operating procedures</p> <p>1.2 Appropriate valves are operated in the correct sequence against relevant requirements and established procedures for the work are communicated to all persons and identified for all work sites</p> <p>1.3 OHS, environmental and sustainable energy policies and procedures related to requirements and established procedures for processing of LPG are obtained and confirmed for the purposes of the work performed and communicated</p> <p>1.4 Work is prioritised and sequenced following consultation with others for completion within acceptable timeframes and in accordance with established procedures</p> <p>1.5 Risk control measures for identified hazards are prioritised, implemented and monitored against the work schedule</p> <p>1.6 Relevant work permits are obtained to access, isolate/de-energise systems and perform work according to requirements and established procedures</p> <p>1.7 Resources including appropriately licensed persons, equipment, tools and personal protective equipment required for the job are identified, scheduled and obtained and</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	confirmed in working order
	1.8 Relevant persons at worksite are confirmed to be current in First Aid and other related work procedures according to requirements
	1.9 Liaison and communication with authorised persons, authorities, clients and land owners is completed so that work can be carried out where necessary
	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
	1.11 Persons participating in the work, including plant operators and contractors are fully briefed and respective responsibilities confirmed where applicable in accordance with established procedures
2 Process LPG	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 or aloft, and use of power tools, techniques and practices are safely followed and currency according to requirements confirmed
	2.3 Essential Knowledge and Associated Skills for the processing of LPG is applied to ensure completion in an agreed timeframe and to quality standards with a minimum of waste according to requirements
	2.4 Adjustment and monitoring of controls and the processing of LPG is carried out in accordance with the work schedule and to requirements and established procedures
	2.5 Hazard warnings and safety signs are recognised and hazards and assessed OHS risks are reported to the immediate authorised persons for directions according to established procedures

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	2.6 Emergency response is selected and unplanned events in the processing of LPG are undertaken with the scope of established procedures
	2.7 Known solutions to a variety of problems are applied using Essential Knowledge and Associated Skills
	2.8 Ongoing checks of quality of the work are undertaken in accordance with given instructions and established procedures
3 Shutdown equipment	3.1 Work completion is notified and work undertaken is checked against work schedules for conformance with requirements and anomalies reported in accordance with established procedures
	3.2 Accidents and/or injuries are reported in accordance with requirements and established procedures where applicable
	3.3 Shutdown is completed in accordance with standard operating procedures and operating conditions
	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 Work completion is notified and relevant work permit(s) are signed off and equipment is returned to service in accordance with requirements
	3.6 Work completion records, reports and information is finalised and processed and 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 for the processing of LPG.

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

#### **KS01-G607 Process gaseous fuel**

##### **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 3.6.4 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.

## 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/workplace</b>		
<b>Group No</b>	<b>The minimum number of items on which skill is to be demonstrated</b>	<b>Item List</b>
A	All	Pumps Valves Vessels Control and monitoring equipment Mixing/sampling equipment
B	At least 1	Processing LPG: Blending/mixing LPG Manufacturing TLGP Odourising LPG

C	At least 4	Process monitoring includes checks for: Stock levels Pressures Water sprays Security Gas heating valves Shutdown system Odourant dosing levels
D	All	Emergency Response: Gas leaks and fire Equipment failure Hazards and incidents
E	All	Documentation: OHS, environmental and associated legislative requirements Aust Dangerous Goods Code Manufacturer's specifications Australian Standards
F	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 processing LPG.

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, 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.

- UEGNSG102B Carry out work activities in a utilities industry work environment
- UEENEEE101 Apply Occupational Health Safety regulations, codes and practices in the workplace
- A
- UEGNSG104B Comply with environmental policies and procedures
- UEGNSG105B Establish the work site
- BSBFLM312B Contribute to team effectiveness
- BSBFLM303C Contribute to effective workplace relationships

## 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 processing LPG.

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:

Equipment (3)

Processing LPG

Process monitoring

Emergency response

Documentation (3)

## Unit Sector(s)

Not applicable.

## Competency Field

Competency Field 11)

LPG.