



Australian Government

Department of Education, Employment and Workplace Relations

CPCPGS3035A Install LPG storage of aggregate storage capacity exceeding 500 litres and less than 8KL

Release: 1

CPCPGS3035A Install LPG storage of aggregate storage capacity exceeding 500 litres and less than 8KL

Modification History

ISC upgrade. Unit code updated from CPCPGS3015A to CPCPGS3035A Install LPG storage of aggregate storage capacity exceeding 500 litres and less than 8KL

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to select, locate, install and test liquefied petroleum gas (LPG) storage facilities with a storage capacity of more than 500 litres but less than 8KL.
The storage is connected to consumer piping systems with an operating pressure not exceeding 140kPa.
The design requirements of this unit are limited to the application of the design to layout and installation.

Application of the Unit

Application of the unit Site location for work application may be a customer's premises.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units

CPCPCM2023A	Carry out OHS requirements
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Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify installation requirements.	1.1. Building plans and specifications and any special instructions are obtained. 1.2. Safety (OHS) requirements associated with installation of LPG storage facilities, and workplace environmental requirements, are adhered to throughout the work. 1.3. Quality assurance requirements for company operations are identified and adhered to. 1.4. Gas load and design requirements are determined from plans, specifications, and job drawing or workplace instructions. 1.5. Storage capacity is calculated in compliance with regulatory authority and workplace requirements, ensuring adequacy to meet load details. 1.6. Regulator size and size of connections to cylinders are determined to meet capacity and load of the system in accordance with workplace requirements. 1.7. Appropriateness of selected location to provide required service is established in conformance to standards, design instruction and workplace requirements. 1.8. Quantity of cylinders and materials required is estimated from design instruction and selected to comply with standards and authorities' requirements.
2. Prepare for installation.	2.1. Materials and equipment are ordered and checked for compliance with docket and order form, and for acceptable condition. 2.2. Appropriate tools and equipment for installation of storage facility, including personal protective equipment, are identified, selected and checked for serviceability. 2.3. Appropriate testing apparatus is selected. 2.4. Work is planned in conjunction with others involved in or affected by the work. 2.5. Work area and materials are prepared to support efficient installation of system.
3. Install and test LPG storage system.	3.1. LPG cylinders and tank, piping, fittings and components are installed in conformance to standards and workplace requirements. 3.2. Regulator and associated pipework are installed in compliance with standards and workplace requirements. 3.3. Regulator is adjusted to provide flow pressure in conformance to standards and workplace

ELEMENT

PERFORMANCE CRITERIA

requirements.

3.4. System is purged in accordance with standards.

3.5. System is tested in conformance to standards and workplace requirements.

3.6. Test equipment is removed and test data recorded in format required by regulatory authority and workplace requirements.

ELEMENT

PERFORMANCE CRITERIA

- | ELEMENT | PERFORMANCE CRITERIA |
|--------------|--|
| 4. Clean up. | <p>4.1. Work area is cleared and materials disposed of or recycled in accordance with state or territory <i>statutory and regulatory authority</i> legislation and workplace procedures.</p> <p>4.2. Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and workplace procedures.</p> <p>4.3. <i>Information</i> is accessed and documentation completed in accordance with workplace requirements.</p> <p>4.4. Relevant authorities and supervisors are advised of job completion in conformance to regulatory and workplace requirements.</p> |

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- communication skills to:
 - access information
 - complete workplace documentation
 - determine requirements
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - follow instructions
 - inform relevant authorities and supervisors of completion of job
 - plan work with others
 - read and interpret:
 - documentation from a variety of sources
 - drawings and specifications
 - record data in writing
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication, such as hand signals
- identifying and accurately reporting to appropriate personnel any faults in tools,

REQUIRED SKILLS AND KNOWLEDGE

equipment or materials

- numeracy skills to apply measurements and calculations
- organisational skills, including the ability to plan and set out work
- selecting, locating, installing and testing LPG storage facilities
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
 - access and understand site-specific instructions in a variety of media
 - use mobile communication technology.

Required knowledge

Required knowledge for this unit is:

- electrical safety and requisite precautions
- how to access relevant information, including codes and technical standards
- job safety analysis (JSA) and safe work method statements (SWMS)
- material requirements determination process
- procedures for installing and testing gas storage facilities
- properties of gas, gas safety, combustion principles, pressure and flow rates
- relevant statutory and authority requirements related to installing and testing gas storage facilities
- SI system of measurements
- workplace and equipment safety requirements.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment providing that simulated or project-based assessment techniques fully replicate plumbing and services workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of:

- locating, interpreting and applying relevant information, standards and specifications to determine requirements, and select, locate, install and test LPG storage systems
- applying safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- as a minimum the ability to, given the plans and specifications for a gas storage facility of capacity greater than 500 litres (but less than 8KL), determine the requirements, install and test first and second stage piping installation from an LPG storage cylinder located and installed to specifications, ensuring:
 - correct identification of location, design and details of proposed storage installation
 - correct selection and use of appropriate processes, tools and equipment
 - completing all work to specification
 - compliance with regulations, standards and organisational quality procedures and processes
 - communicating and working effectively and safely with others.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge

EVIDENCE GUIDE

will usually be conducted in an off-site context. Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the minimum task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe working practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace

EVIDENCE GUIDE

- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed. Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Safety (OHS) is to be in accordance with commonwealth, state and territory legislation and regulations and may include:

- handling of materials
- hazard control
- personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
- safe operating procedures, including recognising and preventing hazards associated with:
 - hazardous materials and substances

RANGE STATEMENT

- service lines
- surrounding structures and facilities
- trip hazards
- use of tools and equipment
- work site visitors and the public
- working at heights
- working in proximity to others
- use of firefighting equipment
- use of first aid equipment
- workplace environment and safety.

RANGE STATEMENT

Environmental requirements include:

- clean-up protection
- waste management.

Quality assurance requirements may include:

- Australian standards
- Environment Protection Authority (EPA)
- internal company quality assurance policy and risk management strategy
- International Standards Organisation
- site safety plan
- workplace operations and procedures.

Materials for installing LPG storage facilities:

- may include:
 - container supports and bases
 - copper tubing
 - fitting and fixing materials
 - gas cylinders and storage tanks (500L-8 KL)
 - gas regulators
 - non-metallic hose assemblies
 - other approved materials
- are to comply with job specifications and appropriate standards for the storage of LPG.

Tools and equipment may include:

- brazing equipment
- chain blocks
- flaring tools
- forklifts
- grinders
- hacksaws
- hand and power tools
- hand trolleys
- hoists and jacks
- ladders
- lifting and load shifting equipment
- measuring equipment
- rollers
- silver brazing equipment
- testing equipment.

Installation is normally a two stage system and:

- may be from storage:
 - to point of use, requiring regulators
 - from storage to a second stage regulator
- installation and materials are to be in

RANGE STATEMENT

accordance with relevant standards.

RANGE STATEMENT

Statutory and regulatory authorities include:

- state or territory statutory authority
- statutory gasfitting authority
- statutory plumbing authority.

Information may include:

- charts and hand drawings
- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- job drawings
- manufacturer specifications and instructions
- material safety data sheets (MSDS)
- memos
- organisation work specifications and requirements
- regulatory and legislative requirements, particularly those pertaining to:
 - building codes
 - OHS and environmental requirements
 - plumbing and gasfitting authority regulations
- relevant Australian standards
- safe work procedures relating to determining requirements, and installing and testing LPG storage systems
- signage
- verbal, written and graphical instructions
- work bulletins
- work schedules, plans and specifications.

Unit Sector(s)

Unit sector Plumbing and services

Co-requisite units

Co-requisite units Nil

Co-requisite units Nil

Functional area

Functional area