



Australian Government

**UEGNSG619 Perform scheduled
maintenance on gas processing or storage
facilities and equipment**

Release: 1

UEGNSG619 Perform scheduled maintenance on gas processing or storage facilities and equipment

Modification History

Release 1. This is the first release of this unit of competency in the UEG Gas Industry Training Package.

Application

This unit involves the skills and knowledge required to carry out scheduled maintenance, and repair and replace parts on liquefied petroleum gas (LPG) processing or storage facilities and equipment.

It includes repairing/replacing pressure vessels, valves and fittings, transfer equipment, pumps, compressors, transfer hoses, pipework and seals.

It also includes following procedures to correctly and safely carry out the work using appropriate materials, tools and equipment.

This unit applies to work sites where LPG is processed and stored, and subject to all work health and safety (WHS)/occupational health and safety (OHS) and duty of care requirements being met for the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Gaseous fuel Vessels

Unit Sector

Gas Industry

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Prepare for maintenance and repair activities

- 1.1** Appropriate facilities, tools, testing and measuring instruments, drawings, plans, materials and components for the work are selected in accordance with the work schedule/s and workplace procedures
- 1.2** Job requirements and workplace procedures for the work are obtained for all work sites/facilities and communicated to relevant person/s
- 1.3** WHS/OHS, environmental and sustainable energy policies and procedures related to performing minor maintenance on LPG processing and storage facilities and equipment are obtained and applied
- 1.4** Work is prioritised and sequenced for completion within acceptable timeframes following consultation with others in accordance with workplace procedures
- 1.5** Hazards and WHS/OHS risks are identified and prioritised and control measures implemented and monitored against the work schedule
- 1.6** Relevant work permits are obtained to access and perform the work and facilities and equipment is isolated, depressurised, purged, tagged and locked out before repair/maintenance work is undertaken
- 1.7** Appropriate equipment, tools and personal protective equipment (PPE) required for the job are identified, scheduled, obtained and confirmed in working order
- 1.8** Responsibilities for first aid and other emergency incidents at the work site are confirmed with relevant person/s in accordance with workplace procedures
- 1.9** Communication with authorised person/s, authorities, clients and land owners is conducted, as required, and work coordinated in accordance with the work schedule
- 1.10** Site is prepared to minimise risk and damage to property, commerce and individuals in accordance with the work schedule and workplace procedures
- 1.11** Persons participating in the work, including plant operators and contractors, are briefed and responsibilities confirmed in accordance with workplace procedures
- 1.12** Fault-finding and troubleshooting techniques are applied

- to operational systems to identify any repairs or maintenance required in accordance with job requirements and workplace procedures
- 1.13** Road signs, barriers and warning devices are positioned in accordance with job requirements and traffic management plan
- 2 Perform scheduled maintenance and repairs**
- 2.1** WHS/OHS policies and procedures and safe work practices are followed to eliminate or minimise incidents and hazards
- 2.2** Hazardous activities are performed safely and currency maintained, as required, in accordance with regulatory requirements and workplace procedures
- 2.3** Maintenance and repairs on LPG processing/storage facilities and equipment are coordinated to ensure completion in agreed timeframe, to industry standards and with a minimum of waste in accordance with job requirements
- 2.4** Adjustments to calibration and test equipment/devices are made in accordance with manufacturer instructions to ensure equipment/devices operate within specific ranges and to maintain correct flow parameters
- 2.5** Hazard warnings and safety signs are recognised and WHS/OHS risks assessed and reported to the authorised person/s for directions in accordance with workplace procedures
- 2.6** Unplanned events encountered when performing maintenance on LPG processing/storage facilities and equipment are identified and actioned in accordance with workplace procedures
- 2.7** Maintenance is performed and parts repaired or replaced by applying problem-solving techniques in accordance with workplace procedures and job requirements
- 2.8** Quality and safety checks of the maintenance work are conducted in accordance with job instructions, industry standards and workplace procedures
- 3 Complete scheduled maintenance and relevant documentation**
- 3.1** Maintenance results are documented and work undertaken is checked against work schedule/s for conformance and anomalies reported in accordance with workplace procedures

- 3.2 Accidents and injuries are reported in accordance with requirements and workplace procedures
- 3.3 Work site is rehabilitated, cleaned up and made safe in accordance with job instructions and workplace procedures
- 3.4 Tools, equipment and any surplus resources and materials are cleaned, checked and returned to storage in accordance with workplace procedures
- 3.5 Relevant work permit/s are signed off and equipment is returned to service in accordance with job and regulatory requirements
- 3.6 Work completion records, reports and documentation are completed, processed and appropriate person/s notified in accordance with workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEG Gas Industry Training Package Companion Volume Implementation Guide.

equipment must include at least seven (7) of the following:

- pressure vessel
- vapourisers
- earth connections
- relief valves
- system(s) isolation
- emergency shutdown valving, including – idle speed control (ISC) valves
- manual shutdown valving
- pipe work
- vessel footings
- regulators
- hoses and couplings
- pumps
- compressors

identifying irregularities must include at least three (3) of the following:

- incorrect flow rates
- corrosion
- impact damage
- point deterioration
- leakage
- non-operability of shutdown systems
- equipment out of calibration

scheduled maintenance, repairs and replacement of parts must include at least six (6) of the following:

- excess flow valves
- relief valves
- pressure regulators/springs
- pump seals/compressor seals
- pressure gauges
- bypass valves
- meters
- solenoids
- valves
- break away couplings
- meter heads
- transfer hoses

Unit Mapping Information

This unit replaces and is equivalent to UEGNSG619A Perform scheduled maintenance on gas processing or storage facilities and equipment.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6a6c032e-ffcb-4f3d-8063-415efbd261e8>

Assessment Requirements for UEGNSG619 Perform scheduled maintenance on gas processing or storage facilities and equipment

Modification History

Release 1. This is the first release of this unit of competency in the UEG Gas Industry Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and include:

- applying relevant industry standards, guidelines, codes of practice and regulations
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - hazard identification and reporting
 - implementing risk control measures
 - selecting and using correct personal protective equipment (PPE)
 - work safely with hazardous materials and equipment
- adjusting calibration and testing equipment
- applying problem solving techniques
- applying sustainable energy and environmental principles and practices
- communicating with relevant stakeholders
- completing scheduled maintenance and relevant documentation
- conducting briefings
- dealing with unplanned events/situations in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- following manufacturer specifications
- following work orders/work schedules
- identifying required repairs/maintenance
- isolating, purging, depressurising, tagging and locking out facilities and equipment
- obtaining and complying with relevant work permits
- obtaining relevant tools, testing and measuring instruments, drawings, plans and materials
- performing scheduled maintenance and repairs
- positioning road signs, barriers and warning devices
- preparing for maintenance and repair activities
- rehabilitating work site
- returning equipment to service.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- relevant industry standards, guidelines, codes of practice and regulations
- relevant WHS/OHS legislated requirements, including:
 - hazards, risk assessment and control measures
 - environmental and sustainable energy principles and practices
 - safety signs, including workplace hazards and warnings
 - work permits, Job hazard analysis (JHA), job safety analysis (JSA), job safety environment analysis (JSEA) and safe work method statements (SWMS)
 - use of spill kits and PPE
 - manual handling characteristics, types and techniques
 - accidents and emergency types, including fire, and gas leaks
 - emergency response equipment and procedures
- work orders and work schedules
- relevant work permits
- liquefied petroleum gas (LPG) bulk transfer equipment, including:
 - requirements, applications, methods and procedures
 - equipment/tools
 - types, selection, manufacturer specifications/instructions, testing, set up and adjustment
 - compressors and pumps
 - pipes and hoses
- LPG processing or storage facility and equipment maintenance
- relevant workplace policies and procedures
- LPG storage/pressure vessels, including:
 - types, construction, size, valves and labelling
 - testing and inspection procedures
- LPG processing equipment requirements, applications, methods and procedures including:
 - mix/blend properties and specifications
 - equipment/tools
 - types, selection, manufacturer specifications/instructions, testing and set up
 - analytical judgements for appropriate adjustments to plant and equipment
 - variations and irregularities identification
 - gas analysis equipment
 - safety
 - gas alarm and communication equipment
 - ignition prevention/control
 - leak testing requirements, types, procedures and required equipment/tools

- PPE types, application, checking, maintenance and storage
- scheduled maintenance
- fault identification
- repair and replacement of components and parts
- organisation's policies, quality requirements, specifications, forms and reports for work activities
- hazardous activities, including:
 - lifting, climbing, working in confined spaces or aloft, and use of power tools
- inspecting and testing procedures
- problem-solving techniques
- relevant industry standards, guidelines, codes of practice and regulations
- relevant manufacturer specifications
- relevant SWMS/job safety assessments or risk mitigation processes
- relevant technical drawings, plans, material lists or specifications
- relevant workplace documentation
- traffic management plan

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and PPE currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals

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