



Australian Government

UEGNSG807 Install gas flow, measuring and pressure regulating devices

Release: 1

UEGNSG807 Install gas flow, measuring and pressure regulating devices

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 install gas flow, measuring and pressure regulating devices in accordance with relevant legislation, codes of practice, regulations and workplace procedures.

It includes installing of gas valves, pressure controllers, regulators and meters in gas facilities and stations.

This unit applies to the following types of gas stations, subject to all work health and safety (WHS)/occupational health and safety (OHS) and duty of care requirements being met for the workplace:

- pressure reduction stations, district and customer regulator sets
- compressor stations
- meter stations and customer meter sets
- custody transfer stations
- inlets and city gates
- scraper stations
- gas storage facilities
- main line valves.

The skills and knowledge described in this unit require a licence or permit to practice in the workplace where work is carried out on electrical installations which are designed to operate at voltages greater than 50 V a.c. or 120 V d.c.

Competency development activities in this unit are subject to regulations directly related to licencing.

Additional and/or other conditions may apply in some jurisdictions subject to regulations related to electrical work. Practice in the workplace and during training is also subject to WHS/ OHS regulations.

Pre-requisite Unit

UEGNSG006 Use a portable gas detector to locate escape

Competency Field

Pressure Control Discipline

Unit Sector

Gas Industry

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to install gas flow, measuring and pressure regulating device

PERFORMANCE CRITERIA

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

- 1.1** WHS/OHS and environmental control measures for the site are identified, obtained and applied
- 1.2** Work requirements are interpreted from plans, specifications and instructions
- 1.3** Relevant job requirements and workplace procedures for work activities are discussed with relevant person/s to determine and confirm work schedule and respective responsibilities
- 1.4** WHS/OHS, environmental and sustainable energy workplace policies and procedures are determined and confirmed
- 1.5** Hazards are identified, WHS/OHS risks are assessed and control measures are prioritised, implemented and monitored in accordance with workplace procedures
- 1.6** Scope of responsibility under the relevant work permits and/or relevant notification is determined and confirmed to access, isolate/de-energise systems and perform work in accordance with job requirements and workplace procedures
- 1.7** Equipment, tools and personal protective equipment (PPE) needed to carry out work activities are identified, scheduled, obtained and checked for correct operation and safety
- 1.8** Appropriate persons are consulted to ensure work

activity is coordinated effectively with person/s involved

- 1.9** Materials, plans, diagrams, drawings and resources required for work are confirmed and obtained in accordance with workplace procedures
 - 1.10** Relevant responsibilities associated with first aid and related workplace safety procedures at the work site are identified, checked and confirmed
 - 1.11** Third-party issues are referred to appropriate person/s in accordance with workplace procedures
 - 1.12** Site preparation, safety plan and work schedule are confirmed in accordance with workplace procedures
- 2 Install gas flow, measuring and pressure regulating device**
- 2.1** WHS/OHS risk control measures, schedule of work and workplace procedures for carrying out work are followed
 - 2.2** Appropriate materials, tools, equipment and measuring devices are selected and used safely in accordance with workplace procedures
 - 2.3** Hazardous activities are conducted safely in accordance with given safe work instructions and to job requirements
 - 2.4** Work is carried out efficiently, to required industry standard, without waste of materials or damage to apparatus, circuits, and the surrounding environment or services using sustainable energy principles
 - 2.5** Hazard warnings and safety signs are identified and assessed as part of WHS risks and incident control measures and are reported to authorised person/s for directions in accordance with workplace procedures
 - 2.6** Installation of components is conducted in accordance with work schedule and workplace procedures
 - 2.7** Gas flow regulator, filters and meter components system are purged, pressurised and checked for soundness in accordance with workplace procedures
 - 2.8** Non-routine/unplanned events are referred to the immediate authorised person/s for directions in accordance with workplace procedures

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| | 2.9 | Routine work activity quality checks are carried out in accordance with workplace instructions |
| 3 Complete work and relevant documentation | 3.1 | WHS/OHS risk control, work completion measures and workplace procedures are followed |
| | 3.2 | Work site is tidied and made safe in accordance with workplace procedures |
| | 3.3 | Tools, equipment and surplus resources and materials are cleaned, checked and securely stored |
| | 3.4 | Appropriate person/s are notified of work completion in accordance with workplace procedures |
| | 3.5 | Work completion documentation is completed accurately and provided to appropriate persons 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.

- work must be conducted in at least three (3) of the following types of gas facilities/stations:
- district and customer metering and regulator sets
 - distribution line and path valves
 - pressure reduction stations, district and customer regulator sets
 - compressor stations
 - meter stations and customer meter sets
 - custody transfer stations
 - inlets and city gates
 - scraper stations
 - gas storage facilities
 - non-supervisory control and data acquisition (SCADA) main line valves

equipment must include the following:

- valves: manual, ball, plug, double block and bleed
- pressure controllers
- actuators
- at least two (2) types of regulators:
- diaphragm, sleeve and hydraulic plug
- at least two (2) types of meters: small capacity union connected positive displacement meters, diaphragm, rotary and turbine

Note: fault finding is limited to the component level.

constants and variables must include the following:

- monitoring, adjusting and controlling
- regulation of flow and pressure
- gas measurement
- recording and reporting
- regulation of the system
- equipment
- organisational and statutory requirements
- low voltage electrical work

third-party issues referred to appropriate person/s must include the following:

Unit Mapping Information

This unit replaces and is equivalent to UEGNSG807A Install Gas Flow, Measuring and Pressure Regulating Devices.

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 UEGNSG807 Install gas flow, measuring and pressure regulating devices

Modification History

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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 work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - applying workplace procedures and practices
 - using of risk control measures
- applying sustainable energy principles and practices
- carrying out work on gas flow and pressure measuring and regulating devices in accordance with relevant legislation, code of practice, regulations and workplace procedures
- completing required documentation and reporting requirements
- dealing effectively with unplanned events in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- identifying and interpreting correctly drawings, diagrams, schedules, procedures and manuals relevant to the work to be undertaken
- installing gas valves, filters, regulators and pressure relief devices
- installing pressure measurement, control, boosters and relief devices in accordance with relevant legislation, industry standards, codes of practice and workplace procedures
- purging, pressurising, checking soundness and venting components
- selecting correct materials, equipment, tools, personal protection equipment (PPE) and measurement devices, including tools, torqueing equipment, bonding and stray current controls.

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:

- flow measurement equipment, types, operation and installation
- gas distribution and transmission stations principles of operation
- gas filtering system types, principles of operation, components, including gas strainers, filters, differential pressure indicators

- gas flow and pressure control and measurement devices installation
- gas flow control principles, component types and operation
- gas monitoring equipment, types, principles of operation, components and installation
- gas station alarms and safety devices, types, operation and installation
- gas station valves, types, operation and installation
- gas station venting, purging, pressurising and soundness check operations
- hazardous activities, including lifting, climbing, working in confined spaces, excavations, trenches or aloft, and use of power tools, techniques and practices
- pressure control equipment, types, pilot loaded diaphragm and sleeve regulators
- relevant job safety assessments or risk mitigation processes
- relevant legislation, industry standards, codes and regulations WHS/OHS legislated requirements
- relevant manufacturer specifications, manuals and procedures
- relevant workplace policies and procedures, including gas facility manuals, schematics, piping and instrumentation diagram/drawing
- relevant workplace reporting and documentation requirements
- tools, torquing equipment, bonding and stray current controls.

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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